

SEABIRD ECOLOGY AND CONSERVATION
(MARS 6040)

www.pelagicos.net/classes_seabirds_fa18.htm

HAWAII PACIFIC UNIVERSITY
HAWAII LOA CAMPUS (HLC)
FALL SEMESTER, 2018

TIME: 13:00 – 16:00
DAYS: Friday
ROOM: OLC Annex (OI)

INSTRUCTOR

David Hyrenbach, Ph.D.
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Phone: 808- 236-3563
Email: khyrenbach@hpu.edu
Office: CTSA Building #1, Oceanic Institute (http://www.pelagicos.net/images/office_map.JPG)

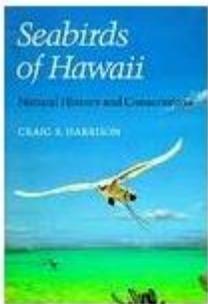
OFFICE HOURS

Tuesday / Thursday (AC 2nd floor lanai, HLC) 10:45 - 12:00
Friday (OLC Annex, OI) 12:00 - 13:00

COURSE DESCRIPTION: This course provides an overview of the phylogeny, anatomy, physiology and behavior of marine birds, with an emphasis on Hawaiian and North Pacific species. The goal of this course is to provide students with the understanding of the ecology of these marine top predators and their role in marine ecosystems required to manage their populations in response to natural and human-induced impacts. Hands-on activities in the laboratory, field work and guest lectures from resource managers and conservation practitioners will augment the course material.

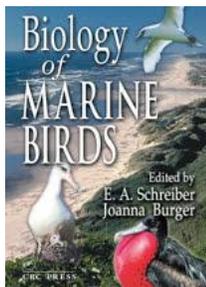
NOTE: This is a cross-listed undergraduate (4040) and graduate (6040) course. Graduate and undergraduate students will work together, but will have different requirements, detailed below.

TEXTS:



Required: Seabirds of Hawaii (1990) by Craig Harrison
Ithaca, NY, Cornell University Press, 288 pages
(ISBN 0801424496)
(Google book: <http://books.google.com/books?id=d02YectzRDkC&>)

One copy on Reserve at Atherton Library



Required: Biology of marine birds (2002)
Edited by Elizabeth Anne Schreiber, Joanna Burger
Boca Raton, FL, CRC Press 722 pages
(ISBN 0849398827)
(Google book: <http://books.google.com/books?isbn=0849398827>)

One copy on Reserve at Atherton Library

Additionally, we will read articles from scientific journals posted on the class web-site. These pdfs are for class use only. Please do not distribute.

COURSE OBJECTIVES:

This marine ornithology survey course covers the phylogeny, anatomy, physiology, ecology, behavior and conservation of marine birds. Upon completion of this course, students will be able to:

1. Identify seabird species to the taxonomic level of family, and explain their evolutionary relatedness.
2. Explain the physiological mechanisms and specialized adaptations which make an aquatic existence possible for marine birds.
3. Explain the interplay between flight / diving proficiency, foraging ecology and at-sea distributions that structure seabird communities at-sea.
4. Outline the theoretical background and the empirical evidence of the effects of energetic demands and oceanographic variability on the reproductive strategies and population dynamics of marine birds.
5. Discuss the demographic drivers of marine bird populations, the main conservation threats they face at-sea and on land, and the efforts underway to monitor and manage these impacts.
6. Synthesize the ecological roles seabirds play in marine and island ecosystems and the way seabird research can inform marine resource management.

STUDENT EVALUATION:

Students will be evaluated on the basis of four quizzes, four lab / field activities, one group paper, one group presentation, and one comprehensive final examination.

Students enrolled in MARS 6040 will be evaluated as follows:

Quizzes: 20%

(4 quizzes, 5% each: species / family ID, evolution & adaptation, ecology, conservation)

Lab / field Activities: 20%

(4 activities, 5% each: seabird necropsy, bolus sorting, diet sample, colony monitoring)

Project Write-Up: 20%

(individual analysis and write-up of a research project, involving data analysis and synthesis, selected with the instructor)

Oral Review Presentation: 10%

(20-minute oral presentation of the literature review)

Comprehensive Final Exam: 30% (Including a take-home exam)

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Thus, all students enrolled in MARS 6040 will complete the following activities and assignments:

- 1) Take four quizzes
- 2) Perform a necropsy of a seabird
- 3) Participate in a field survey of seabirds with the class
- 4) Participate in the monitoring of a seabird colony with the class
- 5) Write an individual research paper: 5 - 6 pages (plus figures and tables)
- 6) Present project results: 20 minutes
- 7) Complete a comprehensive class and take-home final
- 8) Attend a field trip to a seabird colony

Research Project Report (*for graduate students only*): Students will analyze data compiled as part of the class activities and will give an educational 15 minute lecture to the class using MS Powerpoint on an overhead projector. The presentation will be followed by 5 minutes of Q&A and discussion. Presentations will be graded on the basis of their content (organization, synthesis), format (oral delivery, presentation slides) and the student's mastery of the subject matter.

GRADING SCALE:

A =	93% - 100%
A- =	90% - 92%
B+ =	87% - 89%
B =	83% - 86%
B- =	80% - 82%
C+ =	77% - 79%
C =	74% - 76%
C- =	73% - 70%
D+ =	67% - 69%
D =	60% - 66%
F =	Less than 60%

COURSE POLICIES:

- Missing class will harm your participation score and performance in the course. While there is no attendance requirement, I expect to receive an explanation concerning any absences; preferably before they happen. Thank you.
- Make up examinations are NOT allowed. A make-up examination will only be considered if the following two conditions are met: (i) I must receive notification that you are experiencing a medical emergency PRIOR to the start of the missed examination, and (ii) documentation of the medical emergency must be provided by a licensed physician and received within 7 days of the missed examination. Otherwise, missed examinations will result in a grade of zero.
- You are expected to attend lecture and lab / field activities, to arrive to class on time and to turn your cell phones off. If you must take a call, please turn phone to “silent” or “vibrate” and leave the classroom before you answer.
- Laptops are allowed to take notes / view the lecture pdfs. This is a privilege which will be revoked if laptops are used for non-class activities (e.g., email / facebook). I will not be the cop... the class will police itself.

OTHER UNIVERSITY POLICIES:

Academic Honesty:

Students are expected to comply with HPU’s academic honesty policies and are furthermore required to internalize the principles of scientific integrity. In particular, it is academically dishonest to **plagiarize** (i.e., pass off someone else's intellectual work as your own). Directly quoting others, even with proper attribution of the source, is never done in scientific writing, so **there are no circumstances in which including someone else’s writing in your paper will be acceptable.**

All students are expected to comply with HPU’s academic honesty policies. Any infringement can result in a grade of “F” for the course. Furthermore, students are required to understand the reasons for this policy and internalize the principles of scientific integrity. All students will follow these guidelines:

- It is academically dishonest to try to pass off someone else's intellectual work as your own, or to help someone else to do so.
- All research results must be documented with laboratory notebooks, computer files of raw data.
- All work must be original.
- Data analysis and results must include clear and accurate descriptions of the methods; the results of others must be clearly identified, and the appropriate sources must be cited.
- If you use published materials (for facts, statements, images, data, etc.) in completing an assignment, credit must be given by citing the source – failure to properly cite sources is considered plagiarism.
- Directly quoting others is not acceptable in scientific writing. Thus, there are no circumstances in which including someone else’s writing in your papers is permissible.

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For more information on what constitutes plagiarism, see the links in Campus Pipeline, under the Libraries folder. Purdue University's Online Writing Lab provides excellent advice on how to avoid committing plagiarism: www.owl.english.purdue.edu/handouts/research/r_plagiar.html

Hawaii Pacific University provides a learning environment based upon academic excellence and integrity. In this course, it is expected that you will adhere to all Hawaii Pacific University guidelines regarding academic dishonesty. It is Hawaii Pacific University policy that any act of Academic Dishonesty will incur a penalty up to and including expulsion from the University. Any student who cheats on an academic exercise, lends unauthorized assistance to others, or who hands in a completed assignment that is not his or her work will be sanctioned. The term "academic exercise" includes all forms of work submitted for credit or points. Please see the Student Handbook for the full policy.

If you copy another student's assignment or use their homework or test to guide your work, each will receive a grade of "0" for that assignment and may receive an automatic "F" for the course. Any single occurrence of academic dishonesty in any form whatsoever may result in a grade of "FD" for the course. The grade of "FD" represents an "F" for academic dishonesty and it will remain a permanent part of your academic record, and is not subject to HPU's normal retake policy. Depending on the severity of the case, a single event of academic dishonesty may result in either a zero on the assignment for everybody involved, an "F" in the course, or expulsion from the University.

If you unclear on what is and what is not plagiarism, please discuss it with me. All major writing assignments will be analyzed at Turnitin.com. For homework problems and any other take-home assignment, students may work with each other but must turn in their own answers to assigned problems. For additional information on plagiarism see the links in Campus Pipeline under the Libraries folder. Another excellent site explaining plagiarism (and how to avoid committing it) can be found at the Council of Writing Program Administrators website: <http://www.wpacouncil.org/node/9>

Special Needs Policy:

Under the Rehabilitation Act of 1973 (Section 504), the Americans with Disabilities Act, Title III (Public Accommodations) and Title V (Employment), and the Hawai'i Fair Employment Practice Law, Hawai'i Pacific University does not discriminate against individuals with disabilities. HPU will make reasonable accommodations in its policies, practices and procedures in order to: 1) allow students with disabilities to benefit from the services and facilities offered by the University and 2) employ otherwise qualified individuals with disabilities who are able to do essential tasks of specific jobs. HPU will accommodate known disabilities, unless to do so would impose an undue hardship. This is interpreted to mean significant difficulty (fundamentally altering the nature of the services and facilities provided by the University) or expense.

Note: Any student with a documented disability who would like to request accommodations should contact the University Disability Services Office (933-0816 (V), 933-3334 (TTY), Campus Center Room 311) as early in the semester as possible.

Last Updated: August 15, 2018

Counseling and Behavioral Health Services:

The Counseling and Behavioral Health Services (CBHS) department provides FREE and CONFIDENTIAL counseling services to current registered HPU students including the following counseling services: individual; couples; family; crisis Intervention; consultation services for students, parents, faculty and staff; grief and loss. To schedule an appointment or for more information, please contact the Academic Advising & Behavioral Health office at either of the following: DOWNTOWN (808) 544-1198 or HAWAII LOA (808) 236-3578. The CBHS department can also be reached by email at: counseling@hpu.edu. They are unable to take appointments online or through email. All appointments must be scheduled by calling the numbers listed above. If this is an emergency, please call 911 or go to the nearest emergency room or hospital.

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CLASS SCHEDULE OF LECTURE / LAB / FIELD TOPICS

(August 31 – December 7, 2016)

This is a tentative schedule, which may speed up / slow down as needed, to keep up with student learning and performance. Revised schedules will be posted periodically, throughout the semester.

Note: There will be several opportunities to go on fieldtrips, during non-class times. Every student will go on at least one field trip. If you can only make one trip, I suggest you come out to Kaena Point.

Last Day to Drop Classes with 100% Tuition Refund - Sunday, September 2, 2018

Last Day to Drop Classes without W Grade - Sunday, September 23, 2018

date	week	lecture	Lecture	field	lab
31-Aug	1	1	Course Introduction		Seabird Survey Methods
		2	Taxonomy and Phylogeny		
7-Sep	2			Field Survey	Field Survey Intro
14-Sep	3	3	Flight / Plumage / Molt		Necropsy Safety Briefing
		4	Morphometrics Lab Intro		Seabird Morphometrics
21-Sep	4	5	Body Size / Allometrics		WTSH necropsies
		6	Morphology / Physiology		
28-Sep	5	7	Adaptations: Diving / Flying		WTSH necropsies
		8	Wing Loading Lab Intro		
5-Oct	6	9	Diving & Energetics		Wing Ecomorphology
12-Oct	7	11	Flight Energetics		WTSH diet sorting
		12	Diet LabIntro		
19-Oct	8	13	Foraging ecology (diets, feeding methods)		WTSH diet sorting
		14	Oceanographic habitats		
26-Oct	9	15	Pollution & toxicology		Bolus Sorting
		16	Plastic Ingestion Lab Intro		
2-Nov	10	17	Breeding biology 1 (nests, eggs, incubation)		Bolus Sorting
		18	Breeding biology 2 (development, investment)		
9-Nov	10	17	Life-History & Oceanography		
		18	Life-History & Fisheries Interactions		
16-Nov	12	19	Seabird Conservation		
	12	20	Introduction to Kaena Point (guest lecture)		
24-Nov	13			Kaena Point Field Trip	
30-Nov	14		Graduate Student Talks		
			Take-home Exam (2:45 – 5:00)		
			Undergraduate Student Talks		
7-Dec	15		Papers Due		OLC Annex