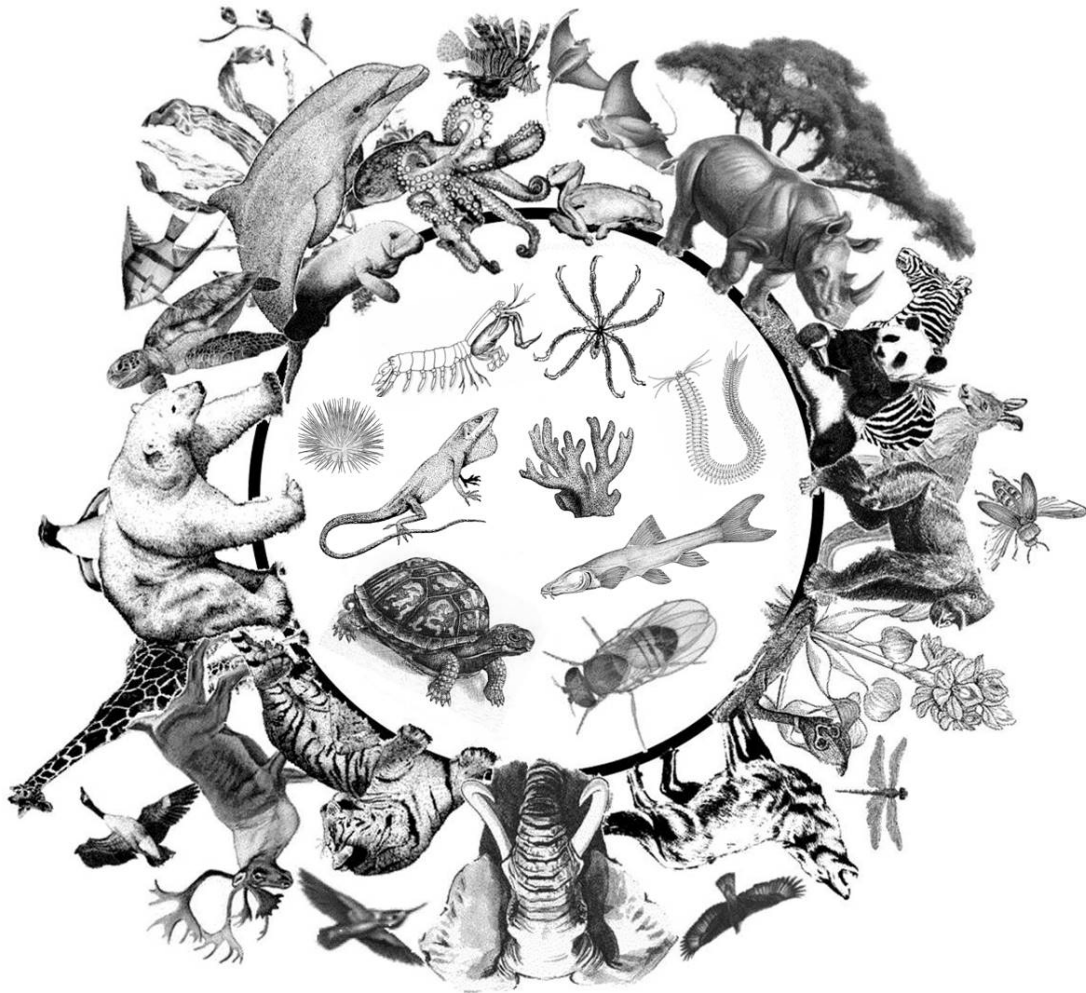


2022-2023*

Zoology Graduate Program Handbook

ESSENTIAL READING & REFERENCE for STUDENTS & FACULTY



School of Life Sciences



UNIVERSITY
of HAWAII®
MĀNOA

* REVISED. Supersedes all previous editions. Note NEW guide to ZOOL 691, 699, 700, 700F, and 800, and NEW comprehensive exam guidelines appended at end of handbook.

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IMPORTANT 2022-2023 UPDATES and REMINDERS

Here are the most **important updates**:

1. All **campus-level graduate forms** are now to be filled-out on-line: <https://manoa.hawaii.edu/graduate/forms/> . **Program-level forms** are still available to download from our program web page: <https://manoa.hawaii.edu/biology/graduate/forms> or <https://manoa.hawaii.edu/lifesciences/graduate/zoology-graduate-program/>
2. The Graduate Division is now more thoroughly enforcing rules regarding the **University Representative**, who must (a) be a level-3 graduate faculty member in another UHM graduate program (i.e., not Zoology), (b) have previously supervised a graduate student to the completion of their degree, and (c) be “at arm’s length” from other committee members (i.e., no spouses, conflicts of interest, etc.). Be sure to submit **Form 2A** for Graduate Division approval of your committee *before* your first committee meeting.
3. The **COVID-19 pandemic** will continue to affect all aspects of graduate education. With novel variants of the virus, conditions and rules are changing rapidly. Please use these links to follow updates on pandemic policies for the [UH System](#) in general and the [UH Mānoa](#) campus.

Here are **important reminders** of requirements that are often overlooked (see cited sections for details):

- (1) [Annual graduate student reviews](#) (Chapter 7-II) are conducted on the basis of the prior academic year. The 2021-2022 annual review reports will be **due on 19 September 2022**. First year students are exempt.
- (2) After the first year in the program, **all graduate students must do the following every year:**
 - (a) take a biology-related course, (b) meet with their committee, and (c) give a public presentation (Chapter 6-I-A).
- (3) After the first year in the program, graduate students and advisors must submit an [Annual Graduate Committee Meeting Report](#) form to the Chair of the Graduate Instruction Committee (Chapter 6-I and 7-II).
- (4) The [University Representative](#), who ensures that the student is treated fairly by the committee, must (a) be a level-3 graduate faculty member in another UHM graduate program (i.e., not Zoology), (b) have previously supervised a graduate student to the completion of their degree, and (c) be “at arm’s length” from other committee members (i.e., no spouses, conflicts of interest, etc.) (Chapters 2-IV and 6-I).
- (5) A [Graduate Assessment Form](#) completed by the graduate committee must be submitted with Form 2 and Form 3 (Chapter 7-III).
- (6) Graduate students are automatically placed on **academic probation** by the Graduate Division after 7 years from starting the program (Chapter 4-I), or if the GPA drops below 3.0.
- (7) For clarity regarding ZOOL 700, 700F, and 800, please see the guide to these courses appended to this handbook.
- (8) The Graduate Division has a policy that graduating PhD students must complete the [Survey of Earned Doctorates](#) (Chapter 6-III).
- (9) The Graduate Division has a policy that MS Plan A and PhD graduates must publish their thesis or dissertation via [ProQuest](#) (Chapter 6-III).

PREFACE

E komo mai (Welcome) to the Zoology Graduate Program at the University of Hawai'i at Mānoa! The success of our program depends on our graduate students and faculty diligently making use of this handbook. We especially seek constructive feedback on what is and is not working. We intend to revise this handbook annually, so please send suggestions for additions and improvements over the course of the academic year. Our primary goal is to facilitate graduate education and research in zoology.

ACKNOWLEDGMENTS

Many faculty and graduate students have been involved in revising the Zoology Graduate Program, yet I especially thank the all-volunteer Ad Hoc Committee for the Revision of the Biology/Zoology Graduate Program (AH-CR-BZ-GP, pronounced "Ah Crap, Busy Goop"): former Chair of the former Department of Biology (ex officio) Dr. Andy Taylor, Drs. Peter Marko, Amy Moran, Bob Thomson, and Amber Wright from Biology, Dr. Rob Cowie from the Pacific Biosciences Research Center (PBRC), and Dr. Rob Toonen from the Hawai'i Institute of Marine Biology (HIMB). Also very helpful have been all Graduate Student Representatives, School of Life Sciences staff, especially Pia Dizon and Anastasia Lagmay, and the staff of the Graduate Division.

Mahalo to all! -- Mark Hixon, Zoology Graduate Chair

QUICK GUIDE TO STARTING GRADUATE SCHOOL FOR NEW STUDENTS

(see also the Appendix for additional information)

E komo mai (Welcome) to the Zoology Graduate Program (ZGP) at UH Mānoa! The [School of Life Sciences](#) administers this program. This quick guide is designed to help you get started. **If you have any questions, you should first check this handbook thoroughly**, then ask (in sequence) your graduate advisor, the ZGP Academic Support (zoolgrad@hawaii.edu), and Dr. Mark Hixon (ZGP Chair: hixonm@hawaii.edu), including your advisor in your e-mail message. Here are your first steps:

(1) **Statement of Intent to Register (SIR):** Submit your SIR to the Graduate Division (GD). This statement was attached to your letter of admission. To submit your SIR, you may either e-mail the GD at gradsir@hawaii.edu and let them know you are planning to enroll, or postal mail the SIR form (attached to your letter of admission from the GD). Please include your full name, UH ID#, and graduate program (Zoology).

(2) **MyUH:** Go on-line to myuh.hawaii.edu to set-up **your UH e-mail** and UH username accounts. This can be done as soon as you have accepted the offer to enter our program from the GD, even before you move to Hawai'i. You will need either your UH Number (from the acceptance letter you received) or your Social Security Number. Please be sure to send your new UH e-mail address to the Manager of the School of Life Science Pia Dizon (pdizon@hawaii.edu), ZGP Academic Support (zoolgrad@hawaii.edu), ZGP Chair Dr. Mark Hixon (hixonm@hawaii.edu), and your graduate advisor. Also, be sure to submit your [Health Clearance](#) form as you cannot complete registration without it.

(3) **Registration and Tuition:** Please check your [MyUH](#) account regularly for information regarding registration via the [STAR online system](#), payment of any fees via your student account, and much more. The Graduate Division provides specific information for [graduate registration](#), and the [Academic Calendar](#) lists various deadlines. **Fall 2022 registration** for new graduate students begins **May 31**. You should register for **ZOOL 691C** "Seminar: Zoology Literature," which is a required one-credit scientific skills orientation for new graduate students. (The analogous course in the Marine Biology Graduate Program is MBIO 691I.) **Fall 2022 classes** start Monday, **August 22**. The Graduate Division's online [Virtual New Student Orientation](#) is **August 8-15**.

(4) **UH Identification Card:** Once you have registered and have any printed proof of registration as well as your personal ID, please go to the window at the Campus Center (above the bookstore – see [campus map](#)) to obtain your UH ID card. If you are interested, ask for a bus pass sticker for your card (bus fare included in your fees).

(5) **Teaching Assistants and Graduate Fellows:** If you applied for and were granted a TA-ship, please see Pia Dizon (pdizon@hawaii.edu) in the School of Life Sciences office (Edmondson 216) for employment paperwork, which includes insurance. You will be contacted regarding a required [TA Training](#). If you are an NSF Graduate Research Fellow or have any scholarship or fellowship, please contact and introduce yourself to Kristen Connors (connors@hawaii.edu), who is the Scholarships and Fellowships Coordinator at the Graduate Division. Note that international students cannot be paid until they have Social Security Numbers.

(6) **Keys and Mailbox:** All Zoology graduate students are entitled to a card key that opens the second floor door to Edmondson Hall and the mailroom (Edmondson 214), where you will have a mailbox. Any

additional keys you are authorized to have will be determined and arranged by your graduate advisor and your TA supervisor. Before you are authorized to have additional keys, you must have completed or be registered to take the [Lab Safety Training](#) course. You will be notified when your keys can be picked-up at the School of Life Sciences office (Edmondson 216).

(7) Interim Committee Meeting: Your interim committee is intended to help you address any course deficiencies and plan your graduate curriculum until you have formed your specific graduate committee. You will be notified which faculty will be serving on your interim committee, and you will be responsible to schedule that meeting early during your first semester. At that meeting, you and your interim committee will fill-out the relevant [Form 1](#) and the [Interim Committee Report Form](#), then submit them to Zoology Graduate Chair Dr. Hixon.

(8) Ultimate Source of Help: School of Life Sciences Manager Pia Dizon (pdizon@hawaii.edu) is your initial contact for all the following university business:

- general inquiries
- schedule of classes, instructor changes
- course evaluations
- transfer credit requests
- vehicle reservation request
- seminar series announcements
- other announcements to disseminate to SLS group
- general academic/instruction inquiries
- fiscal matters (KFS, PCARDS)
- grant assistance (MyGrant, ORS, RCUH)
- request for high dollar purchase (SuperQuotes, Sole Source, etc.)
- new hires/terminations, other personnel requests
- GA support appointments (RA/TA appointments for fiscal verification)
- building and key requests/access
- capital asset inventory
- travel requests and reimbursements
- building issues and repairs
- request for van rentals, parking permits, etc.
- grad Admissions process
- TA/RA assignments

And, finally,...

On-line is a list of UH Mānoa [Student Basic Needs](#). Additional helpful resources are in the **Appendix** of this handbook, including specific help for **international students**. And, of course, do make use of the **Zoology Graduate Program Quick Reference Guide**, starting on the next page.

ZOOLOGY GRADUATE PROGRAM QUICK REFERENCE GUIDE

This guide does not replace the handbook, but rather provides quick reference for using the handbook. DO NOT RELY ON OLD VERSIONS OF THE HANDBOOK! (See also Appendix I: FAQs)

There are 2 sets of rules and procedures: (1) university-level (administered by the [Graduate Division \[GD\]](#)) and (2) program-level (administered by the [School of Life Sciences](#)):

(1) Graduate Division Rules & Guidance: <https://manoa.hawaii.edu/graduate/content/current-students> and [Style and Policy Manual for Theses and Dissertations](#), as summarized in this handbook.

(2) Zoology Program Rules & Guidance: this handbook.

Graduate Committee Composition: Please refer to Chapter 2 on [Graduate Faculty Policies](#). Level 3 faculty may advise PhD and MS students, Level 2 faculty may advise only MS students, and Level 1 faculty may serve on graduate committees but not be advisors. Note that only Level 3 non-Zoology graduate faculty may serve as **University Representatives (URs)**. According to the GD, both the graduate advisor and the URs must be “at arms length” from the rest of the committee (i.e., no spouses, etc.). Additionally, the UR must have previously supervised a graduate student to the completion of their degree. The majority of the committee must be [Zoology Graduate Faculty](#). You are expected to work with your advisor to form your committee by the end of your first year in graduate school. Doctoral students will submit [Form 2A](#) once the committee is selected, but *before* the first committee meeting. For further information: <https://manoa.hawaii.edu/graduate/content/select-committee-member>

Coursework and Degree Requirements: Please refer to Chapter 6 on **Graduate Curriculum Policies**. The Zoology Graduate Program requires that new students take **ZOOL 691C** (a scientific skills orientation seminar) during their first Fall Semester, and all students take at least one credit of biology-relevant graduate seminars or other coursework each year. The [GD](#) has more specific requirements that are MANDATORY regarding [course loads](#), [academic progress](#), and each graduate degree:

Master’s Plan A (thesis): <https://manoa.hawaii.edu/graduate/content/masters-plan>

Master’s Plan B (non-thesis): <https://manoa.hawaii.edu/graduate/content/masters-plan-b>

PhD: <https://manoa.hawaii.edu/graduate/content/doctorate>

Key Graduate Forms: Fill-out, sign, and submit (preferably digitally) *in numerical sequence* to the Graduate Chair (*not* to the Graduate Division):

[Form 1](#): For **PhD and Master’s Plan A (thesis) and Plan B (non-thesis)**, this **Pre-Candidacy** form is used for the first-year **interim committee meeting** for identifying and remediating any course deficiencies. The program will contact you regarding your interim committee meeting. For a list of undergraduate courses that all graduate students should have taken or remediated, see Chapter 3-V. Be sure to also fill-out the associated **Interim Committee Report Form**.

[Form 2A](#): For **PhD** only, this **Dissertation Committee Approval** form is used for pre-approval of the PhD committee. Submit this form *before* the first committee meeting.

Form 2:

- For **PhD**, this **Advance to Candidacy** form is used to appoint the dissertation committee officially and report the outcome of the comprehensive exam and dissertation proposal meeting.
- For **Master's Plan A**, this **Advance to Candidacy** form is used to appoint the thesis committee officially and approve the research topic.
- For **Master's Plan B**, this **Degree Completion** form is used following the research paper and/or presentation date.

Form 3: **PhD Dissertation Evaluation** or **Master's Plan A Thesis Evaluation** form is used to report the outcome of the dissertation or thesis defense.

Assessment Form: **PhD and Master's Plan A (thesis)** students have two assessments: The **initial** assessment is to be conducted at advancement to candidacy meeting (with Form 2), and the **final** assessment is to be conducted at the dissertation or thesis defense (with Form 3). **Master's Plan B (non-thesis)** students have only a **final** assessment at the degree completion meeting (with Form 2).

Form 4: For **PhD or Master's Plan A**, this **Dissertation or Thesis Submission** form replaces the dissertation or thesis signature page.

Other Actions Requiring Forms: Fill-out, sign, and submit digitally directly to the Graduate Division (GD) (graduate.education@hawaii.edu):

Master's Plan A:

[Master's Petition to Enroll in GRAD 700F](#): submit to GD

PhD:

[Final Oral Examination for Doctoral Dissertation Defense](#): submit to GD at least 2 weeks before dissertation defense

MS and PhD:

[Graduate Application for Degree](#): This form must be submitted to the GD "no later than 3 weeks after instruction begins during the semester of graduation and no later than June 1 for the Summer Session."

Petitions Requiring Memos from the Graduate Chair to the GD: The graduate advisor should send an e-mail of explanation to the Graduate Chair (hixonm@hawaii.edu) to request any of the following actions:

- to extend a thesis or dissertation submission date (see [Academic Calendar](#) for deadlines)
- to add a non-UH graduate committee member (*permanently*) – include the person's current CV
- to replace a graduate committee member with an ad-hoc committee member (*temporarily*) – include the person's current CV (the GD prefers that regular graduate faculty be used)
- to be awarded an MS degree (Plan B non-thesis) *en route* to a PhD (for PhD students only)
- to transfer between degree programs (MS A to MS B, MS B to MS A, or PhD to MS A or B). (Note that transferring from an MS to a PhD program requires one to apply to the Graduate Division.)

The Graduate Chair will then write a memo to the GD to seek approval for any of the above requests.

Other Petition Forms:

[Master's Petition to Revise Thesis Committee](#): submit to Graduate Chair

[Master's Petition for Remote Committee Participation](#): submit to GD: required only for the final defense (not the comprehensive exam)

[Doctoral Petition to Revise Dissertation Committee](#): submit to Graduate Chair
[Doctoral Petition for Remote Committee Participation](#): submit to GD: required only for the final defense (not the comprehensive exam) – NOTE: With COVID-19, all committee meetings are currently online – there is no need to petition remote participation.
[Petition for Leave of Absence](#) (see on-line instructions)
[Petition to Transfer Credits](#) (see on-line instructions)
[Petition to Substitute or Waive Courses](#)
[Petition for Submission of Undergraduate Excess Credits Toward a Master's Degree](#)

Limits of Support and Time in Graduate School: The Zoology Graduate Program guarantees to the extent possible a minimum of 5 yr of support (6 yr max TA support) for PhD students and 2 yr of support (3 yr max TA support) for MS students who are making adequate progress based on annual reviews. (The GD automatically places graduate students on [academic probation](#) after 7 yr, yet you are expected to graduate well before then, and the program may put you on probation before 7 yr if necessary.)

Review and Assessment: Please refer to Chapter 7 on **Graduate Review and Assessment Policies**. By **19 September 2022**, each graduate student (except first-year students) will submit to the Chair of the Graduate Instruction Committee Dr. Rob Cowie (cowie@hawaii.edu) a checklist and curriculum vitae for the 2021-2022 (past) academic year, using the special form available [on-line](#). Following your annual review, you and your advisor must sign and return your annual review report by **30 April 2023**. Preliminary and final assessments will use forms provided during graduate committee meetings associated with [Forms 2 and 3](#).

Graduate Timetables (next pages):

PLEASE PRINT AND POST THE RELEVANT VERSION AT YOUR DESK!!!!...

Timetable for Master's Plan A (thesis)*:

First Fall Semester	<ul style="list-style-type: none"> • ZOOL 691C orientation seminar (see Ch 6, Sec IA) • Interim Committee meeting (MS plan A Form 1 & Interim Committee Report Form)
By end of year 1	<ul style="list-style-type: none"> • choose & meet with thesis committee to approve thesis proposal (MS plan A Form 2) and have initial assessment (see Ch 7 for Assessment Form).
By end of year 2	<ul style="list-style-type: none"> • complete coursework requested by Interim Committee and thesis committee
Year 2 and every year until graduation	<ul style="list-style-type: none"> • submit annual progress report to GIC (see Ch 7) • meet with thesis committee & submit Annual Graduate Committee Meeting Report Form (see Section 1A) • give public presentation (see Ch 6, Sec IA) • enroll for at least 1 credit of biology-relevant graduate seminars or other coursework (see Ch 6, Sec IA)
By end of year 3 (5 years maximum): Graduation Checklist	<ul style="list-style-type: none"> • in final semester, enroll in at least 1 credit of ZOOL 700 or 1 credit (only) of 700F • apply to GD for degree no later than 3 weeks after instruction begins during the semester of graduation and no later than June 1 for the summer session (Graduate Application for Degree Form) • submit thesis to committee for review at least 2 weeks before defense, or earlier if requested by the committee • defend thesis (MS plan A Form 3) and have final assessment (see Ch 7 for Assessment Form) • submit thesis to Zoology Graduate Program and GD (MS plan A Form 4) • complete GD graduation requirements (Ch 6-III)

* All forms are available on the Zoology Graduate Program [web page](#) and on the Graduate Division [web page](#).

Timetable for Master's Plan B (non-thesis)*:

First Fall Semester	<ul style="list-style-type: none"> • ZOOL 691C orientation seminar • Interim Committee meeting (MS plan B Form 1 & Interim Committee Report Form)
By end of year 1	<ul style="list-style-type: none"> • choose & meet with advisory committee to approve research proposal
By end of year 2	<ul style="list-style-type: none"> • complete coursework requested by Interim Committee and advisory committee
Year 2 and every year until graduation	<ul style="list-style-type: none"> • submit annual progress report to GIC (see Ch 7) • meet with advisory committee & submit Annual Graduate Committee Meeting Report Form (see Section IA) • give public presentation (Ch 6, Sec IA) • enroll for at least 1 credit of biology-relevant graduate seminars or other coursework (Ch 6, Sec IA)
By end of year 3 (5 years maximum): Graduation Checklist	<ul style="list-style-type: none"> • apply to GD for degree no later than 3 weeks after instruction begins during the semester of graduation and no later than June 1 for the summer session (Graduate Application for Degree Form) • present research report to advisory committee (MS plan B Form 2) and have final assessment (see Ch 7 for Assessment Form) • complete GD graduation requirements (Ch 6-III)

* All forms are available on the Zoology Graduate Program [web page](#) and on the Graduate Division [web page](#).

Timetable for PhD*:

First Fall Semester	<ul style="list-style-type: none"> • ZOOL 691C orientation seminar (see Section IA) • Interim Committee meeting (PhD Form 1 & Interim Committee Report Form)
By end of year 2	<ul style="list-style-type: none"> • choose & meet with dissertation committee to approve dissertation proposal (PhD Form 2A) and have initial assessment (see Chapter 7 for Assessment Form) • complete coursework requested by Interim Committee and dissertation committee
Within 1 year of submitting Form 2A	<ul style="list-style-type: none"> • oral comprehensive exam and advance to candidacy (PhD Form 2) – see guide appended to handbook
Year 2 and every year until graduation	<ul style="list-style-type: none"> • submit annual progress report to GIC (see Ch 7) • meet with dissertation committee & submit Annual Graduate Committee Meeting Report Form (see Ch 6, Sec IA) • give public presentation (see Ch 6, Sec IA) • enroll for at least 1 credit of biology-relevant graduate seminars or other coursework (see Ch 6, Sec IA)
By end of year 5 (7 years maximum): Graduation Checklist	<ul style="list-style-type: none"> • in final semester, enroll in at least 1 credit of ZOOL 800 • submit dissertation to committee at least 4 weeks before defense • apply to GD for degree no later than 3 weeks after instruction begins during the semester of graduation and no later than June 1 for the summer session (Graduate Application for Degree Form) • notify GD of defense time & place at least 2 weeks before defense (Dissertation Defense Form) • defend dissertation (PhD Form 3) and have final assessment (see Ch 7 for Assessment Form) • submit dissertation to Zoology Graduate Program and GD (PhD Form 4) • complete GD graduation requirements (Ch 6-III)

* All forms are available on the Zoology Graduate Program [web page](#) and on the Graduate Division [web page](#).

Ultimate Source of Help: School of Life Sciences Manager Pia Dizon (pdizon@hawaii.edu) is your initial contact for all the following university business:

- general inquiries
- schedule of classes, instructor changes
- course evaluations
- transfer credit requests
- vehicle reservation request
- seminar series announcements
- other announcements to disseminate to SLS group
- general academic/instruction inquiries
- fiscal matters (KFS, PCARDS)
- grant assistance (MyGrant, ORS, RCUH)
- request for high dollar purchase (SuperQuotes, Sole Source, etc.)
- new hires/terminations, other personnel requests
- GA support appointments (RA/TA appointments for fiscal verification)
- building and key requests/access
- capital asset inventory
- travel requests and reimbursements
- building issues and repairs
- request for van rentals, parking permits, etc.
- grad Admissions process
- TA/RA assignments

Chapter 1

INTRODUCTION

I. Overview

E komo mai (Welcome) to the Zoology Graduate Program (ZGP) at the University of Hawai'i at Mānoa (UHM)!

The ZGP is an interdisciplinary program administered by the School of Life Sciences (please see the **organizational chart** at the end of this chapter). The program offers PhD, MS Plan A (thesis), and MS Plan B (non-thesis) degrees, and includes faculty and graduate students from the School of Life Sciences and various other units on campus. Teaching assistantships for graduate students in the program are provided and administered by the School of Life Sciences.

This handbook is intended to provide essential and concise information for both faculty and graduate students to succeed in the program with minimal difficulty, so **please read this handbook outright then refer to it as needed. It is the shared and equal responsibility of both the faculty advisor and the graduate student to follow the rules and procedures of the Graduate Division and the Zoology Graduate Program.** Please be sure to use only the latest edition of the handbook, which will always be available on-line:

manoa.hawaii.edu/biology/graduate/guides.

The handbook is digital to take advantage of many relevant web links. Constructive suggestions for improvement of the handbook are always welcome – please send your ideas to the key contacts listed on the organizational chart.

II. Graduate Division (GD)

It is essential to keep in mind that all graduate programs on campus must follow the rules and procedures of the UHM Graduate Division (GD). These rules and procedures are revised on occasion, so the ultimate word on university-level policies will always be the GD web page:

<https://manoa.hawaii.edu/graduate/>.

When the GD makes graduate curricular changes, current student can choose whether to follow rules and procedures from the academic year they entered (“grandfathered”), or follow the new rules and procedures. Students must follow **all** rules and procedures for the academic year they choose; you may not “pick and choose” between years.

Note that rules and procedures specific to the Zoology Graduate Program are included in this handbook, which will be revised annually. Please be sure that you refer to the most recent version of this handbook.

III. Professional Conflict

Conflict is inevitable in most human endeavors, and our goal is to prevent simmering conflicts from festering into major grievances. Regardless of what combination of students, faculty, or staff are involved, unresolved conflict is anathema to a successful graduate program.

It is imperative to keep in mind that the graduate advisor-advisee relationship is a mutually voluntary mentor-apprentice arrangement. If either the major professor or the graduate student face difficult challenges with the other, it is important to seek help for resolution.

IMPORTANTLY, if a graduate student has a conflict with their graduate advisor, they have recourse. There are allies available to help graduate students who are facing major issues with their advisors, and there is no need to suffer in silence and fear for one's future career just because of a conflict with a faculty member.

Regardless of who is involved in the conflict, the Chair of the Zoology Graduate Instruction Committee (Dr. Rob Cowie, cowie@hawaii.edu), the Chair of the Zoology Graduate Program (Dr. Mark Hixon, hixonm@hawaii.edu), the Interim Director of the School of Life Sciences (Dr. Clifford Morden, cmorden@hawaii.edu), and the Deans of the Graduate Division (Dean Krystyna Aune, krystyna@hawaii.edu, and Associate Dean Julianne Maeda, julienne@hawaii.edu) are all available for consultation. Such meetings may be joint or private, and may be open or confidential at your request, yet by law cannot be confidential in the case of [Title IX](#) issues, cases of workplace violence, etc.

If grievances persist, then formal, campus-level action may be required.

- Procedures for graduate student grievances, excluding Title IX issues: www.manoa.hawaii.edu/graduate/content/graduate-student-grievances
- Procedures for Title IX issues involving discrimination or sexual harassment: manoa.hawaii.edu/titleix

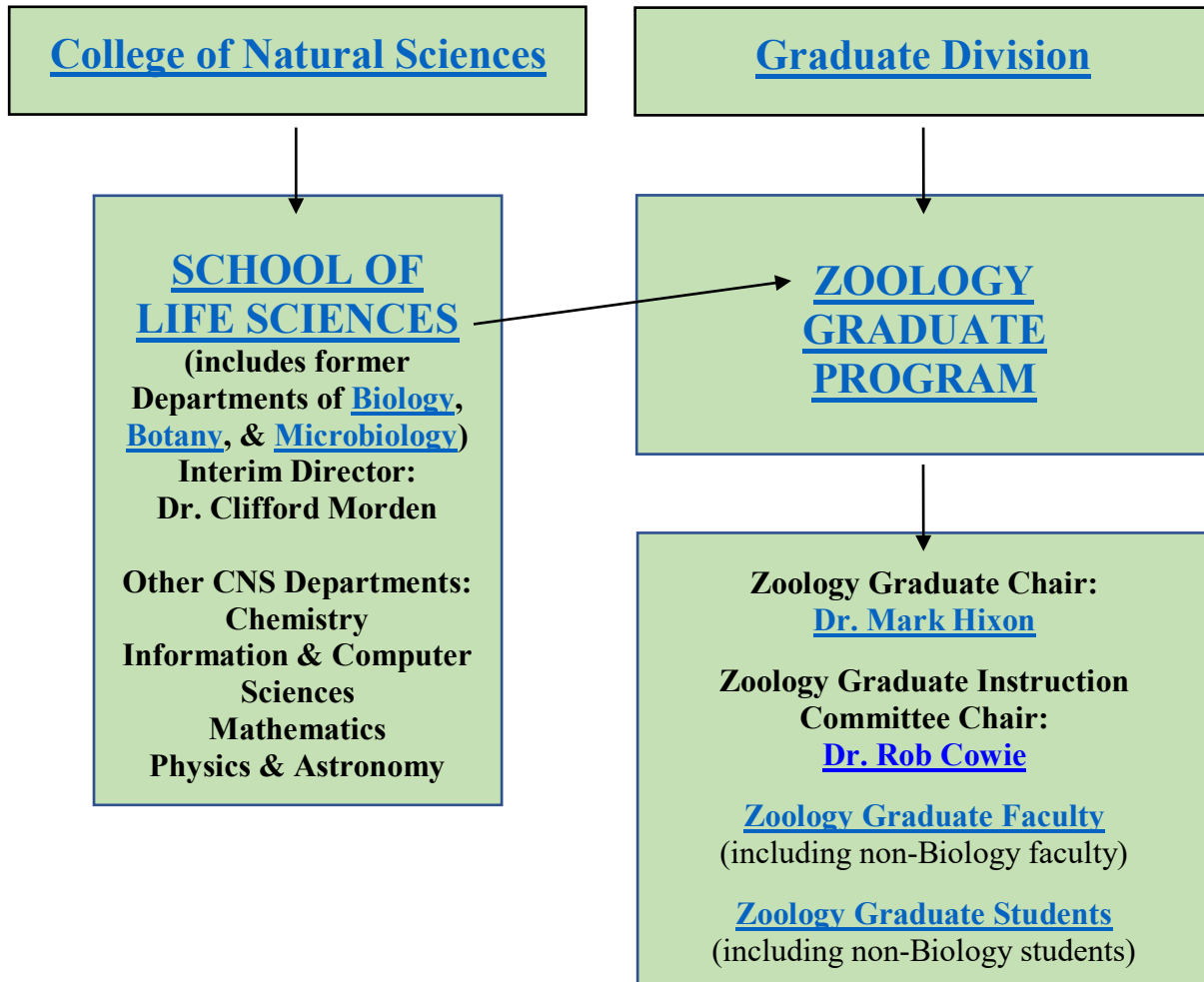
It is important for anyone who witnesses or experiences harassment of any form to contact the [Office of Title IX](#) immediately. UH offers free on-line [Title IX training](#) for students and employees.

The [UH Whistleblower Hotline](#) (1-855-874-2849) was launched to encourage and enable any member of UH or the general public to make good faith reports of misconduct. University of Hawai'i students, faculty and staff have an important resource to confidentially report violations of laws, rules, regulations and UH policies. If you observe or suspect any fraud, waste, abuse, or other conduct you believe is in violation of the University's policies or other laws, rules, or regulations, you are encouraged to report your concerns.

The University of Hawai'i is an equal opportunity/affirmative action institution and is committed to a policy of nondiscrimination on the basis of race, sex, gender identity and expression, age, religion, color, national origin, ancestry, disability, marital status, arrest and court record, sexual orientation, or status as a covered veteran. This policy covers admission and access to, and participation, treatment, and employment in the University's programs, activities, and services. For more information on equal employment opportunity, affirmative action, Title IX and ADA/Section 504 Coordinators, and University complaint procedures, visit the following website: www.hawaii.edu/offices/eoo/, or call (808) 956-8753.

Organizational Chart & Important Contacts (with links)

NOTE: The Zoology Graduate Program is administered by the School of Life Sciences.



Important Contact Information

[Dr. Mark Hixon](#) (Zoology Graduate Chair):

hixonm@hawaii.edu, 808-956-6427, Edmondson 417

[Dr. Rob Cowie](#) (Zoology Graduate Instruction

Committee Chair):

cowie@hawaii.edu, 808-956-4909, Gilmore 408

[Pia Dizon](#) (Program Manager):

pdizon@hawaii.edu, 808-956-7315, Edmondson 216

[Valentina Alvarez](#) (Interim Grad Student Rep):

val64@hawaii.edu

[Spencer Alascio](#) (Interim Social Activities Rep):

salascio@hawaii.edu

School of Life Sciences Main Office (general inquiries):

lifesci@hawaii.edu, 808-956-8303, Edmondson 216

Chapter 2

ZOOLOGY GRADUATE FACULTY POLICIES¹

I. Categories of Graduate Faculty as defined by the UHM Graduate Division (GD) manoa.hawaii.edu/graduate/content/types-levels, with additional explanation provided by the Associate Dean of the GD, and with details added by the Zoology Graduate Program:

Levels:	3 (formerly “Full”): can chair PhD and MS committees (& cannot be a Zoology University Representative):	2 (formerly “Associate”): can chair MS but not PhD committees (& cannot be a Zoology University Representative):	1* (Emeritus & Affiliate Graduate Faculty): can serve on MS and PhD committees, but not chair committees (& cannot be a Zoology University Representative):
Types:			
Regular UHM faculty whose locus of employment is an academic unit (i.e., former Department of Biology):	all faculty in former Department of Biology (tenure-track) (subject to periodic review; see section III).	Not currently used , but may be implemented in the future.	Emeritus former Department of Biology faculty (GD requires only a copy of the emeritus appointment letter to change former regular faculty to emeritus faculty & allow continued service on committees.)
Cooperating UHM faculty whose locus of tenure is in a “non- host” unit (e.g., PBRC, HIMB) or another UH campus (i.e., UHH):	non-Biology, tenure- track UH faculty by nomination from graduate faculty in former Department of Biology to GD (subject to periodic review; see section III); these are level 3 graduate faculty in their home graduate program (e.g., MBIO, NREM, OCN).	non-Biology, non- tenure-track (e.g., soft- money) UH faculty by nomination from graduate faculty in former Department of Biology to GD (subject to periodic review; see section III), and who are level 2 graduate faculty in their home graduate program (if applicable).	not employed by UH but qualified to serve on Zoology graduate committees. Faculty who have resigned or retired from UH (including non-Biology emeritus faculty) may be reappointed as affiliate graduate faculty .

* Note from the GD: Faculty who retire and are awarded emeritus status may continue to chair the committees of their graduate students who advanced to degree candidacy before the faculty member retired. Because consideration and awarding of emeritus status occurs well after retirement, any graduate students of newly retired faculty who have not yet advanced to degree candidacy should find new graduate advisors, and the former advisor may continue to serve on the committee.

¹ Approved by Biology Faculty 11 March 2016, with revisions by GD on 14 July 2017, with subsequent clarifications.

II. Appointment to Zoology Graduate Faculty:

Graduate Division policy: *The nomination of a graduate faculty member should have the support of the majority of the program's graduate faculty and are also recommended by the School Director. A graduate faculty appointment must be re-established if the home program changes (i.e., faculty member leaves one department for another at UHM) or if their status at UH changes (e.g., resignation, retirement). Review of all program graduate faculty occurs concurrently with Program Review or following an accreditation visit.*

(manoa.hawaii.edu/graduate/content/types-levels)

Graduate Division policy: *UHM faculty (instruction, research, administration and specialist) at Rank 2 or above and distinguished scholars from the community at large may be nominated to the graduate faculty. As part of Act 208, all graduate faculty are now required to complete online Title IX training every two years. The certificate of completion (i.e., certificate or email of completion) should be submitted to the college/school HR office and to the Graduate Chair, unless otherwise noted.*

(manoa.hawaii.edu/graduate/nomination-appointment-of-faculty)

Zoology Graduate Program Policy: Prospective cooperating and affiliate graduate faculty will submit a current CV and memo to the Zoology Graduate Chair explaining the reason for applying, what the candidate will add to the program, and agreeing to abide by the responsibilities of Zoology Graduate Faculty (see section III). The candidate will present a research seminar, and the Zoology Graduate Faculty will then vote on the candidate. If a favorable recommendation from the entire Zoology Graduate Faculty is approved by the Regular Graduate Faculty, then the nomination will be forwarded to the GD for appointment.

III. Responsibilities of Graduate Faculty:

A. Graduate Division Policy on Graduate Faculty Standards:

(manoa.hawaii.edu/graduate/content/standards-responsibilities):

The following is **official GD policy** (see below for additional Zoology Graduate Program responsibilities):

For level 3 (formerly full) graduate faculty status, #1, 2 & 3 must be maintained...and for level 2 (formerly associate) graduate faculty status, #1 & #2 OR #1 & #3 must be maintained:

- 1. To remain current in her or his field as demonstrated by active participation in department, college, university and national or international professional activities;*
- 2. To be active in scholarship as evidenced over a five-year span by two or more refereed publications...as appropriate to the field;*
- 3. To participate in teaching and guiding graduate students as demonstrated by participating in two or more of the following activities: teaching graduate level courses, serving on graduate student committees; providing financial support for graduate students; and serving on policy, examination, or program committees of a graduate program.*

B. General Expectations of Graduate Faculty: All Zoology Graduate Faculty are expected to (1) maintain active research programs by applying for research grants and publishing in peer-reviewed

outlets, (2) fund the research conducted by their graduate students, as needed, and (3) engage actively in mentoring graduate students in the program, which includes being aware of and abiding by the program policies as well as the policies of the Graduate Division, and ensuring that their graduate students do so.

C. *Periodic Graduate Faculty Review* [on hold until the Graduate Division develops guidelines]: All Zoology Graduate Faculty will be reviewed by the program every 5 years, and are expected to participate in the review process. These reviews are in addition to and independent of departmental/college five-year program reviews, periodic GD reviews of graduate faculty, and periodic reviews of tenured faculty by the Director of the School of Life Sciences. A **Faculty Review Committee** consisting of 3 Regular and 3 Cooperating faculty members will be elected by the Zoology Graduate Faculty (see section IIID for voting). The review process will consist of the faculty member submitting a summary of his/her accomplishments in graduate education, research, and service (both within the Zoology Graduate Program, including attendance and participation at graduate faculty meetings, as well as within the broader scientific community) over the past 5 years, as follows:

Graduate Teaching and Mentoring: Please list (1) all graduate courses, including seminars, taught or co-taught (including course number, title, semester, and year); (2) all graduate students advised, including their degrees and any graduation dates; (3) all service on graduate student committees, both at UH and at other universities; (4) other activities and awards relevant to graduate education.

Research: Please list (1) all publications and their status (published, in press, accepted) – do *not* include papers in preparation, submitted, or under review; (2) grants applied for and funding status, including sources and amounts; (3) research presentations both on and off-campus, including invited seminars at other institutions as well as presentations (talks or posters) at scientific conferences; (4) other activities and awards relevant to research.

Graduate Service: Please list all service on (1) Zoology Graduate Program committees (including semesters and years); (2) university, state, national, and/or international committees relevant to research; (3) scientific society committees relevant to research; (4) other activities and awards relevant to graduate service.

If deficiencies are identified, then dismissal from the program may be warranted. Alternatively, the Faculty Review Committee may work with the deficient faculty member to develop mutually acceptable remedial action. The Faculty Review Committee will submit recommendations to the Zoology Graduate Faculty, who will vote and pass recommendations to the Regular Graduate Faculty for subsequent petition to the GD.

D. *Graduate Faculty Meetings*: Every Regular and Cooperating faculty member of the Zoology Graduate Program must attend and participate in graduate faculty meetings, or provide a reasonable excuse to the Zoology Graduate Chair. Emeritus and Affiliate graduate faculty are encouraged to attend faculty meetings, yet are not required to do so. The Zoology Graduate Chair or designee will schedule and lead faculty meetings, taking roll call. A quorum will be one-half of the current total number of Regular and Cooperating Zoology Graduate Faculty. If a Regular or Cooperating graduate faculty member misses 3 consecutive meetings without good reason, then that member is subject to dismissal from the program.

E. **Graduate Faculty Voting:** Every Regular and Cooperating faculty member of the Zoology Graduate Program is expected to vote on program policy and actions when requested. Emeritus and Affiliate faculty are encouraged to participate in policy and action discussions, yet do not vote.

F. **Graduate Faculty Seminar:** If invited, every Regular and Cooperating faculty member of the Zoology Graduate Program must participate in the annual graduate scientific skills seminar (ZOOL 691C) for new students in the program offered each Fall Semester (organized by the Zoology Graduate Chair).

G. **Graduate Faculty Teaching and Service:** Every Regular and Cooperating member of the Zoology Graduate Program is expected to chair and/or serve on graduate student committees. Additionally, every **Level 3 (formerly Full) Regular and Cooperating Graduate Faculty** member of the Zoology Graduate Program must serve on Zoology Graduate Program committees and/or teach or co-teach graduate courses. **Level 2 (formerly Associate) and Level 1 (e.g., Emeritus and Affiliate) Graduate Faculty** members of the Zoology Graduate Program are encouraged to participate, yet are not required to do so. Specifically:

(1) **Service:** serve on any Zoology Graduate Program committee (e.g., Graduate Admissions, Graduate Instruction, Graduate Curriculum, Graduate Faculty Review, Graduate Program Steering) for at least 2 semesters every 5 years (i.e., each faculty review period).

or

(2) **Teaching:** teach or co-teach graduate courses for at least 2 semesters every 5 years (i.e., each faculty review period).

or

(3) **Combination:** serve on 1 Zoology Graduate Program committee and teach or co-teach 1 graduate course, as detailed above.

H. **Zoology Graduate Program Steering Committee:** This committee of 2 Regular and 2 Cooperating graduate faculty in the program, chaired by the Zoology Graduate Chair, will work proactively with the Zoology Graduate Faculty to implement these requirements.

IV. Rights of Graduate Faculty:

A. **Mentoring Graduate Students:** As defined by the GD in the table above (section I), **Level 3 (formerly Full) Regular and Cooperating Graduate Faculty** can chair PhD and MS committees and be the University Representative on graduate student committees in non-Zoology graduate programs, whereas **Level 2 (formerly Associate) Graduate Faculty** can chair MS but not PhD committees and cannot be the University Representative. All graduate faculty can otherwise serve on graduate student committees, and are expected to do so. Note that GD policy is that the [University Representative](#), who ensures that the student is treated fairly by the committee, must (a) be a level-3 graduate faculty member in another UHM graduate program (i.e., not Zoology), (b) have previously supervised a graduate student to the completion of their degree, and (c) be “at arm’s length” from other committee members (i.e., no spouses, conflicts of interest, etc.). It is important that all graduate faculty read and abide by the GD policies on [Committee Composition and Potential Members](#).

B. **Teaching Assistantships for Graduate Students:** The School of Life Sciences allocates graduate teaching assistantships in a way that balances instructional needs (of BIOL, BOT, MICR, and ZOOL

courses) with support needs of graduate students in the Zoology and other graduate programs. School of Life Sciences policy is as follows:

(a) Limits of Support and Time in Graduate School: The Graduate Programs housed in the School of Life Sciences (SLS) guarantee to the extent possible a minimum of 5 years of support (6 years max TA support) for PhD students and 2 years of support (3 years max TA support) for MS Plan A students who are making adequate progress.

(b) Teaching Assistantships for Graduate Students: The School of Life Sciences allocates graduate teaching assistantships in a way that balances instructional needs (of BIOL, BOT, MCB, and MICRO courses) with support needs of graduate students in the SLS graduate programs (Botany, Marine Biology, Microbiology, and Zoology). The SLS funding priorities are as follows:

- **Regular Graduate Faculty:** There is a limit of two TA slots to be associated with any Regular faculty member at any one time. Faculty can petition the SLS via the Associate Director for Instruction for an additional TA slot under special circumstances.
- **Cooperating Graduate Faculty:** There is a limit of one TA slot to be associated with any cooperating faculty member at any one time, based on availability after assignments have been made for students of regular graduate faculty. Faculty can petition the SLS via the Associate Director for Instruction for an additional TA slot under special circumstances.
- **Priority Allocation of TA Slots:** In the event that graduate teaching assistantships become limited, priority allocation will be provided to assistant professor (pre-tenure, tenure-track) faculty in the SLS. Faculty that currently exceed the limit on TA slots will receive lowest priority. These priorities apply at the time of graduate student admission only. Following admission, the limits on support (section A) apply for individual graduate students.

(c) Articulation Among Programs: Admission to the respective graduate programs will continue to follow the established practices for each program, but will recognize the limits set forth above. This will require coordination among the Graduate Chairs and Associate Director for Instruction before each admissions cycle in order to determine the number of new admissions that are possible, while maintaining our commitments to currently enrolled students. This will also require that the sponsoring advisors for prospective students supply a financial support plan to the relevant admissions committee. SLS TA solicitations and TA assignments will be coordinated by the SLS Associate Director for Instruction to avoid duplicate TA offers, and to ensure that these support limits are recognized.

Chapter 3

ZOOLOGY GRADUATE ADMISSIONS POLICIES²

I. Graduate Admissions Committee (GAC)

The Graduate Admissions Committee (GAC) will consist of 4 faculty members (2 regular and 2 cooperating) of the Zoology Graduate Program who commit to a 2-year term. Each year, 2 individuals (1 regular and 1 cooperating) will be replaced such that there is continuity across years in the admissions process. At the start of each academic year, the Zoology Graduate Chair, in consultation with the Director of the School of Life Sciences, will solicit volunteers and nominations from the Zoology Graduate Faculty, and select among them to represent the breadth of expertise of the Zoology Graduate Program. GAC membership should cover the major fields of study in the Zoology Graduate Program as well as possible, and will represent the program in evaluating all graduate applications. The first responsibility of the GAC each year is to elect a chair to convene upcoming meetings and be a point of contact for GAC communications. The GAC and Director of the School of Life Sciences will work with graduate admission committees in programs affiliated with the School of Life Sciences, including the Botany, Microbiology, and Marine Biology Graduate Program, to ensure cooperative processing of graduate applicants across programs.

II. Evaluation of Graduate Applicants

- A. **Initial Screening:** Application files are due **15 December** each year, at which time they will be collated by School of Life Sciences staff into an initial spreadsheet that includes key data (GPA, potential advisor(s), etc.). The GAC will then evaluate all applications and members will add their own rankings to the initial spreadsheet, as outlined in Section II.B. below. Note that the program no longer requires GRE exams, and the minimum GPA requirement for acceptance by the Graduate Division is 3.0.
- B. **Evaluation Criteria:** Each application file will be reviewed by a minimum of 2 GAC members, including at least one member from the applicant's field of study, yet excluding any identified sponsors of the applicant. Applicants will be evaluated in terms 5 criteria, all of which are considered important:
 - (1) academic background (courses, grades, etc.);
 - (2) letters of recommendation;
 - (3) vision and writing (personal statement, etc.);
 - (4) previous research experience; and
 - (5) overall potential for success in the program.

The GAC will then meet to discuss and categorize the applications into 4 tiers: *Outstanding*, *Acceptable*, *Marginal*, or *Unacceptable*. **IMPORTANT:** *All Level 2 and 3 Zoology Graduate Faculty will be notified that the applications are in the process of being tiered, and are responsible to confirm that files are complete for any applicants with whom they have specific interest.*

² Approved by Zoology Graduate Faculty 24 October 2016, with revisions by GD on 14 July 2017 and subsequent clarifications.

- C. **Ranking of Applicants:** In consultation with the Chair of the Zoology Graduate Program and the Director of the School of Life Sciences, the GAC will consider the number of students graduating the previous year, expected availability of TA resources for the coming year, and other resources (grants, office space, etc.) to estimate the maximum number of students likely to be accepted. GAC will then rank the top applicant files down to roughly triple the maximum number of incoming students that could be accepted in the coming year, unless that number exceeds the applications in the *Outstanding* and *Acceptable* categories, in which case only applicants in those upper two categories will be considered.
- D. **Notification of the Graduate Faculty:** By **15 January**, the GAC will circulate the categorically tiered *Outstanding* and *Acceptable* applicants on a summary spreadsheet to all Level 2 and 3 Zoology Graduate Faculty in good standing. Faculty who wish to accept a student from the circulated list will have until **1 February** to submit a non-binding *internal* “sponsorship” plan to the Chair of the Zoology Graduate Program and the Director of the School of Life Sciences outlining a plan for both stipend and research support of new and continuing students for their graduate training (including current or pending grants) for 5 years for a PhD applicant or 2 years for an MS applicant. No applicant without a faculty sponsorship letter will be acceptable for admission.
- E. **Ranking and Selection of Sponsored Applicants:** The GAC will reconvene to rank the pool of sponsored applicants, incorporating the sponsorship plan, guaranteed non-TA support, the minimum number of TA slots available (determined by the Director of the School of Life Sciences), and other factors (e.g., preference for new assistant professors, see Chapters 3 IV B and 4 II C). The GAC will then determine which applicants will be offered priority admission and provide a recommendation to the Director of the School of Life Sciences for allocation of available TA and other resources (within the guideline set forth in Chapter 3 IV B and 4 II C) to recruit outstanding candidates.
- First round of acceptance:** The GAC will decide which students will be made early offers of acceptance based on applicant rankings. Faculty will be notified of decisions regarding early offers by the **end of February** to notify excellent candidates as early as possible in this process (see Section III below).
 - Second round of acceptance:** As students decline early offers or additional resources become available (e.g., additional TA slots, awarded grants), the GAC will proceed down the ranking list to make offers up to the maximum number of students who can be guaranteed support within the program for any given year.
 - Competitive fellowships:** Students who are awarded a substantial competitive fellowship that provides a stipend (e.g., NSF GRF, NOAA Nancy Foster, EPA STAR) will be evaluated by the GAC at any time during the admissions process. The GAC will evaluate any fellowship on a case-by-case, with the standard of comparison being the National Science Foundation Graduate Research Fellowship (NSF GRF).

III. Offers to Acceptable Candidates

University policy states:

The Graduate Division officially admits students based on support and confirmation from graduate programs if requirements for admission have been met. Programs should not provide any form of official notice to applicants of their admission until the official letter from the Graduate Division has already been sent. A copy of the admission or denial letter is sent to the department for each applicant.

However, faculty sponsors of applicants recommended for admissions shall be contacted as soon as possible so that they can communicate the decision immediately with the applicant. A letter from the Zoology Graduate Program will provide informal communication to students that they have been recommended to the GD for admission, including the Zoology Graduate Program intention to offer support, and the nature of that support.

IV. Funding Limits for Graduate Students

The Zoology Graduate Program policy is to accept only students who will be supported financially throughout their graduate training. As such, selected applicants will be guaranteed 2 years of support (regardless of source) if entering as an MS student, and 5 years of support (regardless of source) if entering as a PhD student, based loosely on the sponsorship plan at the time of acceptance. Limits and guaranteed support are also intended to set target normative time to graduation; to ensure timely completion of degrees, MS students are eligible for a maximum of 3 years of support (regardless of source) whereas PhD students are eligible for a maximum of 7 years of support from any sources. Exceptions may be considered by petition to the Graduate Instruction Committee (GIC).

V. Graduate Applicant Proficiency

Incoming graduate students are expected to have demonstrated proficiency in the biological sciences, typically by having completed a bachelor's degree in biology or other life sciences field similar to a Bachelor's of Science degree in biology at the University of Hawai'i at Mānoa. Typical *minimum* preparatory undergraduate coursework includes:

- 18 semester hours or 27 quarter hours of biology [note that 2 semesters = 3 quarters]
- 3 semesters or 5 quarters of chemistry (general and organic)
- 2 semesters or 3 quarters of physics
- 1 semester or 2 quarters of biochemistry or molecular biology
- 1 semester or 2 quarters of calculus (note that calculus is a required prerequisite for the graduate course in Biometry ZOOL 631)

Prior research experience is especially desirable. The Graduate Admissions Committee will examine each applicant's transcripts carefully for evidence of sufficient proficiency for graduate studies. Applicants should also discuss with their potential advisors any possible deficiencies that would require remedial coursework. Any additional deficiencies and remediation will be determined during the first-semester interim committee meeting, culminating in the completion of Form 1.

APPENDIX: English Proficiency

Documentation of proficiency in English is required of graduate students from nations where English is not the native language. The following are university policies and help with English:

- English Proficiency requirements: manoa.hawaii.edu/graduate/content/english-proficiency
- English Language Institute: manoa.hawaii.edu/graduate/content/english-language-institute

Chapter 4

ZOOLOGY GRADUATE STUDENT SUPPORT POLICIES and SOURCES³

I. Commitment

The Zoology Graduate Program is committed to supporting graduate students, contingent on the availability of sufficient funds and, beyond the first year, satisfactory performance in both teaching and advancement in the degree program. Assuming sufficient departmental resources, MS students making satisfactory progress are guaranteed 2 years of support (regardless of source), and PhD students making satisfactory progress are guaranteed 5 years of support (regardless of source), with appointments made one year at a time. By petition to the Graduate Instruction Committee (GIC), MS students are possibly eligible for a maximum of 3 years of support, and PhD students are possibly eligible for a maximum of 7 years of support. Support can take the form of teaching assistantships (TA), research assistantships (RA), fellowships, or a combination thereof. Upon admission each student will receive a sponsorship plan from their major advisor outlining the plan for support. Regardless of support, current Graduate Division (GD) policy is that graduate students must complete their degrees within 7 years from their first semester in the program to avoid [academic probation](#). Note that probation is automatic 7 years after entry to graduate school; full-time or part-time status during those 7 years does not matter. Probation also occurs if the GPA drops below 3.0.

II. Graduate Teaching Assistantships (TAs)

Teaching Assistantships (TA-ships) are professional positions that support the teaching mission of the university, as well as provide teaching experience for graduate students while pursuing their degrees.

- A. **Eligibility and Work Load:** Zoology graduate students have priority access to teaching assistantships in the School of Life Sciences if they maintain a minimum 3.0 GPA. Teaching Assistants (TAs) are expected to work half time (i.e., not more than 20 hours per week) in their instructional duties, so that the remainder of the week is available for coursework, research, and other scholarly work toward degree completion. TAs must enroll for 6 to 9 graduate-level (or equivalent) credits toward the degree each semester. Audit hours do not count toward the minimum. TAs taking only one credit Thesis 700F (for MS Plan A students) or Dissertation 800 (for PhD students) are defined by the Graduate Division (GD) as carrying a full load. **If receiving financial aid, the student should check with [Financial Aid Services](#) regarding TA funding and course requirements.**
- B. **TA Application and Placement:** The purpose of the TA application is to place qualified graduate students in an appropriate course matching their scientific expertise and level of teaching skill. The TA application is also used to rank applicants for any remaining positions once all support commitments are satisfied. Each semester, TA application announcements are by e-mail, and applications are due to the School of Life Sciences (SLS) for placement during the following semester (e.g., apply during Fall Semester for a position during Spring Semester). *Once a student has accepted a TA position, they are expected to honor that commitment for the entire duty period.* Recommendations for TA placement are made by the SLS instructional faculty and

³ Adopted by Biology Faculty prior to 2016, with subsequent clarifications.

staff, and approved by the SLS director. Other considerations include special priority for incoming graduate students and students of non-tenured SLS faculty, merit and need-based student petitions, and preferences based on past TA performance. See Chapter 2-IV-B for details.

- C. **Caps on TA Positions per Faculty Member:** The number of TA positions available is determined by the needs of the School of Life Sciences. In order to equitably distribute TA positions across the school, faculty have a cap on the number of graduate students that they can support at the same time (i.e., per semester) as TAs. *Regular Zoology graduate faculty may have a maximum of 2 students on TA-ships at any time, and Cooperating graduate faculty may have a maximum of 1 student on a TA-ship at any time.* The difference in cap size is due to the fact that Regular Zoology graduate faculty contribute to the undergraduate program by teaching courses that generate TA positions. All faculty are expected to consider the cap when developing sponsorship plans for graduate student support. Exceptions to the cap will be considered by petition to the Director of the School of Life Sciences under special circumstances. See Chapter 2-IV-B for details.
- D. **Levels of Support for Teaching Assistants:** Full academic year teaching assistantships carry a **stipend** that is paid over a 12-month period for 9 months of service. *Importantly, students who TA only one semester during the academic year lose one month of salary and health insurance over the summer, so it is strongly recommended to TA for a full academic year.* Current University of Hawai'i System policy is that the minimum salary level for graduate students is **Step 9**, which is scheduled to increase annually for next couple years (**pay scales:** manoa.hawaii.edu/graduate/content/compensation-tax-withholding). In addition, all teaching assistantships include a **tuition waiver**, yet this waiver does not cover **student fees**. Teaching assistants may enroll in the **State Health Fund** medical insurance program if appointed at 0.50 FTE for a period of at least three months (i.e., a typical TA). While on TA-ship, a student may also work as an RA for additional hours of **overload** per week, subject to approval (use form "Graduate Assistant Petition to Work More Than 20 Hours" downloaded at manoa.hawaii.edu/graduate/content/forms). The Graduate Division lists other **benefits** for graduate students: manoa.hawaii.edu/graduate/content/benefits.

III. Graduate Research Assistantships (RAs)

Research Assistantships (RA-ships) are professional positions that support the research mission of the university, as well as provide research experience for graduate students while pursuing their degrees. RA-ships are typically supported by external grants to faculty. The exact nature of these positions will therefore vary by project and advisor. The School of Life Sciences does not provide research assistantships directly. Research Assistants (RAs) working at least 12 weeks of the 16-week semester are eligible for tuition waivers. While on TA-ship, a student may also work as an RA for additional hours of overload per week, subject to approval (use form "Graduate Assistant Petition to Work More Than 20 Hours" downloaded at manoa.hawaii.edu/graduate/content/forms). The Graduate Division lists other benefits for graduate students: manoa.hawaii.edu/graduate/content/benefits.

IV. Fellowships and Grants for Graduate Students

Note that many external fellowships granted directly to graduate students, such as national competitive fellowships (e.g., EPA STAR, etc.), are not eligible for tuition waivers. [National Science Foundation Graduate Research Fellowships](#) are an exception in that they are eligible for tuition waivers.

A. **Zoology Graduate Program:** The Zoology Graduate Program offers several research and travel awards for graduate students made possible through donations and endowments from alumni and former faculty. Requests for proposals are circulated in early Fall Semester. Awards are made once per year by a selection committee appointed by the Director of the School of Life Sciences. For details, see manoa.hawaii.edu/biology/node/674

B. **UH Mānoa Campus:**

- a. The **Ecology, Evolution, and Conservation Biology** graduate specialization offers several fellowships to its graduate students. For details, see www.hawaii.edu/eecb/current.html
- b. The **Graduate Student Organization** offers grants in support of research and travel. For details, see gso.hawaii.edu/grants-awards
- c. The **East-West Center** offers a variety of scholarships and fellowships supporting cross-cultural exchange. For details, see www.eastwestcenter.org/scholarships-fellowships
- d. The **STAR** online system lists graduate funding opportunities, including an annually designated amount of **Achievement Scholarship** funds dedicated to the Zoology Graduate Program. For details regarding Achievement Scholarships, see manoa.hawaii.edu/graduate/content/achievement-scholarships

C. **Extramural:**

a. **Major National Competitive Fellowships:**

NSF Graduate Research Fellowship:

www.nsfgrfp.org

National Defense Science & Engineering Graduate Fellowship:

ndseg.sysplus.com

b. **Web Lists of Fellowships and Grants:**

UH Mānoa Graduate Division:

manoa.hawaii.edu/graduate/content/fellowships-scholarships

Federal Government Grants:

federalgovernmentgrants.net

The Foundation Center:

foundationcenter.org

College Scholarships and Grants:

www.collegescholarships.org/grants/graduate.htm

Graduate Fellowships and Scholarships:

www.gradschools.com/financial-aid/graduate-fellowships-scholarships/fellowships-for-graduate-students

Prof. Marissa Baskett's Links to Graduate Resources:

www.des.ucdavis.edu/faculty/baskett/links/academia.html#Grad

Chapter 5

ZOOLOGY GRADUATE STUDENT 'OHANA

I. Weekly Research Seminars and *Pau Hana*

Each Friday during the school year, the School of Life Sciences and the Marine Biology Graduate Program host a seminar from 3:30 to 4:30 PM on-line (due to the COVID-19 pandemic). Seminars are research presentations by invited speakers, and may include graduate students (doctoral dissertation defenses), UH faculty members and other researchers, and guests from outside the university. Graduate students and faculty are strongly encouraged to attend these weekly seminars, which are open to the general public.

'Ohana (extended family) is important in Hawai'i. Depending upon UH regulations regarding the COVID-19 pandemic, following each weekly Friday seminar, the graduate student representatives of the School of Life Sciences and the Marine Biology Graduate Program host a *pau hana* ("finished work") just outside the seminar venue, complete with beverages for purchase and munchies, providing opportunities for graduate students to meet informally with the seminar speaker, as well as with faculty and other UH researchers.

II. Other Graduate Student Events

Depending upon UH regulations regarding the COVID-19 pandemic, on Fridays starting at 10:00 AM, the School of Life Sciences hosts the life science coffee social on the Edmondson second-floor *lanai* (patio). These events are a good opportunity to socialize with others in the program.

Zoology graduate students also gather for many other informal events and activities. Examples in the past have included hiking groups, water sports (snorkeling, surfing, etc.), potlucks, barbecues, and camping. Please feel free to contact interim graduate social activities representative Spencer Alascio (salascio@hawaii.edu) or interim graduate representative Valentina Alvarez (val64@hawaii.edu) for more information on events organized by graduate students.

III. Tester Symposium

During each spring semester, the School of Life Sciences hosts the two-day [Albert L. Tester Memorial Symposium](#). Graduate students across the natural sciences are invited to present their research. A distinguished scientist is invited to participate in the symposium by presenting a plenary address. Depending upon UH regulations regarding the COVID-19 pandemic, an awards banquet concludes the symposium, where prizes are awarded for the best student work.

IV. Graduate Life Balance

Graduate school can be stressful at times, and it is important to pay attention to your health and general well-being. Keep in mind that you are not alone in your graduate school experience, even though it may feel that way sometimes. Hawai'i is a beautiful place to pursue graduate studies, but life here also

offers unique challenges. If you are a new arrival to Hawai'i, you will find many of your colleagues have shared experiences associated with the island life (e.g., long-distance relationships, being home sick, and coping with the cost of living). You will likely find that your new Hawai'i *'ohana* is an amazing support system. Also, taking the time to do the things that you enjoy, to get away from your computer, and to make sure that you eat and sleep well are very important to your health and your graduate life experience. While it may take some time to balance work and replenishment, keep your goals in sight. Graduate school is indeed challenging, yet that challenge will make your accomplishment feel all the more worthwhile when you graduate!

Here are some helpful on-line resources:

- [UHM Counseling and Student Development Center](#)
- [UC Berkeley Graduate Student Happiness and Well-Being Report](#)
- Chronicle of Higher Education: [Me and My Shadow CV](#)
- Dynamic Ecology blog: [Life as an Anxious Scientist](#)
- Eco-Evolutionary Dynamics blog: [Rejection and How to Deal with It](#)
- The Muse: [5 Different Types of Imposter Syndrome \(and 5 Ways to Battle Each One\)](#)

V. Helpful Resources

Please see the **Appendix** of this handbook, which also includes **Frequently Asked Questions** and specific information for **international students**.

Chapter 6

ZOOLOGY GRADUATE CURRICULUM⁴

I. Graduate Curriculum and Timetables

The intention of the Zoology Graduate Program is to provide a flexible and customizable education for our graduate students, while simultaneously adhering to the rules and regulations of the UHM Graduate Division.

A. All Graduate Students: The following is required of *all* students:

(1) All new graduate students will take **ZOOL 691C** (a scientific skills orientation seminar) during their **first Fall Semester** in the program. Thereafter, all graduate students must **every year take at least 1 credit of biology-relevant graduate coursework**, including graduate seminars (e.g., ZOOL 691) and topics courses (e.g., ZOOL 7XX), excluding ZOOL 699, 700, 700F, and 800.

(2) Besides the advisor, the [graduate committee](#) consists of ≥ 2 other graduate faculty in the program for MS students (≥ 3 total committee members), and ≥ 2 other graduate faculty in the program plus a University Representative for PhD students (≥ 5 total committee members). The University Representative is optional for MS committees. The **University Representative**, who ensures that the student is treated fairly by the committee, must (a) be a level-3 graduate faculty member in another UHM graduate program (i.e., not Zoology), (b) have previously supervised a graduate student to the completion of their degree, and (c) be “at arm’s length” from other committee members (i.e., no spouses, conflicts of interest, etc.). The “arm’s length” rule also applies to committee chairs (i.e., graduate advisors). To include a non-UH graduate committee member, the graduate advisor should e-mail a request and justification to Graduate Chair Mark Hixon (hixonm@hawaii.edu), attaching the person’s current CV. The majority of the committee must be [Zoology Graduate Faculty](#). PhD students must submit [Form 2A](#) for Graduate Division approval of the committee *before* their first committee meeting.

(3) All graduate students must **every year meet with their graduate committee** at least once to discuss progress and future plans regarding their graduate education and research. The [Annual Graduate Committee Meeting Report Form](#) should be filled-out during the meeting, then submitted to the Zoology Graduate Program. Note that this form is not necessary during years when Form 2 and Form 3 are submitted, both of which require graduate committee meetings.

(4) All graduate students must **every year give a public presentation** relevant to zoology, preferably regarding their research. This requirement is typically met by participating in the Tester Symposium (manoa.hawaii.edu/biology/testersymposium), presenting a seminar for the Ecology, Evolution, and Conservation Biology interdisciplinary program (www.hawaii.edu/eechb) or any public departmental seminar, or giving a talk at a scientific conference. A class presentation as a Teaching Assistant does **not** meet this requirement. Please contact the Graduate Chair for questions regarding eligible public presentations.

(5) All graduate students are expected to maintain a **full-time course load** during Fall and Spring Semester (not Summer Session), unless approved by petition to the Graduate Instruction

⁴ Approved by Zoology Graduate Faculty 10 April 2017, with revisions by GD on 14 July 2017 and subsequent clarifications.

Committee (e.g., official leave of absence). According to the Graduate Division (GD), a full load can vary from 1 to 8 credits, depending on specific circumstances, with a maximum possible load of 16 credits:

TERM	FULL-TIME LOAD	MAXIMUM LOAD
Fall or Spring Semester	- 8 credits (if receiving financial aid) <i>OR</i> - 6 credits (for graduate assistants <u>not</u> receiving financial aid) <i>OR</i> - 1 credit of ZOOL 700F (MS Plan A) in final semester or 800 (PhD) in any semester after orals	- 16 credits <i>OR</i> - 9 credits (for graduate assistants)
Summer Session	- 4 credits per session <i>OR</i> - a total of 8 credits for two sessions <i>OR</i> - 1 credit of ZOOL 700 or 700F (MS Plan A) or 800 (PhD) in final semester	8 credits per session

Students must be enrolled every semester, including the semester they graduate. For further details: manoa.hawaii.edu/graduate/content/course-loads-full-time-definition

Please refer to the guide to ZOOL 700, 700F, and 800 appended to this handbook.

(6) The GD has the following **minimum grade policy for graduate students**:

- Graduate students must maintain a 3.0 cumulative GPA.
- Course grades must be C or higher (previously, C- was acceptable) starting Fall 2019.
- A C- grade for a course in Spring 2019 or earlier will still be allowed.

(7) **To extend a thesis or dissertation submission date**, the graduate advisor should e-mail a request and justification to the Graduate Chair (hixonm@hawaii.edu).

B. Master's Plan A (thesis): In addition to the requirements in Section IA (All Graduate Students) above, MS Plan A students are required to complete **at least 30 credit hours** with a grade of B or better (B- or worse does not count) and maintain a grade point average of at least 3.0. Plan A Master's degree students must be enrolled during the semester or summer session in which they intend to graduate.

Specific course credit requirements (30 credits total of biology-relevant courses):

ZOOL 691C (1 credit, required during the student's first fall semester)

ZOOL or BIOL 400-level courses (6 credits maximum count toward degree)

ZOOL, BIOL, or other 6XX and 7XX-level courses (12 credits minimum, excluding 699 and 700)

ZOOL 699 and 700 (12 credits maximum count toward degree, including 1 credit of ZOOL 700F for the final semester)

Timetable for Master's Plan A (thesis)*:

First Fall Semester	<ul style="list-style-type: none"> • ZOOL 691C orientation seminar (see Section IA) • Interim Committee meeting (MS plan A Form 1 & Interim Committee Report Form)
By end of year 1	<ul style="list-style-type: none"> • choose & meet with thesis committee to approve thesis proposal (MS plan A Form 2) and have initial assessment (see Chapter 7 for Assessment Form).
By end of year 2	<ul style="list-style-type: none"> • complete coursework requested by Interim Committee and thesis committee
Year 2 and every year until graduation	<ul style="list-style-type: none"> • submit annual progress report to GIC (see Chapter 7) • meet with thesis committee & submit Annual Graduate Committee Meeting Report Form (see Section 1A) • give public presentation (see Section IA) • enroll for at least 1 credit of biology-relevant graduate seminars or other coursework (see Section IA)
By end of year 3 (5 years maximum): Graduation Checklist	<ul style="list-style-type: none"> • in final semester, enroll in at least 1 credit of ZOOL 700 or 1 credit (only) of 700F • apply to GD for degree no later than 3 weeks after instruction begins during the semester of graduation and no later than June 1 for the summer session (Graduate Application for Degree Form) • submit thesis to committee for review at least 2 weeks before defense, or earlier if requested by the committee • defend thesis (MS plan A Form 3) and have final assessment (see Chapter 7 for Assessment Form) • submit thesis to Zoology Graduate Program and GD (MS plan A Form 4) • complete GD graduation requirements (Ch 6-III)

* All relevant forms and instructions are available on the Zoology Graduate Program [web page](#) and on the Graduate Division [web page](#).

Students should work closely with their advisors and graduate committees regarding the content and length of their **thesis proposal**.

C. Master's Plan B (non-thesis): In addition to the requirements in Section IA (All Graduate Students) above, MS Plan B students are required to complete **at least 30 credit hours** with a grade of B or better (B- or worse does not count) and maintain a grade point average of at least 3.0. Plan B Master's degree students must be enrolled during the semester or summer session in which they intend to graduate. The GD requires a "culminating experience" for this degree option, which the Zoology Graduate Program requires to be a written research report (e.g., an original research paper or a synthetic review paper) presented orally to at least the student's committee.

Specific course credit requirements (30 credits total of biology-relevant courses):

ZOOL 691C (1 credit, required during the student's first fall semester)

ZOOL or BIOL 400-level courses (12 credits maximum count toward degree)

ZOOL, BIOL, or other 6XX and 7XX-level courses (18 credits minimum, excluding 699 and 700)

ZOOL 699 (1 credit minimum and 9 credits maximum count toward degree)

Timetable for Master's Plan B (non-thesis)*:

First Fall Semester	<ul style="list-style-type: none"> • ZOOL 691C orientation seminar • Interim Committee meeting (MS plan B Form 1 & Interim Committee Report Form)
By end of year 1	<ul style="list-style-type: none"> • choose & meet with advisory committee to approve research proposal
By end of year 2	<ul style="list-style-type: none"> • complete coursework requested by Interim Committee and advisory committee
Year 2 and every year until graduation	<ul style="list-style-type: none"> • submit annual progress report to GIC (see Chapter 7) • meet with advisory committee & submit Annual Graduate Committee Meeting Report Form (see Section IA) • give public presentation (see Section IA) • enroll for at least 1 credit of biology-relevant graduate seminars or other coursework (see Section IA)
By end of year 3 (5 years maximum): Graduation Checklist	<ul style="list-style-type: none"> • apply to GD for degree no later than 3 weeks after instruction begins during the semester of graduation and no later than June 1 for the summer session (Graduate Application for Degree Form) • present research report to advisory committee (MS plan B Form 2) and have final assessment (see Chapter 7 for Assessment Form) • complete GD graduation requirements (Ch 6-III)

* All relevant forms and instructions are available on the Zoology Graduate Program [web page](#) and on the Graduate Division [web page](#).

Students should work closely with their advisors and advisory committees regarding the content and length of their **research proposal**.

D. (a) PhD Students Entering Without MS: In addition to the requirements in Section IA (All Graduate Students) above, the Zoology Graduate Program requires students who enter the PhD program without a Master's degree to complete the same coursework requirements as in Master's Plan A -- **at least 30 credit hours** with a grade of B or better (B- or worse does not count) and a grade point average of at least 3.0 -- with the exception that ZOOL 700 (Thesis Research) is replaced with ZOOL 800 (Dissertation Research).

Specific course credit requirements (30 credits total of biology-relevant coursework):

ZOOL 691C (1 credit, required during the student's first fall semester)

ZOOL or BIOL 400-level courses (6 credits maximum count toward degree)

ZOOL, BIOL, or other 6XX and 7XX-level courses (12 credits minimum, excluding 699 and 700)

ZOOL 699 and 800 (12 credits maximum count toward degree, including at least 1 credit of ZOOL 800 for the final semester)

(b) PhD Students Entering With MS: Students who enter the PhD program with a Master's degree must meet the requirements in Section IA (All Graduate Students) above, and enroll in at least 1 credit of ZOOL 800 (upon approval of Form 2 Advance to Candidacy) each semester in order to maintain full-time enrollment. The Interim Committee or Dissertation Committee may require the student to take additional courses in order to build expertise in new research areas or remediate deficiencies in the student's background.

Specific course credit requirements:

ZOOL 691C (1 credit, required during the student's first fall semester)

ZOOL 800 (at least 1 credit each semester)

any additional courses required by the Interim Committee or Dissertation Committee

Timetable for PhD*:

First Fall Semester	<ul style="list-style-type: none">• ZOOL 691C orientation seminar (see Section IA)• Interim Committee meeting (PhD Form 1 & Interim Committee Report Form)
By end of year 2	<ul style="list-style-type: none">• choose & meet with dissertation committee to approve dissertation proposal (PhD Form 2A) and have initial assessment (see Chapter 7 for Assessment Form)• complete coursework requested by Interim Committee and dissertation committee
Within 1 year of submitting Form 2A	<ul style="list-style-type: none">• oral comprehensive exam and advance to candidacy (PhD Form 2) – see guide appended to handbook
Year 2 and every year until graduation	<ul style="list-style-type: none">• submit annual progress report to GIC (see Chapter 7)• meet with dissertation committee & submit Annual Graduate Committee Meeting Report Form (see Section IA)• give public presentation (see Section IA)• enroll for at least 1 credit of biology-relevant graduate seminars or other coursework (see Section IA)
By end of year 5 (7 years maximum): Graduation Checklist	<ul style="list-style-type: none">• in final semester, enroll in at least 1 credit of ZOOL 800• submit dissertation to committee at least 4 weeks before defense• apply to GD for degree no later than 3 weeks after instruction begins during the semester of graduation and no later than June 1 for the summer session (Graduate Application for Degree Form)• notify GD of defense time & place at least 2 weeks before defense (Dissertation Defense Form)• defend dissertation (PhD Form 3) and have final assessment (see Chapter 7 for Assessment Form)• submit dissertation to Zoology Graduate Program and GD

	(PhD Form 4) • complete GD graduation requirements (Ch 6-III)
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* All relevant forms and instructions are available on the Zoology Graduate Program [web page](#) and on the Graduate Division [web page](#).

Students should work closely with their advisors and dissertation committees regarding the content and length of their **dissertation proposal**, which should be substantial, typically at least 10 pages of single-spaced text (excluding tables, figures, and references).

Students should also work closely with their advisors and dissertation committees regarding the **oral comprehensive exam**. Please refer to the guide appended to this handbook.

Teaching experience, typically but not necessarily as a teaching assistant, is required of all doctoral students. Teaching experience after entering the program that is not a teaching assistantship must be approved *in advance* by the Graduate Instruction Committee (GIC). In such circumstances, the student and advisor should submit a proposal memo to the chair of the GIC.

II. Changing from MS to PhD Track

- A. MS to PhD when completing MS:** According to the Graduate Division (GD), if you are an MS student completing your degree one semester and intend to begin your PhD in the same discipline with the same advisor the next semester, then you must contact the GD via the Zoology Graduate Chair. Note that application fees and deadlines apply.
- B. MS to PhD without completing MS:** According to the Graduate Division (GD), if you enter the Zoology Graduate Program as an MS student and wish to switch instead to a PhD program *without* first completing your MS, then you must re-apply formally to the Zoology Graduate Program, including the application to the GD (manoa.hawaii.edu/graduate/how-to-apply).
- C. MS to PhD after completing MS:** If you have already completed your MS and are no longer enrolled at UH, then you must re-apply formally to the Zoology Graduate Program, including the application to the Graduate Division (manoa.hawaii.edu/graduate/how-to-apply).
- D. MS en route to PhD:** Current PhD students who do not already have an MS in Zoology from any institution may request an “MS Plan B en route to PhD” after meeting the requirements to advance to candidacy, i.e., approval of Form 2 by the Graduate Division (see manoa.hawaii.edu/graduate/content/doctorate: Master’s Degree En route to Doctorate). Some research experience will be expected before the MS degree is granted. The student and advisor should submit a request to the Chair of the Graduate Instruction Committee (GIC) explaining how these conditions have been met. Following approval, the GIC will notify the Zoology Graduate Chair, who will forward a memo of request to the Graduate Division (GD). According to the GD, the degree may not be awarded retroactively after completing the PhD, and the candidate must file a Graduate Application for Degree by the appropriate deadline (see manoa.hawaii.edu/graduate/content/double-counting-credits: Master’s Degree En Route to Doctorate in Same Discipline). Please submit the Graduate Application for Degree [form](#) to apply for graduation with an MS degree to gradss@hawaii.edu.

III. Graduate Division Graduation Requirements

In addition to the steps listed above for each graduate degree, Graduate Division policy is that graduating PhD students **must** complete the following:

- (1) complete the on-line [Survey of Earned Doctorates](#).
- (2) publish the dissertation via [ProQuest](#), and pay ProQuest any required fees.

MS Plan A students also **must** publish the thesis via ProQuest, and pay ProQuest any required fees.

Chapter 7

ZOOLOGY GRADUATE REVIEW and ASSESSMENT POLICIES⁵

In addition to coursework, the PhD oral comprehensive exam and dissertation defense (for PhD students), and the final MS Plan A thesis defense or the MS Plan B research report presentation (for MS students), all students in the Zoology Graduate Program must be reviewed annually regarding progress toward their degrees, and must undergo formal assessments regarding their fulfillment of graduate student learning outcomes.

I. Graduate Student Learning Outcomes

The Graduate Division has posted [Advanced Degree Institutional Learning Objectives](#) that underlie all graduate programs on campus. On 14 November 2014, the Biology Faculty approved the following **Graduate Student Learning Outcomes for the Zoology Graduate Program** (a UHM requirement):

Student will:

1. demonstrate advanced knowledge in a specialized area of the biological sciences and general knowledge of related areas, as defined by the student's committee;
2.
 - PhD track: conduct original and independent scientific research, including critical analysis, synthesis and use of information and data that contributes to one's field of study; or
 - MS A (thesis) track: conduct scientific research, including critical analysis, synthesis and use of information and data specific to one's field of study; or
 - MS B (non-thesis) track: critically analyze, synthesize and interpret information specific to one's field of study;
3. proficiently communicate and disseminate scientific information in oral and in written form;
4. conduct research responsibly and ethically; and
5. engage professionally and collegially with the larger scientific community and with society.

II. Annual Graduate Review

The annual graduate student review is conducted by the Graduate Instruction Committee (GIC) independent of each student's advisor and graduate committee. The intention of the annual review is to (1) document progress students are making toward their graduate degrees, (2) identify and help solve any challenges students are facing in graduate school, and (3) document and recognize each student's accomplishments. By an announced deadline early Fall Semester of each year, each graduate student (excluding first-year students) will submit to the GIC Chair a completed [Annual Graduate Review Checklist](#) and curriculum vitae for the previous academic year. Specific instructions are provided with the checklist. A member of the GIC will then interview each graduate student (except for first-year students) during Spring Semester, reviewing progress during the previous academic year, especially in

⁵ Approved by Zoology Graduate Faculty 5 May 2017.

relation to the Graduate Student Learning Outcomes (see Section I). The GIC member will work with the student to write a short report of the interview for the student's file, to be signed by the GIC member, the student, and the student's advisor. The fully signed reports must be returned to the GIC Chair by an announced deadline.

III. Graduate Assessment

The intention of formal graduate assessments, which are required by the University, is to gauge the extent to which each student has fulfilled the Graduate Student Learning Outcomes (see Section I). Assessments will be conducted by each student's graduate committee, so it is the responsibility of both the student and the entire committee to ensure that the assessments are completed. **Preliminary assessments** will be completed for PhD and MS Plan A students at the time of advancement to candidacy (Form 2). **Final assessments** will be completed at the time of the PhD dissertation evaluation (Form 3), the MS Plan A thesis evaluation (Form 3), or MS Plan B degree completion (Form 2). For both assessments, the student's graduate committee will fill-out the [Zoology Graduate Assessment Form](#) (click to download), including the rubrics page, and forward the completed form to the Zoology Graduate Chair.

APPENDIX: HELPFUL RESOURCES

I. Frequently Asked Questions (FAQs)

- **Applying to Graduate School** (Chapter 3)

Where can I find information about faculty and their research interests?

Zoology graduate faculty information: manoa.hawaii.edu/biology/graduatefaculty. It is important to contact potential advisors directly to determine whether they are accepting new students and encourage you to apply to work with them. Guides for applying to graduate school are provided here: manoa.hawaii.edu/biology/graduate/admissions

How do I apply to the UH Zoology Graduate Program?

Everything you need to know is on-line: manoa.hawaii.edu/biology/graduate/admissions. The annual deadline is December 15 for the following Fall Semester. Note that the UH Mānoa Graduate Division requires a \$100 non-refundable application fee.

I am missing some prerequisite undergraduate courses. How will this affect my application?

The Graduate Admissions Committee considers all parts of each application, so excellence in, for example, undergraduate research may compensate for missing some preferred undergraduate courses.

What is the minimum GPA and what are the minimum GRE scores required for the program?

The minimum GPA for both applicants and existing graduate students is 3.0, and the GRE exam is no longer required. The Graduate Admissions Committee will examine carefully each applicant's entire file for evidence of sufficient proficiency for graduate studies. Applicants should also discuss with their potential advisors any possible deficiencies that would require remedial coursework. Any additional deficiencies and remediation will be determined during the first-semester interim committee meeting, culminating in the completion of Form 1.

Where should I submit supplemental application materials?

The Graduate Division has a supplemental material upload site: documentupload.manoa.hawaii.edu/upload/#/login

Where should my references send letters of recommendation, and what happens if those letters arrive after the application deadline?

Please ask your references to e-mail your letters of recommendation to zoolgrad@hawaii.edu. As long as the letters are received before the Graduate Admissions Committee completes its evaluation of applications, late letters will be accepted.

- **During Graduate School** (Chapters 4-7)

As a new graduate student, how do I register for courses, set-up my UH e-mail, get a mailbox, and the like?

Read the *Quick Guide to Starting Graduate School* (p. 5). Senior graduate students are also helpful (usually). Be sure to enroll ZOOL 691C Scientific Skills Seminar (aka Zoology Literature) during your first semester.

How can I get in touch with my graduate cohort to discuss things like rooming together?

You will receive an e-mail from the Zoology Graduate Chair during the summer that will include a list of those in your cohort along with their e-mail addresses.

As a new graduate student, when should I plan to arrive in Hawai'i?

The Graduate Division will host an online series, [Virtual New Graduate Student Orientation](#). New graduate students must be **on island no later than a week before the first day of instruction**. In any case, the earlier one moves to Honolulu, the broader will be the selection of housing options.

As a new Teaching Assistant (TA), what must I do to get oriented?

New TAs must undergo TA training provided by the [Center for Teaching Excellence](#). There will also be initial TA meetings for the large enrollment courses (BIOL 171L/172L/265L/275L), led by a lab coordinator who will contact you.

Where can I get help to become an effective teacher?

In addition to other resources, we recommend the graduate course BOT/ZOOL 670 Scientific Teaching. For graduate students pursuing careers that involve a teaching component, active learning tools taught in this course will be a helpful asset. This course will also be useful for creating a more inclusive and diverse environment in STEM education.

What is the most important page in this handbook?

They are all important, yet you should have a copy of the timetable for your degree posted at your desk and you should check it often to ensure you are on track: MS Plan A (Ch 6-I-B), MS Plan B (Ch 6-I-C), PhD (Ch 6-I-D).

How do I sign-up for research/thesis/dissertation credits with my advisor?

First, find the CRN for the course you wish to take: www.sis.hawaii.edu/uhdad/avail.classes?i=MAN. Note that you will need to ask the Zoology Program for CRNs for ZOOL 699, 700, 700F, and 800: zoolgrad@hawaii.edu. Second, ask your advisor to look-up section numbers for his/her courses by logging onto LauLima (laulima.hawaii.edu/portal) and pressing the "sites" button in the upper right screen. For example, "ZOOL-699-022" means that 022 is the section number for this professor in this course. If your advisor is clueless, then ask for help (zoolgrad@hawaii.edu). Third, register the usual way via the [STAR system](#).

What's the story with ZOOL 700, 700F, and 800?

Please see the guide to these courses appended to this handbook.

How are Teaching Assistantships assigned and what is the process for applying?

You will receive an e-mailed announcement each semester to fill-out an application for the following semester. The School of Life Sciences (*not* the Zoology Graduate Chair) make TA assignments based on need and availability.

After year one, what must I do every year?

All graduate students must every year: (a) take a biology-related course, (b) meet with their committee, and (c) give a public presentation (see Chapter 6-I-A for details).

After year one, what forms must I submit every year?

The Annual Graduate Review Checklist form and the Annual Graduate Committee Meeting Report form, both of which are available on-line (with all other program forms):

manoa.hawaii.edu/biology/graduate/forms. The forms include instructions. Note that the Annual Graduate Committee Meeting Report form is not required in years when [Form 2 and Form 3](#) are submitted.

What counts for the annually required “public presentation”?

Typically, this will be a presentation at the annual Tester Symposium (Chapter 5-III). Otherwise, it can be a presentation at a scientific conference, a guest presentation in a course or seminar (not a class you are TA'ing), or any public event. If in doubt, then ask the Zoology Graduate Chair for guidance before the fact.

What is the Assessment Form and what am I supposed to do with it?

See Chapter 7-III for details. Bring the [Graduate Assessment Form](#) to certain graduate committee meetings for your committee to fill-out and submit to the Zoology Graduate Chair:

- MS Plan A (thesis): preliminary assessment at thesis proposal meeting (with Form 2) and final assessment at thesis defense (with Form 3)
- MS Plan B (non-thesis): (no preliminary assessment) final assessment at research report presentation (with Form 2)
- PhD: preliminary assessment at oral comprehensive exam (with Form 2) and final assessment dissertation defense (with Form 3)

What should I do if a graduate committee member is unresponsive (not answering e-mails, not reviewing documents, etc.) or worse?

Discuss the situation with your advisor for them to mediate (assuming they are not the problem), then if there is no improvement, see the Zoology Graduate Chair or the Chair of the Graduate Instruction Committee for help. UH Mānoa is a supportive community and has a zero-tolerance policy for all forms of harassment. See Chapter 1-III for grievance procedures and contacts.

What is the UH policy on illness and leave of absence for graduate students?

For a leave of absence of a semester or longer, submit in advance a [Leave of Absence](#) form to Pia Dizon (pdizon@hawaii.edu). For periods less than a semester, submit in advance a [Personal Leave](#) form to Pia. For much shorter periods, discuss the possibility of informal breaks with your advisor, as well as your supervisor if you are a Teaching Assistant or Research Assistant.

Who are the graduate students who can help me?

Senior graduate students in your own lab are always a good option. Otherwise, Valentina Alvarez (val64@hawaii.edu) is the Interim Zoology Graduate Student Representative.

- **Finishing Graduate School** (Chapters 4-7)

How long does it typically take to get a graduate degree in Zoology and how long will I be supported?

It is expected that the MS degree will take no more than 3 years and the PhD take no more than 5 years to complete, which are the limits of guaranteed support. The maximum is 5 years for the MS degree and 7 years for the PhD degree. The Graduate Division automatically places graduate students on

[academic probation](#) after 7 years, yet you are expected to graduate well before then, and the program may place you on probation before 7 years if necessary. See Chapter 4-I for details.

What steps do I take when I'm ready to graduate?

Complete the timetable checklist for your respective degree: MS Plan A (Ch 6-I-B), MS Plan B (Ch 6-I-C), and PhD (Ch 6-I-D), including Graduate Division requirements (Ch 6-III).

How do I initiate a petition?

Consult with the Zoology Graduate Chair before filing any petition. Petitions to the Zoology Graduate Program require formal memos to the Zoology Graduate Chair co-authored by the student and the advisor. Petitions to the Graduate Division typically require special forms. See the *Zoology Graduate Program Quick Reference Guide* for details.

How do I change from an MS track to a PhD track?

There are 4 different routes. Read Chapter 6-II for details.

II. Arrival in Hawai'i Checklist (see also the Quick Guide on page 4)

General (see Section IV for relevant on-line links)

- Adjust to the new **time zone** if necessary and check-in with your advisor or academic sponsor.
- For **employment**, you will need copies of your Social Security Card, passport, driver's license. See [Pia Dizon](#) (School of Life Sciences Manager) in the School of Life Sciences Office (Edmondson 216). It is important that **international students** begin the process of obtaining a Social Security Card right away to avoid excessive delays in pay. Be sure to schedule your mandatory Visa Clearance meeting through [International Student Services](#).
- Open a **bank account** on island. It takes 4-6 weeks for Hawai'i checks to be processed in off island financial institutions. Ask the School of Life Sciences office for direct deposit forms and take them to your new bank of choice. Many students use the [UH Federal Credit Union](#) located on campus to open a new account. There is also an [American Savings Bank](#) on campus. It is possible to keep your mainland bank (though there are no mainland bank branches in Hawai'i), but it will take ~2 weeks more for your checks to clear, and you will need to figure-out how to get the direct deposit form signed by your mainland bank.
- **Hawai'i State Identification** card. Even if you're not driving, one of these will make life easier and qualify you for *kama'aina* prices (locals' discounts) on everything from hotel rooms for your family to tourist attraction.
- If necessary, get a **Hawai'i Driver's License**. Make sure you do this before your current driver's license expires or you will have to take both the written exam and the driving test. You do not have to do this if you will be able to maintain your current driver's license. For example, CA allows licenses to be renewed via mail.
- **Find a place to live**. Be prepared to make many phone calls, do a lot of walking and fill-out applications with reference info. Note that traffic in Honolulu can be horrendous, especially on the freeways, so consider commuting time if you wish to live far from campus.
- Figure out your mode of **transportation**. Once your student ID is validated each semester, you can receive a sticker on your ID which acts as your bus pass.
- Perform **change of address** with US Postal Service, credit card companies, DMVs, etc.

School of Life Sciences

- Have copies of all of your admissions paperwork just in case something is missing.
- Activate your "XXX"@hawaii.edu **e-mail account** through myuh.hawaii.edu. Notify the School of Life Sciences office of your activation and your user name so that they can add you to the appropriate mailing lists from which you will receive important information.
- Log on to "[My UH Portal](#)" which is your student records/registration page that uses the same password and login as your UH e-mail account. Check on your TA/RA status which will be important for waiving your tuition during the registration billing process. If it is not listed, contact your TA/RA supervisor to correct the problem.
- **Registration**: You can register for classes before your preliminary committee meetings, yet your classes may change after that meeting. Check your registration date through the [My UH Portal](#). Your tuition waiver will take 2-3 days to show up, so do not wait until the last day to register. You are responsible for paying student fees, which can be paid online with a credit card. If you miss your payment, your classes will be cancelled and your spot in that once-every-two-year course will go to someone else.
- Register for **Zoology 691C** which is required for all first-year students and offered each fall semester.

- Buy **books** for classes. These can be purchased the [UHM Bookstore](#), local bookstores, and on-line. On-line prices are often cheaper but it takes longer to get your books. Plan accordingly. If you order books on-line, keep in mind that they are going on a long journey to get to you. If possible, request extra robust packaging from the seller.
- Walk around [campus](#) and learn where resources/buildings are. You won't be the only one walking around with a map.
- For **office** space, ask your advisor, who is responsible for finding space for you.
- **Student ID**: These are processed at [Campus Center](#) after your class registration has been updated in the system (i.e., register today, get ID tomorrow). You usually need a copy of your class registration the first time around.
- Get **validated**. Every semester you must go to [Campus Center](#) get "validated". You will receive a sticker on your ID for the current semester (as long as you are registered for classes) showing that you are a currently enrolled student. You'll need to pay your student fees before you can get your ID validated.
- **Library**: You also need to have your UH System student ID card registered at [Hamilton Library](#).
- Contact your chosen **health care** provider to learn how to obtain an identification card and get activated within the system. You may have a hold on your registration for Mumps, Measles, Rubella (MMR) vaccine records and tuberculosis (TB) test, particularly if you are on a TAship. The tests can be done at the [University Health Services](#) building and your vaccine records can be submitted on-line using [FileDrop](#).
- Report all new **address changes**, phone numbers, etc. to the School of Life Sciences office (Edmondson 216) in order to keep your file current.
- **Meet other grad new students!**

III. Regions of Honolulu near UH Mānoa (campus H1 exit at point "A" on map)



IV. Helpful Links

Banking

- American Savings Bank: www.asbhawaii.com
- Bank of Hawai'i: www.boh.com
- Central Pacific Bank: www.centralpacificbank.com
- First Hawaiian Bank: www.fhb.com
- University of Hawai'i Federal Credit Union: www.uhfcu.com

Housing

- Apartments: honolulu.craigslist.org/d/apts-housing-for-rent/search/apa
- Rooms: honolulu.craigslist.org/d/rooms-shares/search/roo
- Trulia: www.trulia.com/for_rent/Honolulu,HI
- UHM Housing Page: manoa.hawaii.edu/housing

UHM Links

- Graduate Division: manoa.hawaii.edu/graduate
- Zoology Graduate Program: manoa.hawaii.edu/biology/graduate
- School of Life Sciences: lifesciences.manoa.hawaii.edu
- Former Department of Biology: manoa.hawaii.edu/biology
- MyUH Portal: myuh.hawaii.edu
- Ecology, Evolution, and Conservation Biology Program: www.hawaii.edu/eech
- Hawai'i Institute of Marine Biology: www.himb.hawaii.edu
- Diving Safety Program: www.hawaii.edu/ehso/diving-safety
- Ka Leo Student Newspaper: www.manoanow.org/kaleo
- Student Basic Needs: www.hawaii.edu/student-basic-needs/resources/manoa/
- Students Links: manoa.hawaii.edu/students
- Username Set: www.hawaii.edu/username

Miscellaneous Links

- Bishop Museum: www.bishopmuseum.org
- Driver's License Info: www.honolulu.gov/csd/dlicense.html
- Honolulu Star Advertiser: www.staradvertiser.com
- TheBus: www.thebus.org

V. Very Brief Guide to Living and Working in Hawai‘i

It is important for those of us who are not native Hawaiian to realize that we are foreign visitors and to behave appropriately in our relationships with the land, the sea, and the people. For scientists, manifesting humility and respect is critically important. To help new graduate students and faculty become oriented to living and working in Hawai‘i, we recommend these resources:

- (1) Familiarize yourself and accurately use common ‘Ōlelo Hawai‘i (Hawaiian language) words and phrases. ‘Ōlelo Hawai‘i was banned as the language of instruction in all Hawai‘i schools in 1896, a few years after the illegal overthrow of the Hawaiian Kingdom government by the United States. This ban was in place for 90 years until it was finally lifted in 1986. The Hawaiian community is in the process of language revitalization. You can help revitalize ‘Ōlelo Hawai‘i by learning the language, and by supporting legislation and programs that make learning ‘Ōlelo more accessible to everyone.
 - Bookmark the webpage for Hawaiian language dictionaries (wehewehe.org) so you can look up words you see and hear to build your understanding.
 - Use the [Duolingo](https://www.duolingo.com) website or mobile app to practice correct pronunciation and learn useful words and phrases.
 - Follow social media accounts teaching ‘Ōlelo Hawai‘i, such as Kumu Kahanuola Solatorio [@ehoopilimai](https://www.instagram.com/ehoopilimai) on Instagram.
 - Learn more about the history of Hawaiian language revitalization through this video: [‘Āha‘i ‘Ōlelo Ola - ‘Ōlelo Hawai‘i \(English Subtitles\)](#).
 - Explore additional resources: kanaeokana.net/olelo.
- (2) Consider partnerships with local communities in your scientific research.
For guidance: seagrant.soest.hawaii.edu/kulana-noii
- (3) Learn about Hawaiian worldview, history, and sovereignty.
 - Consider enrolling in courses in Hawaiian Studies and/or Hawaiian Language such as HWST 631 Pono Science: Ethical Implications of Science in Hawai‘i (1 credit seminar).
 - Watch recorded presentations by Hawaiian faculty at UH Mānoa: manoa.hawaii.edu/nhss/learn/the-bookshelf-nhssuhm
 - Visit the [Kamakakūokalani Center for Hawaiian Studies](#) on the main UH Mānoa campus.
 - Explore additional resources: kanaeokana.net.

A‘ohe pau ka ‘ike i ka hālau ho‘okahi
Not all knowledge is learned in one school

[Mark Hixon thanks his Hawaiian colleagues for their helpful reviews and revisions of this page.]

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ZOOL 691, 699, 700, 700F, and 800: What do they all mean?

It's a little confusing, but here's the official word...

ZOOL 691A-I = Seminar in Zoology (1 credit): UHM Catalog says "Reports on research or reviews of literature: (B) general zoology; (C) zoology literature; (D) animal behavior; (E) ecology; (F) animal physiology; (G) development biology; (H) marine biology; (I) systematics and evolution. Each alpha is repeatable five times." **NOTE: ZOOL 691C** is required for all first-year Zoology graduate students as the Scientific Skills Seminar. The School of Life Sciences also requires **ZOOL 691E** for credit for the unit's weekly research seminars.

ZOOL 699 = Directed Research (variable credits): UHM Catalog says "Directed research and reading in various fields of zoology. Repeatable unlimited times." From the Graduate Division: "12 credits maximum count toward and are required for the MS Plan A (thesis) degree (including ZOOL 700 and 700F credits), and 9 credits maximum count toward and are required for the MS Plan B (non-thesis) degree."

Easy so far, but what about ZOOL 700, 700F, and 800? From the [Graduate Division Student Services](#) (Graduate Division for short) web page:

Registration for Thesis ZOOL 700, Dissertation ZOOL 800, or ZOOL 700F

Students may register for Thesis ZOOL 700 or Dissertation ZOOL 800 under the following conditions:

- approval by the graduate chair,
- approval of thesis/dissertation proposal by the thesis/doctoral committees, and
- acceptance of Form 2 by the Graduate Division.

Registration for **ZOOL 700/800** is not permitted until Form 2 is accepted by the Graduate Division. If a student is unable to submit the form prior to registration, the student should register for 699 or another course first and submit the form at the first opportunity. Provided that the form is submitted during the same semester, the Graduate Division will count the 699 as 700 for degree check purposes, upon request by the student's graduate program. [NOTE: To do so, the advisor should send a memo of request to the Zoology Graduate Chair, who will approve and forward the memo to the Graduate Division.]

Students may register for **ZOOL 700F** after completing all Plan A requirements including the required ZOOL 700 credits. To register for ZOOL 700F for the first time, submit to the Office of Graduate Student Services a Petition to Enroll in ZOOL 700F. Upon approval of the petition by the Graduate Division, the student will receive a course reference number (CRN) for registration purposes. A student who wishes to register for ZOOL 700F more than once should contact the Office of Graduate Student Services for instructions.

ZOOL 700 = (MS Plan A) Thesis Research (variable credits): UHM Catalog says only “Repeatable unlimited times.” From the Graduate Division: “A minimum of 6 credits is required for MS Plan A (thesis) degree, yet not more than 12 credits.”

So what’s the difference between ZOOL 699 and ZOOL 700? From the Graduate Division: “To clarify, a total of 12 credits of 699 and 700 may be counted toward a Plan A Master's degree. However, of that 12 credits, 6 credits is minimally required of 700. Given that the program requires 12 credits for an MS thesis, 699 credits make-up the difference, up to 6 credits.”

ZOOL 700F = (MS Plan A) Thesis Research (1 credit) *last semester only*: From the Graduate Division: “This course is ONLY for the last semester of an MS Plan A (thesis) degree, and is considered a full load by the University -- no other courses are to be taken that final semester. This course can be taken only after all other course requirements for the degree have been met (see Chapter 5 of Zoology Graduate Program Handbook). Specifically, a student is not eligible to enroll in ZOOL 700F until they have taken at least 6 credits of ZOOL 700. However, if necessary, the student and advisor may petition the Graduate Division via a memo to the Zoology Graduate Chair to convert ZOOL 699 credits to ZOOL 700 credits after the fact. Once the Graduate Division approves the petition, then the student will be eligible to enroll in ZOOL 700F. Contact Graduate Student Services for authorization to enroll in ZOOL 700F.”

ZOOL 800 = (PhD) Dissertation Research (variable credits): From the Graduate Division: “One credit of 800 is considered full-time and should be taken once a student has had their Form 2 approved by Graduate Student Services. It is not only for the semester of graduation. As long as no other courses are taken and the student notifies the Cashier's office, the 1 credit is charged at the resident rate.” From the [Registrar](#): “If you are enrolled in only a **Dissertation 800** course for **1 credit** and are classified as a **nonresident**, please inform the UH Cashier’s Office to adjust your tuition before paying. Your tuition and fees should be charged at the **resident** rate. If more than 1 credit or other courses are taken, your tuition will be based on the non-resident tuition rate for all classes enrolled.”

NOTE: The intention of the Graduate Division regarding one credit of ZOOL 700F (MS Plan A) or one credit of ZOOL 800 (PhD) is to lessen your registration fees.

Zoology Graduate Program Oral Comprehensive Exam Guidelines

by Mark Hixon, Zoology Graduate Chair
in consultation with past and present Graduate Instruction Committee Chairs

Each PhD student is required to pass an oral comprehensive exam conducted by their graduate committee, typically by year 3 of graduate school. The outcome of the exam is reported on Form 2: Advance to Candidacy (<https://manoa.hawaii.edu/graduate/forms/>), which is submitted on-line (via Kualii Build). In addition, please be sure to submit the [Preliminary Assessment Form](#) to the Zoology Graduate Chair.

There has been variation in how this exam is conducted in our program, leading to understandable confusion among both graduate students and faculty. This document provides standardized, programmatic guidelines.

Intention: The purpose of the oral comprehensive exam is for a graduate student to demonstrate their ability to discuss science at a PhD level with doctoral peers. Thus, the exam should be a satisfying rite of passage, rather than an annoying hoop to jump through. To be sure, every graduate student I have known (including myself) had fear and anxiety going into the orals, yet stepping through these emotions in an academic setting is an important life lesson. Of course, this process can be more stressful for some than others, which is why the committee – and especially the advisor – should be both supportive and available to help the student prepare for and do well in the exam. Students should keep in mind that their committee wants them to succeed – you will be in a room of well-wishers.

Preparation: The word “comprehensive” means just that: “complete; including all or nearly all elements or aspects of something” (Oxford Dictionary). This does not mean that the student is expected to know everything under the sun, yet they should be able to discuss diverse aspects of science with at least superficial knowledge. To prepare, the student should meet with each committee member months (!) before the exam to discuss what areas are important for the student to study. For example, I tell my students to know their dissertation topic in greatest depth, then with steadily decreasing depth as one gets further from that central topic. By the time one gets to general biology or general science, the depth of knowledge is not expected to be great, yet there should be some knowledge. Importantly, committee members should NOT simply hand the student a list of questions they will ask, or a small set of papers to know for the exam, or anything else that is explicit and limited. That said, it is helpful for committee members to suggest general topics, review papers, and textbooks that will help the student prepare. Studying for the oral comprehensive exam is the opportunity for a student to maximize the knowledge readily available in their immediate memory.

Structure: The exam is chaired by your advisor, who supervises rounds of questioning by committee members, including the University Representative if they wish. The University Representative is there primarily to ensure you are not abused by any committee member (something I’ve never encountered). Typically, there are two rounds of questioning, the first round often running 15-20 min per committee member, usually (but not necessarily) focusing on questions at least somewhat related to the dissertation topic. Sometimes there is a short break before the second round. The second round is typically shorter, usually involving follow-up and more peripheral questions. The exam should not run more than 3 hours. Some students choose to bring food and beverages to the exam for everyone, which is appreciated but certainly not required.

Strategy: Here are some tips to help you succeed in your orals:

- Maintain open lines of communication with your advisor and committee as you prepare. It's OK to discuss the forthcoming exam with your committee members more than once.
- Talk to other students about their experiences so you know what to expect. You may find it useful to do a practice exam with lab mates or friends, especially those who have had comprehensive exams from the same committee members.
- The day before the exam, do whatever most replenishes you, leaving you centered and grounded.
- Always pause (and breathe) and gather your thoughts before answering a question. There is no rush. It helps to bring a pad of paper on which to jot down key words or whatever so you don't have to make unusually long and silent eye contact with the questioner while you are thinking.
- Use the board liberally to draw diagrams and graphs. After drawing graph axes, immediately label them before drawing any points or curves.
- If you don't know an answer, you have two options. First, you may offer what you do know most closely related to the question, first asking permission: "I don't know whether big black bugs bleed black blood, but I do know something about crustacean blood. Would you like to hear that?" The questioner then has the option of saying yes or no. Second, you may simply say "I don't know," which is perfectly OK as long as you don't say this too frequently.
- Never ever bullshit! The committee will have their bullshit detectors on high, so never make-up stuff when you don't know the answer. That said, it is OK to speculate: "I don't know the answer, yet if I had to speculate I'd guess that..."
- If you feel yourself panicking (or getting faint or sick to your stomach), then ask to go to the restroom. Once there, splash water on your face, scream or cry or whatever helps you purge the energy, pull it together, and resume the exam. In my experience, students tend to be their own worst enemies during oral exams. Keep in mind that your committee wants you to succeed!

Outcome: After the exam is complete, the student is asked to leave the room and wait nearby. Typically, the University Representative (or if they defer, your advisor) then chairs the discussion. After everyone has had the opportunity to speak, the committee votes by consensus, raising hands, or even secret ballot (which any member may request). A simple majority prevails. There are three possible outcomes: pass, fail, or reconvene. A student who fails the comprehensive exam may repeat it once. The last outcome is unofficial and at the discretion of the committee if they believe the student needs time to prepare for a stronger performance. Regardless of the outcome, the committee may request follow-up study or coursework from the student in areas where proficiency was lacking. The final step is a well-deserved party for the new PhD candidate!

Remember, if you desire advice outside your committee, feel free to discuss the oral comprehensive exam or anything else with the Zoology Graduate Chair or the chair of the Zoology Graduate Instruction Committee.

Good Luck!

Official UHM Graduate Division policies regarding the doctoral comprehensive exam:
<https://manoa.hawaii.edu/graduate/doctorate/>