

A Guide to Completing the Application for the University of Hawai'i at Hilo Master of Science in Tropical Conservation Biology and Environmental Science

MS TCBES Checklist

- UH Hilo Graduate application form
- Application fee, \$50
- Personal statement of objectives
- Resume
- Three professional or academic letters of recommendation
- Official transcripts from all colleges or universities (must be received in a sealed envelope)
- Baccalaureate degree transcripts from international institutions must be submitted to a [transcript evaluation service](#).
- General Test, Graduate Record Exam (must be received directly from testing agency, or in a sealed envelope if submitted with your application); UH Hilo code: 4869
- Have received confirmation of TCBES faculty sponsorship if Thesis Track (Plan A)

For International applicants:

- Official TOEFL score report, if required
- [International Graduate Student Supplemental Information Form](#)

**Priority deadline for receipt of all application materials in the Graduate Division:
December 1**

Program Purpose and Goals

The primary purpose of the MS in TCBES is to provide graduate training in conservation biology and environmental science to people with baccalaureate degrees and others currently working in the field. The program will utilize the extraordinary biological, physical and cultural complexity on the Island of Hawai'i as a focus of investigation and study. The program will prepare students for technical positions and for entry into Ph.D. programs in related fields.

Program objectives:

- Foster knowledge of current trends and issues in conservation biology and environmental sciences including basic and applied research and natural resource problems;
- Provide participants with experiences in conceptual and technical research in ecology, evolutionary genetics, geographic analysis, environmental monitoring and assessment in marine and terrestrial environments;
- Promote research and scholarly activities that will enable participants to enter the scientific research community.

The program has two tracks. In the Thesis Track (Plan A), students conduct original research and write a research proposal and thesis. In the Internship Track (Plan B), students pursue an array of courses and an internship that provides an immersion training experience. The intern will write a detailed proposal and work directly with agency personnel in a two-way obligation between TCBES and the organization.

Application Process

Applications will be examined beginning Dec. 1 for admission to the following Fall semester. After Dec. 1, applications will be accepted on a space available basis until May 1. Apply online at:

<http://hilo.hawaii.edu/admissions/Apply.php>

The UH Hilo Graduate Division receives all supporting documents and maintains the applications through final notification. If you do not hear from us within 30 days of submission of your application, please contact the Graduate Division at 808-932-7926.

Applications that meet the admission criteria will be forwarded to the TCBES Admissions Committee for a comprehensive review and consideration for admission into the program. Admission decisions made by the committee will be forwarded to the Graduate Division which sends the final notification to the applicant.

Admission Status: The applicant's admission status is valid only for the semester to which the applicant is accepted. Applications for students who do not register or who withdraw from the University are voided but retained for a period of one (1) year. Students may reapply for admission to the next year by submitting a new application to the Admissions Office with the application fee.

Criteria for Admission:*

Acceptance is granted at the discretion of the Admissions Committee based on the six criteria listed below. An applicant must:

- 1) have earned a baccalaureate degree from an accredited institution or from a nationally recognized foreign institution.
- 2) in her/his personal statement, state whether he/she is interested in Plan A or Plan B. If Plan A, the applicant must list advisor(s) from the TCBES faculty who agrees to sponsor the application and to serve as primary advisor upon acceptance to the program. Plan B students are not required to get sponsorship from an advisor.
- 3) have a minimum combined verbal and quantitative score of 290 on the General Graduate Record Exam (GRE).
- 4) have a grade point average of 3.0 (4.0 = A scale) or the equivalent in the last four semesters of approximately 60 semester credits of undergraduate and/or in all post-baccalaureate work.
- 5) submit three letters of recommendation from references who have observed or supervised the applicant's performance and are able to comment on the quality of the applicant's academic achievement, ability to pursue graduate study, and general character.
- 6) earn a score of 550 TOEFL (paper based), 213 (computer based) or 79 (internet based), or 6.0 IELTS (for students who have not attended an English language university, or for whom English is not the primary language).

*Recommended course work prior to admission: 2 years chemistry; 1 year calculus; 1 course in geographic information or remote sensing, 1 course in statistics; 2 courses in life sciences; 2 additional courses in physical sciences

Transfer of Credits: Requests for transfer of graduate credits must be made during the first semester in which the student is enrolled in the program. Only credit hours with a grade of B or better from accredited universities are transferable. Transfer credit hours must have been completed within five years preceding the date upon which the advanced degree is to be conferred by UH Hilo, and must not have been used to satisfy requirements for another degree. The TCBES program will decide which credits will be transferred.

Frequently Asked Questions

Cost: \$484 per credit hour resident tuition 2018-2019
 \$1,102 per credit hour non-resident 2018-2019
 Total Credits: 30 credits Plan A, 36 credits Plan B

<http://tcbes.uhh.hawaii.edu/>

1. Do I need to find a faculty sponsor?

If you are interested in **Plan A** then you are required to contact individual faculty members whose research interests are similar to your own and who agree to sponsor your application to the program. It is recommended that you begin faculty contact well before the application deadline. If you are interested in **Plan B** then you are not required to have a sponsor.

2. How do I find a faculty sponsor?

TCBES faculty information can be found within this application and on the TCBES Program website.

3. How long does it take to complete the program?

The course work is designed to be completed in 3-4 semesters, with additional time needed for completing the thesis or internship.

4. What are the entrance requirements?

See Checklist and Criteria for Admission.

5. Do I have to take the GRE?

Yes, applicants are required to submit General GRE exam scores to UH-Hilo (UH Hilo code: 4869).

6. Can I transfer credits?

Yes, up to 6 credits, subject to program approval.

7. When will the program start?

Classes for new students begin in the fall of each year.

8. How much will it cost to live in Hilo?

You should budget approximately \$30,000 per year (residents of Hawai'i) and \$39,000 (non-residents) for tuition, books, housing, food, and personal expenses.

9. Is financial aid available?

Graduate assistantship positions may be available (contact Dr. Ostertag: ostertag@hawaii.edu). You may also contact faculty and participating agencies for financial assistance. Students interested in assistantship positions must have submitted the FAFSA; students who meet the deadline for financial aid will have priority for assistantship positions and other aid. Contact the UH-Hilo Financial Aid Office for more information (808-932-7449).

10. Do I need to write a thesis?

Plan A requires course work and a thesis of original research. Plan B requires course work, an internship, and research papers.

Course	Cr	Title
Core Courses (required for all MS TCBES students):		
600	3	Conservation Biology and Environmental Science
601	3	TCBES Field and Laboratory Methods
602	1	Research Seminar in TCBES
603	1	Natural Resource Management Seminar
Elective Courses:		
Plan A: 16 elective credits of 600-level TCBES courses.		
Plan B: 25 elective credits of 600-level TCBES courses.		
Elective Courses:		
610	3	Environmental Chemical Analysis
615	3	Global Environmental Change
620	3	Research Techniques in Molecular Conservation Biology
630	3	Nearshore Monitoring and Analysis
633	3	Biodiversity
635	3	Physical Environment of Ecosystems
640	3	Advanced Remote Sensing and Digital Image Processing
645	3	Applying Social Science to Marine and Coastal Resource Management
650	3	Oceanographic Monitoring and Analysis
655	3	Ecological Physiology
660	3	Molecular Ecology
665	3	Environmental Toxicology
670	3	Advanced Techniques in Geographic Information Systems
675	3	Conservation Genetics
677	3	Quantitative Ecology
680	3	Advanced Statistical Analysis and Research Design
685	3	Behavioral Ecology and Evolutionary Analysis
694	1-3	Special Topics in Tropical Conservation Biology and Environmental Sciences
699	1-3	Directed Research
Thesis and Internship Courses:		
690	3	Internship (Plan B: 3 credits required)
700	1-6	Thesis Research (Plan A: 6 credits required)

Core Courses (required for all MS TCBES students):

Elective Courses:

Elective Courses:

Thesis and Internship Courses:

TCBES Faculty

Norman Arancon normanq@hawaii.edu

Associate Professor, CAFNRM

Ph.D., The Ohio State University.

Vermicomposting, composting, soil ecology, organic agriculture, tropical fruit crop production, sustainable agriculture.

<http://hilo.hawaii.edu/academics/cafnrm/NormanArancon.php>

Jonathan D. Awaya awayaj@hawaii.edu

Associate Professor, Biology

Ph.D., University of Hawai'i at Mānoa, Molecular Biosciences and Bioengineering.

Molecular microbiology, bioremediation, iron-trafficking pathways, secondary metabolite production.

<http://hilo.hawaii.edu/depts/biology/Awaya.php>

Celia Bardwell-Jones celiab@hawaii.edu

Associate Professor, Philosophy

Chair, Gender and Women's Studies.

Affiliate Faculty, Filipino Studies Certificate Program.

Social metaphysics, indigenous epistemology, immigration, and philosophical conceptions of the sea as it relates to freedom and conservation ethics.

<https://hilo.hawaii.edu/depts/genderstudies/faculty.php>

Jim Beets beets@hawaii.edu

Professor, Marine Science

Ph.D., University of Georgia, Zoology.

Marine ecology, fish/fisheries ecology, ecological monitoring

<http://www.hilo.hawaii.edu/~beets/>

Kathryn Besio besio@hawaii.edu

Professor, Geography

Ph.D., University of Hawai'i at Mānoa, Geography.

Cultural geography, tourism, nature-society relations.

<https://hilo.hawaii.edu/depts/geography/faculty.php>

Leng Chee lengchee@hawaii.edu

Associate Professor, Pharmaceutical Sciences

Ph.D., University of Illinois at Chicago, Natural Products Chemistry.

Isolation, characterization, and biological evaluation of natural products of marine and microbial origin.

<http://pharmacy.uhh.hawaii.edu/cop/psc/lengchee.php>

Steven Colbert colberts@hawaii.edu

Associate Professor, Marine Science

Ph.D., Geological Sciences, University of Southern California.

Coastal hydrology, carbonate chemistry.

<http://www2.hawaii.edu/~colberts/Colbert/Welcome.html>

Marta deMaintenon demainte@hawaii.edu

Professor, Marine Science

Ph.D., UC Berkeley, Integrative Biology.

Phylogeny, biogeography and evolution of gastropod molluscs.

<http://www2.hawaii.edu/~demainte/>

Jesse Eiben eiben@hawaii.edu

Assistant Professor, CAFNRM

Ph.D., University of Hawai'i at Mānoa, Plant and Environmental Protection Sciences, Entomology.

Insect taxonomy, insect phylogenetics, population and growth modeling, integrated pest management, survivorship analysis, biodiversity statistics.

<http://hilo.hawaii.edu/academics/cafnrm/JesseEiben.php>

Armando García-Ortega agarciao@hawaii.edu

Assistant Professor, CAFNRM

Ph.D., Wageningen University, The Netherlands

Aquaculture of local marine fish species.

<http://hilo.hawaii.edu/academics/cafnrm/ArmandoGarcia-Ortega.php>

Joseph Genz genz@hawaii.edu

Assistant Professor, Anthropology

PhD Anthropology, University of Hawai'i at Mānoa.

Cultural revitalization of voyaging and navigation.

<https://hilo.hawaii.edu/faculty/joegenz/>

Timothy Grabowski tbg@hawaii.edu

Unit Leader, Hawaii Cooperative Fishery Research Unit

Adjunct Associate Professor, Marine Science

Ph.D., Clemson University, Zoology.

Fish ecology, fisheries management and conservation, fish reproduction and early life history, behavioral ecology, aquatic landscape ecology.

<http://www2.hawaii.edu/~tbg>

Mazen Hamad mazen@hawaii.edu

Associate Professor, Chemistry

Ph.D., University of Washington, Analytical Chemistry.

Environmental analytical chemistry.

<https://hilo.hawaii.edu/depts/chemistry/FacultyandStaff.php>

Patrick Hart pjhart@hawaii.edu

Professor & Chair, Biology

Ph.D., University of Hawai'i at Mānoa, Zoology & Ecology, Evolution, and Conservation Biology.

Ecology and conservation-Hawaiian forests/forest birds.

<http://hilo.hawaii.edu/faculty/pjhart/>

Maria Haws haws@hawaii.edu

Associate Professor, CAFNRM

Director, Pacific Aquaculture & Coastal Resources Center

Extension Specialist, University of Hawai'i Sea Grant Program.

Ph.D., Texas A&M Univ., Wildlife & Fisheries Sciences.

Pearl research, aquaculture, marine invertebrates, coastal zone management, natural resources policy.

<https://hilo.hawaii.edu/academics/cafnrm/faculty.php>

Kevin Hopkins hopkins@hawaii.edu

Professor, CAFNRM

Ph.D., Auburn University, Fisheries & Allied Aquacultures.

Aquaculture and fisheries development including their environmental impacts.

<https://hilo.hawaii.edu/academics/cafnrm/faculty/hopkins.php>

Susan Jarvi jarvi@hawaii.edu

Professor, Pharmaceutical Sciences

Ph.D., Northern Illinois University, Biological Sciences.

Host-parasite co-evolution, avian disease systems.

<http://pharmacy.uhh.hawaii.edu/cop/psc/jarvi.php>

Huihui Kanahale-Mossman hkanahel@hawaii.edu

Associate Director, Kīpuka Native Hawaiian Student Center.

Ph.D., University of Hawai'i at Mānoa, Education.

Hawaiian language, pedagogy, and culture.

<http://kipuka.uhh.hawaii.edu/>

Marina Karides mkarides@hawaii.edu

Associate Professor, Sociology

Ph.D., University of Georgia, Sociology.

Island studies, economic development, and food systems, global and feminist sociology, qualitative research methodologies.

<https://hilo.hawaii.edu/depts/sociology/faculty.php>

Matthew L. Knope knope@hawaii.edu

Assistant Professor, Biology

Ph.D., Stanford University, Biology.

Evolutionary ecology of marine and terrestrial organisms.

<http://hilo.hawaii.edu/depts/biology/faculty.php>

Yiqing Li yiqing@hawaii.edu

Associate Professor, CAFNRM

Ph.D., University of Puerto Rico.

Forest soil ecology, carbon sequestration of tropical forests, tropical silviculture and forest ecosystem restoration.

<https://hilo.hawaii.edu/academics/cafnrm/faculty/YiqingLi.php>

Chris Lu, chrislu@hawaii.edu

Professor, CAFNRM

Ph.D., University of Wisconsin-Madison

Ruminant nutrition.

<http://hilo.hawaii.edu/academics/cafnrm/>

Steven Lundblad slundbla@hawaii.edu

Professor, Geology

Ph.D., Geological Sciences, University of North Carolina.

Sedimentary Geology, Geochemistry, Geoarchaeology.

<http://hilo.hawaii.edu/uhh/faculty/lundblad/index.php>

Bruce Mathews bmathews@hawaii.edu

Professor & Dean, CAFNRM

Ph.D., University of Florida, Agronomy and Soils.

Environmental agronomy, nutrient cycling, water quality, grassland management.

<http://www.hilo.hawaii.edu/academics/cafnrm/faculty/mathews.php>

Sarah Marusek marusek@hawaii.edu

Associate Professor & Chair, Political Science

Ph.D., University of Massachusetts Amherst, Political Science

Legal geography; legal semiotics; everyday jurisprudence; law and society

http://works.bepress.com/sarah_marusek/

William J. Mautz mautz@hawaii.edu

Professor Biology

Ph.D., Cornell University, Ecology and Evolutionary Biology.

Environmental toxicology, physiological ecology of reptiles and amphibians.

<http://hilo.hawaii.edu/uhh/faculty/mautz/>

Karla McDermid mcdermid@hawaii.edu

Professor, Marine Science

Ph.D., University of Hawai'i at Mānoa, Botanical Sciences.

Seaweed/seagrass taxonomy, ecology, biogeography, chemistry; and herbivory.

<http://www.mare.hawaii.edu>

Jon-Pierre Michaud jonpierr@hawaii.edu

Associate Professor, Chemistry

Ph.D., University of Arizona, Toxicology & Pharmacology.

Toxicology, environmental chemistry, pesticides in water and biota, epidemiology of volcanic fog (vog).

<http://hilo.hawaii.edu/depts/chemistry/FacultyandStaff.php>

Jené Michaud jene@hawaii.edu

Professor, Geology

Ph.D., University of Arizona, Hydrology.

Hydrology, watersheds, geomorphology, modeling.

<http://www2.hawaii.edu/~jene/>

Peter Mills millsp@hawaii.edu

Director, Heritage Management Graduate Program,

Professor of Anthropology

Ph.D., University of California, Berkeley.

Archaeology, historic archaeology.

<http://hilo.hawaii.edu/uhh/faculty/millsp/index.php>

Cam Muir cmuir@hawaii.edu

Associate Professor, Biology

Ph.D., Simon Fraser University, Institute for Molecular Biology

& Biochemistry.

Ecological genetics/conservation genetics, phylogeography, and local adaptation of endemic Hawaiian fauna.

<http://hilo.hawaii.edu/faculty/cmuir/>

Stan T. Nakanishi stn@hawaii.edu

Assistant Professor, Biology

Ph.D., Emory University, Neuroscience.

Neuromodulation, lā'au lapa'au (medicinal Hawaiian plants).

<http://hilo.hawaii.edu/directory/view/1764>

Rebecca Ostertag ostertag@hawaii.edu

Director, TCBES Graduate Program,

Professor, Biology

Ph.D., University of Florida, Botany.

Plant community dynamics, nutrient cycling, restoration of tropical forest ecosystems.

<http://hilo.hawaii.edu/uhh/faculty/ostertag/>

Adam Pack pack@hawaii.edu

Professor, Psychology and Biology

Ph.D., University of Hawai'i at Mānoa, Human and Animal Cognition: Marine Mammal Science.

Marine mammal behavior, humpback whales, dolphin behavior and cognition.

<https://hilo.hawaii.edu/faculty/adam-a-pack>

Ryan Perroy rperroy@hawaii.edu

Associate Professor, Geography & Environmental Science
Ph.D., University of California, Santa Barbara, Geography.

Exploring land degradation and recovery processes, such as erosion and invasive species, using lidar, remote sensing, X-ray fluorescence, and traditional field methods.

<http://spatial.uhh.hawaii.edu/index.htm>

Matthew Platz mplatz@hawaii.edu

Professor, Chemistry

Ph.D., Yale University, Chemistry.

Physical Organic Chemistry, Photochemistry.

<https://hilo.hawaii.edu/catalog/chemistry>

Jonathan Price jpprice@hawaii.edu

Associate Professor & Chair, Geography & Environmental Science

Ph.D., University of California at Davis, Geography.

Biogeography and landscape/vegetation ecology.

<http://www.hilo.hawaii.edu/depts/geography/faculty.php>

Michael Shintaku shintaku@hawaii.edu

Professor, CAFNRM

Ph.D., Cornell University, Plant Pathology.

Plant virology.

<https://hilo.hawaii.edu/academics/cafnrm/faculty/shintaku.php>

Shihwu Sung, sung45@hawaii.edu

Professor, CAFNRM

Ph.D., Iowa State University, Environmental Engineering. Applied Environmental Engineering.

<https://hilo.hawaii.edu/academics/cafnrm/faculty.php>

Jolene Sutton, jtsutton@hawaii.edu

Assistant Professor, Biology

Ph.D., University of Otago, Zoology.

Molecular ecology, population and conservation genetics, genetic engineering, genetic pest management.

<https://sites.google.com/site/jolenesutton/>

Misaki Takabayashi misakita@hawaii.edu

Professor, Marine Science

Ph.D., University of Queensland, Centre for Marine Studies.

Coral reef ecology, coral molecular biology, marine microbial molecular biology.

<http://maunaloa.uhh.hawaii.edu/~misaki/Welcome.html>

Li Tao ltao2@hawaii.edu

Assistant Professor, Biology

Ph.D., University of California at Davis, Biochemistry and Molecular Biology.

Regulation of cell division using a combination of biochemistry, molecular biology and cell biology.

<http://hilo.hawaii.edu/uhh/faculty/ltao>

Jason Turner jpturner@hawaii.edu

Associate Professor, Marine Science

Ph.D., Texas A&M University, Wildlife and Fisheries.

Marine ecology, trophic dynamics of food webs, biochemical tracers.

<http://foodweb.uhh.hawaii.edu>

Tracy Wiegner wiegner@hawaii.edu

Professor, Marine Science

Ph.D., Rutgers University, Oceanography.

Freshwater and coastal water quality, nutrient and organic matter cycling,
microbial processes. <https://hilo.hawaii.edu/faculty/wiegner/>

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Questions about the application
process may be directed to
hilograd@hawaii.edu, or call
808.932.7926