

# 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

### 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 mission:**

- Foster knowledge of theory and techniques in conservation biology and environmental sciences, including basic, applied, and socio-ecological research;
- Promote scholarly activities in marine and terrestrial environments that will enable participants to pursue careers in research and natural resource management.

The program has two tracks. In the Thesis Track, students conduct original research and write a research proposal and thesis. In the Internship Track, 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 two (2) years. Students may reapply for admission to the next year by submitting a new application and fee, and updated statement, resume and letters.

### **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 Thesis Track or Internship Track. If Thesis Track, 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. Internship Track 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).

**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: \$489 per credit hour resident tuition 2019-2020  
\$1,107 per credit hour non-resident 2019-2020  
Total Credits: 30 credits Thesis Track,  
36 credits Internship Track

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

- 1. Do I need to find a faculty sponsor?**

If you are interested in **Thesis Track** 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 **Internship Track** 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 \$31,000 per year (residents of Hawai'i) and \$38,500 (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](mailto:ostertag@hawaii.edu)). You may also contact faculty and participating agencies for financial assistance. Students interested in any type of financial aid should submitted the FAFSA; students who are residents may qualify for the \$1,000 Graduate Opportunity Grant. Contact the UH-Hilo Financial Aid Office for more information (808-932-7449).
- 10. Do I need to write a thesis?**

Thesis Track requires course work and a thesis of original research. Internship Track requires course work, an internship, and research papers.

### Total Credits Required:

- (Thesis Track) = 30 credits (8 core + 16 electives + 6 thesis)
- (Internship Track) = 36 credits (14 core + 12 electives + 10 internship)

### Core Courses (8) credits required for all M.S. TCBES students:

- CBES 600 Conservatn Biol & Environ Sci (3)
- CBES 601 CBES Field & Laboratory Method (3)
- CBES 602 Research Seminar in TCBES (1)
- CBES 603 Natural Resource Mgt Seminar (1)

### Core Courses required for Internship Track:

- CBES 645 Social Science Research Methods for Environment and Conservation (3)
- CBES 689 Organizational Management and Logistics (3)
- CBES 690 Internship (10)

### Other Required Courses:

- Thesis Track: CBES 700 (6)
- Internship Track: CBES 690 Internship (10)

### Elective Courses <sup>1</sup>:

- Thesis Track: 16 elective credits of 600-level CBES courses.
- Internship Track: 12 elective credits of 600-level CBES courses.

<sup>1</sup> A maximum of 6 credits of 400-level courses may count toward these elective credits.

### Thesis and Internship Courses:

690 3 Internship (Plan B: 3 credits required)  
700 1-6 Thesis Research (Plan A: 6 credits required)

Questions about the application process may be directed to [hilograd@hawaii.edu](mailto:hilograd@hawaii.edu), or call 808.932.7927

## TCBES Faculty

**Norman Arancon** [normanq@hawaii.edu](mailto: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](mailto: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](mailto:celiab@hawaii.edu)

Associate Professor, Philosophy

Chair, Gender and Women's Studies.

Affiliate Faculty, Filipino Studies Certificate Program.

Ph.D., University of Oregon, Philosophy.

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](mailto: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](mailto: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>

**John Burns** [johnhr@hawaii.edu](mailto:johnhr@hawaii.edu)

Assistant Professor, Marine Science and Data Science

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

Coral reef biology and ecology, ecosystem monitoring, 3D modeling, spatial statistics

**Leng Chee Chang** [lengchee@hawaii.edu](mailto: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](mailto: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](mailto: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](mailto: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](mailto:agarciao@hawaii.edu)

Assistant Professor, CAFNRM

Ph.D., Wageningen University, The Netherlands

Aquaculture of local marine fish species.

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**Joseph Genz** [genz@hawaii.edu](mailto:genz@hawaii.edu)

Assistant Professor, Anthropology

PhD Anthropology, University of Hawaii at Mānoa.

Cultural revitalization of voyaging and navigation.

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

**Timothy Grabowski** [tbg@hawaii.edu](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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>

**Christopher Lu**, [chrislu@hawaii.edu](mailto:chrislu@hawaii.edu)

Professor, CAFNRM

Ph.D., University of Wisconsin-Madison

Ruminant nutrition.

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

**Steven Lundblad** [slundbla@hawaii.edu](mailto: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](mailto: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](mailto: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

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**William J. Mautz** [mautz@hawaii.edu](mailto:mautz@hawaii.edu)

Emeritus Professor, Biology

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

Environmental toxicology, physiological ecology of reptiles and amphibians.

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**Karla McDermid** [mcdermid@hawaii.edu](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto:mplatz@hawaii.edu)

Professor, Chemistry

Ph.D., Yale University, Chemistry.

Physical Organic Chemistry, Photochemistry.

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

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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](mailto:shintaku@hawaii.edu)

Professor, CAFNRM

Ph.D., Cornell University, Plant Pathology.

Plant virology.

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**Shihwu Sung** [sung45@hawaii.edu](mailto:sung45@hawaii.edu)

Professor, CAFNRM

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

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**Jolene Sutton** [jtsutton@hawaii.edu](mailto: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](mailto: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](mailto: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](mailto: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>

**Grady Weyenberg** [grady.weyenberg@hawaii.edu](mailto:grady.weyenberg@hawaii.edu)

Assistant Professor, Mathematics

Ph.D., University of Kentucky, Statistics

Mathematical statistics, computational tool development.

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

**Tracy Wiegner** [wiegner@hawaii.edu](mailto: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/>