

New Program Code     Replace Program Code    Date: \_\_\_\_\_

**REQUESTOR CONTACT INFORMATION**

Name \_\_\_\_\_ Campus \_\_\_\_\_  
 Title \_\_\_\_\_ Email \_\_\_\_\_  
 Office/Dept \_\_\_\_\_ Phone \_\_\_\_\_

**NEW PROGRAM CODE TO CREATE**

Institution \_\_\_\_\_ Campus \_\_\_\_\_  
 Level \_\_\_\_\_ Effective Term \_\_\_\_\_

	Code (Max. Characters)	Description	Check if requesting new code:
College	(2) _____	_____	<input type="checkbox"/> See Banner form STV_COLL
Department	(4) _____	_____	<input type="checkbox"/> See Banner form STV_DEPT
Degree/Certificate	(6) _____	_____	<input type="checkbox"/> See Banner form STV_DEGC
Major	(4) _____	_____	<input type="checkbox"/> See Banner form STV_MAJR
Concentration	(4) _____	_____	<input type="checkbox"/> See Banner form STV_MAJR
Minor	(4) _____	_____	<input type="checkbox"/> See Banner form STV_MAJR

If a similar major/concentration code exists in Banner, please list the code: \_\_\_\_\_

Justification to warrant a new major/concentration code similar to an existing major/concentration code:  
 \_\_\_\_\_

Is this major/concentration code being used the same way at the other UH campuses?     Yes     No

Should this program be available for applicants to select as their planned course of study on the online application? *If yes, student may select the code as their only program of study.*     Yes     No

**RULES PERTAINING TO FINANCIAL AID AND 150% DIRECT SUBSIDIZED LOAN LIMIT LEGISLATION**

Is 50% or greater of the classes in this program offered at a location other than the Home Campus?     Yes     No

Is this program/major/certificate financial aid eligible?     Yes     No

Does this certificate qualify as a Gainful Employment Program (Title IV-eligible certificate program)?  
 See <http://www.ifap.ed.gov/GainfulEmploymentInfo/index.html>     Yes     No

**Program Length**

*In academic years; decimals are acceptable. The length of the program should match what is published by the campus in any online and/or written publication.*

Special Program Designations     A     B     N     P     T     U

*See Special Program Designations Code Definitions on IRAO Program Code Request webpage*

Required Terms of Enrollment:     Fall     Spring     Summer     Extended

**EXISTING PROGRAM CODE TO REPLACE, IF APPLICABLE**

Program Code _____	Program Description _____
Institution _____	Campus _____
College _____	Department _____
Level _____	

Are current students "grandfathered" under the program code?  Yes  No

Should the old program code be available for use in Banner?  Yes  No

**Effective**  **, old program code will no longer be available to admit or recruit students.**  
Term (ie. Fall 2020)

*This will turn off the online application, recruitment (effects Banner forms SRASUMI and SRAQUIK) and admissions (effects Banner forms SAADCRV, SAAADMS, SAASUMI, SAAQUIK, and SAAQUAN) Banner modules.*

**Effective**  **, old program code will no longer be available to award degree to students.**  
Term (ie. Fall 2020)

*This will turn off the general student (effects Banner form SGASTDN) and academic history (effects Banner form SHADEGR) Banner modules.*

**ATTACHMENTS**

**BOR Approved:** Sole-credential Certificate, Associate, Bachelor and Graduate Degrees, and sole credential certificates

- BOR Meeting Minutes & Supporting Documents  Curriculum

**Chancellor Approved:** Concentrations, Certificates and Associate in Technical Studies (ATS) Degree

- Memo from Chancellor to notify Vice President for Academic Planning and Policy regarding program action.  
 Curriculum

**CERTIFICATES ONLY: Please check one (1) statement.** This certificate is a...

BOR approved certificate. BOR Meeting/Approval Date: \_\_\_\_\_

Chancellor approved within an authorized BOR program. BOR Program: \_\_\_\_\_

Chancellor approved CO in accordance with UHCCP 5.203, Section IV.B.10.

**VERIFICATIONS**

*By signing below, I verify that I have reviewed and confirm the above information that is pertinent to my position.*

<p><b>Registrar</b> (Print Name)</p> <p>_____</p>	<p><b>Financial Aid Officer</b> (Print Name)</p> <p>_____</p>	<p><b>For Community Colleges, verification of consultation with OVPCC Academic Affairs:</b> Tammi Oyadomari-Chun</p> <p>_____</p>
Signature	Date	Signature
Signature	Date	Signature
Signature	Date	Signature

**ADDITIONAL COMMENTS**



UNIVERSITY  
of HAWAII®  
MĀNOA

John A. Burns School of Medicine

Department of Tropical Medicine, Medical Microbiology and Pharmacology

February 14, 2022

MEMORANDUM

TO: David Lassner, Ph.D.  
President

VIA: Michael Bruno, Ph.D.  
Provost

VIA: Laura E. Lyons, Ph.D. *Laura E. Lyons*  
Interim Vice Provost for Academic Excellence

FROM: Jerris R. Hedges, M.D., M.S., M.M.M. *Jerris R. Hedges, MD* Dec 15, 2021  
Dean, John A. Burns School of Medicine

Tetine L. Sentell, M.A., Ph.D. *Tetine Sentell* Dec 16, 2021  
Interim Dean, Thompson School of Social Work and Public Health

Nicholas Comerford, M.S., Ph.D. *Nicholas Comerford* Dec 16, 2021  
Dean, College of Tropical Agriculture and Human Resources

Brian Taylor, M.A., M.Phil., Ph.D. *Brian Taylor* Dec 16, 2021  
Dean, School of Ocean and Earth Science and Technology

Amy Schiffner, M.F.A. *Amy Schiffner* Dec 17, 2021  
Director, Interdisciplinary Studies Program

SUBJECT: APPROVAL OF THE NEW UNDERGRADUATE CERTIFICATE IN  
ONE HEALTH

SPECIFIC ACTION REQUESTED:

It is requested that the new UNDERGRADUATE certificate in ONE HEALTH be approved.

RECOMMENDED EFFECTIVE DATE: Fall 2023

ADDITIONAL COST: None

651 Ilalo Street, Biosciences Building, Third Floor, Honolulu, HI 96813

Telephone: (808) 692-1607 Fax: (808) 692-1979

An Equal Opportunity/Affirmative Action Institution

## PURPOSE:

Preparing students with the skills and knowledge to work collaboratively across disciplines to solve real-world problems is one of the imperatives of institutions of higher education. With the launching of UHealthy Hawai‘i and the Center for Microbiome Analysis through Island Knowledge & Investigation (C-MĀIKI), the University of Hawai‘i has made significant commitments to the interconnectivity of the health of the individual, the community and the environment. Thus, a multi-unit team, comprising faculty from the John A. Burns School of Medicine, the Thompson School of Social Work and Public Health, the School of Ocean and Earth Science and Technology, and the College of Tropical Agriculture and Human Resources, proposes to translate current investments into educational capital by collaboratively developing a One Health Interdisciplinary Undergraduate Certificate Program at the University of Hawai‘i at Mānoa (UHM). This UHM undergraduate certificate program will require a minimum of 15 credits. Core courses will include a 3-credit One Health Introductory Course on the intersection between human health, animal/plant health and environmental health, a 2-credit One Health Seminar Course to engage undergraduates with world-class UHM researchers and community organizations advancing the One-Health concept, a 1-credit Journal Club Course to promote awareness of contemporary One Health literature, and a capstone research project or practicum/internship experience. The remaining credits will be from existing and new One Health-related courses offered at UHM. Students electing to fulfill capstone research requirement under the supervision of UHM’s top faculty will actively participate in the intellectual adventure of generating new knowledge. Students choosing a capstone practicum/intership option will obtain first-hand experience working with university and community organizations on One Health-related initiatives. The proposed program will provide a multidimensional, holistic perspective of health and strategically integrate UHM’s faculty, researchers, and community advocates of One Health into the undergraduate educational experience.

## BACKGROUND:

Although One Health programs have proliferated in many schools of human and veterinary medicine in the United States, few institutions have developed certificate programs in One Health that are targeted specifically to undergraduate students. As conceived, the proposed One Health Interdisciplinary Undergraduate Certificate Program will harness and translate the exceptional talent of faculty from multiple units to develop a non-unit-restricted structure and truly interdisciplinary curriculum that fulfills the core competencies in One Health education. To be clear, the One Health Interdisciplinary Undergraduate Certificate Program will complement, rather than duplicate or compete with existing programs in the following ways:

- leveraging strengths in multiple departments and disciplines across the UHM, as well as investments in interdisciplinary programs (such as C-MĀIKI);
- applying indigenous knowledge that exemplifies our unique geographic location and cultural heritage; and
- being responsive to current and anticipated workforce needs in health care, public health, environmental health and conservation biology, biome science, and education for the state, region and beyond.

The One Health Interdisciplinary Undergraduate Certificate Program initiative was selected as a winner of the UHM Provost’s 2019–20 Strategic Investment Competition for High-Impact Practices in Undergraduate Education. The proposed program received approval of Authorization To Plan (ATP) on April 20, 2021.

## ACTION RECOMMENDED:

It is recommended that the new UNDERGRADUATE certificate in ONE HEALTH be approved.

# ONE HEALTH INTERDISCIPLINARY UNDERGRADUATE CERTIFICATE PROGRAM

University of Hawai'i at Manoa

## Program Objectives

Preparing students with the skills and knowledge to work collaboratively across disciplines to solve real-world problems is one of the imperatives of institutions of higher education. With the launching of UHealthy Hawai'i and the Center for Microbiome Analysis through Island Knowledge & Investigation (C-MĀIKI), the University of Hawai'i has made significant commitments to the interconnectivity of the health of the individual, the community and the environment. Thus, a multi-unit team, comprising faculty from the John A. Burns School of Medicine, the Thompson School of Social Work and Public Health, the School of Ocean and Earth Science and Technology, and the College of Tropical Agriculture and Human Resources, proposes to translate current investments into educational capital by collaboratively developing a One Health Interdisciplinary Undergraduate Certificate Program at the University of Hawai'i at Mānoa (UHM).

This UHM undergraduate certificate program will require a minimum of 15 credits. Core courses will include a 3-credit One Health Introductory Course on the intersection between human health, animal/plant health and environmental health, a 2-credit One Health Seminar Course to engage undergraduates with world-class UHM researchers and community organizations advancing the One-Health concept, a 1-credit Journal Club Course to promote awareness of contemporary One Health literature, and a capstone research project or practicum/internship experience. The remaining credits will be from existing and new One Health-related courses offered at UHM. Students, who elect to fulfill the capstone research requirement under the supervision of UHM's top faculty, will actively participate in the intellectual adventure of generating new knowledge. Students, who choose a capstone practicum/internship option, will obtain first-hand experience working with university and community organizations on One Health-related initiatives. The proposed program will provide a multidimensional, holistic perspective of health and strategically integrate UHM's faculty, researchers and community advocates of One Health into the undergraduate educational experience.

## Relationship to Existing Programs

The One Health Interdisciplinary Undergraduate Certificate Program is intended to complement, rather than duplicate or compete with, instructional, research and outreach opportunities of the Institute for Sustainability and Resilience and other relevant UHM programs concerned with environmental sustainability, climate change, and community resilience. The proposed certificate program will provide a multidimensional, holistic perspective of health and strategically integrate UHM's top faculty, researchers, and community leaders into the undergraduate educational experience.

## Program Administration

The certificate program will be administered through the UHM Interdisciplinary Studies Program (ISP) with the cooperation of faculty representatives from each of the participating

units. The One Health certificate program aligns well with the ISP mission which is “to serve students in developing coherent and rigorous degree paths which address broad and complex issues by integrating multiple intellectual traditions...”. Initially, the certificate program director will be from the John A. Burns School of Medicine, which has been leading the planning process for the certificate. However, leadership of the program may rotate to other participating units once the program is fully established.

Academic advising will be provided by ISP advisors in partnership with academic advisors servicing undergraduate students in the participating units. ISP advisors will provide guidance in designing a certificate program plan that best fits the interests of the student while meeting the program requirements for the One Health certificate. In addition to academic advising, each participating student will be mentored for their capstone project by either a research or practicum advisor engaged in One Health research or community outreach from the various participating units, as well from other units engaged in One Health-related research or outreach activities.

### **Participating Units**

- John A. Burns School of Medicine (JABSOM)
  - Department of Tropical Medicine, Medical Microbiology and Pharmacology
- Thompson School of Social Work and Public Health (TSSWPH)
  - Office of Public Health Studies (OPHS)
  - Center on Aging
- College of Tropical Agriculture and Human Resources (CTAHR)
  - Department of Human Nutrition, Food and Animal Sciences
  - Department of Plant and Environmental Protection Sciences
  - Department of Molecular Biosciences and Bioengineering
  - Department of Natural Resources and Environmental Management
  - Department of Tropical Plant and Soil Sciences
- School of Ocean and Earth Science and Technology (SOEST)
  - Pacific Biosciences Research Center (PBRC)
  - Department of Oceanography

It is emphasized that the units listed above represent the core programs involved in the planning and development of the One Health certificate. A list of UHM faculty who constitute the leadership and planning committee for the One Health certificate program is provided in Appendix 1. Once the certificate program is established, additional units will be invited to participate since there are many other schools and programs within UHM whose missions are relevant to the One Health concept.

### **Populations Served**

The One Health Interdisciplinary Undergraduate Certificate Program will be open to both full-time and part-time undergraduate students in any major, as well as post-baccalaureate students, who are interested in the One Health curriculum and whose career goals would benefit from this certificate. Undergraduate students will be allowed to enter the program at

any level of their matriculation (freshmen through seniors) although it is anticipated that primary recruitment will be carried out among college freshmen who will apply during their freshman year and join the program during their sophomore year. That said, the program is designed to be flexible.

For undergraduate students, the certificate program requirements will likely run in parallel to their major requirements, although it is feasible to complete the program in approximately 1.5 years. Initially, we will be targeting a total of 10–15 students as we establish the interdisciplinary program. Once the certificate program is established, it should be possible to expand enrollment to more students depending on the demand. Recruitment will be carried out through the ISP in partnership with other UH programs, including the Honors Program, the Pre-Health/Pre-Law Advising Center, the Undergraduate Research Opportunities Program, and academic advisors from the various UHM Schools and Colleges.

## **Program Organization**

### *Admissions Process*

Undergraduate students majoring in any field, who have an overall GPA of 2.5 or higher, may apply for the certificate program at any point during their undergraduate education. Post-baccalaureate students may also apply to the certificate program as part-time or full-time students. Applications will be processed through the UHM ISP and reviewed by an admissions committee consisting of faculty representatives from each of the participating unit, as well as an ISP representative. Applicants will be required to submit the following documents:

- Application form
- CV or resume
- All undergraduate transcripts
- One letter of recommendation

A prerequisite for the certificate program is an introductory level courses in the biological or physical sciences required for enrollment in the core course PH 441. Any of the following courses would be acceptable: PH 201, ANSC 200, BIOC 241, BIOL 101, BIOL 171, BOT 101, EARTH 101, GES 102, OEST 101, OCN 102, ATMO 150, or SOC 180.

Applicants passing the initial screening will be invited for an interview by the certificate admissions committee. The interests of the student will be assessed, and prospective mentors and research or practicum projects will be discussed during the interview. This discussion will initiate the process of selection of the capstone advisor and project for students who are accepted into the program.

### *Certificate Requirements*

The undergraduate certificate requires a minimum of 15 credit hours; 9 of these 15 credit hours must be at the 300 level or above. Students will need to take the following core courses for the One Health certificate:

- PH 441 (3 cr) – Introduction to One Health (summer only)
- Course alpha TBD, 400 level (2 cr) – One Health Research Seminar (new course under development)

- Course alpha TBD, 300 level (1 cr) – One Health Journal Club (new course under development)

These core courses are intended to provide certificate students with a foundation in the One-Health concept, an opportunity to engage with faculty and other students carrying out One Health research or field experiences, a platform to develop critical reading skills in One Health research, and a hands-on experience. Importantly, the journal club and seminar course will provide an opportunity for certificate students from different disciplines and majors to interact and discuss urgent real-world problems and potential solutions using a One Health approach.

Students will also be required to complete a capstone project which may either be a mentored research project or a supervised practicum/internship. Students will enroll in one of the following for their capstone project:

- IS/other 499 (var cr) – Directed Reading and Research
- IS 400 level (3 cr) – One Health Practicum/Internship (new course under development)

In addition to the core curriculum, students will be required to take two approved One Health-related courses in different departments that align with their individual goals. A list of courses relevant to One Health are provided in Appendix 2. A field of concentration may be selected, depending on the interest of the student and the nature of the capstone project. These concentrations may include: (1) food and animal science; (2) plant and environmental science; (3) biomedical science; (4) ocean and earth science; and (5) public health science. Other areas of concentration may be added as faculty from additional academic programs join the certificate program.

The One Health Interdisciplinary Undergraduate Certificate Program Sheet is provided in Appendix 3, and an example of a One Health certificate program plan is provided in Appendix 4.

### *Capstone Project*

The capstone project will either be a mentored research project or a practicum/internship experience. Students selecting a mentored research project option will enroll in a directed research course (IS 499 or 499 in their area of concentration). Students pursuing the practicum/internship option will enroll in a practicum course (currently in development) that will be based on a field experience with a university or community organization whose activities are relevant to the One Health concept.

As mentioned above, the process of selection of a capstone mentor and research project or practicum experience will be initiated during the admissions interview. A list of potential research projects and practicum experiences is provided in Appendix 5. This information will be transmitted to the Research/Practicum Committee who will work with each student to identify an appropriate research mentor or practicum supervisor. The Research/Practicum Committee will consist of representatives from each of the participating units who are familiar with their potential One Health research faculty mentors, as well as faculty with knowledge of practicum opportunities. With the consent of the student, potential mentors or practicum supervisors will be provided with the student's application material and an interview with the student will be arranged. For students pursuing a research project, once a mentor is selected the student and faculty mentor will collaborate to design the capstone research project. For students selecting a



practicum/internship experience, the instructor of the practicum/internship course will work with each student to develop a plan for their practicum experience, identify a supervisor for the practicum, and monitor progress of the student in this experience. In addition, progress made by each student in their research project or practicum experience will be monitored by the Research/Practicum Committee. Upon completion of the research project or practicum, the student will present this as their capstone project in the One Health Research Seminar course.

### **Resources Required**

The resources required by the program will be provided by the participating units at UHM and will consist of faculty contributions to course instruction and research mentoring.

Administrative and student advising services will be provided by the ISP, along with academic advisors from participating units. Existing research training programs will be leveraged for support of student capstone research projects which include the UHM Undergraduate Research Opportunities Program and a variety of undergraduate research training programs at UHM, including but not limited to:

- Center for Microbiome Analysis through Island Knowledge & Investigation (C-MAIKI)
- NIH/NIMHD Minority Health and Health Disparities Research Training (MHRT) Program
- NIH/NIGMS Maximizing Access to Research Careers (MARC) Award
- Health Literacy Research Hub: Hawai'i

Similarly, practicum/internship experiences will involve university as well as community organizations addressing One Health issues that already provide internship experiences for UHM students. Some examples of these organizations are:

- FilCom Cares
- Papa Ola Lokahi
- Hawai'i Public Health Institute
- Pacific Health Analytics Collaborative
- Ho'oulu 'Āina

### **Program Assessment**

One-Health Student Learning Outcomes:

1. Explain the concept of One Health to a lay audience
2. Identify environmental risks affecting both humans and animals
3. Describe an integrated assessment of health issues that considers human, animal, and environmental aspects
4. Recognize the roles of different professions and organizations in a transdisciplinary One Health team working at the human:animal:environmental interface
5. Identify major zoonotic infectious disease issues and strategies required to address them at the local, national, and global levels
6. Evaluate the complementary roles and responsibilities of various One Health professionals in safeguarding the health and welfare of animals, humans, and the environment.

Achievement of these student learning outcomes will be demonstrated by student performance in One Health courses; active student engagement and participation in One Health seminars and journal clubs; and the planning, execution, and presentation of the One Health capstone project.

Measurable programmatic outcomes of the One Health Interdisciplinary Undergraduate Certificate will include growing the undergraduate educational portfolio, boosting undergraduate student enrollment and retention, heightening interdisciplinary scholarship, diversifying research opportunities, building a collaborative One Health workforce, and attracting philanthropy.

## **Relevance of Program Objectives to the Participating Colleges and University**

### *UH Mission*

As stated in UH Board of Regents Policy 4.201, the primary mission of the university is “to provide environments in which faculty, staff and students can discover, examine critically, preserve, and transmit the knowledge, wisdom, and values that will help ensure the survival of present and future generations with improvement in the quality of life.” Further, this policy states that “the university shall be a global leader and model for the integration of sustainability throughout its teaching, research, operations, and public service.” The One Health Interdisciplinary Undergraduate Certificate Program is fully aligned with these principles as it will strive to instill in students an understanding and appreciation of the interdependence of the health of people, animals, and their shared environment to prepare them to become better stewards of the resources of the islands and the world.

### *Strategic Priorities*

The One Health concept is in perfect alignment with UH strategic priorities. Importantly, it is concordant with UHealthy Hawai‘i, a bold initiative that seeks to leverage the vast talent and resources in the health sciences and related disciplines across the UH System to improve health and healthcare in Hawai‘i and the Pacific, by focusing on four principal areas: (1) Ensuring a robust statewide health workforce; (2) Discovering and innovating to improve and extend lives; (3) Promoting healthier families and communities; and (4) Advancing health in all policies (<https://www.hawaii.edu/news/2019/08/20/uhealthy-hawaii/>).

### *World-Class Research Infrastructure*

The necessary research infrastructure exists to support the proposed program. In addition to UHealthy Hawai‘i, substantial institutional commitments have been made to the Pacific Center for Emerging Infectious Diseases Research (<http://pceidr.jabsom.hawaii.edu/>), a National Institutes of Health-funded center of translational science excellence aimed at the development and deployment of rapid diagnostics, effective treatments and affordable vaccines for new, emerging and re-emerging infectious diseases in the Asia-Pacific region. Another NIH-funded center of excellence, the Integrative Center for Environmental Microbiomes and Human Health (<https://icemhh.pbrc.hawaii.edu/>), is engaged in complementary studies of ecological gradients on human health, from the mountain to the ocean (*mauka* to *makai*), and in urban and rural settings. Also, in the realm of the environmental microbiome, UHM has invested heavily in the

establishment of the C-MĀIKI, a transdisciplinary partnership between PBRC/SOEST, JABSOM, CTAHR, College of Natural Sciences, and College of Engineering, with activities aimed at gaining new knowledge about the environmental microbiome to better understand the dynamics of our planet's microbial foundation (<https://www.c-maiki.org/>).

### *Innovative Teaching Infrastructure*

Each of the units also has the teaching infrastructure to collaboratively develop the certificate program. For example, OPHS/TSSWPH boasts existing scholarship in innovative undergraduate pedagogy, a thriving undergraduate program, a Native Hawaiian and Indigenous Health specialization designed to provide students with skills and training to serve Indigenous People and assist in addressing their health and wellness needs and with links to the community, and active environmental health laboratories, training, and research. Complementary research training for undergraduate students is available in the JABSOM Department of Tropical Medicine, Medical Microbiology and Pharmacology and Department of Native Hawaiian Health. And C-MĀIKI provides ample hands-on experiential learning opportunities.

### *Workforce Needs*

There are relevant workforce needs to support and sustain this effort. Specifically, the Hawai'i Department of Health has identified Environmental Health as a priority in over 40 unfilled positions, many of which could be filled by those trained at the undergraduate level with knowledge and skills in One Health. Indicative of the One Health approach in action, state departments, such as the Department of Health and Department of Aquatic Resources, co-fund some positions related to water quality. Many employment opportunities demand expertise in interdisciplinary coalition building, policy, community relevance, and strong communication skills. Students with interdisciplinary backgrounds and skills in in-demand fields, such as biotechnology, would be more competitive for such jobs.

### *Demand for the Program*

Discussions with leadership of the UH Honors Program and ISP have identified a high level of student interest in health-related undergraduate courses that would bring together faculty from multiple UHM units, including those that do not currently offer undergraduate degrees. In addition, this program would enhance opportunities for student participation in the Undergraduate Research Opportunities Program which has a related goal of promoting the engagement of undergraduate students in faculty-mentored research and creative work.

Demand for services (e.g., contracts, consulting or community service) or the intellectual property (e.g., inventions and creative works) that would be produced by students and faculty of the program and the degree to which this demand is not being adequately met by existing programs.

### *Evidence of Employer Demand*

As mentioned above, there is a need for individuals with One-Health knowledge and skills by the Environmental Health program and other in-demand positions related to water quality. One Health skills such as interdisciplinary coalition building, health policy, community relevance and communication skills would be valuable to positions in government and industry.



Signature Page

*Signature indicates that the person has reviewed the certificate program proposal and supports the proposed program.*

*Jerris R. Hedges, MD* Jerris R. Hedges, M.D., M.S., M.M.M. Dec 15, 2021  
Dean, John A. Burns School of Medicine Date

*Tetine Sentell* Tetine L. Sentell, Ph.D. Dec 16, 2021  
Interim Dean, Thompson School of Social Work and Public Health Date

*Nicholas Comerford* Nicholas Comerford, M.S., Ph.D. Dec 16, 2021  
Dean, College of Tropical Agriculture and Human Resources Date

*Brian Taylor* Brian Taylor, M.A., M.Phil., Ph.D. Dec 16, 2021  
Dean, School of Ocean and Earth Science and Technology Date

*Amy Schiffner* Amy Schiffner, M.F.A. Dec 17, 2021  
Director, Interdisciplinary Studies Program Date

*Laura E. Lyons* Laura E. Lyons, Ph.D.  
Associate Vice Chancellor for Academic Affairs Date

*Michael Bruno* Michael Bruno, Ph.D. 1/27/2023  
Provost Date

*David Lassner* David Lassner, Ph.D. January 30, 2023  
President Date

## APPENDICES

### ONE HEALTH INTERDISCIPLINARY UNDERGRADUATE CERTIFICATE PROPOSAL

APPENDIX 1. One Health Interdisciplinary Undergraduate Certificate Leadership Team

APPENDIX 2. UH Manoa Courses Relevant to One Health

APPENDIX 3. One Health Interdisciplinary Undergraduate Certificate Program Sheet

APPENDIX 4. One Health Program Plan Example

APPENDIX 5. One Health Research Projects and Practicum Experiences

APPENDIX 6. Approval Of Authorization To Plan (ATP) An Undergraduate Certificate In One  
Health

## APPENDIX 1 - One Health Interdisciplinary Undergraduate Certificate Leadership Team

### John A. Burns School of Medicine

- Richard Yanagihara, Professor, Dept. of Pediatrics
- Sandra P. Chang, Professor, Dept. of Tropical Medicine, Medical Microbiology & Pharmacology

### Interdisciplinary Studies Program

- Amy Schiffner, Director, UH Manoa Interdisciplinary Studies Program

### Thompson School of Social Work and Public Health

- Tetine L. Sentell, Interim Dean, Thompson School of Social Work and Public Health
- Michelle Tagorda, Undergraduate Advisor, Office of Public Health Studies

### College of Tropical Agriculture and Human Resources

- Michael Melzer, Assistant Researcher, Dept. of Plant and Environmental Protection Services
- Michael Muszynski, Assistant Professor, Dept. of Tropical Plant and Soil Sciences
- Jenee Odani, Associate Specialist, Dept. of Human Nutrition, Food and Animal Sciences

### School of Ocean and Earth Science and Technology

- Nicole Hynson, Associate Professor, Pacific Biosciences Research Center
- Matthew Medeiros, Assistant Professor, Pacific Biosciences Research Center

## APPENDIX 2. UH Manoa Courses Relevant to One Health

*(9 of the 15 credit hours for certificate must be at the 300 level or above; qualifying courses bolded. Additional courses offered by other programs may be added in the future.)*

Course Alpha	Title	Credit Hours
ANSC 200	Human, Animals & Agriculture (Fall)	3
ANSC 244	Comparative Nutrition (Fall)	3
<b>ANSC 350</b>	<b>Humans, Food &amp; Animals</b>	<b>3</b>
<b>ANSC 446</b>	<b>Genes and Animal Biology</b>	<b>3</b>
<b>ANSC 453</b>	<b>Animal Diseases &amp; Their Control (Spring Odd)</b>	<b>3</b>
<b>ANSC 454</b>	<b>Meat Science and Muscle Biology</b>	<b>3</b>
FSHN 112	Food Service Safety & Sanitation	2
FSHN 185	The Science of Human Nutrition	3
<b>FSHN 370</b>	<b>Lifespan Nutrition</b>	<b>3</b>
<b>FSHN 440</b>	<b>Food Safety</b>	<b>3</b>
GES 102/OCN 102	Introduction to Environment and Sustainability	3
MICR 130	General Microbiology	3
<b>MICR 351</b>	<b>Biology of Microorganisms</b>	<b>3</b>
<b>MICR 485</b>	<b>Microbes and their Environment</b>	<b>3</b>
NREM 210/PEPS 210	Introduction to Environmental Science	3
NREM 251	Scientific Principles of Sustainability	3
OCN 105	Sustainability in a Changing World	3
OCN 120	Global Environmental Challenges	3
<b>OCN 315</b>	<b>Role of Models in Global Environmental Science</b>	<b>3</b>



<b>OCN 340/PEPS 340</b>	<b>Ecology of Infectious Disease &amp; Symbiosis</b>	<b>3</b>
OEST 103	An Introduction to Integrative Systems Biology: Hawaiian Biomes as a Framework (may be too basic for science majors)	4
<b>PACE 485</b>	<b>Topics: Pacific Island Community Health and Peacebuilding</b>	<b>3</b>
PEPS 210	Introduction to Environmental Science	3
<b>PEPS 405</b>	<b>Plant Pathogens and Disease</b>	<b>3</b>
<b>PEPS 422</b>	<b>Biocontrol of Invasive Species</b>	<b>3</b>
<b>PEPS 451</b>	<b>Environmental Law</b>	<b>3</b>
<b>PEPS 463/TRMD 463</b>	<b>Medical and Urban Entomology</b>	<b>3</b>
<b>PEPS 486</b>	<b>Symbiosis</b>	<b>3</b>
<b>PEPS/SUST 310</b>	<b>Environment and Agriculture</b>	<b>3</b>
<b>PEPS/TPSS/SUST 410</b>	<b>Sustainable Soil and Plant Health Management</b>	<b>2</b>
PH 201	Introduction to Public Health (F/S/summer)	3
PH 203	Introduction to Global Health (F/S)	3
<b>PH 310</b>	<b>Introduction to Epidemiology (non-majors: summer only) - w/pr for summer by request</b>	<b>3</b>
<b>PH 340</b>	<b>Public Health &amp; the Environment (F&amp;S)</b>	<b>3</b>
<b>PH 441 (required course)</b>	<b>Introduction to One Health (summer now; asyn, online) w/pr by request</b>	<b>3</b>
<b>PH 445</b>	<b>Introduction to Environmental Microbiology (check with Ron)</b>	<b>3</b>
TPSS 200	Agriculture, Environment, and Society (fall)	3
<b>TPSS 410</b>	<b>Sustainable Soil and Plant Health Management (odd spring)</b>	<b>2</b>
<b>TPSS 480/480L</b>	<b>Life in the Soil Environment/Lab (even spring?)</b>	<b>3+1</b>

<b>TRMD 350</b>	<b>Pandemic Preparedness and Response: One Health Case Study of COVID-19</b>	<b>3</b>
<b>TRMD 431</b>	<b>Principles of Medical Parasitology</b>	<b>2</b>
<b>TRMD 441</b>	<b>International Health Disparities</b>	<b>2</b>

**University of Hawai‘i at Mānoa**  
**Interdisciplinary Studies Program Sheet 2022-23**  
**One Health Interdisciplinary Undergraduate Certificate**  
**Admissions: Selective Process: Application**  
**Min. Total Credits: 15 credits**

<b>College Requirements</b>
<b>Admission Requirements</b>
<ul style="list-style-type: none"> <li>• Fall or Spring admission</li> <li>• For undergraduate students, submit an application to the Interdisciplinary Studies Program, Office of the Vice Provost for Academic Excellence no later than the following: <ul style="list-style-type: none"> <li>○ <b>March 1</b> for Fall semester (January 5 priority deadline)</li> <li>○ <b>October 1</b> for Spring semester (September 1 priority deadline)</li> </ul> Apply: <a href="https://manoa.hawaii.edu/onehealth/">https://manoa.hawaii.edu/onehealth/</a> </li> <li>• For post-baccalaureate students, complete the application above to the Interdisciplinary Studies Program, Office of the Vice Provost for Academic Excellence and submit an application to the University of Hawai‘i at Mānoa no later than the following: <ul style="list-style-type: none"> <li>○ <b>March 1</b> for Fall semester (January 5 priority deadline)</li> <li>○ <b>October 1</b> for Spring semester (September 1 priority deadline)</li> </ul> Apply: <a href="https://manoa.hawaii.edu/admissions/">https://manoa.hawaii.edu/admissions/</a> <ul style="list-style-type: none"> <li>○ Pay non-refundable \$70 Application Fee</li> <li>○ Submit official non-UH transcript(s)</li> </ul> Apply: <a href="https://manoa.hawaii.edu/onehealth/">https://manoa.hawaii.edu/onehealth/</a> </li> <li>• 2.50 cumulative GPA</li> <li>• Curriculum Vitae (CV) or resume</li> <li>• All undergraduate transcripts</li> <li>• One letter of recommendation</li> <li>• Admissions interview</li> </ul>
<b>Completion Requirements</b>
<ul style="list-style-type: none"> <li>• Minimum certificate credits: 15</li> <li>• Minimum grade of C (not C-) in courses</li> <li>• Minimum exit GPA of 2.5 in the certificate equivalent</li> </ul>
<b>Requirements</b>
<ul style="list-style-type: none"> <li>• Undergraduates or post-baccalaureate students majoring in any field will be eligible</li> <li>• Fields of concentration for certificate: Food and Animal Science, Plant and Environmental Science, Biomedical Science, Ocean and Earth Science, Public Health Science</li> </ul>
<b>Program (15 credits)</b>
<i>Core course requirements</i>
<input type="checkbox"/> PH 441 (3 cr) <input type="checkbox"/> IS 490* (2 cr) <input type="checkbox"/> IS 395* (1 cr)
*IS 490 – One Health Seminar and IS 395 – One Health Journal Club are new courses that are being submitted for approval
<i>Capstone requirement</i>
Students are required to complete a capstone project which may be either a mentored research project or a supervised practicum/internship
<input type="checkbox"/> IS 499 – Directed Reading or Research (var cr) <input type="checkbox"/> IS 485 - Practicum/Internship (3 cr)
<i>Elective courses</i>
In addition to the core courses, students are required to take two, approved, 300+ level One Health-related courses from different departments including Food and Animal Science, Plant and Environmental Science, Biomedical Science, Ocean and Earth Science, Public Health Science.
<input type="checkbox"/> 300+ One Health-related course 1 (2-3 cr) <input type="checkbox"/> 300+ One Health-related course 2 (2-3 cr)
The current list of approved, elective One Health-related courses may be obtained from Interdisciplinary Studies advisors.
<i>Total credit requirement</i>
Core course credits, capstone course credits, and qualifying elective course credits may be counted toward the 15-credit certificate completion requirement.

*This program sheet was prepared to provide information and does not constitute a contract. Meet regularly with your Interdisciplinary Studies advisor to ensure you are on track with your certificate requirements.*

## Notes

Office of Undergraduate Education, Interdisciplinary Studies Program, Sinclair Building 108, (808) 956-7297, [isp@hawaii.edu](mailto:isp@hawaii.edu)

ISP Director: Amy Schiffner; [amyls@hawaii.edu](mailto:amyls@hawaii.edu)

ISP Faculty Advisors: Elizabeth Gannaway; [gannaway@hawaii.edu](mailto:gannaway@hawaii.edu)

Siobhan Ni Dhonacha; [dhonacha@hawaii.edu](mailto:dhonacha@hawaii.edu)

Certificate Director: Sandra P. Chang; [sandrac@hawaii.edu](mailto:sandrac@hawaii.edu)

SC 02/2022

APPENDIX 4. One Health Program Plan Example

<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
<b>Fall</b>	<b>Fall</b>	<b>Fall</b>	<b>Fall</b>
	PH 201* (3)	IS 300 level Journal Club	Elective 300+ 1
		IS 499**	IS 499 1
Credits	Credits	Credits	2 Credits 4
<b>Spring</b>	<b>Spring</b>	<b>Spring</b>	<b>Spring</b>
			IS 400 level Seminar 2
		Elective 300+	3
		IS 499	1
Credits	Credits	Credits	4 Credits 2
<b>Summer</b>	<b>Summer</b>	<b>Summer</b>	<b>Summer</b>
	PH 441 Intro to One- Health 3		
		3 Credits	6 Credits 6
Credits	Credits	Credits	6 Credits 6
<b>Total Credits</b>	<b>Total Credits</b>	<b>Total Credits</b>	<b>Total Credits</b>
	<b>3</b>	<b>3</b>	<b>9</b>
			<b>15</b>

\*Pre for PH 441: PH 201, or ANSC 200, or BIOC 241, or BIOL 101, or BIOL 171, or BOT 101, or ERTH 101, or GES 102, or OEST 101, or OCN 102, or ATMO 150, or SOC 180; or consent.

\*\*Research may be carried out over several semesters or concentrated within a few semesters or summer session; students selecting the practicum option would fulfill their practicum requirements while taking a 3 credit practicum course over a single semester or summer session.

## APPENDIX 5. One Health Research Projects and Practicum Experiences

### Research Projects

JABSOM – John A. Burns School of Medicine

TSSWPH – Thompson School of Social Work and Public Health

CTAHR – College of Tropical Agriculture and Human Resources

SOEST – School of Ocean and Earth Science and Technology

ENG – College of Engineering

WRRRC – Water Resources Research Center

<b>Unit/Organization</b>	<b>Project Title</b>	<b>Mentor(s)</b>	<b>Department</b>
JABSOM	Nontuberculous mycobacteria (NTM) from Hawai'i feral pigs and their clinical significance in human macrophages	Jennifer Honda, Sandra P. Chang	Tropical Medicine, Medical Microbiology & Pharmacology
	Evidence-based Therapeutics for Life-threatening Box Jellyfish and Snake Envenomations	Angel Yanagihara	Tropical Medicine, Medical Microbiology & Pharmacology
	Neuroangiostrongyliasis (rat lungworm disease): A Diagnostic Challenge	Kenton Kramer, Willi Gosnell, Jourdan McMillan	Tropical Medicine, Medical Microbiology & Pharmacology
	Possible reemergence of <i>Mycobacterium bovis</i> in East Moloka'i	Willi Gosnell	Tropical Medicine, Medical Microbiology & Pharmacology
	Assessing Cross-Reactive Flavivirus Antibodies in Pregnant Women During the Zika Virus Outbreak in Brazil	Wei-Kung Wang	Tropical Medicine, Medical Microbiology & Pharmacology
	SARS CoV2 Hawaii Variant: Genetic Characteristics, Phylogenetic Analysis, and Immunogenic Epitopes	Vivek R. Nerurkar	Tropical Medicine, Medical Microbiology & Pharmacology
TSSWPH	Oceans & human health (esp. maternal and child health)	Catherine M. Pirkle	Office of Public Health Studies
	Monitoring Hawai'i beach water quality	Yuanan (Ron) Lu	Office of Public Health Studies
	Determinants of health of Native Hawaiians and Indigenous Peoples	Mapuana Antonio	Office of Public Health Studies
	Malama: rebuilding indigenous food systems in rural native	Jane Chung-Do	Office of Public Health Studies

	Hawaiian communities through backyard aquaponics		
	Health economics and health systems	Victoria Fan	Pacific Health Analytics Collaborative, Center on Aging
	Epidemiology, public health biology and pathophysiology; air quality and environmental protection concerns	Thomas Lee	Office of Public Health Studies
CTAHR	Zoonotic diseases (terrestrial, aquatic); emerging pathogens	Jenee Odani	Human Nutrition, Food and Animal Sciences
	Food safety	Yong Li	Human Nutrition, Food and Animal Sciences
	Soil health, carbon sequestration	Susan Crow, Jonathan Deenik	Natural Resources and Environmental Management; Tropical Plant and Soil Sciences
	Pathogen discovery and diagnostics	Mohammad Arif, Michael Melzer	Plant and Environmental Protection Sciences
	Companion animals	Lorien Yancura	HDFS
	Urban entomology	Jia-Wei Tay	PEPS Plant and Environmental Protection Sciences
	Functional foods & diabetes; nanotechnology for agriculture and human health	Pratibha V. Nerurkar	Molecular Biosciences and Bioengineering
	Sustainable agriculture to improve animal production, animal nutrition, human nutrition	Rajesh Jha and others	Human Nutrition, Food and Animal Sciences
	Peptide chemistry, peptide toxin bioengineering, invertebrate aquaculture	John-Paul Bingham	Molecular Biosciences and Bioengineering
	Environmental physiology, comparative endocrinology	Andre P. Seale	Human Nutrition, Food and Animal Sciences
State of Hawaʻii Interdepartmental Collaboration	Invasive species monitoring	Layla Kaufman	Project Coordinator, Hawaiʻi Invasive Species Council

Hawai'i State Dept. Of Health	Vector Management	Grace Simmons	Chief, Vector Control Branch
	Mosquito entomology	Lincoln Wells	Entomologist, Hawaii State Dept of Health; Database Developer, EpiCenter for Emerging Infectious Disease Intelligence, UC Davis
	Mosquito entomology	Chris Jacobsen	Vector Control Branch, Hilo; Hawa'i District Health Office
SOEST	Mechanism of action of toxins and bioactive compounds from venomous marine invertebrates	Angel Yanagihara	Pacific Biosciences Research Center
	Mosquito microbiome and disease transmission	Matthew Medeiros	Pacific Biosciences Research Center
	Ecology of plant-fungal symbioses	Nicole Hynson	Pacific Biosciences Research Center
	Impact of microorganisms on ecosystems	Kiana Frank	Pacific Biosciences Research Center
	Evolution of pheromones	Joanne Yew	Pacific Biosciences Research Center
	Microbial ecology and disease ecology	Andrea Jani	Pacific Biosciences Research Center
	Impact of humans on coral health	Bob Richmond	Pacific Biosciences Research Center
	Role of microbes in coastal oceanographic processes	Rosie Alegado	Oceanography
	Microbial ecology of aquatic ecosystems (coral reefs, oceanic gyres, alpine lakes)	Craig Nelson	Oceanography
	Biological oceanography; ecology and evolutionary consequences of viral infection	Grieg Steward	Oceanography
ENG/WRRC	Interface between water quality and environmental health microbiology	Tao Yan	Water Resources Research Center; Civil and Environmental Engineering



## Practicum/Internship Opportunities

- FilCom Cares
- Papa Ola Lokahi
- Hawai'i Public Health Institute
- Pacific Health Analytics Collaborative
- Ho'oulu 'Āina
- Honolulu Zoo
- Hawai'i Homeless Outreach and Medical Education (HOME) Project
- Papahana Kuaol



UNIVERSITY  
of HAWAII®  
MĀNOA

Department of Tropical Medicine,  
Medical Microbiology and Pharmacology  
John A. Burns School of Medicine

MEMORANDUM

DATE: October 13, 2020

TO: David Lassner, Ph.D.  
President, University of Hawai'i System

VIA: Michael Bruno, Ph.D. *Michael Bruno*  
Provost, University of Hawai'i at Mānoa

VIA: Laura E. Lyons, Ph.D. *Laura E. Lyons*  
Interim Associate Vice Chancellor for Academic Affairs

FROM: Jerris R. Hedges, M.D., M.S., M.M.M. *JRHedges* Oct 15, 2020  
Dean, John A. Burns School of Medicine

William "Bill" G. Chismar *WGC* Oct 15, 2020  
Interim Dean, Myron B Thompson School of Social Work  
Interim Dean, Outreach College

Nicholas Comerford, M.S., Ph.D. *NB Comerford* Oct 16, 2020  
Dean, College of Tropical Agriculture and Human Resources

Brian Taylor, M.A., M.Phil., Ph.D. *Brian Taylor* Oct 15, 2020  
Dean, School of Ocean and Earth Science and Technology

Amy Schiffner, M.F.A. *Amy Schiffner* Oct 15, 2020  
Director, Interdisciplinary Studies Program

Ronald E. Cambra *Ronald E. Cambra* Oct 17, 2020  
Assistant Vice Chancellor for Undergraduate Education

SUBJECT: APPROVAL OF AUTHORIZATION TO PLAN (ATP) AN UNDERGRADUATE  
CERTIFICATE IN ONE HEALTH

SPECIFIC ACTION REQUESTED:

It is respectfully requested that the Authorization to Plan (ATP) for an undergraduate certificate in ONE HEALTH be approved.

RECOMMENDED EFFECTIVE DATE: Fall 2021

ADDITIONAL COST: None

## PURPOSE:

The One Health Interdisciplinary Undergraduate Certificate Program is intended to prepare students with the skills and knowledge to work collaboratively across disciplines to solve real-world problems using the One Health approach that promotes the integration of human health, animal/plant health, and environmental health. The program is founded on *Mauli Ola*, the Hawaiian concept of physical, spiritual and mental health and of social and cultural wellbeing, that transcends the mere absence of disease or disability, and is deeply rooted in the indigenous belief that the health of the individual and the health of the community are inextricably linked to the health of the environment. Importantly, this program is in perfect alignment with UHealthy Hawai'i and is supported by a multi-unit team of core faculty from the John A. Burns School of Medicine (JABSOM), the Office of Public Health Studies (OPHS) in the Myron B. Thompson School of Social Work (MBTSSW), the Pacific Biosciences Research Center (PBRC) in the School of Ocean and Earth Science and Technology (SOEST), and the College of Tropical Agriculture and Human Resources (CTAHR), with the full support of their Deans and Directors. This certificate program will incorporate Top Faculty and Researchers at the University of Hawai'i at Mānoa (UHM) into the Undergraduate Experience. As stipulated in the UHM undergraduate certificate program guidelines, a minimum of 15 credits will be required. A 3-credit One Health Introductory Course on the intersection between human health, animal/plant health and environmental health, and a 2-credit One Health Seminar Course to engage undergraduates with world-class UHM researchers will serve as core courses, while the remaining credits will be from existing courses along with new courses designed to address specific aspects of One Health. Several tracks are envisioned that will align with the student's research topic, such as medical, animal, social and environmental science tracks. The program will be based in the UH Manoa Interdisciplinary Studies Program. By fulfilling their capstone requirement under the supervision of UHM's Top Research Faculty, students will actively participate in the intellectual adventure of generating new knowledge in real time.

## BACKGROUND:

Although One Health programs have proliferated in many schools of human and veterinary medicine in the United States, few institutions have developed certificate programs in One Health that are targeted specifically to undergraduate students. As conceived, the proposed One Health Interdisciplinary Undergraduate Certificate Program will harness and translate the exceptional talent of faculty from multiple units to develop a non-unit-restricted structure and truly interdisciplinary curriculum that fulfills the core competencies in One Health education. To be clear, the One Health Interdisciplinary Undergraduate Certificate Program will complement, rather than duplicate or compete with existing programs in the following ways:

- leveraging strengths in multiple departments and disciplines across the UHM, as well as investments in interdisciplinary programs (such as C-MĀIKI);
- applying indigenous knowledge that exemplifies our unique geographic location and cultural heritage; and
- being responsive to current and anticipated workforce needs in health care, public health, environmental health and conservation biology, biomesecience, and education for the state, region and beyond.

The One Health Interdisciplinary Undergraduate Certificate Program initiative was selected as a winner of the UHM Provost's 2019-20 Strategic Investment Competition for High-Impact Practices in Undergraduate Education.

ACTION RECOMMENDED:

It is recommended that the Authorization to Plan (ATP) for an undergraduate certificate in ONE HEALTH be approved.

**Authorization to Plan A New Academic Program:  
One Health Interdisciplinary Undergraduate Certificate Program**

**Campus, school/college and department/division proposing the new program**

- John A Burns School of Medicine, UH Manoa
  - Department of Tropical Medicine, Medical Microbiology & Pharmacology
- Myron B. Thompson School of Social Work, UH Manoa
  - Office of Public Health Studies
- College of Tropical Agriculture and Human Resources, UH Manoa
  - Department of Human Nutrition, Food and Animal Sciences
  - Department of Plant and Environmental Protection Services
- School of Ocean and Earth Science and Technology, UH Manoa
  - Pacific Biosciences Research Center

**Program proposed:** One Health Interdisciplinary Undergraduate Certificate Program

**Program objectives**

Preparing students with the skills and knowledge to work collaboratively across disciplines to solve real-world problems is one of the imperatives of institutions of higher education. With the launching of UHealthy Hawai‘i and the Center for Microbiome Analysis through Island Knowledge & Investigation (C-MĀIKI), the University of Hawai‘i has made significant commitments to the interconnectivity of the health of the individual, the community and the environment. Thus, a multi-unit team of faculty from the John A. Burns School of Medicine, the Myron B. Thompson School of Social Work, the School of Ocean and Earth Science and Technology and the College of Tropical Agriculture and Human Resources proposes to translate current investments into educational capital by collaboratively developing a One Health Interdisciplinary Undergraduate Certificate Program at the University of Hawai‘i at Mānoa (UHM) to better integrate UHM’s Top Faculty and Researchers into the Undergraduate Experience. This UHM undergraduate certificate program will require a minimum of 15 credits. Core courses will include a 3-credit One Health Introductory Course on the intersection between human health, animal/plant health and environmental health, a 2-credit One Health Seminar Course to engage undergraduates with world-class UHM researchers, and a capstone experience. The remaining credits will be from existing and new One Health-related courses offered by participating departments. By fulfilling their capstone requirement under the supervision of UHM’s top faculty, students will actively participate in the intellectual adventure of generating new knowledge. The proposed program will provide a multidimensional, holistic perspective of health and strategically integrate UHM’s top faculty and researchers into the undergraduate educational experience.

**Alignment with the Campus and UH system mission, strategic plan and the Integrated Academic and Facilities Plan**

*UH Mission.* As stated in UH Board of Regents Policy 4.201, the primary mission of the university is “to provide environments in which faculty, staff and students can discover, examine critically, preserve and transmit the knowledge, wisdom, and values that will help ensure the survival of present and future generations with improvement in the quality of

life.” Further, this policy states that “the university shall be a global leader and model for the integration of sustainability throughout its teaching, research, operations, and public service.” The One Health Interdisciplinary Undergraduate Certificate Program is fully aligned with these principles as it will strive to instill in students an understanding and appreciation of the interdependence of the health of people, animals and their shared environment in order to prepare them to become better stewards of the resources of the islands and the world.

*Strategic Priorities.* The One Health concept is in perfect alignment with UH strategic priorities. Importantly, it is concordant with UHealthy Hawai‘i, a bold initiative that seeks to leverage the vast talent and resources in the health sciences and related disciplines across the UH System to improve health and healthcare in Hawai‘i and the Pacific, by focusing on four principal areas: (1) Ensuring a robust statewide health workforce; (2) Discovering and innovating to improve and extend lives; (3) Promoting healthier families and communities; and (4) Advancing health in all policies (<https://www.hawaii.edu/news/2019/08/20/uhealthy-hawaii/>).

*World-Class Research Infrastructure.* The necessary research infrastructure exists to support the proposed program. In addition to UHealthy Hawai‘i, substantial institutional commitments have been made to the Pacific Center for Emerging Infectious Diseases Research (<http://pceidr.jabsom.hawaii.edu/>), a National Institutes of Health-funded center of translational science excellence aimed at the development and deployment of rapid diagnostics, effective treatments and affordable vaccines for new, emerging and re-emerging infectious diseases in the Asia-Pacific region. Another NIH-funded center of excellence, the Integrative Center for Environmental Microbiomes and Human Health, is engaged in complementary studies of ecological gradients on human health, from the mountain to the ocean (*mauka* to *makai*), and in urban and rural settings. Also, in the realm of the environmental microbiome, UHM has invested heavily in the establishment of the C-MĀIKI, a transdisciplinary partnership between PBRC/SOEST, JABSOM, CTAHR, CNS, and CoE, with activities aimed at gaining new knowledge about the environmental microbiome to better understand the dynamics of our planet’s microbial foundation (<https://www.c-maiki.org/>).

*Innovative Teaching Infrastructure.* Each of the units also has the teaching infrastructure to collaboratively develop the certificate program. For example, OPHS/MBTSSW boasts existing scholarship in innovative undergraduate pedagogy, a thriving undergraduate program, a Native Hawaiian and Indigenous Health specialization designed to provide students with skills and training to serve Indigenous People and assist in addressing their health and wellness needs and with links to the community, and active environmental health laboratories, training, and research. Complementary research training for undergraduate students is available in the JABSOM Department of Tropical Medicine, Medical Microbiology and Pharmacology and Department of Native Hawaiian Health. And C-MĀIKI provides ample hands-on experiential learning opportunities.

## **Justification of need**

*Workforce Needs.* There are relevant workforce needs to support and sustain this effort. Specifically, the Hawai'i Department of Health has identified Environmental Health as a priority in over 40 unfilled positions, many of which could be filled by those trained at the undergraduate level with knowledge and skills in One Health. Indicative of the One Health approach in action, state departments, such as the Department of Health and Department of Aquatic Resources, co-fund some positions related to water quality. Many employment opportunities demand expertise in interdisciplinary coalition building, policy, community relevance, and strong communication skills. Students with interdisciplinary backgrounds and skills in in-demand fields, such as biotechnology, would be more competitive for such jobs.

### **Demand for the program**

- *Provide evidence demonstrating student demand for the program and the extent that the demand is not being adequately met by existing programs.*

Discussions with leadership of the UH Honors Program and Interdisciplinary Studies Program have identified a high-level of student interest in health-related undergraduate courses that would bring together faculty from multiple UH units, including those that do not currently offer undergraduate degrees. In addition, this program would enhance opportunities for student participation in the Undergraduate Research Opportunities Program which has a related goal of promoting the engagement of undergraduate students in faculty-mentored research and creative work.

- *Demand for services (e.g., contracts, consulting or community service) or the intellectual property (e.g., inventions and creative works) that would be produced by students and faculty of the program and the degree to which this demand is not being adequately met by existing programs.*

Measurable outcomes of the One Health Interdisciplinary Undergraduate Certificate Program will include growing the undergraduate educational portfolio, boosting undergraduate student enrollment and retention, heightening interdisciplinary scholarship, diversifying research opportunities, building a collaborative One Health workforce, and attracting philanthropy.

- *Evidence of employer demand.*

As mentioned above, there is a need for individuals with One-Health knowledge and skills by the Environmental Health program and other in-demand positions related to water quality. One Health skills such as interdisciplinary coalition building, health policy, community relevance and communication skills would be valuable to positions in government and industry.

### **Non-duplication of programs**

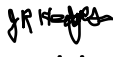
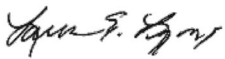
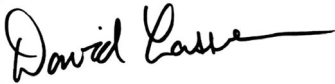
The One Health Interdisciplinary Undergraduate Certificate Program is intended to complement, rather than duplicate or compete with, instructional, research and outreach opportunities of the Institute for Sustainability and Resilience and other relevant UHM programs concerned with environmental sustainability, climate change, and community resilience. The proposed certificate program will provide a multidimensional, holistic perspective of health and strategically integrate UHM's top faculty and researchers into the undergraduate educational experience.

**List potential risks:** None identified.

**New Resources:** None required.

## Signature Page

*Signature indicates that the person has reviewed the ATP and supports the proposed program.*

	Jerris R. Hedges, M.D., M.S., M.M.M.	Feb 9, 2021
<hr/>		Date
<i>Dean, John A. Burns School of Medicine</i>		
 <i>William G Chismar</i>	William Chismar, Ph.D.	Feb 10, 2021
<hr/>		Date
<i>Interim Dean, Myron B. Thompson School of Social Work</i>		
 <i>Nicholas Brian Comerford</i>	Nicholas Comerford, M.S., Ph.D.	Feb 10, 2021
<hr/>		Date
<i>Dean, College of Tropical Agriculture And Human Resources</i>		
 <i>Brian Taylor</i>	Brian Taylor, M.A., M.Phil., Ph.D.	Feb 10, 2021
<hr/>		Date
<i>Dean, School of Ocean and Earth Science and Technology</i>		
 <i>Amy Schiffner</i>	Amy Schiffner, M.F.A.	Feb 11, 2021
<hr/>		Date
<i>Director, Interdisciplinary Studies Program</i>		
 	Laura E. Lyons, Ph.D.	March 23, 2021
<hr/>		Date
<i>Associate Vice Chancellor for Academic Affairs</i>		
 <i>Michael Bruno</i>	Michael Bruno, Ph.D.	March 24, 2021
<hr/>		Date
<i>Provost</i>		
 	David Lassner, Ph.D.	April 20, 2021
<hr/>		Date
<i>President</i>		



**UNIVERSITY OF HAWAII AT MĀNOA  
UHM-1 FORM (ADD A COURSE)**

*See Guidelines for instructions and deadlines. Submit forms (one course per form) to [uhmcrse@hawaii.edu](mailto:uhmcrse@hawaii.edu).*

<b>1. Course Subject and Number</b> IS/TRMD 395		<b>2. Effective Term &amp; Year</b> <input checked="" type="checkbox"/> FA <u>22</u> <input type="checkbox"/> SP _____ <input type="checkbox"/> SU _____		<b>3. Frequency (check all that apply)</b> <input checked="" type="checkbox"/> Fall Semester <input type="checkbox"/> Summer Semester <input type="checkbox"/> Spring Semester <input type="checkbox"/> Alternate Years		<b>4. Offering Status (check one)</b> <input checked="" type="checkbox"/> Regular <input type="checkbox"/> Experimental (~97 or ~98 only)	
<b>5a. Full Course Title (for alpha courses, attach a separate sheet and specify the title for each alpha)</b> One Health Journal Club				<b>6. Grade Option (check all that apply)</b> <input checked="" type="checkbox"/> Letter Grade <input type="checkbox"/> Satisfactory/Unsatisfactory (500, 700, 800 only) <input type="checkbox"/> CR/NC <input type="checkbox"/> Audit <input type="checkbox"/> Honors (Medicine only)			
<b>5b. Banner Course Title (30 character maximum, including spaces and punctuation; use title case. For alpha courses, attach a separate sheet and specify the title for each alpha)</b> One Health Journal Club				<b>GEO Use:</b> <input type="checkbox"/> None <input type="checkbox"/> Add _____    GEC Initials _____			
<b>7a. Gen Ed Foundations, Diversification, or Hawaiian/Second Language Designation (check one)</b> <input type="checkbox"/> Request Gen Ed designation indicated below (complete 7b) <input checked="" type="checkbox"/> No designation requested							
<b>7b. If requesting Gen Ed Designation, indicate designation (choose one):</b> DA    DH    DL    DS    DB    DP    DY    DB+DY    DP+DY    FGA    FGB    FGC    FQ    FW    HSL							
<b>8. Contact Hours (total meeting hours per semester – if variable, specify range)</b> 16 hours		<b>9. Number of Credits (if variable, specify range)</b> 1		<b>10. Repeat Limit (do NOT write "None")</b> unlimited		<b>11. Credit Limit (do NOT Write "None")</b> unlimited	
<b>12. Schedule Type (check all that apply)</b> <input type="checkbox"/> Lecture (LEC) <input checked="" type="checkbox"/> Discussion (DIS) <input type="checkbox"/> Hybrid Technology Intensive (HTI) <input type="checkbox"/> Thesis/Dissertation (THE) <input type="checkbox"/> Laboratory (LAB) <input type="checkbox"/> Seminar (SEM) <input type="checkbox"/> Lecture/Laboratory combined (LEL) <input type="checkbox"/> Directed Reading or Research (DRR) <input type="checkbox"/> Lecture/Discussion combined (LED) <input type="checkbox"/> Field Experience/ Internship/Practicum (PRA)							
<b>13. Co-requisite Course(s)</b>		<b>14. Class Standing Restrictions</b>		<b>15a. Major Restrictions (as they should appear in Catalog)</b>		<b>15b. Banner Codes of Acceptable Majors</b>	
<b>16a. Prerequisite Course(s) (use "and," "or," and punctuation to indicate relationships between prerequisites)</b> PH 441							
<b>16b. Minimum Required Grade for Prerequisites</b> C		<b>16c. Blanket Requirements Listed in Catalog (if none, write "none")</b>					
<b>17. Catalog Description (35-word maximum. Do not include other course information such as frequency, grade option, and prerequisites in the description/word count.)</b> Students gain critical reading skills in the presentation and discussion of published literature on One Health-related topics.							
<b>18. Justification (attach additional sheets if needed)</b> see attached document						<b>19. Syllabus Attached</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not Needed (~99 only)	
<b>20. Cross-listed or Honors Course(s)</b>							
IS 395		Amy Schiffner		<i>Amy Schiffner</i>		Feb 14, 2022	
Course Subject & Number		Chair/Director		Signature		Date	
TRMD 395		Vivek R. Nerurkar		<i>Vivek R. Nerurkar</i>		Feb 14, 2022	
Course Subject & Number		Chair/Director		Signature		Date	
<b>21. Requested By</b> I certify that the student learning objectives for the course are consistent with the learning objectives of each program under which the course is listed.							
Trop Med, Med Micro & Pharm		Vivek R. Nerurkar		<i>Vivek R. Nerurkar</i>		Feb 14, 2022	
Department/Unit		Chair/Director		Signature		Date	
<b>Approved By</b>							
John A. Burns School of Medicine		Jerris R. Hedges		<i>Jerris R. Hedges, MD</i>		Feb 14, 2022	
1 <sup>st</sup> College or School		Dean or Designee		Signature		Date	
2 <sup>nd</sup> College or School		Dean or Designee		Signature		Date	
<b>General Education Office (for courses numbered 100-499)</b>							
Director or Designee				Signature		Date	
<b>Graduate Division (for Graduate Division-administered courses)</b>							
Dean or Designee				Signature		Date	
<b>Office of the Provost</b>							
Vice Chancellor for Academic Affairs or Designee				Signature		Date	

# UHM-1 Form Justification - IS 395: One Health Journal Club

## Rationale

This discussion-based course will be a required core course for the One Health Interdisciplinary Undergraduate Certificate Program. Scientific articles that examine environmental health, animal health, and human health through a One Health lens will be selected for discussion. This course will facilitate interdisciplinary student interactions and the development of critical thinking skills when reading the scientific literature. Discussions of these articles will be student-driven and guided by faculty who are experts in the field.

## Learning Objectives and Outcomes

### Institutional Learning Objectives

This course addresses the following institutional learning objectives for UH Manoa undergraduate students:

2. **Know—Breadth and Depth of Knowledge**

Students develop their understanding of the world with emphasis on Hawai'i, Asia, and the Pacific by integrating

- a. General education knowledge (biological sciences, physical sciences, social sciences, technology);
- b. Specialized study in an academic field (*the interconnectedness of animals, environment, plants and people*); and
- c. Understanding of Hawaiian culture and history.

4. **Do—Intellectual and Practical Skills**

Students improve their abilities to

- d. Think critically and creatively;
- f. Communicate and report.

5. **Value—Personal and Social Responsibility**

Students demonstrate excellence, integrity, and engagement through

- g. Continuous learning and personal growth;
- h. Respect for people and cultures, in particular Hawaiian culture;
- i. Stewardship of the natural environment; and
- j. Civic participation in their communities.

### Course Learning Outcomes

After successfully completing this course, you will be able to:

1. Critically read, comprehend, and present published data in One Health
2. Discuss the strengths and weaknesses of publications
3. Demonstrate skills in comprehending, evaluating, and communicating scientific data
4. Describe examples of an integrated assessment of health issues that considers human, animal, and environmental aspects
5. Identify major zoonotic infectious disease issues and evaluate strategies required to address them at the local, national, and global levels

### Course Syllabus

Syllabus attached.

### Expected Course Enrollment

The number of students will depend on the number of students enrolled in the One Health Certificate Program. Initially we anticipate that the course will enroll 10-12 students, however we expect enrollment to increase as the certificate program becomes established. Discussions with the UH Honors Program and Interdisciplinary Studies Program have indicated a high level of student interest in health-related undergraduate courses that would involve faculty from multiple UHM units, including those that do not currently offer undergraduate degrees. Since scientific articles and discussion topics will be different each semester, students will be able to take this course multiple times, which may increase course enrollment.

## Additional Resources

None required. Course faculty with expertise in One Health will be drawn from the departments participating in the One Health Interdisciplinary Undergraduate Certificate Program (see list below).

## Academic units requiring course

This course is not a requirement for any major or degree program. However, it is a core requirement for the One Health Interdisciplinary Undergraduate Certificate Program which involves the following units and departments:

- John A. Burns School of Medicine (JABSOM)
  - Department of Tropical Medicine, Medical Microbiology and Pharmacology
- Thompson School of Social Work and Public Health (TSSWPH)
  - Office of Public Health Studies (OPHS)  
Center on Aging
- College of Tropical Agriculture and Human Resources (CTAHR)
  - Department of Human Nutrition, Food and Animal Sciences
  - Department of Plant and Environmental Protection Sciences
  - Department of Molecular Biosciences and Bioengineering
  - Department of Natural Resources and Environmental Management
  - Department of Tropical Plant and Soil Sciences
- School of Ocean and Earth Science and Technology (SOEST)
  - Pacific Biosciences Research Center (PBRC)
  - Department of Oceanography

## Consultation

Participating academic units and departments have been consulted including the Office of Public Health Studies which offers PH 441, a prerequisite for several core courses in the certificate program, including this course.



## INTERDISCIPLINARY STUDIES

### IS/TRMD 395: One Health Journal Club

Fall 2022

#### CLASS INFORMATION

**Time/Day:** TBD (1 hour per class; one day per week)

**Meeting Location:** TBD

**Credit Hours:** 1

**Pre-requisites:** PH 441

#### INSTRUCTOR INFORMATION

**Instructor:** TBD (instructor will be drawn from qualified faculty in departments participating in the One Health certificate program)

**Office:** In person: Faculty offices at UHM or JABSOM; Online: By Zoom

**Office Hours:** 2 hours per week (Days/times to be specified)

**E-mail:** TBD

**Phone:** TBD

#### COURSE DESCRIPTION

This core course for the [One Health Interdisciplinary Undergraduate Certificate Program](#) is intended to provide certificate students with a deeper understanding of the science involved in One Health, the opportunity to engage with One Health faculty and students, and the skills to critically read and evaluate One Health literature. This journal club will provide an opportunity for certificate students from different disciplines with differing interests to interact and discuss a variety of One Health topics. Additionally, students will learn how to critically read scientific literature – an immensely important skill for all students interested in pursuing a career in One Health.

#### COURSE INFORMATION, POLICIES AND RESOURCES

##### Communication

**1. Participating in our Learning Community**

This is a discussion-based course. In addition to in class discussions, students are encouraged to meet outside of class to prepare for in class discussions.

**2. Contacting the Instructor**

Students are advised to contact the instructor with any questions via email.

**3. Attendance policy:**

Students who are enrolled in this course, but never attend will be flagged by the course instructor for non-participation before the last day to add/drop (for 100% tuition refund) deadline. Flagged students will be administratively dropped by the Office of the Registrar. Any changes to a student's enrollment status may affect financial aid eligibility and can result in the return of some or all of federal student financial aid.

**4. Use of Internet, mobile devices, and social media**

While there is no prohibition to the use of the internet, mobile devices, and social media during class, these activities may distract from full participation in course activities and thus are discouraged during class time.

**5. Statement on Disability: KOKUA Program**

If you have a disability and related access needs, please contact the KOKUA Program (Office for Students with Disabilities) at 956-7511, KOKUA@hawaii.edu, or go to Room 013 in the Queen Lili'uokalani Center for Student Services. Please know that I will work with you and KOKUA to meet your access needs based on disability documentation. KOKUA's services are confidential and offered free of charge.

**6. Academic Integrity and Ethical Behavior: Office of Student Conduct**

Cheating, plagiarism, or other forms of academic dishonesty are not permitted within this course and are prohibited within the System-wide Student Conduct Code (EP 7.208). Examples include: fabrication, facilitation, cheating, plagiarism, and use of improper materials. Any incident of suspected academic dishonesty will be reported to the Office of Student Conduct for review and possible adjudication. Additionally, the instructor may take action in regard to the grade for the deliverable or course as they see fit.

**7. Office of Title IX:**

(808) 956-2299 / [t9uhm@hawaii.edu](mailto:t9uhm@hawaii.edu) / <https://manoa.hawaii.edu/titleix/>

**8. Department of Public Safety:**

(808)956-6911 (Emergency) / (808)956-8211 (Non-Emergency) <http://manoa.hawaii.edu/dps/>

**9. UH System Basic Needs**

include food and housing, childcare, mental health, financial resources, and transportation, among others. Student basic needs security is critical for ensuring strong academic performance, persistence and graduation and overall student well-being. If you or someone you know are experiencing basic needs insecurity, please see the following resources: [UH System Basic Needs](#)

## COURSE CONTENT AND LEARNING OBJECTIVES

### Course Content

Students gain critical reading skills in the presentation and discussion of real-world one health-related literature. One health-related literature will include scientific research articles and review articles that cover a wide variety of One Health topics.

### Institutional Learning Objectives

This course addresses the following institutional learning objectives for UH Manoa undergraduate students:

**1. Know—Breadth and Depth of Knowledge**

Students develop their understanding of the world with emphasis on Hawai'i, Asia, and the Pacific by integrating

- a. General education knowledge (biological sciences, physical sciences, social sciences, technology);
- b. Specialized study in an academic field (*the interconnectedness of animals, environment, plants and people*);
- and
- c. Understanding of Hawaiian culture and history.

**1. Do—Intellectual and Practical Skills**

Students improve their abilities to

- d. Think critically and creatively;
- f. Communicate and report.

## 2. **Value—Personal and Social Responsibility**

Students demonstrate excellence, integrity, and engagement through

- g. Continuous learning and personal growth;
- h. Respect for people and cultures, in particular Hawaiian culture;
- i. Stewardship of the natural environment; and
- j. Civic participation in their communities.

## **Course Learning Outcomes**

After successfully completing this course, you will be able to:

1. Critically read, comprehend, and present published data in One Health
2. Discuss the strengths and weaknesses of publications
3. Demonstrate skills in comprehending, evaluating, and communicating scientific data
4. Describe examples of an integrated assessment of health issues that considers human, animal, and environmental aspects
5. Identify major zoonotic infectious disease issues and evaluate strategies required to address them at the local, national, and global levels

## **Course Format**

This 1-credit course will meet weekly for one hour. All students are expected to attend. The course instructor and/or students will select a scientific journal article to be discussed at each class meeting. Students are expected to have read the assigned readings prior to class. Student groups will take turns leading class discussions of the assigned reading(s). Assigned readings will include peer reviewed journal articles on One Health topics.

## **REQUIRED TEXTS AND READINGS**

All reading materials (scientific research articles, background review articles) will be provided in electronic form on the Lulima class site by the course instructor one week before the presentation. There will be no textbook for this course.

## **COURSE ASSIGNMENTS, EVALUATION AND GRADING**

### **Attendance/Participation**

Class attendance and participation are required. If a student does not participate, benefits received through involvement are lost as well as contributions to the learning of fellow students. Students are expected to inform the instructor of anticipated or unavoidable absences. There is no make up for daily attendance.

### **Article Presentations**

Students enrolled in the course are required to lead one journal club discussion during the semester. Students will work with the course instructor to select a scientific journal article. Journal articles must be distributed at least one week prior to the class they will be discussed. Journal articles may be one of the following types: scientific research article or scientific review article.

### **Grade Composition**

#### **Assessments and Weighting**

Article Presentations - 50%

Attendance/Participation in class discussions - 50%

### **Final Grade**

Your final grade will be calculated on a flat grading scale based on the following scale:

**Letter Grades and Percentage Ranges**

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = 0-59%

## CALENDAR

### Tentative Course Schedule

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The following schedule is subject to change. Students will be notified of any changes by email. Journal articles/topics will vary each semester and will be finalized by the first week of class.

Several examples of topics are provided below. Articles/topics will be selected to represent the interdisciplinary and collaborative nature of the One Health concept.

<i>Week</i>	<i>Journal Article/Topic (Presenter)</i>	<i>Readings, Assignments</i>
<i>Week 1</i>	Introduction on how to read a scientific research article (Course Instructor)	TBD
<i>Week 2</i>	Example: What is One Health?	<u>"One health: The interface between veterinary and human health"</u>
<i>Week 3</i>	Example: One Health Agenda 2030	<u>"Roadmap to a One Health Agenda 2030"</u>
<i>Week 4</i>	Example: Modeling Infectious Diseases	<u>"Mathematical models of infectious disease transmission"</u>
<i>Week 5</i>	Example: Disease, Habitat Fragmentation and Conservation	<u>"The broad footprint of climate change from genes to biomes to people"</u>
<i>Week 6</i>	Example: One Health and Food Safety	<u>"A one health perspective on dairy production and dairy food safety"</u>
<i>Week 7</i>		
<i>Week 8</i>		
<i>Week 9</i>		
<i>Week 10</i>		
<i>Week 11</i>		
<i>Week 12</i>		
<i>Week 13</i>		
<i>Week 14</i>		
<i>Week 15</i>		
<i>Week 16</i>		

### SYLLABUS CHANGE POLICY:

Information contained in the course syllabus may be subject to change with reasonable advance notice, as deemed appropriate by the instructor. Updates to the syllabus will be communicated via email.



## University of Hawai'i at Mānoa (UHM) TITLE IX SYLLABUS INFORMATION

UHM is committed to providing a learning, working and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking. If you or someone you know experiences any of these, UHM has staff and resources on campus to support and assist you. Staff also can direct you to resources in the community. Here are some:

If you wish to remain **ANONYMOUS**, speak with someone **CONFIDENTIALLY**, or would like to receive information and support in a **CONFIDENTIAL** setting, contact: (\* **Confidential Resource**)

**Counseling & Student Development Center\*** (808) 956-7927 • <https://manoa.hawaii.edu/counseling/>

**Office of Gender Equity\*** (808) 956-9499 • [geneq@hawaii.edu](mailto:geneq@hawaii.edu) Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ+) Center (808) 956-9250 • <https://manoa.hawaii.edu/lgbt> Respondent Support (808) 956-4392 • [PAUrs@hawaii.edu](mailto:PAUrs@hawaii.edu)

**Student Parents at Mānoa (SP@M)\*** (808) 956-8059 • <https://manoa.hawaii.edu/studentparents/>

**UH Confidential Advocacy\*** (Natalia Villegas) (808) 341-4952 • [nataliat@hawaii.edu](mailto:nataliat@hawaii.edu)

**University Health Services Mānoa\*** (808) 956-8965 • <https://www.hawaii.edu/shs/>  
<http://www.manoa.hawaii.edu/titleix/resources.html#confidential>

If you wish to **REPORT** an incident of sex discrimination or gender-based violence including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence or stalking as well as receive information and support, contact:

**Dee Uwono**

Director and Title IX Coordinator  
Hawai'i Hall 124  
2500 Campus Road  
Honolulu, HI 96822  
(808) 956-2299  
[t9uhm@hawaii.edu](mailto:t9uhm@hawaii.edu)

*As a member of the University faculty, I am **required to immediately report** any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need. For more information regarding sex discrimination and gender-based violence, the University's Title IX resources and the University's Policy, EP 1.204, go to: <http://www.manoa.hawaii.edu/titleix/>*

**UNIVERSITY OF HAWAII AT MĀNOA  
UHM-1 FORM (ADD A COURSE)**

*See Guidelines for instructions and deadlines. Submit forms (one course per form) to [uhmcrse@hawaii.edu](mailto:uhmcrse@hawaii.edu).*

<b>1. Course Subject and Number</b> IS/TRMD 485		<b>2. Effective Term &amp; Year</b> <input checked="" type="checkbox"/> FA <u>22</u> <input type="checkbox"/> SP _____ <input type="checkbox"/> SU _____		<b>3. Frequency (check all that apply)</b> <input checked="" type="checkbox"/> Fall Semester <input checked="" type="checkbox"/> Summer Semester <input checked="" type="checkbox"/> Spring Semester <input type="checkbox"/> Alternate Years		<b>4. Offering Status (check one)</b> <input checked="" type="checkbox"/> Regular <input type="checkbox"/> Experimental (~97 or ~98 only)	
<b>5a. Full Course Title (for alpha courses, attach a separate sheet and specify the title for each alpha)</b> One Health Practicum				<b>6. Grade Option (check all that apply)</b> <input checked="" type="checkbox"/> Letter Grade <input type="checkbox"/> Satisfactory/Unsatisfactory (500, 700, 800 only) <input type="checkbox"/> CR/NC <input type="checkbox"/> Audit <input type="checkbox"/> Honors (Medicine only)			
<b>5b. Banner Course Title (30 character maximum, including spaces and punctuation; use title case. For alpha courses, attach a separate sheet and specify the title for each alpha)</b> One Health Practicum							
<b>7a. Gen Ed Foundations, Diversification, or Hawaiian/Second Language Designation (check one)</b> <input type="checkbox"/> Request Gen Ed designation indicated below (complete 7b) <input checked="" type="checkbox"/> No designation requested				<b>GEO Use:</b> <input type="checkbox"/> None <input type="checkbox"/> Add _____    _____ GEC Initials			
<b>7b. If requesting Gen Ed Designation, indicate designation (choose one):</b> DA    DH    DL    DS    DB    DP    DY    DB+DY    DP+DY    FGA    FGB    FGC    FQ    FW    HSL							
<b>8. Contact Hours (total meeting hours per semester – if variable, specify range)</b> 240 hours		<b>9. Number of Credits (if variable, specify range)</b> 3		<b>10. Repeat Limit (do NOT write "None")</b> 0		<b>11. Credit Limit (do NOT Write "None")</b> 3	
<b>12. Schedule Type (check all that apply)</b> <input type="checkbox"/> Lecture (LEC) <input type="checkbox"/> Discussion (DIS) <input type="checkbox"/> Hybrid Technology Intensive (HTI) <input type="checkbox"/> Thesis/Dissertation (THE) <input type="checkbox"/> Laboratory (LAB) <input type="checkbox"/> Seminar (SEM) <input type="checkbox"/> Lecture/Laboratory combined (LEL) <input type="checkbox"/> Directed Reading or Research (DRR) <input type="checkbox"/> Lecture/Discussion combined (LED) <input checked="" type="checkbox"/> Field Experience/ Internship/Practicum (PRA)							
<b>13. Co-requisite Course(s)</b>		<b>14. Class Standing Restrictions</b>		<b>15a. Major Restrictions (as they should appear in Catalog)</b>		<b>15b. Banner Codes of Acceptable Majors</b>	
<b>16a. Prerequisite Course(s) (use "and," "or," and punctuation to indicate relationships between prerequisites)</b> PH 441							
<b>16b. Minimum Required Grade for Prerequisites</b> C		<b>16c. Blanket Requirements Listed in Catalog (if none, write "none")</b> none					
<b>17. Catalog Description (35-word maximum. Do not include other course information such as frequency, grade option, and prerequisites in the description/word count.)</b> Field practicum experience in a university or community organization or work site under the supervision of a preceptor/site supervisor and faculty mentor.							
<b>18. Justification (attach additional sheets if needed)</b> see attached document						<b>19. Syllabus Attached</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not Needed (~99 only)	
<b>20. Cross-listed or Honors Course(s)</b>							
IS 485		Amy Schiffner		Amy Schiffner		Feb 14, 2022	
Course Subject & Number		Chair/Director		Signature		Date	
TRMD 485		Vivek R. Nerurkar		Vivek R. Nerurkar		Feb 14, 2022	
Course Subject & Number		Chair/Director		Signature		Date	
<b>21. Requested By</b> I certify that the student learning objectives for the course are consistent with the learning objectives of each program under which the course is listed.							
Trop Med, Med Micro & Pharm		Vivek R. Nerurkar		Vivek R. Nerurkar		Feb 14, 2022	
Department/Unit		Chair/Director		Signature		Date	
<b>Approved By</b>							
John A. Burns School of Medicine		Jerris R. Hedges		Jerris R. Hedges, MD		Feb 14, 2022	
1 <sup>st</sup> College or School		Dean or Designee		Signature		Date	
2 <sup>nd</sup> College or School		Dean or Designee		Signature		Date	
<b>General Education Office (for courses numbered 100-499)</b>							
Director or Designee				Signature		Date	
<b>Graduate Division (for Graduate Division-administered courses)</b>							
Dean or Designee				Signature		Date	
<b>Office of the Provost</b>							
Vice Chancellor for Academic Affairs or Designee				Signature		Date	

# UHM-1 Form Justification - IS 485: One Health Practicum

## Rationale

The One Health practicum course will be one of two capstone options for students enrolled in the One Health Interdisciplinary Undergraduate Certificate Program, the other being a One Health research project. The One Health Practicum is intended to provide certificate students with real-world experience and the opportunity to integrate and apply classroom learning in a professional environment. The practicum is intended for students who prefer to pursue a supervised, practical experience rather than a research-based project. Students will work with a site preceptor/supervisor and faculty mentor.

## Learning Objectives and Outcomes

### Institutional Learning Objectives

This course addresses the following institutional learning objectives for UH Manoa undergraduate students:

#### 1. **Know—Breadth and Depth of Knowledge**

Students develop their understanding of the world with emphasis on Hawai'i, Asia, and the Pacific by integrating

- a. General education knowledge (biological sciences, physical sciences, social sciences, technology);
- b. Specialized study in an academic field (*the interconnectedness of animals, environment, plants and people*); and
- c. Understanding of Hawaiian culture and history.

#### 1. **Do—Intellectual and Practical Skills**

Students improve their abilities to

- d. Think critically and creatively
- f. Communicate and report.

#### 2. **Value—Personal and Social Responsibility**

Students demonstrate excellence, integrity, and engagement through

- g. Continuous learning and personal growth;
- h. Respect for people and cultures, in particular Hawaiian culture;
- i. Stewardship of the natural environment; and
- j. Civic participation in their communities.

### Course Learning Outcomes

After successfully completing this course, you will be able to:

1. Integrate One Health theory with practice and application of knowledge
2. Describe an integrated assessment of health issues that considers human, animal, and environmental aspects
3. Identify and participate in programs that address One Health issues in the real world
4. Recognize the roles of different professions and organizations in a transdisciplinary One Health team working at the human:animal:environmental interface

## Expected Course Enrollment

The number of students will depend on the number of students enrolled in the One Health Certificate Program. Initially we anticipate that the course will enroll 10-12 students, however we expect enrollment to increase as the certificate program becomes established. Discussions with the UH Honors Program and Interdisciplinary Studies Program have indicated a high level of student interest in health-related undergraduate courses that would involve faculty from multiple UHM units, including those that do not currently offer undergraduate degrees.

## Additional Resources

None required. Course faculty with expertise in One Health will be drawn from the departments participating in the One Health Interdisciplinary Undergraduate Certificate Program (see list below).

## Academic units requiring course

This course is not a requirement for any major or degree program. However, it is a capstone option for the One Health Interdisciplinary Undergraduate Certificate Program which involves the following units and departments:

- John A. Burns School of Medicine (JABSOM)
  - Department of Tropical Medicine, Medical Microbiology and Pharmacology
- Thompson School of Social Work and Public Health (TSSWPH)
  - Office of Public Health Studies (OPHS)
  - Center on Aging
- College of Tropical Agriculture and Human Resources (CTAHR)
  - Department of Human Nutrition, Food and Animal Sciences
  - Department of Plant and Environmental Protection Sciences
  - Department of Molecular Biosciences and Bioengineering
  - Department of Natural Resources and Environmental Management
  - Department of Tropical Plant and Soil Sciences
- School of Ocean and Earth Science and Technology (SOEST)
  - Pacific Biosciences Research Center (PBRC)
  - Department of Oceanography

## Consultation

Participating academic units and departments have been consulted including the Office of Public Health Studies which offers PH 441, a prerequisite for several core courses in the certificate program including this course.



# IS/TRMD 485: One Health Practicum

Fall 2022

## CLASS INFORMATION

Time/Day: TBA  
Meeting Location: TBA  
Credit Hours: 3  
Pre-requisites: PH 441

## INSTRUCTOR INFORMATION

**Instructor:** Jourdan MacMillan, Practicum Coordinator  
**Office:** JABSOM BSB 320  
**Office Hours:**  
**E-mail:** posnerj@hawaii.edu  
**Phone:** xxx-xxxx

## COURSE DESCRIPTION

The One Health Practicum is intended to provide [One Health Interdisciplinary Undergraduate Certificate Program](#) students with real-world experience and the opportunity to integrate and apply classroom learning in a professional environment. The practicum is one of the options students may select to fulfill the capstone requirement for the One Health certificate and is intended for students who prefer to pursue a supervised, practical experience rather than a research-based capstone project.

## COURSE INFORMATION, POLICIES AND RESOURCES

### 1. Contacting the Instructor

Students are advised to contact their site supervisor/preceptor and/or faculty mentor with any questions.

### 2. Attendance policy:

Students who are enrolled in this course, but never attend will be flagged by the course instructor for non-participation before the last day to add/drop (for 100% tuition refund) deadline. Flagged students will be administratively dropped by the Office of the Registrar. Any changes to a student's enrollment status may affect financial aid eligibility and can result in the return of some or all of federal student financial aid.

### 3. Use of Internet, mobile devices, and social media

While there is no prohibition to the use of the internet, mobile devices, and social media during class, these activities may distract from full participation in course activities and thus are discouraged during class time.

### 4. Statement on Disability: KOKUA Program

If you have a disability and related access needs, please contact the KOKUA Program (Office for Students with Disabilities) at 956-7511, KOKUA@hawaii.edu, or go to Room 013 in the Queen Lili'uokalani Center for Student Services. Please know that I will work with you and KOKUA to meet your access needs based on disability documentation. KOKUA's services are confidential and offered free of charge.

5. **Academic Integrity and Ethical Behavior: Office of Student Conduct**  
Cheating, plagiarism, or other forms of academic dishonesty are not permitted within this course and are prohibited within the System-wide Student Conduct Code (EP 7.208). Examples include: fabrication, facilitation, cheating, plagiarism, and use of improper materials. Any incident of suspected academic dishonesty will be reported to the Office of Student Conduct for review and possible adjudication. Additionally, the instructor may take action in regard to the grade for the deliverable or course as they see fit.
6. **Office of Title IX:**  
(808) 956-2299 / [t9uhm@hawaii.edu](mailto:t9uhm@hawaii.edu) / <https://manoa.hawaii.edu/titleix/>
7. **Department of Public Safety:**  
(808)956-6911 (Emergency) / (808)956-8211 (Non-Emergency) <http://manoa.hawaii.edu/dps/>
8. **UH System Basic Needs**  
include food and housing, childcare, mental health, financial resources, and transportation, among others. Student basic needs security is critical for ensuring strong academic performance, persistence and graduation and overall student well-being. If you or someone you know are experiencing basic needs insecurity, please see the following resources: [UH System Basic Needs](#)

## COURSE CONTENT AND LEARNING OBJECTIVES

### Course Content

Field internship experience in a university or community organization or work site under the supervision of a preceptor/site supervisor and faculty mentor. The practicum is designed to provide students in the One Health Certificate Program the opportunity to demonstrate and apply their knowledge and skills in a real-world professional setting. The practicum experience will fulfill the capstone project requirement for the One Health Certificate Program.

### Institutional Learning Objectives

This course addresses the following institutional learning objectives for UH Manoa undergraduate students:

1. **Know—Breadth and Depth of Knowledge**  
Students develop their understanding of the world with emphasis on Hawai'i, Asia, and the Pacific by integrating
  - a. General education knowledge (biological sciences, physical sciences, social sciences, technology);
  - b. Specialized study in an academic field (*the interconnectedness of animals, environment, plants and people*); and
  - c. Understanding of Hawaiian culture and history.
1. **Do—Intellectual and Practical Skills**  
Students improve their abilities to
  - d. Think critically and creatively
  - f. Communicate and report.
2. **Value—Personal and Social Responsibility**  
Students demonstrate excellence, integrity, and engagement through
  - g. Continuous learning and personal growth;
  - h. Respect for people and cultures, in particular Hawaiian culture;
  - i. Stewardship of the natural environment; and
  - j. Civic participation in their communities.

## Course Learning Outcomes

After successfully completing this course, you will be able to:

1. Integrate One Health theory with practice and application of knowledge
2. Describe an integrated assessment of health issues that considers human, animal, and environmental aspects
3. Identify and participate in programs that address One Health issues in the real world
4. Recognize the roles of different professions and organizations in a transdisciplinary One Health team working at the human:animal:environmental interface

## Course Format

The practicum is a 3-credit course during which the student completes 240 hours of on-site learning experiences in a One Health-related university or community organization or work site. Students can complete these hours over the summer period or during the Fall or Spring semesters. At the beginning of the practicum, students will work with a faculty mentor to identify a university or community organization or work site for the field internship experience. Once a practicum site is selected, the student will develop a practicum proposal which will define the objectives and schedule of the practicum. During the practicum students will maintain a daily log of their practicum times and prepare weekly reflections on their practicum activities. These documents will be prepared on a Google Drive shared in real time with the preceptor and practicum instructor.

The practicum is intended to provide One Health Certificate Program students with real-world experience and the opportunity to integrate and apply classroom learning in a professional environment. Practicum experiences may be completed at one of the sites approved by the One Health Certificate Program such as FilCom Cares, Papa Ola Lokahi, Hawai'i Public Health Institute, Pacific Health Analytics Collaborative, Ho'oulu Āina, or other, approved organizations.

## REQUIRED TEXTS AND READINGS

All background reading materials (review articles, primary references) will be provided in electronic form on the Lulima class site by the course instructor and practicum preceptor. There will be no textbook for this course.

## COURSE ASSIGNMENTS, EVALUATION AND GRADING

### Attendance/Participation

The practicum is an on-site experience. Scheduling will be coordinated between the student and on-site supervisor/preceptor and approved by the faculty mentor. Students are required to complete 240 hours by the end of the practicum period. Students will maintain a daily log of the time spent on the practicum that will be confirmed by the preceptor and monitored by the course instructor. Overall student performance in the practicum will be evaluated using a rubric prepared by the instructor to be completed by the preceptor.

### Student Reflections

Students will write a reflection at the end of each week of the practicum summarizing the week's experience, identifying the One Health issues that emerged and how they were addressed, and proposing alternative approaches to deal with the issue.

### Final Practicum Report

Students will prepare a final report that summarizes the practicum experience, whether the experience fulfilled the objectives of the practicum, and suggesting changes that would either improve the practicum experience and/or better address the One Health issues identified during the practicum.

### Final Grade

Your final grade will be calculated on a flat grading scale.

You will receive a letter grade based on the following scale:

**Letter Grades and Percentage Ranges**

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = 0-59%

**Grade Composition**

**Assessments and Weighting**

Evaluation of student practicum management and professional communication by on-site supervisor/preceptor – 25%

Student Reflections - 25%

Final Practicum Report - 50%



## CALENDAR

Week	Practicum Activity	Readings, Assignments
Week 1	Introduction to the Practicum Experience	TBD
Week 2	Selection of Practicum Site	TBD
Week 3	Development of Practicum Objectives and Plan with Preceptor	Submission of practicum objectives and plan to preceptor and course instructor Weekly log
Week 4	Practicum Experience	Weekly log and reflections
Week 5	Practicum Experience	Weekly log and reflections
Week 6	Practicum Experience	Weekly log and reflections
Week 7	Practicum Experience	Weekly log and reflections
Week 8	Practicum Experience	Weekly log and reflections
Week 9	Practicum Experience	Weekly log and reflections
Week 10	Practicum Experience	Weekly log and reflections
Week 11	Practicum Experience	Weekly log and reflections
Week 12	Practicum Experience	Weekly log and reflections
Week 13	Practicum Experience	Weekly log and reflections
Week 14	Preparation of First Draft of Practicum Report	Submit first draft of Practicum Report to preceptor and course instructor
Week 15	Revision of Practicum Report	Revise report
Week 16	Submission of Final Draft of Practicum Report	Submit final Practicum Report to preceptor and course instructor

### SYLLABUS CHANGE POLICY:

Information contained in the course syllabus may be subject to change with reasonable advance notice, as deemed appropriate by the instructor. Updates to the syllabus will be communicated via email.

### University of Hawai'i at Mānoa (UHM) TITLE IX SYLLABUS INFORMATION

UHM is committed to providing a learning, working and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking. If you or someone you know experiences any of these, UHM has staff and resources on campus to support and assist you. Staff also can direct you to resources in the community. Here are some:

If you wish to remain **ANONYMOUS**, speak with someone **CONFIDENTIALLY**, or would like to receive information and support in a **CONFIDENTIAL** setting, contact: (\* **Confidential Resource**)

**Counseling & Student Development Center\*** (808) 956-7927 •  
<https://manoa.hawaii.edu/counseling/>

**Office of Gender Equity\*** (808) 956-9499 • [geneq@hawaii.edu](mailto:geneq@hawaii.edu) Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ+) Center (808) 956-9250 • <https://manoa.hawaii.edu/lgbt>  
Respondent Support (808) 956-4392 • [PAUrs@hawaii.edu](mailto:PAUrs@hawaii.edu)

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**University Health Services Mānoa\*** (808) 956-8965 • <https://www.hawaii.edu/shs/>  
<http://www.manoa.hawaii.edu/titleix/resources.html#confidential>

If you wish to **REPORT** an incident of sex discrimination or gender-based violence including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence or stalking as well as receive information and support, contact:

**Dee Uwono**

Director and Title IX Coordinator  
Hawai'i Hall 124  
2500 Campus Road  
Honolulu, HI 96822  
(808) 956-2299  
[t9uhm@hawaii.edu](mailto:t9uhm@hawaii.edu)

*As a member of the University faculty, I am **required to immediately report** any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need. For more information regarding sex discrimination and gender-based violence, the University's Title IX resources and the University's Policy, EP 1.204, go to: <http://www.manoa.hawaii.edu/titleix/>*

**UNIVERSITY OF HAWAII AT MĀNOA  
UHM-1 FORM (ADD A COURSE)**

*See Guidelines for instructions and deadlines. Submit forms (one course per form) to [uhmcrse@hawaii.edu](mailto:uhmcrse@hawaii.edu).*

<b>1. Course Subject and Number</b> IS/TRMD 490		<b>2. Effective Term &amp; Year</b> <input type="checkbox"/> FA _____ <input checked="" type="checkbox"/> SP <u>23</u> <input type="checkbox"/> SU _____		<b>3. Frequency (check all that apply)</b> <input type="checkbox"/> Fall Semester <input type="checkbox"/> Summer Semester <input checked="" type="checkbox"/> Spring Semester <input type="checkbox"/> Alternate Years		<b>4. Offering Status (check one)</b> <input checked="" type="checkbox"/> Regular <input type="checkbox"/> Experimental (~97 or ~98 only)	
<b>5a. Full Course Title (for alpha courses, attach a separate sheet and specify the title for each alpha)</b> One Health Seminar				<b>6. Grade Option (check all that apply)</b> <input checked="" type="checkbox"/> Letter Grade <input type="checkbox"/> Satisfactory/Unsatisfactory (500, 700, 800 only) <input type="checkbox"/> CR/NC <input type="checkbox"/> Audit <input type="checkbox"/> Honors (Medicine only)			
<b>5b. Banner Course Title (30 character maximum, including spaces and punctuation; use title case. For alpha courses, attach a separate sheet and specify the title for each alpha)</b> One Health Seminar				<b>GEO Use:</b> <input type="checkbox"/> None <input type="checkbox"/> Add _____ GEC Initials _____			
<b>7a. Gen Ed Foundations, Diversification, or Hawaiian/Second Language Designation (check one)</b> <input type="checkbox"/> Request Gen Ed designation indicated below (complete 7b) <input checked="" type="checkbox"/> No designation requested							
<b>7b. If requesting Gen Ed Designation, indicate designation (choose one):</b> DA    DH    DL    DS    DB    DP    DY    DB+DY    DP+DY    FGA    FGB    FGC    FQ    FW    HSL							
<b>8. Contact Hours (total meeting hours per semester – if variable, specify range)</b> 32 hours		<b>9. Number of Credits (if variable, specify range)</b> 2		<b>10. Repeat Limit (do NOT write "None")</b> unlimited		<b>11. Credit Limit (do NOT Write "None")</b> unlimited	
<b>12. Schedule Type (check all that apply)</b> <input type="checkbox"/> Lecture (LEC) <input type="checkbox"/> Discussion (DIS) <input type="checkbox"/> Hybrid Technology Intensive (HTI) <input type="checkbox"/> Thesis/Dissertation (THE) <input type="checkbox"/> Laboratory (LAB) <input checked="" type="checkbox"/> Seminar (SEM) <input type="checkbox"/> Lecture/Laboratory combined (LEL) <input type="checkbox"/> Directed Reading or Research (DRR) <input type="checkbox"/> Lecture/Discussion combined (LED) <input type="checkbox"/> Field Experience/ Internship/Practicum (PRA)							
<b>13. Co-requisite Course(s)</b>		<b>14. Class Standing Restrictions</b>		<b>15a. Major Restrictions (as they should appear in Catalog)</b>		<b>15b. Banner Codes of Acceptable Majors</b>	
<b>16a. Prerequisite Course(s) (use "and," "or," and punctuation to indicate relationships between prerequisites)</b> PH 441							
<b>16b. Minimum Required Grade for Prerequisites</b> C		<b>16c. Blanket Requirements Listed in Catalog (if none, write "none")</b> none					
<b>17. Catalog Description (35-word maximum. Do not include other course information such as frequency, grade option, and prerequisites in the description/word count.)</b> Weekly presentations and discussions on current events and research in the field of One Health. Presentation topics may include research progress, literature reviews, or research proposals.							
<b>18. Justification (attach additional sheets if needed)</b> see attached document						<b>19. Syllabus Attached</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not Needed (~99 only)	
<b>20. Cross-listed or Honors Course(s)</b>							
IS 490		Amy Schiffner		<i>Amy Schiffner</i>		Feb 14, 2022	
Course Subject & Number		Chair/Director		Signature		Date	
TRMD 490		Vivek R. Nerurkar		<i>Vivek R. Nerurkar</i>		Feb 14, 2022	
Course Subject & Number		Chair/Director		Signature		Date	
<b>21. Requested By</b> I certify that the student learning objectives for the course are consistent with the learning objectives of each program under which the course is listed.							
Trop Med, Med Micro & Pharm		Vivek R. Nerurkar		<i>Vivek R. Nerurkar</i>		Feb 14, 2022	
Department/Unit		Chair/Director		Signature		Date	
<b>Approved By</b>							
John A. Burns School of Medicine		Jerris R. Hedges		<i>Jerris R. Hedges, MD</i>		Feb 14, 2022	
1 <sup>st</sup> College or School		Dean or Designee		Signature		Date	
2 <sup>nd</sup> College or School		Dean or Designee		Signature		Date	
<b>General Education Office (for courses numbered 100-499)</b>							
Director or Designee				Signature		Date	
<b>Graduate Division (for Graduate Division-administered courses)</b>							
Dean or Designee				Signature		Date	
<b>Office of the Provost</b>							
Vice Chancellor for Academic Affairs or Designee				Signature		Date	

# UHM-1 Form Justification - IS 490: One Health Seminar

## Rationale

This seminar course will be a required core course for the One Health Interdisciplinary Undergraduate Certificate Program. The course will consist of One Health-focused presentations by faculty, students and guest speakers followed by a group discussion session. Importantly, this seminar course will provide an opportunity for certificate students from different disciplines and majors to interact and discuss critical real-world problems and potential solutions using a One Health approach.

## Learning Objectives and Outcomes

### Institutional Learning Objectives

This course addresses the following institutional learning objectives for UH Manoa undergraduate students:

1. **Know—Breadth and Depth of Knowledge**  
Students develop their understanding of the world with emphasis on Hawai'i, Asia, and the Pacific by integrating
  - a. General education knowledge (biological sciences, physical sciences, social sciences, technology);
  - b. Specialized study in an academic field (*the interconnectedness of animals, environment, plants, and people*); and
  - c. Understanding of Hawaiian culture and history.
2. **Do—Intellectual and Practical Skills**  
Students improve their abilities to
  - d. Think critically and creatively;
  - e. Conduct research; and
  - f. Communicate and report.
3. **Value—Personal and Social Responsibility**  
Students demonstrate excellence, integrity, and engagement through
  - g. Continuous learning and personal growth;
  - h. Respect for people and cultures, in particular Hawaiian culture;
  - i. Stewardship of the natural environment; and
  - j. Civic participation in their communities.

### Course Learning Outcomes

After successfully completing this course, students will be able to:

1. Define One Health and identify current One Health issues, developments, and challenges, particularly those of relevance to Hawaii, Asia, and the Pacific
2. Communicate One Health concepts, research, and developments to faculty and peers
3. Critically analyze and discuss One Health issues from an interdisciplinary and collaborative perspective
4. Analyze current One Health responses and propose new strategies to address One Health-related issues

### Course Syllabus

Syllabus attached.

### Expected Course Enrollment

The number of students will depend on the number of students enrolled in the One Health Certificate Program. Initially, we anticipate that the course will enroll 10–12 students. However, we expect enrollment to increase as the certificate program becomes established. Discussions with the UH Honors Program and Interdisciplinary Studies Program have indicated a high level of student interest in health-related undergraduate courses that would involve faculty from multiple UHM units, including those that do not currently offer undergraduate degrees.

## Additional Resources

None required. Course faculty with expertise in One Health will be drawn from the departments participating in the One Health Interdisciplinary Undergraduate Certificate Program (see list below).

## Academic units requiring course

This course is not a requirement for any major or degree program. However, it is a core requirement for the One Health Interdisciplinary Undergraduate Certificate Program which involves the following units and departments:

- John A. Burns School of Medicine (JABSOM)
  - Department of Tropical Medicine, Medical Microbiology and Pharmacology
- Thompson School of Social Work and Public Health (TSSWPH)
  - Office of Public Health Studies (OPHS)  
Center on Aging
- College of Tropical Agriculture and Human Resources (CTAHR)
  - Department of Human Nutrition, Food and Animal Sciences
  - Department of Plant and Environmental Protection Sciences
  - Department of Molecular Biosciences and Bioengineering
  - Department of Natural Resources and Environmental Management
  - Department of Tropical Plant and Soil Sciences
- School of Ocean and Earth Science and Technology (SOEST)
  - Pacific Biosciences Research Center (PBRC)
  - Department of Oceanography

## Consultation

Participating academic units and departments have been consulted including the Office of Public Health Studies which offers PH 441, a prerequisite for several core courses in the certificate program, including this course.



## INTERDISCIPLINARY STUDIES

### IS/TRMD 490: One Health Seminar

Fall 2022

#### CLASS INFORMATION

**Time/Day:** TBD (1 h 40 min per class; one day per week)

**Meeting Location:** TBD

**Credit Hours:** 2

**Pre-requisites:** PH 441

#### INSTRUCTOR INFORMATION

**Instructor:** TBD (instructor will be drawn from qualified faculty in departments participating in the One Health certificate program)

**Office:** In person: Faculty offices at UHM or JABSOM; Online: By Zoom

**Office Hours:** 2 hours per week (Days/times to be specified)

**E-mail:** TBD

**Phone:** xxx-xxxx TBD

#### COURSE DESCRIPTION

This core course for the undergraduate certificate in One Health is intended to provide certificate students with an expanded foundation in the One-Health concept, an opportunity to engage with faculty, student, and community stakeholders in One Health, and to exchange ideas relating to the breadth of One Health research projects and field experiences in Hawaii. Importantly, this seminar course will provide an opportunity for certificate students from different disciplines and majors to interact and discuss urgent real-world problems and potential solutions using a collaborative, One Health approach.

#### COURSE INFORMATION, POLICIES AND RESOURCES

##### Communication

1. **Participating in our Learning Community**

Students are expected to contribute to class discussions by asking questions and sharing their perspectives on the topic and content of the seminar presentations and the relevance and significance of the presentations to the One Health concept.

2. **Contacting the Instructor**

Students are advised to contact the instructor with any questions about the course in person or via email.

3. **Attendance policy:**

Students who are enrolled in this course, but never attend will be flagged by the course instructor for non-participation before the last day to add/drop (for 100% tuition refund) deadline. Flagged students will be administratively dropped by the Office of the Registrar. Any changes to a student's enrollment status may affect financial aid eligibility and can result in the return of some or all of federal student financial aid.

**4. Use of Internet, mobile devices, and social media**

While there is no prohibition to the use of the internet, mobile devices, and social media during class, these activities may distract from full participation in course activities and thus are discouraged during class time.

**5. Statement on Disability: KOKUA Program**

If you have a disability and related access needs, please contact the KOKUA Program (Office for Students with Disabilities) at 956-7511, KOKUA@hawaii.edu, or go to Room 013 in the Queen Lili'uokalani Center for Student Services. Please know that I will work with you and KOKUA to meet your access needs based on disability documentation. Kokuu's services are confidential and offered free of charge.

**6. Academic Integrity and Ethical Behavior: Office of Student Conduct**

Cheating, plagiarism, or other forms of academic dishonesty are not permitted within this course and are prohibited within the System-wide Student Conduct Code (EP 7.208). Examples include: fabrication, facilitation, cheating, plagiarism, and use of improper materials. Any incident of suspected academic dishonesty will be reported to the Office of Student Conduct for review and possible adjudication. Additionally, the instructor may take action in regard to the grade for the deliverable or course as they see fit.

**7. Office of Title IX:**

(808) 956-2299 / [t9uhm@hawaii.edu](mailto:t9uhm@hawaii.edu) / <https://manoa.hawaii.edu/titleix/>

**8. Department of Public Safety:**

(808)956-6911 (Emergency) / (808)956-8211 (Non-Emergency) <http://manoa.hawaii.edu/dps/>

**9. UH System Basic Needs**

include food and housing, childcare, mental health, financial resources, and transportation, among others. Student basic needs security is critical for ensuring strong academic performance, persistence and graduation and overall student well-being. If you or someone you know are experiencing basic needs insecurity, please see the following resources: [UH System Basic Needs](#)

## COURSE CONTENT AND LEARNING OBJECTIVES

### Course Content

Presentations and discussions on current developments and research in the field of One Health. Presentation speakers will include faculty, students, and guests. Presentation topics may include faculty/guest research, contributions of One Health organizations, student research proposals and progress, student practicum experiences, and literature reviews.

### Institutional Learning Objectives

This course addresses the following institutional learning objectives for UH Manoa undergraduate students:

**1. Know—Breadth and Depth of Knowledge**

Students develop their understanding of the world with emphasis on Hawai'i, Asia, and the Pacific by integrating

- a. General education knowledge (biological sciences, physical sciences, social sciences, technology);
- b. Specialized study in an academic field (*the interconnectedness of animals, environment, plants and people*);
- c. Understanding of Hawaiian culture and history.

1. **Do—Intellectual and Practical Skills**  
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### Course Learning Outcomes

After successfully completing this course, students will be able to:

1. Define One Health and identify current One Health issues, developments, and challenges, particularly those of relevance to Hawaii, Asia and the Pacific
2. Communicate One Health concepts, research, and developments to faculty and peers
3. Critically analyze and discuss One Health issues from an interdisciplinary and collaborative perspective
4. Analyze current One Health responses and propose new strategies to address One Health-related issues

### Course Format

This 2-credit course will meet weekly for 1 h and 40 min. Students are expected to attend all seminar presentations. A student, faculty, or guest speaker will deliver an oral presentation for the first half of each class meeting. The second half will consist of a student-driven discussion of the presentation topic facilitated by the instructor. Presentation topics and speakers will vary each semester and will be finalized by the first week of class. Examples of presentation topics include “Neuroangiostrongyliasis: A Diagnostic Challenge”, “Oceans & Human Health”, “Zoonotic Diseases”, “Role of Microbes in Coastal Oceanographic Processes”, and other One Health topics of interest to faculty and students. Following each presentation students will complete feedback forms to evaluate the presentations and reflect on the information presented and discussed.

### REQUIRED TEXTS AND READINGS

All background reading materials (review articles, primary references) will be provided in electronic form on the Lulima class site by the course instructor and presenters one week before the presentation. There will be no textbook for this course.

### COURSE ASSIGNMENTS, EVALUATION AND GRADING

#### Attendance/Participation

Class attendance and participation in discussions are required. A student who does not participate will gain less from the course and will not contribute to the learning experience of their peers. Students are expected to inform the instructor of anticipated or unavoidable absences. There is no make-up for class attendance.

#### Presentations

Students enrolled in the course are required to make one presentation during the semester. This presentation may be on one of the following topics, or another topic approved by the instructor: research or practicum proposal; research or practicum progress; literature review of a One Health topic.

#### Feedback Assignments

Students will complete a feedback/evaluation survey at the end of each class to provide them with the opportunity to assess the speaker, the quality of the presentation, and reflect on new knowledge gained from the presentation.



## Grade Calculation

### Assessments and Weighting

Attendance and Participation - 50%

Presentations - 25%

Feedback Assignments – 25%

### Final Grade

Your final grade will be calculated on a flat grading scale based on the following:

### Letter Grades and Percentage Ranges

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = 0-59%

## CALENDAR

### Tentative Course Schedule

The following schedule is subject to change. Students will be notified of any changes by email. Presentation topics will vary each semester and will be finalized by the first week of class.

Several examples of presentation topics are provided below. Topics will be selected to represent the interdisciplinary and collaborative nature of the One Health concept. Readings will be selected by the presenters and provided to the class one week in advance of the presentation on the class Lulima site.

<b>Week</b>	<b>Presentation Topic (Presenter)</b>	<b>Readings, Assignments</b>
<i>Week 1</i>	Example: Neuroangiostrongyliasis: A Diagnostic Challenge (Faculty presentation)	TBD
<i>Week 2</i>	Example: Neuroangiostrongyliasis in Hawaii (Student Presentation)	TBD
<i>Week 3</i>	Example: Oceans and Human Health (Faculty presentation)	TBD
<i>Week 4</i>	Example: Role of Microbes in Coastal Oceanographic Processes – Research Progress (Student presentation)	TBD
<i>Week 5</i>	Example: Zoonotic Diseases (Faculty presentation)	TBD
<i>Week 6</i>	Example: Genotyping of Environmental Mycobacteria in Soil Samples – Literature Review (Student presentation)	TBD
<i>Week 7</i>		
<i>Week 8</i>		
<i>Week 9</i>		
<i>Week 10</i>		
<i>Week 11</i>		
<i>Week 12</i>		
<i>Week 13</i>		
<i>Week 14</i>		
<i>Week 15</i>		
<i>Week 16</i>		

**SYLLABUS CHANGE POLICY:**

Information contained in the course syllabus may be subject to change with reasonable advance notice, as deemed appropriate by the instructor. Updates to the syllabus will be communicated via email.

## University of Hawai'i at Mānoa (UHM) TITLE IX SYLLABUS INFORMATION

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**Office of Gender Equity\*** (808) 956-9499 • [geneq@hawaii.edu](mailto:geneq@hawaii.edu) Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ+) Center (808) 956-9250 • <https://manoa.hawaii.edu/lgbt> Respondent Support (808) 956-4392 • [PAUrs@hawaii.edu](mailto:PAUrs@hawaii.edu)

**Student Parents at Mānoa (SP@M)\*** (808) 956-8059 • <https://manoa.hawaii.edu/studentparents/>

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**University Health Services Mānoa\*** (808) 956-8965 • <https://www.hawaii.edu/shs/>  
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**Dee Uwono**

Director and Title IX Coordinator  
Hawai'i Hall 124  
2500 Campus Road  
Honolulu, HI 96822  
(808) 956-2299  
[t9uhm@hawaii.edu](mailto:t9uhm@hawaii.edu)

*As a member of the University faculty, I am **required to immediately report** any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need. For more information regarding sex discrimination and gender-based violence, the University's Title IX resources and the University's Policy, EP 1.204, go to: <http://www.manoa.hawaii.edu/titleix/>*












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Final Audit Report

2022-02-14

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By:	Katerina Spedden (kspedden@hawaii.edu)
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January 24, 2023

**MEMORANDUM VIA E-MAIL**

TO: Randolph Moore, Chair  
Board of Regents

David Lassner, President & CEO  
University of Hawai'i

Michael Bruno, Provost  
University of Hawai'i at Mānoa

Sandy French, Chief Business Officer  
University of Hawai'i at Mānoa

FROM: Kim Binsted, Chair  
Mānoa Faculty Senate Executive Committee

RE: **Resolution Supporting the Proposal for the One Health Undergraduate Certificate**

The Mānoa Faculty Senate unanimously approved the **Resolution Supporting the Proposal for the One Health Undergraduate Certificate** at the January 18, 2023, Senate meeting with 51 votes (100.00%) in support; 0 votes (0.00%) opposed; and 0 abstentions. The resolution is attached.

Please feel free to contact me at [binsted@hawaii.edu](mailto:binsted@hawaii.edu) if you have any questions or need additional information.

A handwritten signature in black ink, appearing to read 'Kim Binsted'.

Kim Binsted, Ph.D.  
*Mānoa Faculty Senate Chair*

A handwritten signature in black ink, appearing to read 'Shana J. Brown'.

Shana J. Brown, Ph.D.  
*Mānoa Faculty Senate Secretary*



*Presented to the Mānoa Faculty Senate by the Committee on Academic Planning & Policy (CAPP) for a vote of the full senate on January 18, 2023, a resolution supporting the proposal for the One Health Undergraduate Certificate. Approved by the Mānoa Faculty Senate on January 18, 2023 unanimously with 51 votes (100.00%) in support; 0 votes opposed; and 0 abstentions.*

**RESOLUTION SUPPORTING THE PROPOSAL FOR  
THE ONE HEALTH UNDERGRADUATE CERTIFICATE**

**WHEREAS**, a multidimensional, holistic perspective of health requires an interdisciplinary approach; and

**WHEREAS**, a multi-unit team of faculty from the John A. Burns School of Medicine, the Myron B. Thompson School of Social Work and Public Health, the School of Ocean and Earth Science and Technology, and the College of Tropical Agriculture and Human Resources proposes to collaborate to provide undergraduate students with an interdisciplinary certificate program called One Health; and

**WHEREAS**, there is a high level of student interest in health-related undergraduate courses; and

**WHEREAS**, the One Health Certificate objectives align with the University's strategic priorities; and

**WHEREAS**, there are relevant needs in the Hawai'i Department of Health and the Department of Aquatic Resources, as well as other employment opportunities; and

**WHEREAS**, this proposed program will be administered through the University of Hawai'i at Mānoa Interdisciplinary Studies Program; and

**WHEREAS**, no additional resources are needed for this program; therefore,

**BE IT RESOLVED**, that the Mānoa Faculty Senate recommends approval of the proposal to establish a One Health Undergraduate Certificate in the Interdisciplinary Studies Program at the University of Hawai'i at Mānoa.

*Supporting documents:*

- *Proposal for the One Health Interdisciplinary Undergraduate Certificate Program dated February 22, 2022*
- *Revised Proposal for the One Health Interdisciplinary Undergraduate Certificate Program dated January 3, 2023*
- *PH 411 Course Syllabus*