

TO: Randy Smith, Vice Provost for Academic Programs  
FROM: Jennifer Schlueter, Faculty Fellow for Curriculum, Graduate School  
DATE: 24 October 2017  
RE: Proposal for a new graduate certificate in Global One Health

The College of Public Health and the College of Veterinary Medicine are proposing a new 15 credit interdisciplinary graduate certificate in Global One Health, which will, as their proposal states, “[address] issues at the interface of human health, animal health, and the environment using an integrated *Health One* approach.”

The proposal was received by the Graduate School in February 2017. It was reviewed by the combined GS/CAA Curriculum subcommittee, chaired by the Faculty Fellow, on 3 April 2017, and revisions were requested on 5 April 2017. Revisions were received in May 2017, and the proposal received its second review by the combined GS/CAA Curriculum subcommittee, now chaired by Interim Dean Herness, on 1 June 2017. Revisions were requested on 5 June 2017. These revisions were received on 19 June 2017. The revised proposal received its third review by the combined GS/CAA Curriculum subcommittee, now chaired by the Faculty Fellow, on 5 October 2017. It was forwarded it on to the Graduate Council for their review on 7 October 2017. The proposal was reviewed and approved at the Graduate Council on 23 October 2017. The positive results of this review were shared with the proposers on 24 October 2017.



June 19, 2017

Dr. Scott Herness, Vice Provost and Dean for Graduate Studies  
Office of Academic Affairs  
Bricker Hall 190 N. Oval Mall  
Columbus, OH 43210

**RE: Response to Additional Comments for New Academic Graduate Certificate in *Global One Health***

Dear Dr. Herness:

Thank you for your email dated June 5, 2017 requesting additional clarification regarding the proposed academic graduate certificate in *Global One Health* submitted originally in February and resubmitted in May by the College of Public Health and the College of Veterinary Medicine. Additional comments received from you June 5<sup>th</sup> and our responses follow.

**(1) Comment:** *Some concern was expressed if the foundational courses will serve certificate students specifically. The subcommittee seeks some assurance that the core curriculum will adequately prepare students who are enrolled solely in the certificate program for the elective courses. The foundational courses are pre-existing for the graduate program and hence designed for students pursuing a broader curriculum.*

**Response:** Respectfully, there is no need for concern. Although two of the foundation courses required for the proposed academic graduate certificate in One Health are required for the MPH degree specializations, a One Health degree program does not exist. Regardless, the course topics and learning objectives for the three foundation courses required are very applicable and, although not exclusively specific to One Health, the content of each will provide important foundational core knowledge and skill important for the certificate and the practice of the One Health approach. In relation, these courses will also prepare the certificate students for the elective courses. The curriculum for the proposed certificate in One Health was carefully constructed by first establishing the competencies that we want addressed. The next step involved determining if existing courses aligned with the competencies; which we confirmed and mapped in the proposal.

**(2) Comment:** *The subcommittee seeks a little more clarity on who the non-Ohio State students will be and the selection criteria for these students.*

**Response:** If the Committee is referring to certificate students who are not degree-seeking students at OSU as the “non-Ohio State students”, we are referring to mainly working professionals from the external workforce. As stated in the proposal, the workforce examples would include human-oriented and animal-orientated clinicians and various scientists and professionals addressing environmental issues (i.e. air, water, soil, plants) who will benefit from One Health education and training. The inherent concept is multidirectional (i.e., impacts of humans and animals on environmental quality and the reverse) and considers the combined interactions, exposures and impacts between and among humans, animals and environmental settings. These students will be selected using the same criteria for all accepted applicants:

- Bachelor degree or advanced degree that includes foundation courses in college-level math, biology and chemistry
- Current graduate or professional degree-seeking student, or, a working professional
- Meet all requirements established by the Ohio State University Graduate School for admission to graduate-level academic certificate programs
- Maximum overlap of 3 credits from the Graduate Certificate program if pursued concurrently with another degree program.

As stated, representatives from Public Health and Veterinary Medicine will form a joint committee recommending student admissions, plus, working with others to advise students in the certificate program, program assessment and review, and engaging in appropriate reviews. To ensure that applicant reviews are consistent and fair, an admission review rubric will be used for each applicant reviewed to document alignment or not with criteria used for admission decisions.

**(3) Comment:** *Some narrative on how the students will be advised through the list of electives to best serve their needs would be appreciated. Additionally, with their limited curriculum graduate minors, graduate interdisciplinary specializations, and graduate certificates are offered on a prescribed curriculum. Substitute or added electives should be made in correspondence with the Graduate School.*

**Response:** Similar to the response to first comment above, electives were selected for the curriculum based on various alignment with the program competencies as well as knowledge and skill areas applicable to the One Health approach. Students will be required to select electives that complement their academic and/or professional backgrounds. Given the number of graduate courses offered by OSU, addition of some other applicable electives is inevitable and correspondence with the Graduate School will occur when the addition occurs. Substituting electives will not be permitted.

**(4) Comment:** *The certificate program will be launched as face to face program with some online offerings. When the certificate wishes to be fully online, an MOU with ODEE will need to be established followed by approval from the Ohio Department of Higher Education (which will be sought by the Graduate School).*

**Response:** Yes, the MOU for ODEE has been drafted and only needs two more signatures. A meeting is being scheduled to provide a summary and secure the additional signatures. Once complete, it will be submitted in advance of full-online curriculum delivery.

**(5) Comment:** *As an informational item, once the certificate is approved, learning goals and an assessment plan need to be placed into TracDat.*

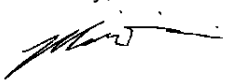
**Response:** Yes, the program curricular competencies and the applicable mapped course learning objectives will be loaded to TracDat and annual assessments conducted and reported.

**(6) Comment:** *In the interest of thoroughness, the student advising sheet should include the process for apply(ing) for completion of the certificate using GradForms.*

**Response:** Yes, this will be done. It would be helpful and appreciated to receive from the Graduate School standard language for this requirement that can be incorporated into all student advising sheets across campus.

We thank you and the respective committees for reviews and assistance.

Sincerely,



Michael S. Bisesi, PhD  
Senior Associate Dean and Director for Academic Affairs College of Public Health



Patrick Green, DVM, PhD  
Associate Dean for Research and Graduate Studies College of Veterinary Medicine

**From:** [Herness, Scott](#)  
**To:** [Bisesi, Michael](#); [Green, Patrick](#)  
**Cc:** [Toft, Jill A.](#); [Herness, Scott](#)  
**Subject:** Global One Health Cert Curr Subcommittee review  
**Date:** Tuesday, June 6, 2017 3:45:42 PM  
**Attachments:** [image003.png](#)

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June 5, 2017

Michael Bisesi  
Senior Assoc. Dean, College of Public Health

Patrick Green  
Assoc. Dean, College of Veterinary Medicine

## **Global One Health**

The combined Graduate School/Council on Academic Affairs curriculum subcommittee met on June 1<sup>st</sup> and, among its agenda items, considered the revised proposal to create a graduate certificate in Global One Health. The proposal was previously reviewed by the subcommittee in April.

The subcommittee felt the revision responded very well to Jen Schlueter's message on April 5<sup>th</sup> describing the initial April 3<sup>rd</sup> subcommittee review. However, given the newness of free-standing graduate certificates at Ohio State, the subcommittee wishes to ensure a comprehensive review that can, in part, serve as a template of review points for future certificate programs. The subcommittee appreciates your patience as a few additional points are considered.

- Some concern was expressed if the foundational courses will serve certificate students specifically. The subcommittee seeks some assurance that the core curriculum will adequately prepare students who are enrolled solely in the certificate program for the elective courses. The foundational courses are pre-existing for the graduate program and hence designed for students pursuing a broader curriculum.
- The subcommittee seeks a little more clarity on who the non-Ohio State students will be and the selection criteria for these students.
- Some narrative on how the students will be advised through the list of electives to best serve their needs would be appreciated. Additionally, with their limited curriculum graduate minors, graduate interdisciplinary specializations, and graduate certificates are offered on a prescribed curriculum. Substitute or added electives should be made in correspondence with the Graduate School.
- The certificate program will be launched as face to face program with some online

offerings. When the certificate wishes to be fully online, an MOU with ODEE will need to be established followed by approval from the Ohio Department of Higher Education (which will be sought by the Graduate School).

- As an informational item, once the certificate is approved, learning goals and an assessment plan need to be placed into TracDat.
- In the interest of thoroughness, the student advising sheet should include the process for apply for completion of the certificate using GradForms.

Once the subcommittee approves the revised proposal, I will submit the proposal to the Graduate Council and subsequently to the Committee on Academic Affairs for their final approvals.

The subcommittee expresses its thanks for understanding in the review process of a new type of graduate offering.

As always, I am available for any questions or clarifications.

Many thanks,



**Scott Herness**

Interim Vice Provost for Graduate Studies

Interim Dean of the Graduate School

**Graduate School**

250 University Hall, 230 North Oval Mall Columbus, OH 43210-1366

614-247-7413 Office / 614-292-3656 Fax

[herness.1@osu.edu](mailto:herness.1@osu.edu)



February 7, 2017 <Revised Submission May 15, 2017>

W. Randy Smith, Vice Provost for Academic Programs  
Office of Academic Affairs  
203 Bricker Hall 190 N. Oval Mall  
Columbus, OH 43210

**RE: New Interdisciplinary Academic Graduate Certificate in *Global One Health***

Dear Dr. Smith:

On behalf of both the College of Public Health and the College of Veterinary Medicine, we are seeking approval of the proposed 15-credit interdisciplinary academic graduate certificate in *Global One Health*. The purpose is to provide formal interdisciplinary education and training focused on addressing issues at the interface of human health, animal health and the environment using an integrated *One Health* approach. The focus helps address the emerging need and want globally (i.e., domestically and internationally) for this integrated approach. The respective Graduate Studies Committees (GSCs) from the College of Public Health (01/20/17) and the College of Veterinary Medicine (02/03/17) each reviewed and unanimously approved the proposal. In addition, this graduate certificate program aligns well with the expanding Global One Health initiative (GOHi) at The Ohio State University (OSU). Indeed, OSU's work in this area has attracted funding from the National Institutes of Health (NIH) and the Centers for Disease Control (CDC) as well as attention in the US and beyond.

Attached is a formatted and succinctly detailed proposal. We would greatly appreciate favorable review and approval. Thank you.

Sincerely,

Michael S. Bisesi, PhD  
Senior Associate Dean and Director for Academic Affairs College of Public Health

Patrick Green, DVM, PhD  
Associate Dean for Research and Graduate Studies College of Veterinary Medicine

ATTACHMENT

**Proposal for  
Interdisciplinary Academic Graduate Certificate in Global One Health  
(15 Semester Credits)**

**<Revised Submission to GC and CAA 05/11/17>**

**OSU Certificate Category**

- Academic Graduate-level under Category 3

**Introduction**

*One Health* is an evolving concept and approach to multi- and interdisciplinary preventive and responsive efforts and activities to simultaneously address sources and types of contaminants and associated communicable and non-communicable diseases at the interface of humans, animals and the environment. It is not a distinct profession, but instead encompasses a scope of knowledge, comprehension and skills that enhance or augment professional expertise for addressing and engaging in activities associated with human health, animal health and environmental quality. For example, human-oriented and animal-orientated clinicians and various scientists and professionals addressing environmental issues would benefit from One Health education and training. The inherent concept is multidirectional and considers the combined interactions, exposures and impacts between and among humans, animals and environmental settings. The approach is applicable globally, that is, both domestically and internationally.

**Goal**

Provide interdisciplinary education and training focused on addressing domestic and international health issues at the interface of human health, animal health and the environment using an integrated One Health approach.

**Purpose**

The purpose of offering an academic graduate certificate in Global One Health is to provide education and training to:

- augment the scope and depth of the respective curricula for students pursuing an applicable graduate or professional degree by adding One Health courses and content via an academic graduate certificate program; and,
- enhance specialized expertise of working professionals who already hold an applicable graduate or professional degree by adding One Health courses and content via an academic graduate certificate program.

**Administrative Academic Units and Faculty Oversight**

Applicable graduate studies oversight and governance will be provided at the college-/unit-levels by the:

- College of Public Health - Division of Environmental Health Sciences  
(program contact Michael Bisesi, PhD [bisesi.12@osu.edu](mailto:bisesi.12@osu.edu))
- College of Veterinary Medicine - Department of Veterinary Preventive Medicine  
(program contact Wondwossen Gebreyes, DVM, PhD [gebreyes.1@osu.edu](mailto:gebreyes.1@osu.edu))

In addition to their respective Graduate Studies Committees, a joint academic One Health committee consisting of two faculty members from each College will be responsible recommending student admissions, plus, working with others to advise students in the certificate program, program assessment and review, and engaging in appropriate reviews. Any substantive changes to the required curriculum will require review and approval at the college/unit-level by the respective Graduate Studies Committees.

### **Need-Based Rationale**

There are numerous illnesses associated with environmental exposures to various biological, chemical and physical agents with related concerns for transmissions and interactions between and among humans and animals. Accordingly, there are identified needs and demands domestically and internationally for a more efficient and effective interdisciplinary and integrated *One Health* approach for surveillance, prevention, mitigation and intervention addressing agents and associated diseases at the interface of human health, animal health and environmental quality.

The One Health approach has been identified as a global need and is promoted by several agencies and organizations world-wide, including the:

- Centers for Disease Control and Prevention (CDC)  
<https://www.cdc.gov/onehealth/global-activities/index.html>
- World Health Organization (WHO)  
<http://www.who.int/features/qa/one-health/en/>
- United States Department of Agriculture (USDA)  
<https://www.usda.gov/topics/animals/one-health>

In relation, the Ohio State University has been recognized as one of the leaders in One Health and formalized and organized the administrative efforts via the Global One Health initiative (GOHi) under the Office for International Affairs. Current international efforts focus on major areas of east Africa and Brazil, including major project funded by the CDC centered in Ethiopia. In addition, a workgroup coordinated by OSU has held several meetings here with One Health representatives from the USDA, U.S. Air Force, and USEPA with goal to expand the One Health approach in Ohio.

There are already opportunities for employment in certain organizations for those educated and trained in One Health. As the One Health approach continues to evolve



and spread, there is anticipation that individuals who complete supplemental education and training in One Health (e.g. academic graduate certificate) will be in greater demand for employment and better prepared to engage in proactive and reactive One Health activities.

### **Prospective Enrollment**

The proposed graduate certificate program will be co-marketed with other graduate programs offered by the Colleges of Public Health and Veterinary Medicine. Current marketing efforts include outreach to racial and ethnically diverse groups. In addition, although OSU GOHi (mentioned above) will not be administratively involved with governance or delivery of the academic graduate certificate program, it will help to promote the program among its various constituents.

During the initial stages of program implementation, enrollment of OSU students pursuing graduate or professional degree programs into the proposed One Health graduate certificate program is anticipated at 10-15 new students per year. With appropriate marketing, working professionals from the external workforce may account for 5-10 new students per year. Students will be able to complete the certificate program within a calendar year either full-time or part-time.

Enrolled students will likely be graduate and professional degree students at OSU and working professionals from local areas since not all of the courses are distance-based. At this point two of three required foundation courses and two selective courses are available on-line as asynchronous distance learning courses. However, the goal is to eventually develop the third foundational course plus at least three more key selective courses offered completely on-line via asynchronous distance learning mode. As access to the program improves via distance learning options, there is anticipated growth of enrollment including students from more distant areas.

### **Competencies**

Individuals who successfully complete the *Interdisciplinary Graduate Certificate in Global One Health* program will be better prepared to:

1. address complex interdisciplinary issues by working across discipline boundaries applicable to the *One Health* approach;
2. interpret monitoring and surveillance data regarding sources, types and reservoirs of environmental contaminants and/or factors affecting the health of both humans and animals;
3. summarize major categories of infectious microbial pathogens and other hazardous agents (i.e., chemical and radiological toxicants) associated with both human and animal diseases domestically and internationally;

4. describe the interactions and dynamics of disease determinants including infectious and toxicological hazards and impacts on complex infectious and chronic diseases.

### **Requirements for Admission**

- Bachelor degree or advanced degree that includes foundation courses in college-level math, biology and chemistry
- Current graduate or professional degree-seeking student, or, a working professional
- Meet all requirements established by the Ohio State University Graduate School for admission to graduate-level academic certificate programs
- Maximum overlap of 3 credits from the Graduate Certificate program if pursued concurrently with another degree program.

### **Curriculum Format (15 graduate-level semester credits required)**

- Three required foundation courses (9 credits) plus two selective courses (6 credits). All courses are delivered and available via semester-based face-to-face classroom sessions. As an alternative to conventional classroom attendance, students may currently opt to complete two and eventually all three foundational courses via online asynchronous distance learning mode. In relation, currently two of the courses listed as selective courses are offered via distance learning mode too; more to be developed. The ultimate goal is to have the program accessible 100% online.
- Successful candidates currently enrolled in Ohio State professional or graduate programs will be able to take the required foundation and selective courses while enrolled in their primary degree programs following the rules and regulations of the Ohio State University Graduate School.
- Successful candidates from the professional workforce (both in the U.S. and international) currently working within or outside of Ohio State University may be admitted as graduate students to pursue the courses to earn the academic certificate program.

## Curriculum/Advisement Sheet

### A. Required Foundation Courses:

	Credits	OSU Colleges
<b>FOUNDATION COURSES (three courses; 9 credits)</b>		
PUBHEPI 6410 (DL) Epidemiology *	3	Public Health
PUBHEHS 6310 (DL) Environmental Health Science*	3	Public Health
VETPREV 7721 Epidemiology of Zoonotic Diseases	3	Veterinary Medicine

### B. Selective Courses:

	Credits	OSU Colleges
<b>SELECTIVE COURSES (pick two or more courses; 6 credits)</b>		
VETPREV 7725 Veterinary Epidemiology	3	Veterinary Medicine
VETPREV 7722 (DL) Foodborne Diseases, Food Animal Production and Food Safety*	3	Veterinary Medicine
PUBHEPI 6436 Epidemiology of Infectious Diseases	3	Public Health
VETPREV 8700/PUBHEPI 8413 (DL) Molecular Epidemiology of Infectious Diseases*	3	Veterinary Medicine/ Public Health
PUBHEHS 5315 Toxicology	3	Public Health
PUBHEHS 6320 Global Health and Environmental Microbiology	3	Public Health
VETPREV8830/PUBHEPI5420 Infectious Disease Modeling in Humans and Animals	3	Veterinary Medicine/ Public Health
PUBHBIO 6210 Biostatistics	3	Public Health
VETPREV 7724 Biosecurity and Biodefense	3	Veterinary Medicine
PUBHLTH 7000 Public Health in Developing Countries	3	Public Health
GEOG 5210 Geographic Information Systems (concurrence see next page)	3	Arts & Sciences
BMI 5710 Biomedical Informatics (concurrence see next page)	3	Medicine
NURS 7780 Evidence-Based Practice (concurrence see next page)	3	Nursing
<b>NOTE: Other graduate-level courses may be selected pending review and approval by the Graduate Certificate in Global One Health faculty oversight committee.</b>		
<b>TOTAL CREDITS REQUIRED</b>	<b>15</b>	

\*DL = Available as Distance Learning course

## **Concurrence from Arts & Sciences - Department of Geography**

**From:** O'Kelly, Morton  
**Sent:** Friday, April 28, 2017 11:49 AM  
**To:** Bisesi, Michael  
**Cc:** Gebreyes, Wondwossen  
**Subject:** RE: Concurrence - GEOG 5210 Geographic Information Systems for One Health Certificate

**Mike:** Happy to have this course (Geog 5210) included as an elective – and FYI, we intend to make multiple offerings available for the foreseeable future. Let us know if you need any further info.  
**Morton**

From: Bisesi, Michael  
Sent: Friday, April 28, 2017 11:46 AM  
To: O'Kelly, Morton <okelly.1@osu.edu>  
Cc: Gebreyes, Wondwossen <gebreyes.1@osu.edu>  
Subject: Concurrence - GEOG 5210 Geographic Information Systems for One Health Certificate  
Morton,

I am seeking concurrence from the ASC-Department of Geography to commit to offering a course as one of several electives for the newly proposed 15 credit academic graduate certificate in One Health developed by the Colleges of Veterinary Medicine and Public Health (see truncated summary below). The course on the list of possible electives is GEOG 5210 Geographic Information Systems. Please let me know. Thank you. - Mike  
Michael S. Bisesi, PhD, REHS, CIH  
Senior Associate Dean, Academic Affairs  
Professor & Chair (Interim), Environmental Health Sciences  
Fellow, AIHA  
College of Public Health

## **Concurrence from Nursing**

**From:** Anderson, Cindy M.  
**Sent:** Friday, April 28, 2017 6:54 PM  
**To:** Bisesi, Michael  
**Cc:** Landers, Tim; Gebreyes, Wondwossen  
**Subject:** RE: Concurrence for Elective Course

**Mike,**  
**We are happy to support your request. We are fully supportive of the inclusion of N7780 as an elective in the academic graduate certificate in One Health. Please let me know if you prefer a formal letter. I am happy to provide.**

**Best to you,**  
**Cindy**  
**Cindy Anderson, PhD, CRNP, ANEF, FNAP, FAHA, FAAN**  
**Associate Dean for Academic Affairs and Educational Innovation**  
**College of Nursing**  
**The Ohio State University**  
**Office phone: 614-292-4179**

From: Bisesi, Michael  
Sent: Friday, April 28, 2017 10:39 AM  
To: Anderson, Cindy M. <anderson.2765@osu.edu>  
Cc: Landers, Tim <landers.37@osu.edu>; Gebreyes, Wondwossen <gebreyes.1@osu.edu>  
Subject: Concurrence for Elective Course

Dear Cindy,  
I am seeking concurrence from the College of Nursing to commit to offering a course as one of several electives for the newly proposed 15 credit academic graduate certificate in One Health developed by the Colleges of Veterinary Medicine and Public Health (see truncated summary

below). The course on the list of possible electives is NURS 7780 Evidence-Based Practice.  
 Please let me know. Please let me know. Thank you. - Mike  
 Michael S. Bisesi, PhD, REHS, CIH  
 Senior Associate Dean, Academic Affairs  
 Professor & Chair (Interim), Environmental Health Sciences  
 Fellow, AIHA  
 College of Public Health

**Concurrence from Medicine – Department of Biomedical Informatics**

**From:** Hebert, Courtney <Courtney.Hebert@osumc.edu>  
**Sent:** Monday, May 15, 2017 3:01 PM  
**To:** Bisesi, Michael  
**Subject:** Re: Concurrence - "BMI 5710 Biomedical Informatics" for One health

Hi Dr. Bisesi,  
 Sorry for missing that email. Yes, BMI would be fine with this.  
 Courtney

From: Bisesi, Michael  
 Sent: Friday, May 12, 2017 1:11 PM  
 To: Hebert, Courtney L.  
 Subject: RE: Concurrence - "BMI 5710 Biomedical Informatics" for One health  
 Courtney,  
 Revisiting my request for concurrence. The course we need is:

BMI 5710 Biomedical Informatics	3	Medicine
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Please let me know. Many thanks.  
 Mike  
 Michael S. Bisesi, PhD, REHS, CIH  
 Senior Associate Dean, Academic Affairs  
 Professor & Chair (Interim), Environmental Health Sciences  
 Fellow, AIHA  
 College of Public Health

**Graduate Certificate Competencies Mapped with Required Foundation Courses**

**Competencies:**

1. address complex interdisciplinary issues by working across discipline boundaries applicable to the *One Health* approach;
2. interpret monitoring and surveillance data regarding sources, types and reservoirs of environmental contaminants and/or factors affecting the health of both humans and animals;
3. summarize major categories of infectious microbial pathogens and other hazardous agents (i.e., chemical and radiological toxicants) associated with both human and animal diseases domestically and internationally;
4. describe the interactions and dynamics of disease determinants including infectious and toxicological hazards and impacts on complex infectious and chronic diseases.

	PUBHEPI 6410	PUBHEHS 6310	VETPREV 7721	Selective 1	Selective 2
<b>Competencies</b>					
1.	X	X	X		
2.	X	X			
3.		X	X		
4.	X	X			