Certificate Title: _Global Health______________
   New: ☒
   Revision: ☐

Classification of Instructional Programs (CIP) Discipline # (6 digits): _51.2210_____
*Please ensure that you select the appropriate CIP code for your certificate program. Please consult this website for more information about CIP codes: https://nces.ed.gov/ipeds/cipcode/default.aspx?y=55

Certificate Type:
   On-Campus: ☒
   Distance: ☐
   On-Campus & Distance: ☐

Proposed Effective Date: ___04/01/2018__________________

Director of the Certificate Program: __Dr Andy Stringer____________________________
Program Coordinator (if different from Director): __N/A___________________________
Graduate Services Coordinator: _____ N/A ____________________________
College: ___College of Veterinary Medicine____________________________________
Department/Program: Population Health and Pathobiology______________________

Catalog Description:

The Certificate in Global Health will introduce DVM students to global health issues and challenges. It will allow students to develop an understanding of key concepts, tools and frameworks essential for continued study in global health. The Certificate in Global Health will highlight the importance of understanding and addressing global health through multidisciplinary frameworks and collaborations. Completing the Certificate in Global Health gives you the knowledge to operate as a global citizen. The Certificate in Global Health program will cover the global disease burden, health determinants and disparities, health policy and actors, and the challenges facing global health. It will also provide an introduction to the methodological approaches and techniques used in global health research, including qualitative fieldwork, quantitative surveys, experimental designs, intervention trials, and program evaluation.

Projected Enrollment:
   On-Campus     Yr. 1- _5_    Yr. 2- _6_    Yr. 3- _7_    Yr. 4- _8_
   Distance      Yr. 1- _0_    Yr. 2- _0_    Yr. 3- _0_    Yr. 4- _0_

Attachments:

☒  Proposal Document
☐  Statement of other departments likely to be affected and summary of consultation with those departments
☐  Program-level assessment
☒  Campus Routing Form
☒  Signature Page
Proposal for Certificate in Global Health
College of Veterinary Medicine, North Carolina State University

Introduction

Veterinarians have an increasingly important role to play in addressing the grand global challenges of the 21st century, particularly in areas such as infectious disease control, antimicrobial resistance, food security and global health. An increasing human population, urbanization, increasing demand for livestock products and climate change will place greater pressures on the environment, human and animal health and livelihoods. The advances of the 21st century have led to a world that is increasingly interconnected. Globalization will see global problems becoming US problems. In the coming decades, many of the major challenges to human health will originate outside of the human health sector. These range from emerging zoonotic diseases to pollution and climate change. Tackling these challenges effectively will require multidisciplinary approaches with consideration given to the broader systems that encompass health (such as housing, transport, animal health, urban land use and agriculture).

Veterinary student education must reflect these global challenges and equip the next generation of veterinarians with the knowledge and skills required to tackle these problems and contribute to the changing needs of society. There has been a growing recognition of the need for improved veterinary education related to issues of global importance. The American Association of Veterinary Medical Colleges (AAVMC) has produced a position statement (endorsed jointly by the American Veterinary Medical Association) on addressing societal needs. The position statement highlights that ‘an accredited college should provide an environment that encourages a diversity of educational paths’ for veterinary students. The AAVMC North American Veterinary Medical Education Consortium (NAVMEC) Report (Roadmap for Veterinary Medical Education in the 21st Century) highlighted the need to: ‘Empower veterinarians to contribute to societal needs from a global perspective’ as one of its main recommendations.

International learning experiences are vital to a Global Health Education program. International experiences, whether a research or clinical placement, allow first hand exposure to different contexts and global challenges, and provide an insight into different cultures and communities. These experiences help to develop key skills required for a future career in global health. Students will gain an increased understanding of differing perspectives and cultural values; improved communication skills; the ability to work in an interdisciplinary team; the ability to critically analyze problems involving complex social and ethical concerns; and the ability to be flexible, innovative and adaptable in resource poor contexts. The benefits of an international learning experience should lead to graduates that are more resourceful, more resilient, and who have a wider professional perspective.

2 https://agenda.weforum.org/2015/10/how-the-sdgs-can-help-address-global-health-challenges/
6 Veterinary Students as Global Citizens. Royal Veterinary College, University of London and Development Education Research Centre, Institute of Education. 2012.
Certificate Overview

The Certificate in Global Health is a formal academic certificate for DVM students that examines the complexities inherent in improving health on a global scale. The Certificate in Global Health will introduce DVM students to global health issues and challenges. It will allow students to develop an understanding of key concepts, tools and frameworks essential for continued study in global health. The Certificate in Global Health will highlight the importance of understanding and addressing global health through multidisciplinary frameworks and collaborations. Completing the Certificate in Global Health gives you the knowledge to operate as a global citizen.

We define global health as

’an area for study, research and practice that places a priority on improving health and achieving health equity for all people worldwide. Global health issues transcend boundaries and require collective solutions that emphasize improving health, reducing disparities, and protecting against global threats.’

The Certificate in Global Health program will cover the global disease burden, health determinants and disparities, health policy and actors, and the challenges facing global health. It will also provide an introduction to the methodological approaches and techniques used in global health research, including qualitative fieldwork, quantitative surveys, experimental designs, intervention trials, and program evaluation.

Earning the Certificate in Global Health requires completion of 12 credits. These credits are gained through the completion of 3 core selectives (3 credits), an additional 4 credits from optional selectives/elective, and 5 credits though completion of an international Global Health Research Project.

Certificate Learning Outcomes

Upon completion of the Global Health Certificate, individuals will be able to:

- Describe the current challenges and trends in global health.
- Describe contemporary and historic global health issues, programs, best practices and actors.
- Analyze the complexities of the social, economic, medical, political and environmental factors that affect global health.
- Analyze strategies to address health disparities across socially, demographically and geographically defined populations.
- Describe how individuals from a variety of disciplines collaborate to improve global health.
- Demonstrate cultural competence and the ability to work effectively within diverse cultural settings.
- Demonstrate an understanding of global health in practice through the process of participation in a data driven experiential learning experience in an international setting.

Requirements for Admission

Students must be enrolled in the DVM degree program at the College of Veterinary Medicine, North Carolina State University and be good academic standing. Students must complete the Certificate in Global Health during the 4-year DVM program.

All courses taken towards the Certificate program must be completed with a grading of Satisfactory (S).

Students must contact the Course Director, Dr Andy Stringer, to apply to the Certificate program.

Program of Study
Earning the Certificate in Global Health requires completion of 12 credits. These credits are gained through the completion of 3 core selectives (3 credits), an additional 4 credits from optional selectives/elective, and 5 credits through completion of an international Global Health Research Project.

Core selectives help you build a foundation of basic knowledge in global health. Core selectives can be completed in any order. Optional selectives allow you to explore in greater depth topics relevant to global health. Only one credit from the ‘orange’ optional selectives can be taken.

Core and Optional Selectives

For additional information on Core and Optional Selectives, please refer to the Certificate Handbook. All selectives listed below are 1 credit.

<table>
<thead>
<tr>
<th>Selective</th>
<th>Code</th>
<th>Core</th>
<th>Optional</th>
<th>Faculty Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Health Challenges</td>
<td>VMP 991 162</td>
<td></td>
<td></td>
<td>Andy Stringer</td>
</tr>
<tr>
<td>Global Health Research Methods</td>
<td>VMP 991 163</td>
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<td></td>
<td>Andy Stringer</td>
</tr>
<tr>
<td>Globalization, Int Trade and Vets</td>
<td>VMP 991 250</td>
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<td>Maria Correa</td>
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<tr>
<td>Surveillance in Veterinary Medicine</td>
<td>VMP 991 151</td>
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<td></td>
<td>Maria Correa</td>
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<tr>
<td>Intro to Research</td>
<td>VMB 991 105</td>
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<td></td>
<td>Matthew Breen</td>
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<tr>
<td>Special Topics in Toxicology</td>
<td>VMB 991 223</td>
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<td>David Dorman</td>
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<tr>
<td>Developmental Toxicology</td>
<td>VMB 991 301</td>
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<td>Nanette Yascone-Yoder</td>
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<td>Infectious Disease Dynamics</td>
<td>VMP 991 160</td>
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<td></td>
<td>Christina Lanzas</td>
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<tr>
<td>Food Animal Residue Avoidance</td>
<td>VMP 992 114</td>
<td></td>
<td></td>
<td>Ronald Baynes</td>
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<tr>
<td>Topics in Veterinary Microbiology</td>
<td>VMP 991 144</td>
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<td>Paula Cray</td>
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<tr>
<td>Global Emerging Infectious Diseases</td>
<td>VMP 991 156</td>
<td></td>
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<td>Peter Cowen</td>
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<td>Molecular Epidemiology</td>
<td>VMP 991 167</td>
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<td></td>
<td>Sid Thakur</td>
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<tr>
<td>Immunodiagnostics</td>
<td>VMP 991 143</td>
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<td></td>
<td>Jonathan Fogle</td>
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<tr>
<td>Epi/Public Health in Spanish</td>
<td>VMP 991 264</td>
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<td></td>
<td>Maria Correa</td>
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<tr>
<td>Principles of Vaccination</td>
<td>VMP 991 268</td>
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<td>Tobias Kaeser</td>
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<tr>
<td>World Travel: Health and Safety</td>
<td>VMC 991 225</td>
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<td>Micahel Loomis</td>
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<td>Vet Med Terminology in Spanish</td>
<td>VMP 991 139</td>
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<td></td>
<td>Maria Correa</td>
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<tr>
<td>Global Health: Uganda</td>
<td>VMP 991 265</td>
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<td>Andy Stringer</td>
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<tr>
<td>Vet Int Experience</td>
<td>VMP 991 112</td>
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<td>Vet Int Experience</td>
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</tbody>
</table>
Optional Elective

For additional information on the Optional Elective, please refer to the Certificate Handbook.

- One Health - Philosophy to Practice: VMP 986 (2 credits). Faculty Instructor – Suzanne Kennedy Stoskoph.

Core Elective

For additional information on the Core Elective, please refer to the Certificate Handbook.

- Global Health Research Project: VMP 900 (5 credits). Faculty Instructor – Andy Stringer.

This international Global Health Research Project will allow students to develop an understanding of methodological approaches and techniques used in global health research, including qualitative fieldwork, quantitative surveys, experimental designs, intervention trials, and program evaluation. This elective will highlight the importance of understanding and addressing global health through multidisciplinary frameworks and collaborations. This elective is a required component of the Certificate in Global Health.

Program Administration

The Certificate in Global Health will be administered by a Certificate Director from the Department of Population Health and Pathobiology.

Current Certificate Director: Andy Stringer BVSc PhD MRCVS, Director, Global Health Education. College of Veterinary Medicine, NC State University. Email: apstringer@ncsu.edu Tel: (919) 513 6275

All of the proposed courses for this Certificate in Global Health are currently active and have been taught previously. The implementation and management of the Certificate in Global Health is not expected to require effort outside of the normal academic activities of course instructors and staff.

No additional staff or resources will be required.

Enrollment Projection

Enrollment will be drawn from DVM students at the College of Veterinary Medicine, North Carolina State University. We project an initial enrollment of 5 students in Year 1, growing to approximately 7-8 students per year by Year 4.

Outcomes Assessment Plan
Objectives

1. In this certificate program, students will be introduced to global health issues and challenges, developing an understanding of key concepts, tools and frameworks essential for continued study in global health, including the importance of understanding and addressing global health through multidisciplinary frameworks and collaborations.

2. The certificate program will provide an educational experience that satisfies the expectations of its graduates.

Learning Outcomes

1. Upon completion of the Global Health Certificate, individuals will be able to:
   - Describe the current challenges and trends in global health.
   - Describe contemporary and historic global health issues, programs, best practices and actors.
   - Analyze the complexities of the social, economic, medical, political and environmental factors that affect global health.
   - Analyze strategies to address health disparities across socially, demographically and geographically defined populations.
   - Describe how individuals from a variety of disciplines collaborate to improve global health.
   - Demonstrate cultural competence and the ability to work effectively within diverse cultural settings.
   - Demonstrate an understanding of global health in practice through the process of participation in a data driven experiential learning experience in an international setting.

2. At the time they complete this certificate program, graduates are expected to:
   - Be satisfied with the usefulness of the certificate program in enabling them to achieve their professional goals.
   - Be sufficiently satisfied with the certificate program to recommend it to others with the same professional goals.
   - Be satisfied with the appropriateness of the courses in providing the knowledge or training they anticipate needing for their professional goals.
   - Be satisfied with the frequency and timeliness of courses offered for the certificate.
   - Be satisfied with the quality of teaching in certificate courses.
   - Be satisfied with the overall educational experience of the certificate program.

Objective 1. In this certificate program, students will be introduced to global health issues and challenges, developing an understanding of key concepts, tools and frameworks essential for continued study in global
health, including the importance of understanding and addressing global health through multidisciplinary frameworks and collaborations.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Evidence to be Collected</th>
<th>Source of Evidence</th>
<th>Frequency of Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe the current challenges and trends in global health.</td>
<td>VMP 991 162 Assignments (Group and Individual Presentations; Policy Paper Brief)</td>
<td>Students</td>
<td>Annually</td>
</tr>
<tr>
<td>Describe contemporary and historic global health issues, programs, best practices and actors.</td>
<td>VMP 991 162; VMP 991 163; VMP 991 250; VMP 900 Assignments (Assessed across multiple selectives and international elective using Group and Individual Presentations; Policy Paper Brief; and International Research Project Report and Evaluation)</td>
<td>Students</td>
<td>Annually</td>
</tr>
<tr>
<td>Analyze the complexities of the social, economic, medical, political and environmental factors that affect global health.</td>
<td>VMP 991 162; VMP 991 163; VMP 991 250; VMP 900 Assignments (Assessed across multiple selectives and international elective using Group and Individual Presentations; Policy Paper Brief; and International Research Project Report and Evaluation)</td>
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<td>Students</td>
<td>Annually</td>
</tr>
<tr>
<td>Describe how individuals from a variety of disciplines collaborate to improve global health.</td>
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<td>Students</td>
<td>Annually</td>
</tr>
<tr>
<td>Demonstrate cultural competence and the ability to work effectively within diverse cultural settings.</td>
<td>VMP 900 Assignments (Assessed through International Research Project Report and Evaluation)</td>
<td>Students</td>
<td>Annually</td>
</tr>
<tr>
<td>Demonstrate an understanding of global health in practice through the process of participation in a data driven experiential learning experience in an international setting.</td>
<td>VMP 900 Assignments (Assessed through International Research Project Report and Evaluation)</td>
<td>Students</td>
<td>Annually</td>
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</tbody>
</table>

**Objective 2.** The certificate program will provide an educational experience that satisfies the expectations of its graduates
<table>
<thead>
<tr>
<th>Outcome</th>
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<th>Frequency of Collection</th>
</tr>
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<tbody>
<tr>
<td>To be satisfied with the usefulness of the certificate program in enabling them to achieve their professional goals</td>
<td>Exit survey administered by College of Veterinary Medicine</td>
<td>College of Veterinary Medicine</td>
<td>Annually</td>
</tr>
<tr>
<td>To be sufficiently satisfied with the certificate program to recommend it to others with the same professional goals</td>
<td>Exit survey administered by College of Veterinary Medicine</td>
<td>College of Veterinary Medicine</td>
<td>Annually</td>
</tr>
<tr>
<td>To be satisfied with the appropriateness of the courses in providing the knowledge or training they anticipate needing for their professional goals</td>
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<td>College of Veterinary Medicine</td>
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<tr>
<td>To be satisfied with the quality of teaching in certificate courses</td>
<td>Exit survey administered by College of Veterinary Medicine</td>
<td>College of Veterinary Medicine</td>
<td>Annually</td>
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<tr>
<td>To be satisfied with the overall educational experience of the certificate program</td>
<td>Exit survey administered by College of Veterinary Medicine</td>
<td>College of Veterinary Medicine</td>
<td>Annually</td>
</tr>
</tbody>
</table>
Certificate in Global Health  
North Carolina State University  

This request has been reviewed and approved by the appropriate campus committees and authorities. 

Endorsed By:  
Paula J. F. Gray  
Head, Department/Director of Graduate Program (Printed Name and Signature)  
Date: 2/7/18 

Recommended By:  
James R. Flowers  
Chair, College Graduate Studies Committee (Printed Name and Signature)  
Date: 2/12/18 

Endorsed By:  
D. P. V.  
College Dean (Printed Name and Signature)  
Date: 2/12/18 

Recommended By:  
Vice Provost, DELTA (if DE degree) (Printed Name and Signature)  
Date:  

Approved By:  
Peter J. Harvis  
Dean of the Graduate School (Printed Name and Signature)  
Date: 3/22/18 

Recommended By:  
Duane Larick  
Dean's Council (Printed Name and Signature)  
Date: 4/26/18 

Approved By:  
Warwick Arden  
Executive Vice Chancellor and Provost (Printed Name and Signature)  
Date: 4/26/18 

Approved By:  
W. R. Woodson  
Chancellor (Printed Name and Signature)  
Date: 6/13/18 

(revised August 2015)