REVIEW FOR ACCREDITATION

OF THE

PUBLIC HEALTH PROGRAM

AT

VIRGINIA TECH

COUNCIL ON EDUCATION FOR PUBLIC HEALTH

SITE VISIT DATES:
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Introduction

This report presents the findings of the Council on Education for Public Health (CEPH) regarding the Public Health Program at Virginia Tech. The report assesses the program's compliance with the *Accreditation Criteria for Public Health Programs, amended June 2011*. This accreditation review included the conduct of a self-study process by program constituents, the preparation of a document describing the program and its features in relation to the criteria for accreditation and a visit in February 2018 by a team of external peer reviewers. During the visit, the team had an opportunity to interview program and university officials, administrators, teaching faculty, students, alumni and community representatives and to verify information in the self-study document by reviewing materials provided in a resource file. The team was afforded full cooperation in its efforts to assess the program and verify the self-study document.

Virginia Tech is a public land-grant university, located in Appalachia, serving communities in the Commonwealth of Virginia, the region and beyond. The university was founded in 1872 as the Virginia Agricultural and Mechanical College. Virginia Tech offers 250 undergraduate and graduate degree programs to more than 33,000 students and manages a research portfolio of more than $504 million. The university has approximately 235 buildings on its 2,600-acre main campus, educational and research facilities across the state, a study-abroad site in Switzerland and an 1,800-acre agricultural research farm near the main campus.

The university established a renewed emphasis on health sciences while creating its 2012-2018 strategic plan and has built new initiatives in biomedical and health sciences graduate education, expanded its investments in health sciences research and brought together a variety of disciplines to invest in new innovative health initiatives focused on "One Health."

The Virginia Tech public health program is located in the Virginia-Maryland College of Veterinary Medicine. It offers a professional MPH degree in two concentrations and also offers two dual degree options. The program is dedicated to the One Health mission as well as the overall mission and motto of the university: *Ut Prosim,* that I may serve.

Virginia Tech received initial CEPH accreditation in June 2013, and this serves as the program's first reaccreditation visit.

Characteristics of a Public Health Program

To be considered eligible for accreditation review by CEPH, a public health program shall demonstrate the following characteristics:

a.   **The program shall be a part of an institution of higher education that is accredited by a regional accrediting body recognized by the US Department of Education or its equivalent in other countries.**

b.   **The program and its faculty and students shall have the same rights, privileges and status as other professional preparation programs that are components of its parent institution.**

c.   **The program shall function as a collaboration of disciplines, addressing the health of populations and the community through instruction, research and service. Using an ecological perspective, the public health program should provide a special learning environment that supports interdisciplinary communication, promotes a broad intellectual framework for problem solving and fosters the development of professional public health values.**

d.   **The public health program shall maintain an organizational culture that embraces the vision, goals and values common to public health. The program shall maintain this organizational culture through leadership, institutional rewards and dedication of resources in order to infuse public health values and goals into all aspects of the program's activities.**

e.   **The program shall have faculty and other human, physical, financial and learning resources to provide both breadth and depth of educational opportunity in the areas of knowledge basic to public health. At a minimum, the program shall offer the Master of Public Health (MPH) degree, or an equivalent professional degree.**

f.   **The program shall plan, develop and evaluate its instructional, research and service activities in ways that assure sensitivity to the perceptions and needs of its students and that combines educational excellence with applicability to the world of public health practice.**

These characteristics are evident in the public health program at Virginia Tech. Virginia Tech is accredited by the Southern Association of Colleges and Schools Commission on Colleges. The program provides the same rights to its students and faculty as other professional preparation programs located in the university. The program facilitates collaboration between faculty and students of the Virginia-Maryland College of Veterinary Medicine and the Virginia Tech Carilion School of Medicine. Virginia Tech has a complement of qualified faculty and staff who represent a diverse array of backgrounds and disciplines. The program has a system of planning and evaluation that involves faculty, staff and outside stakeholders and is responsive to current and emerging public health practice needs, in particular needs associated with the Appalachian region.

1.0 THE PUBLIC HEALTH PROGRAM.

1.1 Mission.

The program shall have a clearly formulated and publicly stated mission with supporting goals, objectives and values.

This criterion is met**.** The program has a clearly formulated and publicly stated mission with supporting goals, objectives and values.

The mission statement, goals and objectives were originally developed in 2010 and are the result of significant discussion and revision by core faculty, university administrators, students and the External Advisory Board. The External Advisory Board reviewed and approved the revised mission, goals and objectives. The revised mission, goals and objectives stemmed from two program retreats in August and December of 2016. Students provided input to this process through a student representative (president of the Public Health Association at Virginia Tech, a formal student association). In addition, objectives were added to the diversity and inclusion goal as a result of collaboration with the College Community and Diversity Committee. Two unique and distinct aspects of the program are the emphasis on the concept of One Health and a commitment to designing research and service agendas grounded in communities that address the needs of the region (ie, Southwest Virginia, Southside Virginia and Central Appalachia).

The program's mission statement is to "protect, improve, and promote population health in Southwest and Southside Virginia, the Commonwealth, Central Appalachia, the Nation, and the world by training future public health leaders through learning, discovery, and engagement in public health."

There are measurable objectives with quantitative and qualitative indicators for each goal (learning, discovery, engagement, and the new goal for diversity and inclusion). The mission, goals and objectives are made available to the public on the program's website and are included in all program materials. In addition, they are provided to all new students at orientation each fall semester. The program has adopted the values of Virginia Tech's Core Values and Principles of Community. These values are embraced by public health stakeholders of the program and are also posted on the program website. An evaluation plan is in place to provide regular feedback, and the tools are used to review, reaffirm and revise the program's mission, goals objectives and statement of values.

The program has assessed its strengths, weaknesses and plans. These plans include: (1) reviewing the mission, goals and objectives in context with the 2016 CEPH criteria; (2) re-establishing the External Advisory Board and engaging the board in future program planning; and (3) remaining a significant program in the health sciences arena and taking advantage of growing opportunities in Roanoke.

1.2 Evaluation and Planning.

The program shall have an explicit process for monitoring and evaluating its overall efforts against its mission, goals and objectives; for assessing the program's effectiveness in serving its various constituencies; and for using evaluation results in ongoing planning and decision making to achieve its mission. As part of the evaluation process, the program must conduct an analytical self-study that analyzes performance against the accreditation criteria.

This criterion is met. The program has robust and clear assessment and evaluation methods to foster and enhance continuous quality improvement. The Assessment Committee manages the evaluation processes. This committee comprises the MPH director, additional faculty members, the program coordinator and a student representative. Each objective has a data collection process and procedures that identify the individual responsible for data collection and maintenance of a database for data received. For instance, data related to the learning goal are collected each semester and maintained in a database by the program assistant. Timeframes are provided for each data collection effort. The Assessment Committee retrieves additional data related to faculty activities from faculty CVs.

The program has demonstrated how the collected data is monitored, analyzed and communicated as well as how the analysis has informed needed change. The Assessment Committee meets at least two times per semester to review data collection strategies, review evaluation results and develop recommendations for programmatic changes. Several stakeholder groups review the assessment results and recommend programmatic changes. These stakeholder groups include: the Program and Policy Committee, primary faculty and the External Advisory Board.

One of the tangible changes as a result of this feedback included an integrated set of two sequential three-credit courses covering epidemiology and quantitative methods taught entirely in the department. This was the result of feedback from students and preceptors that students were not adequately trained in biostatistics and epidemiology. This course continues to evolve with the help of student and alumni feedback. Additional changes addressed concerns of repetition and overlap in the infectious disease track, attainment of full mastery of competencies in health education, assignment of student advisors and inconsistency in information provided by them, particularly when advisors were non-primary faculty.

Modifications included the development of new infectious disease courses, the design and implementation of a capstone project for health education students, the pairing of students with local agencies to conduct needs assessments for health education, group advising by concentration during the fall semester and the scheduling of meetings for non-primary faculty with the MPH director to ensure more consistency in the information provided to students.

The program provided documentation of its performance on each measurable objective for the last three years by data on outcome measures for each goal. Site visitors noted that there are some data that

indicate performance below the target, for instance enrollment, self-reported proficiency in every core competency and increased participation of external community partners who bring varied perspectives on race, ethnicity, Appalachian culture and socio-economic status. During the site visit, program administrators provided clarity regarding the determination of target benchmarks. Input from primary faculty and the student representative during the retreats, faculty meetings and the work of the policy subcommittee allowed the program to retain some targets and revise others based on survey results and trends.

The program involved many stakeholders in the self-study, resulting in a document that was clear in assessing program strengths, weaknesses and plans. The process was led by the program director and an administrative core consisting of the program assistant and program coordinator. Faculty discussed their participation in developing or collecting materials, and the overall accreditation process. Workgroups worked on specific criteria, and each criterion was reviewed by the primary faculty. The department head and college dean were consulted on a regular basis for assistance, students developed and reviewed segments and the broader public health community was also involved in the development of the self-study document.

The program noted that the External Advisory Board was very recently re-constituted (October 2017) and had not been engaged since the last accreditation cycle. Plans are to more proactively engage them in the upcoming cycle. In addition, the program noted concerns for the low response rate from some student surveys and detailed plans to follow-up with students regarding the completion of the assessment surveys. Members from the External Advisory Board were present at site visit meetings either via WebEx or in person. They affirmed their dedication to the program and its mission.

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1.3 Institutional Environment.

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The program shall be an integral part of an accredited institution of higher education.

This criterion is met. Virginia Tech (VT) is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges for a nine-year term, extending through 2019. In addition to CEPH, the university responds to professional accreditors in the disciplines of architecture, public policy administration, education, gerontology, human development, chemistry, psychology and veterinary medicine, among others.

Virginia Tech was founded in 1872 as a land-grant college named Virginia Agricultural and Mechanical College. The university offers 250 undergraduate and graduate degree programs to more than 33,000 students and boasts a research portfolio of more than $504 million. Virginia Tech has approximately 135 buildings on its 2,600-acre main campus, education and research facilities across the state, a study-

abroad site in Switzerland and a 1,800-acre agriculture research farm near the main campus. The main campus is located in Blacksburg, Virginia which is situated in South Central Appalachia.

As part of Virginia Tech's 2012-2018 strategic plan, the Virginia Tech Carilion Health Sciences and Technology campus was established. This fostered a new focus on initiatives in biomedical and health sciences graduate education, expanded VT's investments in health sciences research and brought together disciplines to invest in new innovative health initiatives. This has led to "One Health" becoming a guiding force for the MPH program in order to investigate and focus on the global health challenges that affect the well-being of humans, animals and the environment.

Virginia Tech offers programs through 10 colleges: agriculture and life sciences; architecture and urban studies; business; engineering; university studies; liberal arts and human sciences; natural resources and environment; science; graduate school; and veterinary medicine. The Virginia Tech Master of Public Health program is located within the Department of Population Health Sciences within the College of Veterinary Medicine. The MPH director reports to the department head, who reports to the dean of the college, who reports to the university provost. The provost reports to the university president, who reports to the Board of Visitors.

Budgeting and resource allocation is negotiated between the college and the provost's office. The department head, MPH director and college director of budget and finance develop the annual budget, which is based on tuition, program fee revenue and additional allocations from the college. This budget and any new requests is presented to the dean. Indirect cost recovery for primary faculty research is returned to the college, department and individual faculty to support further research.

Recruitment of personnel is the responsibility of the department head in consultation with the dean of the college. Every personnel hire requires a search committee and is conducted in consultation with the Human Resources Office. The dean must approve all faculty and staff hires. Advancement of program faculty in the promotion and tenure process occurs within the college and is guided by Virginia Tech promotion and tenure policies and procedures.

The program complies with the academic standards and policies set by the Virginia Tech Graduate School. The program also follows program-specific policies and procedures as outlined in the MPH student handbook. New or revised curricula are initiated by the Program's Curriculum Committee, the Policy and Program Committee or a combination of both committees. The proposed curriculum is then submitted to the university's Graduate Curriculum Committee of the Commission on Graduate Studies and Policies. Both the Curriculum Committee and the Commission oversee the graduate course and certificate proposal development and review process, which is required for all new and substantially

revised graduate-level courses. Changes in MPH degree requirements and curricular changes are approved by the program's Program and Policy Committee, which is comprised of all primary MPH faculty, a student representative, the program assistant and the program coordinator.

1.4 Organization and Administration.

The program shall provide an organizational setting conducive to public health learning, research and service. The organizational setting shall facilitate interdisciplinary communication, cooperation and collaboration that contribute to achieving the program's public health mission. The organizational structure shall effectively support the work of the program's constituents.

This criterion is met. Virginia Tech governs the public health program through the Department of Population Health Sciences in the College of Veterinary Medicine. Within the department is the public health program, the Center for Public and Corporate Veterinary Medicine, the Center for Public Health Practice and Research. The Department of Population Health Sciences also offers the graduate certificate in public health and the pending Bachelor of Science in Public Health (BSPH) degree program.

The department head leads the department and is responsible for all major administrative functions, including strategic planning, faculty affairs, budgeting and engagement in college and university health sciences initiatives. The director of the MPH program reports to the department head and oversees all aspects of the MPH program including program governance, policy and procedures, curriculum, student affairs, engagement with the Graduate School and accreditation responsibilities. The program coordinator reports directly to the MPH program director and is responsible for coordinating a variety of program activities, including student recruitment, outreach and engagement, website and social media as well as assessment. The program coordinator also serves as the program's practicum coordinator and manages all aspects of the MPH practicum experience, including the tracking of student progress. There is also a program assistant, who reports primarily to the MPH program director, but aids in other areas of the public health program as well.

The program assistant manages all aspects of student records, policies and procedures and engagement with the Graduate School. The program assistant also manages the program's database, tracks students from admissions through graduation and enforces all policies and procedures. Another charge of the program assistant is to plan all special events including student orientation, capstone seminar and the annual graduation reception. As the program looks to expand and establish a bachelor's degree, there is also a director of the BSPH program who reports directly to the department head. The director of the BSPH program is also the coordinator of the public health graduate certificate. The duties of this position are to establish a new BSPH program at VT as well as manage the program's graduate certificate program.

Due to the proximity of colleagues in the College of Veterinary Medicine and the university's focus on One Health, collaboration across departments is common among the faculty as well as the students. The program partners across VT and externally with public health practitioners in the region. The Virginia Tech Center leads an academic health department with the Virginia Department of Health's New River Health District. The center also coordinates "public health network at VT" faculty group that comprises over 75 faculty colleagues from across the VT campus. Virginia Tech has also defined "destination areas" of research and has awarded start-up grants to program faculty and their collaborators from four other colleges to develop an emphasis at Virginia Tech in ecological and human health in rural areas. On-site discussions reiterated the program's dedication to collaboration. Faculty members collaborate through research, teaching and service.

1.5 Governance.

The program administration and faculty shall have clearly defined rights and responsibilities concerning program governance and academic policies. Students shall, where appropriate, have participatory roles in the conduct of program evaluation procedures, policy setting and decision making.

This criterion is met. The program has committees and a clear governance structure in place, and there is evidence of a strong shared leadership model throughout the program.

The program has five standing committees: The External Advisory Board, Program and Policy Committee, Curriculum Committee, Admissions Committee, Assessment Committee and an Outreach Committee. The program convened two ad-hoc committees during 2017.

The External Advisory Board offers an external perspective on all aspects of the program and provides guidance for the program's overall development and content for learning, discovery and engagement in public health in the region. The advisory board was instrumental in providing guidance for the successful initial accreditation. The board meets twice per year in person and by webinar. The main function of the advisory board is to function as a strategic body to guide the program's impact on public health, advise the program leaders on issues related to program accreditation, lend advice on sound financial practices, assist in networking and student field placement, assist in promoting the program and provide guidance on new academic programs. The board draws upon a multidisciplinary group of leaders with experience related to One Health, infectious disease, community health education and social determinants of health representing government agencies, health systems, academic institutions and community-based organizations.

The Program and Policy Committee provides oversight of all program policies and procedures and functions as a "committee of the whole" with active participation of the primary faculty, staff and MPH student representative. The self-study states that the committee meets monthly and holds one one-day

retreat each year. The committee functions to develop and implement program policies and procedures; ensure compliance and congruence between program policies and Graduate School policies; review data and evaluation findings to make program changes and serves as the decision-making body for all MPH and certificate curriculum planning and adoption of changes.

The Curriculum Committee makes decisions about courses at the individual level in the MPH program, specifically MPH course approvals, transfer courses and course substitutions. The committee is made up of three members of the MPH primary faculty and two student representatives, with one student from each concentration.

The Admissions Committee reviews all MPH applications and makes MPH admissions decisions. The committee meets four times per year in conjunction with the four MPH application deadlines. It comprises three MPH primary faculty members, an MPH student representative and the program assistant.

The Assessment Committee is responsible for program evaluation and assessment. This committee meets quarterly. The committee is made up of three MPH primary faculty, the program coordinator and an MPH student representative. The main charge of this committee is to plan and oversee the program's evaluation activities, ensure the assessment plan meets accreditation criteria, make recommendations to the Program and Policy Committee for changes as it relates to data collection and assessment, identify assessment issues and solicit and analyze annual student satisfaction data.

The Outreach Committee is responsible for planning collaborative outreach activities within the College of Veterinary Medicine, across VT and with community partners. This committee meets quarterly. The committee comprises four faculty members, the program coordinator, MPH program alumni and student representatives.

During 2017, the program convened two ad-hoc committees, a research workgroup and a Doctor of Veterinary Medicine/Master of Public Health (DVM/MPH) workgroup. The purpose of the research workgroup was to review, revise and develop an initial draft of the narrative on research for CEPH accreditation. The purpose of the DVM/MPH workgroup was to review and update course requirements and sequencing for the DVM/MPH program following the adoption of a new DVM curriculum in fall 2016.

Policies and procedures are set by the Program and Policy Committee. The program director chairs the committee and brings all policy decisions to the committee for deliberation and approval. The program director makes day-to-day decisions about the program.

The Assessment Committee designs all planning efforts in consultation with the program director and brings them to the Program and Policy Committee for final discussion and approval. MPH students are engaged through their participation on both the assessment and the program and policy committees. Summary findings and continuous quality improvement changes are brought to the External Advisory Board for discussion.

The Policy and Program Committee reviews and approves all student recruitment and admissions procedures. Day-to-day management efforts in this area are carried out through a team effort of the program director, program coordinator and program assistant. The program coordinator has primary responsibility for implementing student recruitment efforts, while the program assistant has primary responsibility for implementing the student admissions process in conjunction with the Graduate School. The Admissions Committee makes admissions decisions and approval is granted by the Graduate School. Decisions about the approval to graduate are reviewed by faculty advisors and the MPH director and final approval is granted by the Graduate School.

Recruitment efforts for faculty are handled by the department in coordination with the human resources office in the college. The department head oversees all faculty recruitment, and the Promotion and Tenure Committee at the college level oversees all promotion and tenure decisions.

The Graduate School sets academic standards for all graduate programs, and the public health program has set additional standards and policies which are set and reviewed by the Program and Policy Committee.

All research and service expectations are established by the department and the program. These are reviewed on an individual faculty basis by the department head.

The Public Health Association at Virginia Tech (PHA @ VT) is a formal student organization for graduate and undergraduate students and is part of the Graduate Student Association for the College of Veterinary Medicine and the Graduate Student Assembly for the VT Graduate School. Members of the executive body of PHA @ VT hold seats as full voting members of each of the program-level committees.

The governance structure as presented in the self-study provides ample opportunity for program faculty and students to be involved in decision making as it pertains to the public health program. Numerous faculty members are also members of committees through the department and College of Veterinary Medicine, in addition to their program governance roles.

Through onsite conversations it is clear that there is a strong governance model in place and that the program director has created an environment where there is a strong sense of shared leadership.

1.6 Fiscal Resources.

The program shall have financial resources adequate to fulfill its stated mission and goals and its instructional, research and service objectives.

This criterion is met. Resources for the program are sufficient and provided by the Commonwealth of Virginia through Virginia Tech's educational and operational budget, including student tuition, academic and program fees, extramural research funds, grants and private gifts.

The university initially allocated start-up funds to the public health program through 2014-2015. When authorizing the program in November 2008, the provost directed the college and program leadership to build a program that was to be self-supporting by academic year 2014-2015 based on revenues generated from tuition, academic and program fees as well as other research and service revenues. The program achieved this goal.

Currently, the only tuition allocated to the program is from regular MPH students and does not include dual degree students. The university is moving to a new performance-incentive based budgeting (PIBB) model which will allow increased tuition to be allocated to the program.

All primary faculty positions and permanent staff positions, as well as operating funds, have been financed with start-up funds, tuition fees and additional revenues. Financial support includes salaries and benefits for a departmental and program administrative assistant, a dedicated program assistant and a program coordinator.

Tenured and tenure-track faculty members are expected to generate extramural income for promotion and tenure, and all faculty are expected to contribute extramural funding consistent with the program, college and university missions. An additional source of program revenue is the Center for Public Health Practice and Research (CPHPR). The center receives $75,000 annual base funding from the Virginia Tech institute for Society, Culture and Environment. The CPHPR has far exceeded the base funding. The center currently employs five graduate assistants. Thus, the center provides an opportunity for student research projects with fiscal support and volunteer community outreach. Stipend and wage support is also provided to MPH students due to the support of program faculty with laboratories. External funding has grown consistently over the past four years.

Table 1. Sources of Funds and Expenditures by Major Category, 2012 to 2017					
	2012-13	2013-14	2014-15	2015-16	2016-17
Sources of Funds					
Tuition & Fees - MPH	$610,095	$957,159	$857,945	$892,727	$886,637
Tuition & Fees -- Winter/Summer	---	---	$269,345*	$269,345*	$281,935*
State Appropriation	$163,000	$84,000	$248,803	$248,160	$293,506
University and College Funds	$42,391	$148,992	$428,714	$493,073	$493,657
Grants/Contracts	$663,142	$643,710	$734,160	$743,319	$960,464
Foundation Income	---	---	$53,516	$245,345	$44,440
Indirect Cost Recovery	$2,800	$2,648	$4,143	$2,736	$6,459
Aday Award	$3,700	$1,800	---	---	---
Center for Public Health Practice and Research	$75,000	$ 75,000	$97,293	$117,171	$109,427
Graduate Research Assistant Support					$19,720
Total	**$1,560,128**	**$1,913,309**	**$2,693, 918**	**$3,011,877**	**$3,096,245**
Expenditures					
Faculty Salaries & Benefits	$917,155	$1,189,933	$1,314,275	$1,582,251	$1,555,678
Staff Salaries & Benefits	$45,012	$ 50,492	$65,111	$70,663	$65,864
Operations	$82,050	$ 54,398	$144,149	$ 187,051	$181,638
Travel	$22,050	$ 45,526	$31,813	$47,022	$44,914
Center for Public Health Practice and Research	---	---	$97,293	$117,171	$119,953
Grants and Contracts	---	---	$734,160	$734,319	$1,103,965
Foundation Expenditures	---	---	$24,920	$207,553	$118,331
Graduate Research Assistant Support	---	---	---	---	$19,720
Student Support	$61,876	$50,285	---	---	---
Total	**$1,128,143**	**$1,390,634**	**$2,411,721**	**$2,955,031**	**$3,091,732**

*Summer and winter tuition and fees are generated based on a different, per credit hour, financial model by the university and combine both MPH and undergraduate departmental teaching revenues

1.7 Faculty and Other Resources.

The program shall have personnel and other resources adequate to fulfill its stated mission and goals and its instructional, research and service objectives.

This criterion is met. The program has the critical mass of faculty to support the two specialization concentrations: MPH in infectious disease and MPH in public health education. For the last three years, the student to faculty ratios have been less than 10:1 for total faculty (primary and secondary). This ratio is slightly exceeded for some years (and areas) if only primary faculty are considered. Although the program meets the critical mass of faculty for each concentration, the program will be hiring two additional

faculty members (by August 2018) in the area of policy as well as five in the area of epidemiology and quantitative methods. During the site visit, faculty provided data that illustrates significant committed efforts to increasing faculty representation in the topic area of epidemiology.

The program has sufficient administrative and staff support. The program employs a full-time program coordinator and full-time program assistant.

The program is physically located in the College of Veterinary Medicine (CVM) on the Virginia Tech campus with space for many faculty offices. Additional program faculty have their offices adjacent to their labs in Virginia Tech buildings. The CVM space houses all staff offices, the mailroom, student offices and meeting space. Six conference rooms are available to program faculty and students. The program space also includes offices for the Center for Public Health Practice and Research. There is also dedicated laboratory space for several faculty members. During the site visit, faculty confirmed that there is currently sufficient laboratory space and space for graduate assistants. The productivity of some faculty could be further enhanced by the availability of supplemental support from the college for additional graduate assistants.

The program has individual computer and printing equipment available for all faculty and staff, including laptops and i-Pads. Graduate assistants have access to computer printing and software facilities. The college's IT staff provides 24-7 support to faculty, staff and students. Wireless access is available, and classrooms have computer projection and screens for faculty and student use. Students can also access computer services in the university libraries. Individualized computer support is also available for students and faculty.

Library support is sufficient for the program. The university library includes four libraries (main library, Veterinary Medical Library, Art and Architecture and the northern Virginia Graduate Center Library). The library is a selected depository for federal documents and is an invited member of the Association of Research Libraries. The total volumes (print and electronic) are 3,313,883. The holdings also include audio recordings, current serials, films and videos, streaming videos and government documents. Online and print resources are provided for the health sciences, in particular for health promotion, health education and infectious diseases. A designated subject librarian serves as the primary liaison and maintains an awareness of departmental programs and initiatives that have implications for the collection and services. Four additional librarians work as a team within the One Health focus and the science disciplines to provide a wide range of services. The majority of print materials for these subject areas are located in the Newman Library, the Vet-Med Library and an off-site storage faculty. Online health science collections include, but are not limited to, PubMed; BioMed central, Web of Science, PsychINFO, Consumer Health Complete, CINAHL, AgeLINE, Alt-HealthWatch, Biotechnology Abstracts and Biological

Sciences. Interlibrary loans also provide access to desktop delivery service and print copies of journal articles and book chapters are received via electronic delivery. During the student session of the site visit, there was some level of concern regarding the limited weekend hours of the Vet-Med library; however, there was noted recognition of staff support (during this time), and students are very satisfied with the accessibility of online periodicals and journals.

In addition to the resources mentioned above, the program also benefits from partnerships with the Virginia Tech Carilion School of Medicine. A memorandum of understanding has resulted in the support of an adjunct faculty member with a contribution of 30% salary contributed by the SOM to the public health program. Community partners, preceptors and alumni are ambassadors for the program. During the site visit, it was made clear that the public health community is very engaged in the public health program. External organizations offer experiential learning opportunities, practicum locations and provide preceptors for MPH students. During the site visit, the public health community spoke of the positive and far reaching impact of the program on the region through research and service.

The program's self-defined outcome measures are focused on maintaining existing physical space to adequately carry out program functions and maintaining a 10:1 student-faculty ratio. The program noted that one weakness is the challenge of faculty turnover based on recruitment to other universities and retirement. Increased research options and the opportunity to contribute to the BSPH program were discussed as ways to incentivize faculty. The program also plans to incentivize new faculty with a focus on increased research and scholarship as well as creating new opportunities for participation in the certificate program and the BSPH program.

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1.8 Diversity.

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The program shall demonstrate a commitment to diversity and shall evidence an ongoing practice of cultural competence in learning, research and service practices.

This criterion is met. The program has a diversity and inclusion goal and three measurable objectives, as well as three strategies associated with each objective. The first strategy relates to faculty and staff diversity and engages the university's Office of Diversity and Inclusion, *AdvanceVT* and the university's Commission on Equal Opportunity and Diversity. Program faculty are directly involved in a number of university-wide initiatives aimed at improving the recruitment and retention of a diverse faculty. The second strategy aims to increase diversity in students through enhanced recruitment strategies, coordinated school visits and a holistic admissions process that considers community service, leadership and social, economic and other barriers. The third strategy relates to promotion and inclusion and focuses on providing students with some level of diversity and cultural competence. Faculty are encouraged to participate in university-sponsored inclusion efforts, and three faculty members have established

professional relationships with Historically Black Colleges and Universities such as Virginia State University, Hampton University and Bluefield State College.

The program has designated three specific priorities for under-represented populations. These are racial/ethnic diversity in faculty, staff and students; Appalachian representation in students and faculty; and first-generation students. The program reports that 20.6% of its applicants over the last four years came from persons identifying as belonging to diverse populations. For the current academic year (2017-2018), 27.3% of the students enrolled were from diverse populations. In addition, 22.7% of the most recent enrollment class represented Appalachia and 27.2% were first generation college students. All of these recent year's enrollment figures were the highest over the four-year reporting period.

The program has separate diversity objectives for students and faculty. The measures for students are to enroll a racially/ethnically diverse student cohort annually, enroll a student cohort reflective of Appalachia annually, enroll a student cohort with first generation college students annually and for students upon graduation to be able to identify at least one significant interaction with a community partner who represents a diverse population. The program has met all of these targets.

The diversity measures for faculty are as follows: maintain a faculty and staff complement with at least one individual from a racially/ethnically diverse background and another from Appalachia, who participates in diversity and inclusion activities across the college and university each year; maintain a faculty complement with at least one Appalachian faculty member; and ensuring that all primary faculty will engage in at least one diversity activity each year. For the last four years, the program has been unable to meet the target of having at least one ethnically/racially diverse faculty member. However, during the site visit program leaders confirmed that the new faculty hires in June 2018 and August 2018 will allow the program to meet this diversity target. The program exceeded its target of maintaining a faculty complement with at least one Appalachian faculty member, and departmental records indicated that 100% of all core faculty engaged in one diversity activity for each of the completed reporting years.

During the site visit, the site visit team was made aware that the university has a Target of Talent program to help in recruiting diverse faculty. Under this program, a faculty hire meeting the diversity requirement will allow the college to have a new provost-provided faculty position the following year for an additional under-represented minority faculty hire. The program also reported that several of the student experiences took place in diverse community-based settings.

2.0 INSTRUCTIONAL PROGRAMS.

2.1 Degree Offerings.

The program shall offer instructional programs reflecting its stated mission and goals, leading to the Master of Public Health (MPH) or equivalent professional master's degree. The program may offer a generalist MPH degree and/or an MPH with areas of specialization. The program, depending on how it defines the unit of accreditation, may offer other degrees, if consistent with its mission and resources.

This criterion is met. Table 2 presents the program's degree offerings. The program offers one professional degree, the MPH, with concentrations in public health education and infectious disease. The program also offers two joint degrees, the Doctor of Veterinary Medicine/Master of Public Health and the Doctor of Medicine/Master of Public Health degree.

All students are required to take 20 credits of core courses addressing core public health knowledge areas, including laboratory hours for epidemiology and quantitative methods. Each student then chooses a concentration and takes 12 credits of concentration-specific courses. The students' final 10 credits come from professional preparation, which includes the practicum and capstone courses, as well as a one credit course in MPH professional preparation.

Students are able to take electives, however any elective is taken on top of the student's required program of study and cannot replace any course in the program plan.

Students and stakeholders stated that they would like to see more program-offered electives in topic areas such as health policy, geospatial mapping and more statistical analytics.

Table 2. Instructional Matrix – Degrees & Specializations		
	Academic	**Professional**
Master's Degrees		
Public Health Education		MPH
Infectious Disease		MPH
Joint Degrees		
Veterinary Medicine		DVM/MPH
Medicine		MD/MPH

2.2 Program Length.

An MPH degree program or equivalent professional public health master's degree must be at least 42 semester-credit units in length.

This criterion is met. All MPH students are required to complete 42 semester credit hours. There have been no degrees awarded for fewer than 42 semester credit hours. Virginia Tech defines a credit hour as 2250 total contact minutes being equivalent to a three-credit hour course.

2.3 Public Health Core Knowledge.

All graduate professional public health degree students must complete sufficient coursework to attain depth and breadth in the five core areas of public health knowledge.

This criterion is met. The program requires all MPH students to take a required course each (three credits) in three of the five core disciplines of public health: environmental health sciences, social and behavioral sciences and health services administration. The total core credits are 20. For the biostatistics and epidemiology core disciplines, the program moved from offering separate courses to offering an integrated two course (six credit) sequence of epidemiology and quantitative methods, with accompanying labs, starting in 2015-2016. The integration of the epidemiology and biostatistics courses was informed by survey results and concerns about the need for greater proficiency in these core areas.

Students in the DVM/MPH dual program who are set to graduate through 2019 are able to substitute equivalent coursework in the DVM curriculum for epidemiology and biostatistics towards the MPH degree. Students set to graduate after 2019 will no longer be able to substitute equivalent courses towards the MPH degree due to the transition to a new DVM curriculum.

Students in the MD/MPH dual degree are able to substitute equivalent coursework in the MD/MPH curriculum for epidemiology and biostatistics.

2.4 Practical Skills.

All graduate professional public health degree students must develop skills in basic public health concepts and demonstrate the application of these concepts through a practice experience that is relevant to students' areas of specialization.

This criterion is met. Each student is required to participate in a structured eight week, 300-hour minimum practicum. Practicums include both international and domestic settings. During the last two academic years, students have been placed in over 50 agencies in domestic and international locations. Students are directly supervised by an appointed on-site preceptor or, in some cases, by an off-site preceptor and an on-site supervisor. The student is required to complete a deliverable that is presented to the practicum site at the conclusion of the experience. The majority of students complete the practicum before their final semester. No practicum waiver has been granted to any student.

The practicum is guided by the MPH Practicum Toolkit, which provides details on how practicum sites are selected, practicum preceptor qualifications, practicum planning and evaluation. Practicum sites must meet both the needs of the student and the academic requirements of the program. Practicum preceptors are expected to have either an MPH or substantial public health experience. Practicum preceptors receive an orientation through a planning meeting with the student, the student's faculty advisor and the

practicum coordinator. When students complete the practicum, their preceptors are emailed a link to an online evaluation, which is used by the student's faculty advisor to assign 20% of the practicum grade.

In the program's last accreditation review, the site visit team noted that the assistant director of the public health program also served as the practicum coordinator. Since the 2013 CEPH accreditation, the program has added a program coordinator position with primary responsibility for supervising the practicum experience. The coordinator is currently working with MPH students, faculty and preceptors to address challenges with placements outside the US, securing placement opportunities in federal agencies and finding funding for practicum placements.

Students in the dual-degree programs must complete the practicum just as standalone MPH students would. Students, regardless of program of study, are all held to the same MPH practicum contract and must find a placement that meets all of the needs of the contract. If students in the dual-degree programs are able to find a practicum site that meets the MPH contract as well as their other program's needs, they are allowed to do so. Some students in dual degree programs choose to do separate practicums, however.

As the curricula for both the MPH program and the DVM program are in a period of change, the MPH program has revised the way in which the DVM/MPH students may complete their practicum. Students graduating between 2010 and 2018 can use three clerkships from the DVM program, as long as they meet the MPH practicum contract, as the MPH practicum. Alternately, students may also complete their practicums separately. For students graduating in 2019, many of the students have opted to use the summer between their second and third year in the DVM program to complete their MPH practicum, separate from their DVM clerkships. Students graduating from 2020 will have one of two options to complete their practicum: students may complete their MPH practicum independent of the DVM clerkship in their year 3 summer or students may use up to two DVM clerkships as their MPH practicum, as long as they meet the MPH practicum contract.

The site visit team talked with several preceptors during the site visit. All of the preceptors felt that students were very well prepared and able to perform meaningful work. Students in both the standalone and DVM/MPH programs mentioned onsite that they felt as though the practicum was an excellent way to gain real world practice in the field.

2.5 Culminating Experience.

All graduate professional degree programs identified in the instructional matrix shall assure that each student demonstrates skills and integration of knowledge through a culminating experience.

This criterion is met. All students must complete the capstone course in public health during the final semester. The capstone course requires both written and oral components, with a paper composing 75% of the grade and the presentation/poster composing the remainder of the grade. All capstone projects are presented through a poster session, and the four best projects are presented to an audience consisting of faculty, students and community leaders during a half-day capstone seminar. The grading rubrics for the capstone course were included in the self-study and reviewed by the site visit team. The site visit team reviewed a samples of capstone projects and observed that each project selected a public health challenge within the five core disciplines of public health and developed a research or intervention approach to addressing that challenge.

In 2016, the Program and Policy Committee developed and put in place new capstone procedures and guidelines. These changes were made in response to the perception that the capstone projects were not delivered with consistent supervision and that the quality of the projects varied. The new guidelines require capstone students to provide a one-page proposal and receive faculty feedback. Then, each student must compete for the four oral presentation slots by submitting an oral presentation proposal and abstract.

The program is currently discussing the possibility of a year-long capstone experience with integrated coursework. This would take place during the student's second year and may be implemented as early as 2018-19. The site visit team talked with students, preceptors and alumni, and all agreed that this change would improve the capstone experience.

2.6 Required Competencies.

For each degree program and area of specialization within each program identified in the instructional matrix, there shall be clearly stated competencies that guide the development of degree programs. The program must identify competencies for graduate professional, academic and baccalaureate public health degree programs. Additionally, the program must identify competencies for specializations within the degree program at all levels (bachelor's, master's and doctoral).

This criterion is met. The program has a set of 17 MPH core competencies that each student in the program is required to attain. The competencies cover the five core areas of public health and are appropriate for the degree level. All of the competencies are primarily covered in the didactic portion of the program, leaving the practice experience to reinforce the skills attained by students.

The competencies were developed initially when the program began. The program leadership at that time used the ASPH (at that time) competencies and chose a set of 16 to adopt for the VT MPH program. During the current self-study process, program leaders went through a process to review and revise the

competencies to better match the current state of the program. While the process did not change any competencies, the program added one competency related to ethics.

Each concentration has its own set of unique competencies that differ from the set of core competencies. Faculty from the public health education concentration adopted the seven areas of responsibility from the National Commission for Health Education Credentialing (NCHEC) as the concentration competencies. The concentration has adopted these competencies to ensure that students are prepared to take the Certified Health Education Specialist (CHES) exam upon completion of the degree. The attainment of these competencies is reinforced by the high pass rate of all students sitting for the CHES exam post-graduation.

The infectious disease concentration faculty created a set of eight unique competencies for the concentration, as there is not a standard adopted set of competencies within the infectious disease field. The program's infectious disease competencies reflect the emphasis on One Health. These competencies cover the areas of infectious disease processes, communication of infectious diseases, global health concerns, control and prevention plans, analysis of environmental dynamics and interventions.

It was evident from site visitors' meetings with numerous stakeholder groups that continuous feedback and process improvement is present within the program and the department, including processes for the review of the competencies. Faculty in each concentration routinely review and assess the adequacy of the competencies and, if needed, revise either the competencies or the courses to which the competencies are mapped. Through the self-study process, the infectious disease faculty reviewed and re-mapped the competencies and decided to add an additional course in neglected and emerging infectious diseases. Also, during this process, the structure and progression of material within courses and the sequence of courses changed.

The program shares competencies with the MPH students on the internal student Canvas site, the policy and procedures manual and in orientation materials, as well as including them on some syllabi.

The competencies developed and presented by the program link directly to the learning objectives on the syllabi provided for each course. There is evident and adequate didactic coverage of competencies, and each course has been diligently reviewed and assessed to ensure full coverage of all competencies.

2.7 Assessment Procedures.

There shall be procedures for assessing and documenting the extent to which each student has demonstrated achievement of the competencies defined for his or her degree program and area of concentration.

This criterion is met. The program has strong procedures for monitoring and evaluating student progress in achieving the expected competencies. Students complete an online survey of perceived competence for each of the core and concentration competencies during orientation and again approximately two weeks before graduation. A Town Hall, organized by PHA@VT and the Assessment Committee each spring semester, provides qualitative feedback on coverage of competencies Students also identify three to five competencies in their practicum learning contracts and report on achievement of these competencies in their mid-course and final evaluations. Practicum preceptors complete an online evaluation of student performance in the five core disciplines and the four professionalism characteristics. Major employers of program graduates complete an annual online evaluation of program graduate performance in the five core disciplines and the four professional characteristics. Finally, program alumni complete a survey six-months post-graduation that evaluates their attainment of competencies achieved. All students also submit course surveys at the end of each course, and these surveys have been pivotal in changes made to courses and the program in general.

The program has graduation rates that comply with the CEPH standards, with rates of 76%, 82%, 79%, 83% and, for the most recent year, 66% after only two years in the program.

The program has graduate placement rates that are within the required CEPH standards, however over the last three years there have been increasing numbers of graduates actively seeking employment at the time of data collection, with 0%, 10.3% and 11.4%, respectively.

The alumni survey has a declining response rate over the last three years, with rates of 75%, 68.3% and 50% respectively. There is opportunity to engage alumni more throughout the year in order to combat the declining response rates.

Many students in the public health education track sit for the CHES exam, which the program aims to prepare them for. Of the graduates who have sat for the CHES exam, the program reports pass rates of 83.3%, 80% and 100% over the last three years.

2.8 Bachelor's Degrees in Public Health.

If the program offers baccalaureate public health degrees, they shall include the following elements:

Required Coursework in Public Health Core Knowledge: students must complete courses that provide a basic understanding of the five core public health knowledge areas defined in Criterion 2.1, including one course that focuses on epidemiology. Collectively, this coursework should be at least the equivalent of 12 semester-credit hours.

Elective Public Health Coursework: in addition to the required public health core knowledge courses, students must complete additional public health-related courses.

Public health-related courses may include those addressing social, economic, quantitative, geographic, educational and other issues that impact the health of populations and health disparities within and across populations.

Capstone Experience: students must complete an experience that provides opportunities to apply public health principles outside of a typical classroom setting and builds on public health coursework. This experience should be at least equivalent to three semester-credit hours or sufficient to satisfy the typical capstone requirement for a bachelor's degree at the parent university. The experience may be tailored to students' expected post-baccalaureate goals (eg, graduate and/or professional school, entry-level employment) and a variety of experiences that meet university requirements may be appropriate. Acceptable capstone experiences might include one or more of the following: internship, service-learning project, senior seminar, portfolio project, research paper or honors thesis.

The required public health core coursework and capstone experience must be taught (in the case of coursework) and supervised (in the case of capstone experiences) by faculty documented in Criteria 4.1.a and 4.1.b.

This criterion is not applicable.

2.9 Academic Degrees.

If the program also offers curricula for graduate academic degrees, students pursuing them shall obtain a broad introduction to public health, as well as an understanding about how their discipline-based specialization contributes to achieving the goals of public health.

This criterion is not applicable.

2.10 Doctoral Degrees.

The program may offer doctoral degree programs, if consistent with its mission and resources.

This criterion is not applicable.

2.11 Joint Degrees.

If the program offers joint degree programs, the required curriculum for the professional public health degree shall be equivalent to that required for a separate public health degree.

This criterion is met. The program offers two joint degrees, a DVM/MPH degree as well as an MD/MPH degree. The DVM/MPH program is the more prominent of the two dual degrees, as the MD/MPH degree has only had two graduates over the last seven years. The lack of MD/MPH graduates is due to the heavy emphasis the medical school places medical research, which does not leave much time to complete the MPH portion of the program.

Faculty reviewed competencies, learning objectives and course syllabi in the DVM curriculum to determine course substitution. Since the last accreditation review, the program has revised the way that DVM/MPH students complete the MPH degree. These changes came about through continuous quality review and mapping of MPH competencies with DVM courses. In 2016, the DVM curriculum was

significantly changed and therefore course sequencing for the DVM/MPH students has undergone additional changes.

Students with dates of graduation from 2010-2019 were able to substitute courses from the DVM curriculum and Department of Statistics for courses in epidemiology, biostatistics, and infectious disease. Students were able to substitute the public health epidemiology course with the DVM epidemiology and advanced epidemiology courses and the MPH statistics course with the DVM introduction to clinical research course; students were also able to use four separate infectious disease courses from the DVM curriculum as a substitute for one public health principles of infectious diseases course, and students had the opportunity to use three DVM clerkships in place of the MPH practicum.

Through new mapping of the DVM curricula, program faculty determined that students in the DVM/MPH program who are graduating after 2019, would need additional preparation in epidemiology, biostatistics and infectious disease. Therefore, the students will be receiving those classes primarily through the MPH curriculum. Students will also only be able to utilize two DVM clerkships towards the MPH practicum.

The program has acknowledged the barriers that make it difficult for MD/MPH students to pursue the MPH degree, and the program looks toward the new criteria mapping as an opportunity to work with the school of medicine to develop a revised MD/MPH course sequence that may increase MD student participation.

Students in the joint degree programs who met with site visitors enthusiastically stated their appreciation for the flexibility and support that the program provided to them. They stated that faculty were flexible in the scheduling of courses, the substitution of courses and the numerous different practicum options offered. Students also stated their satisfaction with the emotional support they receive from faculty and the openness of the faculty to share any resources or connections with students. Students caught in the period of change for the DVM curriculum stated their appreciation of the faculty's handling of their program of study. Students reported that from the moment it was decided that the curriculum would be changing, faculty members sat down with each affected student and discussed their program of study and how to navigate the changes.

2.12 Distance Education or Executive Degree Programs.

If the program offers degree programs using formats or methods other than students attending regular on-site course sessions spread over a standard term, these degree programs must a) be consistent with the mission of the program and within the program's established areas of expertise; b) be guided by clearly articulated student learning outcomes that are rigorously evaluated; c) be subject to the same quality control processes that other degree programs in the university are; and d) provide planned and evaluated learning experiences that take into consideration and are responsive to the characteristics and needs of adult learners. If the program offers distance education or executive degree programs, it must provide needed support

for these programs, including administrative, travel, communication and student services. The program must have an ongoing program to evaluate the academic effectiveness of the format, to assess learning methods and to systematically use this information to stimulate program improvements. The program must have processes in place through which it establishes that the student who registers in a distance education or correspondence education course or degree is the same student who participates in and completes the course and degree and receives academic credit.

This criterion is not applicable.

3.0 CREATION, APPLICATION AND ADVANCEMENT OF KNOWLEDGE.

3.1 Research.

The program shall pursue an active research program, consistent with its mission, through which its faculty and students contribute to the knowledge base of the public health disciplines, including research directed at improving the practice of public health.

This criterion is met. The program has a productive research portfolio and has been very successful in garnering extramural funding from federal agencies, contracts and training grants. Program faculty, particularly tenured and tenure-track faculty, are expected to engage in significant research and scholarship activity related to their fields of expertise. Percent effort devoted to research and scholarly activity varies among faculty members and is determined in accordance with the type of faculty appointment (tenure track and tenured faculty have at least 30% research). There is significant consultation and negotiation between faculty members and the department head, and every faculty member is evaluated annually. Two primary areas of research focus include externally-funded computational epidemiologic and lab-based approaches focused on infectious diseases and community-engaged projects in health behavior, health policy and environmental health. Research at the university is classified as departmental research, core research and or sponsored research.

The College of Veterinary Medicine Office of Research and Graduate Studies supports a Grants and Contracts Office position that assists program faculty with the preparation of grants, including locating funding opportunities. The Office of Sponsored Programs provides support for submission of grant proposals to external agencies and financial management of funded projects.

Seed funding for research projects is available from several intramural sources. Many opportunities are targeted to life sciences and public health, including funding to develop collaborative interdisciplinary grant proposals to external funding agencies. There are startup packages for all new program faculty to facilitate initiation or transfer of their research programs. The size and type of startup fuds and other resources varies by faculty member.

Primary faculty members currently engage in a variety of funded and non-funded research activities, most of which are collaborative with other Virginia Tech department or disciplines. A total of $27,504,570 was awarded between 2015-2018.

The program's research portfolio includes primary and secondary data analysis, lab-based research, spatial modeling, environmental health studies and community-engaged program interventions. Faculty collaborate with colleagues in the Biocomplexity Institute of Virginia Tech, and many other research endeavors include collaborations with community organizations, such as an NIH-funded evaluation of diabetes education programs that involves formal agreements with the health ministry of the Baptist General convention of Virginia, the Virginia Department of Health and Virginia Cooperative Extension. Program faculty also have formal agreements for research with community-based organizations such as Friends of West End and West Central Community Health Improvement League.

The program's overarching goal to enhance public health practice and research, particularly in Southwest and Southside Virginia, is reflected in other collaborations and in faculty members' affiliation with the centers. For example, the mission of the Center for Public Health Research and Practice is to bolster interdisciplinary collaborative public health practice and research activities at Virginia Tech, in Appalachia and in Southside counties.

Students in the program have ample opportunity to participate in research with faculty in the program. On-site both students and faculty spoke of the many opportunities that students have had to participate in research across a broad spectrum of topics. Students have been involved in implementation and evaluation of fitness and nutrition curricula to determine the most effective entry point for sustaining parents and children involvement. Students have also had the opportunity to participate in global research (Malawi, Dominican Republic and Tanzania), research activities in the College of Veterinary Medicine and across other colleges at Virginia Tech.

During the site visit, program faculty expressed satisfaction with research facilities, and noted an interest in employing more graduate research assistants.

3.2 Service.

The program shall pursue active service activities, consistent with its mission, through which faculty and students contribute to the advancement of public health practice.

This criterion is met. The university motto is *Ut Prosim* which means "That I May Serve," And service plays an important role in program activities. In addition, the college's faculty, promotion and tenure guidelines define service to include service to the profession, community and external practice. Virginia Tech has developed a formal structure for service called VT-Engage. The core values of VT-Engage are

authentic community partnerships, awareness of self and civic identity, development of active citizens and responsible action grounded in scholarship. The program offered specific examples of faculty service to Blacksburg and the New River Valley, service to the region, service to the Commonwealth of Virginia and national service. In addition, faculty review articles for major peer-reviewed public health journals, three faculty serve in leadership roles on journals and two faculty serve as reviewers for federal grants.

Examples of faculty service to Blacksburg and the New River Valley include participation in the Partnership to Access to Healthcare; service on the board of directors for the Community Health Center for New River Valley and the Plenty! Food Bank. Another faculty member serves in the New River Valley Medical Reserve Corps.

The self-study provided a list of faculty service activities for the three most recent academic years. The program has four outcome measures and several specific targets for evaluating its service commitment. The program's measures are as follows: represent the program through faculty and student service in state/national/international public health and health-related organizations; develop partnerships with public and community health agencies; implement an engagement agenda that enhances strategic public health plans in Southside, Southwest and Central Appalachia so as to promote health equities in communities through interinstitutional engagement efforts; and address the workforce needs of the public health community in Southwest and Southside Virginia. The program met or exceeded all its targets for years 2014-2015 and 2015-2016. In 2016-2017, the program did not meet one target; the requirement that all primary faculty engage in at least one service activity per year with public and community health agencies (87.5%, 7/8)"

MPH students are also afforded several service opportunities. The Public Health Association at Virginia Tech held three community events to raise awareness of public health issues. Students also volunteered their time at the American Public Health Association Annual Meeting in Washington, DC. In 2017, the program formally established the MPH Student Ambassadors, who assist in outreach and student recruitment efforts. MPH students and faculty also participate in Medical Reserve Corps training as well as volunteer in local communities to meet the public health needs of the area's population. The site visit team learned that there was a waiting list of 30 students seeking to be Medical Reserve Corps trainees.

3.3 Workforce Development.

The program shall engage in activities other than its offering of degree programs that support the professional development of the public health workforce.

This criterion is met. The public health program has conducted several public health workforce needs assessments since its original CEPH accreditation. The Center for Public Health Practice and Research (CPHPR) administered a workforce development online needs assessment in February 2015 in the

Southwest and Southside region of Virginia targeting Virginia Department of Health districts, public health agencies and organizations and community decision-makers. The needs assessment had 48 respondents, the majority of whom were employed at local health departments. Sixty-seven percent of the respondents preferred in-person training, and the most preferred site was the Virginia Tech campus. Despite the data, center faculty who met with site visitors stated that when they offered workforce development opportunities on the VT campus, they had very little attendance. The program center re-evaluated and made the decision to offer workforce development opportunities at actual worksites in the future.

In response to some survey responses regarding motivators for training and barriers to training opportunities, the Department of Population Health began offering a certificate program in fall 2017, consisting of six core public health classes. The site visit team was informed that the certificate program was being delayed for a year because the MPH curriculum is changing to meet the 2016 CEPH criteria.

The CPHPR also conducted two additional workforce needs assessments in 2016 as part of an event designed to improve health literacy of Virginia Department of Health employees. The event and post-event assessments identified 14 areas where continuing education programs would be helpful in improving and enhancing public health workforce skills.

The program provided an extensive list of its continuing education programs for the last three years (2014-2017). During 2014-2015, the program identified six workforce development activities, led by three MPH faculty, enrolling 260 students and public health professionals. In 2015-2016, there were three workforce development activities led by three MPH faculty, enrolling 258 participants. For the final reporting year (2016-2017), there were five workforce development activities engaging five MPH faculty, reaching 165 persons.

In academic year 2017-2018, the program implemented a different strategy aimed at offering more workforce development trainings in the region in identified areas of need. The new strategy aligns faculty expertise with identified areas of need from the workforce needs assessments. The district health departments then choose the training area they would find most useful, and the training is to be directly provided in locations and times that are convenient to the employees. The site visit team was informed that the first of these trainings is to be delivered in April 2018 for the New River Health District on cultural competency.

In May 2015, the New River Health District and the Virginia Tech Department of Population Health Sciences formed the New River Academic Health Department to share resources and encourage collaborative research projects. A faculty member serves as the coordinator of the New River Academic

Health Department and is funded by the New River Health District at 20%. The site visit team learned that the designated faculty member spends one day a week at the New River Health District.

A standardized evaluation instrument was developed in 2017 that measures the success of workforce development activities and provides suggestions for future training needs. The site visit team confirmed that no evaluation results are available because the instrument will not be in use until appropriate training has been conducted.

4.0 FACULTY, STAFF AND STUDENTS.

4.1 Faculty Qualifications.

The program shall have a clearly defined faculty which, by virtue of its distribution, multidisciplinary nature, educational preparation, practice experience and research and instructional competence, is able to fully support the program's mission, goals and objectives.

This criterion is met. The program has a complement of qualified and diverse faculty. A majority of the primary faculty who support the program have received their degrees from CEPH-accredited programs and schools, and nearly all faculty teach in the area in which they received their degree. While the program's focus is driven by One Health, there is a depth of expertise spanning health education, veterinary medicine, environmental health, epidemiology, statistics and health policy.

All faculty members, with the exception of one adjunct faculty member, have terminal degrees in their areas of instruction and research interest, such as DVM, MD, PhD and DrPH. A majority of the faculty members also hold credentials in their fields of interest such as ACPV, FNAP, CPH, FACP and FIDSA. Many faculty members are veterinarians by trade and have come to teach and pursue the One Health initiative that is central to College of Veterinary Medicine. Department and programmatic leaders have expertise in the area of practice, as both the department head and program director began their careers as public health practitioners in epidemiology and environmental health. The diverse range of backgrounds from faculty members supports the One Health mission, and faculty stated in onsite meetings that they were passionate and drawn to the integration of human and animal health to tackle large public health issues, specifically in the immediate community and the region.

Different stakeholder groups who met with site visitors stated that the program's strongest feature is its faculty complement. Students praised how knowledgeable and approachable the faculty are, as well as how open faculty are to student feedback, concerns and needs. Students mentioned that they felt comfortable going to any faculty member regarding any concerns they may have with the program and that they feel as though the concerns are considered and addressed in a timely manner. Students also noted that the faculty were generous with their time, knowledge and resources and have been a true asset and favorite part of the program.

Preceptors, alumni and community stakeholders also praised the faculty and the openness and willingness to respond to feedback and suggestions for the program. Many stated that there is consistent communication to and from the program faculty and leadership about what can be changed about the program in order to provide the most useful education to students.

Faculty praised the environment of collaboration and collegiality throughout the program, department and college.

4.2 Faculty Policies and Procedures.

The program shall have well-defined policies and procedures to recruit, appoint and promote qualified faculty, to evaluate competence and performance of faculty and to support the professional development and advancement of faculty.

This criterion is met. The program adheres to the policies and procedures outlined and described in the faculty handbook. Regarding faculty ranks, all faculty members are designated as members of the general faculty of the university. The general faculty comprises faculty members outside the staff personnel system who are appointed to carry out the learning, discovery and engagement programs of the universality. Faculty members may be assigned to one of the following standard faculty ranks: extra-collegiate instructor, assistant professor, associate professor, or professor, lecture, visiting assistant professor, visiting associate professor, adjunct professor, assistant professor of practice, associate professor of practice, professor of practice, clinical inductor, clinical assistant professor, clinical associate professor, clinical professor, instructor, advanced instructor or senior instructor. Research faculty ranks includes research associate, senior research associate, research scientist, senior research scientist, postdoctoral associate, project associate, senior project associate, project director, research assistant professor, research associate professor or research professor.

The college and wider university have a number of faculty development activities available to faculty. These activities are available to tenured, tenure-track and non-tenured faculty. These activities include the following: a college-sponsored teaching and learning workshop to assist faculty with their teaching knowledge and skill; a new faculty/early career teaching certificate available to those within three years of appointment, offered by the Center for Instructional Development and Educational Research; and the Network Learning Institutes and Summer Scholars Program to support work in interdisciplinary teams to develop collaborative projects. The department provides professional development funds of $1,500 annually to each faculty member and $1,000 annually to each staff member.

The tool for the evaluation of faculty includes the electronic Faculty Activity Report (eFAR). This form summarizes teaching, research and service activities and accomplishments. In consultation with the

department head, each faculty member prepares a Faculty Activity Plan that details a work plan for the coming year. During the site visit, the team became aware of the opportunity for the program director to provide feedback to the department chair regarding faculty annual evaluations. The communication between the program director and department head is consistent.

4.3 Student Recruitment and Admissions.

The program shall have student recruitment and admissions policies and procedures designed to locate and select qualified individuals capable of taking advantage of the program's various learning activities, which will enable each of them to develop competence for a career in public health.

This criterion is met. The program recruits for five student populations each year. These consist of full-time students pursuing only the MPH, medical students, veterinary students, mid-career professionals enrolled either full-time or part-time in the MPH program and simultaneous degree students pursuing another graduate degree. The site visit team reviewed the program's informational website, which is updated regularly and provides an overview of the program, admissions information and competency and curriculum information. Recruitment materials were updated in fall 2016 and include informational and promotional items. The program has a Facebook page and has added a Twitter account to improve student recruitment using social media.

The program holds information sessions twice a year in different locations on the Virginia Tech campus. The program also maintains a relationship with Health Professions Advising at Virginia Tech to improve internal recruitment.

In 2017, the program explored the possibility of joining ASPPH and SOPHAS to compete with recruitment strategies at peer universities. The Virginia Tech Graduate School did not approve the request to join ASPPH and SOPHAS. During the site visit, program administrators affirmed their commitment to continue their efforts to influence the graduate school to allow the program to use SOPHAS, and the interim provost offered his support during his meeting with the site visitors.

Students seeking admission to the program submit a formal application online to the graduate school. Applicants are required to have an undergraduate degree from an accredited college or university and at least a 3.0 GPA for the last half of credits earned for the undergraduate degree, or at least 12 credits of graduate credit taken post-baccalaureate with a minimum GPA of 3.0. Applicants whose first language is not English need to have TOEFL scores meeting Virginia Tech Graduate School requirements. Applicants are also required to submit GRE scores. Details of the admissions policies and procedures are found on the program website.

Admission decisions are made by the Admissions Committee four times per year. The program has an early decision deadline, a regular deadline, a secondary deadline and a summer deadline (given space availability). If an applicant does not meet minimum requirements but shows promise, the program may encourage him or her to apply as a Commonwealth Campus student and take up to 12 credits before reapplying for admission. In all admission decisions, the Admissions Committee makes recommendations to the primary faculty, and the department chair informs accepted applicants. The Graduate School makes the final determination and offer of admission.

MPH program new student enrollment for 2014-2018 has been 21, 28, 16 and 27 in the infectious disease concentration and 19, 22, 14 and 17 in the public health education concentration. There has been a slight decrease in the number of students attending the program on a part-time basis.

The program has met or exceeded all of its outcome measures except one for all four years. The one exception is the target of enrolling 40 students per year. In 2016-2017, the program only enrolled 30 students. The average undergraduate GPA ranged from a low of 3.31 (2014-2015) to a high of 3.52 (2015-2016).

4.4 Advising and Career Counseling.

There shall be available a clearly explained and accessible academic advising system for students, as well as readily available career and placement advice.

This criterion is met. All MPH students are required to attend an orientation program that takes place on the week before the first semester begins. All students receive an orientation packet of materials covering academic policies, university policies and curriculum requirements. The site visit team reviewed the orientation packets for 2016 and 2017 and the agenda for each of these orientation days.

Prior to the 2017-2018 academic year, each MPH student was assigned a faculty advisor at the time of acceptance into the program. In 2017, the Program and Policy Committee studied the advisee system and identified several concerns, including disproportionate numbers of students being assigned to certain faculty, students being assigned to advisors who did not match the student's area of public health interest and inconsistent advising. In the fall of 2017, the committee adopted a new advising system giving students the opportunity to provide their top choices of faculty advisors. For the first semester all new students will be advised in a group by their chosen concentration before making their choices of preferred advisors in November. Students are then assigned an advisor by December.

The program has developed several activities and materials to assist MPH students with career counseling. One of the required courses, MPH Professional Preparation, provides career planning information and helps students develop skills needed to get a job. The program website lists examples of

public health jobs and careers, and job announcements are sent by email to the MPH student listserv. The program has a process for selecting and supporting students to attend the annual meeting of the American Public Health Association, and the program also supports student attendance at the annual meeting of the Virginia Public Health Association. In 2017, the program also financially supported students seeking to complete the CHES examination. Also, in 2017, the program joined Delta Omega and inducted its first faculty and students into its chapter named Delta Mu. The chapter plans to hold two events each year to honor graduates and increase alumni visibility.

Because MPH students have requested more formal career workshops in the semester they intend to graduate, the program is planning to hold workshops in spring 2018 to afford students the opportunity to learn first-hand about public health careers. The program has graduated seven years of MPH students and has plans to start building a VT MPH alumni network to enhance career opportunities.

During 2014-2015, 77.3% of the alumni reported that they were satisfied with academic advising. In 2015-2016, that number rose to 91.7%, and in 2016-2017, the number dropped to 85%. The percentage of alumni satisfied with career counseling was lower at 33% for 2014-2015 and 50% for both 2015-2016 and 2016-2017. The number for career counseling is low because it only reflects students who request counseling services.

The program previously had its own procedure for handling grievances but recently determined that its grievance policy should align with Virginia Tech Graduate School procedures and now refers all grievances to the Graduate School for disposition. During the period 2014-2017, there was one formal grievance and one inquiry. Recently, the program had another formal grievance that was resolved and resulted in grade changes for several students. The site visit confirmed that the grievance process is understood by the faculty and the students and that the students feel comfortable addressing any issue with faculty and program leaders.

Agenda

**COUNCIL ON EDUCATION FOR PUBLIC HEALTH
ACCREDITATION SITE VISIT**

**Virginia Tech
Public Health Program**

February 22-23, 2018

Thursday, February 22, 2018

9:45 am   <u>Meeting with Program Administration</u>
                        G. Daniel
                        L. Hungerford
                        S. West Marmagas

10:45 am   <u>Break</u>

11:00 am   <u>Meeting with Faculty Related to Curriculum and Degree Programs</u>
                        J. Gohlke
                        A. Bertke
                        J. Hodgson
                        K. Hosig
                        L. Hungerford
                        S. West Marmagas
                        H. Menefee
                        F. W. Pierson
                        K. Redican
                        C. Rist
                        J. West

12:00 pm   <u>Break</u>

12:15 pm   <u>Lunch with Students</u>
                        S. Black
                        A. Carpenter
                        L. Carpenter
                        L. Dodd
                        T. Holsinger
                        M. Kearney
                        M. Medrano
                        T. Oishi
                        M. Shelton
                        M. Zlotnick

1:15 pm   <u>Break</u>

1:30 pm   <u>Meeting with Faculty Related to Research, Service, Workforce Development and Faculty Issues</u>
                        S. Eubank
                        A. Bertke
                        J. Gohlke
                        K. Hosig
                        H. Menefee
                        F. W. Pierson
                        V. Ragan
                        K. Redican
                        S. Wenzel

2:30 pm   <u>Resource File Review and Executive Session</u>

4:00 pm   <u>Meeting with Advisory Board, Alumni, Community Representatives and Preceptors</u>
                        R. Bell
                        E. Burke
                        E. Cantrell
                        K. Feldman
                        S. Harper

L. Kahn
                           A. Agud
                           N. Bissell
                           P. Bordwine
                           J. Deese
                           N. Dye
                           K. Jiles
                           K. Oursler
                           S. Wohlford

5:00 pm   Adjourn

Friday, February 23, 2018

8:15 am   Meeting with Institutional Academic Leadership/University Officials
                           C. Clarke

9:15 am   Executive Session and Report Preparation

12:30 pm   Exit Briefing

1:15 pm   Team Departs