

## CRITERION V.A.: INSTRUCTIONAL PROGRAMS

**The program shall offer instructional programs reflecting its stated mission and goals, leading to the Master of Public (MPH) or equivalent professional master's degree in community health/preventive medicine or in selected areas of knowledge basic to public health. The program may offer other degrees, professional and academic, and other areas of specialization, if consistent with its mission and resources.**

The Department of Preventive Medicine and Biometrics (PMB) offers professional and academic degrees at the master and doctoral levels. The Master of Public Health (MPH), Master of Tropical Medicine and Hygiene (MTM&H), and Master of Science in Public Health (MSPH) are professional degrees; the Doctor of Public Health (DrPH) is both an academic and professional degree; and, the Doctor of Philosophy (PhD) in Environmental Health Sciences and Medical Zoology are research and academic degrees. There are various areas of specialization within each of the PMB graduate degree programs, with the exception of the MTM&H (*Table V-1*).

The MPH, the cornerstone of PMB's instructional programs, and the other professional degrees require course work in the five core public health areas:

1. Biostatistics – collection, storage, retrieval, analysis and interpretation of health data; design and analysis of health related surveys and experiments; and concepts and practices of statistical data analysis;
2. Environmental Health – environmental factors including biological, physical and chemical factors which affect the health of the community;
3. Epidemiology – distribution and determinants of disease, disabilities and death in human populations; the characteristics and dynamics of human population; and the natural history of disease and the biological basis of public health;
4. Health Services Administration - planning, organization, administration, management, evaluation and policy analysis of health programs; and,
5. Social and Behavioral Sciences – concepts and methods of social and behavioral sciences relevant to the identification and the solution of public health problems.

The MPH degree program provides a broad didactic experience in public health and preventive medicine, while offering students unique courses and opportunities to participate in practicum experiences not available at any other U.S. institution offering public health training. For example, PMB offers a course on Joint Military Medical Operations and Humanitarian Assistance in which students examine how military and other public health resources can be used effectively in support of global humanitarian relief operations. While a large proportion of the students entering the MPH program are physicians, a variety of other health care professionals (e.g., veterinarians, dentists, environmental scientists, and nurses) round out every incoming class. The MPH is designed as a full-time 12-month degree program which requires a minimum of sixty quarter-credit hours, of which thirty-six credit hours are required core courses. Thus, students have flexibility in terms of elective courses and can achieve greater depth in their selected area of concentration. Included in these thirty-six credit hours are the three new one-credit courses offered in support of the MPH project

and practicum, a three credit course for the MPH public health practicum, and a three credit course for the MPH independent project.

Every MPH student selects an area of concentration from among the following: aerospace physiology, epidemiology and biostatistics, environmental and occupational health, general preventive medicine, health services administration, international health specialist; tropical public health, and occupational ergonomics. Three of these (aerospace physiology, international health specialist, and occupational ergonomics) were added since the last CEPH review in order to address a community need for public health training in these areas. A number of required and elective courses have been added to the curriculum to support these new areas of concentration.

All MPH students are required to complete the core curriculum. Our core courses are quantitatively oriented and are designed primarily for individuals planning careers in public health in one of the Uniformed Services. More specifically, graduates use their strong quantitative and analytical skills in biostatistics and epidemiology to identify and measure community health needs and to investigate the impact of biological, environmental, behavioral and social factors on community health. Graduates understand the major components, the operation, and the financing of health delivery services, particularly those in the public sector, and have the administrative skills to plan, analyze, and manage community health programs for the Uniformed Services. The specialty concentrations build upon the foundations of the core curriculum, require specific additional courses, and allow students to select electives from a fairly wide range of courses. For example, in the Health Services Administration concentration, required courses include a course in principles of health care management, international health, health care financial management, quality assessment and improvement in health care, decision-making in health services, and the law of health care.

Additionally, all MPH students are required to complete a 108-hour practicum (i.e., a well-defined, directly supervised, practical field experience at an off-site location, pre-arranged according to explicit learning objectives) and a capstone/independent project. Additional information on the practicum and independent project may be found under *Criterion V.B.*). The independent project represents the culminating experience of the MPH degree program. Successful completion of this independent project necessitates applying skills across the core disciplines and the ability to synthesize and apply knowledge to a specific problem relevant to public health.

PMB has fully accredited residency programs in Occupational and Environmental Medicine, and General Preventive Medicine. All students in our residency programs come to us with at least one year of clinical experience. As part of the residency program, each resident is required to successfully complete a course of academic study leading to the MPH degree or the MTM&H degree (PGY2). Planned clinical rotations (PGY3) take place following their MPH/MTM&H year.

Since the last CEPH review, the degree requirement for the Laboratory Animal Medicine residency program was changed to a Master of Comparative Medicine and transferred to another academic department within the School of Medicine.

The Master of Tropical Medicine and Hygiene (MTM&H) is a professional degree program designed to provide each student with the necessary background to practice as a competent public health officer and tropical infectious disease physician in the Uniformed Services. The MTM&H, like the MPH, is a twelve month program. Students complete the MPH core courses and are required to have a total of sixty-quarter credit hours to graduate. MTM&H students all specialize in Tropical Public Health and are required to spend six weeks overseas in a clinical setting. In addition to the core MPH courses, MTM&H students are required to take Principles & Practice of Tropical Medicine, Epidemiology and Control of Arboviruses and Malaria Epidemiology and Control. These courses are designed to ensure that all students acquire an in-depth of knowledge of the agents of tropical diseases, medical parasitology, and vector biology, while receiving hands-on experience with the epidemiology, pathology, diagnosis, management, treatment, prevention, and control of selected tropical infectious diseases.

The MSPH program admitted its first students in the fall of 1998 and was not operating at the time of the last CEPH visit. The MSPH is a twenty-four month, 120-quarter credit-hour program requiring at least sixty credit hours of coursework. The MSPH program is designed for public health practitioners planning a career in the environmental health sciences. There are three specialty tracks within the MSPH degree program: Environmental and Occupational Health (EOH), Health Physics (HP), and Medical Entomology. Each MSPH student is required to complete twenty-four quarter credit hours of core courses. Depending on the selected specialty area, there are a number of additional track-specific required courses that are completed during Year one or Year two of their program. Practicum experiences are included in Year 2. Additionally, MSPH students are required to write and defend a thesis based upon original research.

The Doctor of Public Health (DrPH), a professional and academic degree, requires a minimum of three years of full time study. Students are expected to complete at least 144 quarter credit hours of which 48 must be from graded courses. Military officers with a doctoral degree in a health-related field receive preference for admission into this program. The minimum requirements for admission include a Master's degree, with an outstanding academic record, some health-related work or volunteer experience and a demonstrated interest in pursuing a career in public health. The DrPH program of study consists of the basic academic foundation (core MPH curriculum) with additional required advanced electives, critical thinking seminar series, minimum of one teaching assistant assignment per year, and a dissertation. For a DrPH student to advance to candidacy, they must successfully pass a written and oral comprehensive qualifying examination. The DrPH requirements are designed to provide rigorous advanced public health training and produce health professionals who are broadly knowledgeable in the diverse fields of public health (epidemiologic research, health policy development, environmental health risk assessment and management; disaster and emergency preparedness; tropical public health; and, other fields relevant to public health).

The Department of PMB offers Doctor of Philosophy (PhD) degrees in environmental health sciences (EHS) - a relatively new program that was not in place at the time of the last CEPH review – and medical zoology (Med Zoo). The PhD is a research and academic degree

requiring a minimum of 144-quarter credit hours, of which 48 credit hours must be devoted to formal coursework. The PhD program of study requires a minimum of three years of full time study and includes many of the core and elective courses taken by MPH students followed by advanced elective courses and a dissertation.

The PhD program in EHS requires thirty-eight quarter credit hours of core courses (e.g., two courses in biostatistics, environmental chemistry, principles of toxicology, scientific ethics and the responsible conduct of research) and a requirement to serve as a laboratory assistant or teaching assistant (minimum of one course per year, starting in the second year). All PhD EHS students in order to advance to candidacy must successfully complete a qualifying examination that consists of a written examination followed by an oral examination. The PhD program in Medical Zoology provides a broad didactic and research experience in Medical Zoology and its principal subspecialties. Applicants pursuing a PhD in Medical Zoology must have already a Master's degree in an appropriate field of biology. The PhD program in Medical Zoology provides the training and experience necessary for research careers in Medical Parasitology or Medical Entomology. The PhD program in Medical Zoology requires forty-one quarter credit hours of core courses (e.g., three courses in biostatistics, two courses in epidemiology, medical parasitology and principles and practice of public health). Medical Zoology students must also pass a two-part qualifying examination in order to advance to candidacy. All PhD students have a requirement to complete a written dissertation based upon original research that must be privately and publicly defended.

**V.A.1. Identification in matrix form of the program's degree programs, showing the areas of specializations possible and distinguishing between those considered by the program to be professional degrees and those considered to be academic degrees. If the program offers degrees in a non-traditional format, these must be included in the matrix and identified as non-traditional.**

**Table V-1. Degree Programs in the Department of PMB**

<b>Degree Program</b>	<b>Area of Specialization</b>	<b>Type of Degree</b>
MPH	Aerospace Physiology*; Epidemiology and Biostatistics; Environmental and Occupational Health; General Preventive Medicine and Public Health; Health Services Administration; International Health *; Tropical Public Health; Occupational Ergonomics*	Professional
MTM&H	Tropical Public Health	Professional
MSPH	Environmental and Occupational Health; Health Physics; Medical Entomology	Professional
DrPH	Epidemiologic Research; Health Policy Development; Environmental Risk Assessment and Management; Disaster and Emergency Preparedness; Tropical Public Health; and other fields relevant to public health	Professional
PhD	Environmental Health Sciences; Medical Zoology (Medical Parasitology or Medical Entomology)	Academic

\*Indicates a new area of specialization since the last CEPH review.

The program does not offer any degrees in a non-traditional format.

**V.A.2. The school bulletin or other official publication which describes all curricula offered by the program.**

School bulletins are available on-line at the university web site at the address: <http://www.usuhs.mil/admissions.html>. A printed copy of the catalogue will be available for the site visit team.

The Information Handbook for Graduate Medical and Public Health Programs, Department of Preventive Medicine and Biometrics, Uniformed Services University of the Health Sciences, F. Edward Hébert School of Medicine 2004-2004 describes all the degree programs, specialty concentrations (tracks), and curricula offered by the Department (*Appendix III-1*). Our Practicum & Independent Project Handbook, Uniformed Services University of the Health Sciences Department of Preventive Medicine & Biometrics serves a primer on the MPH practicum and independent project (PIP) requirements (*Appendix V-1*).

<b>V.A.3. Assessment of the extent to which this criterion is met.</b>
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**V.A.3.a. Strengths**

PMB offers a comprehensive MPH degree program with a number of specialty concentrations, including aerospace physiology, international health and occupational ergonomics that have been added since the last CEPH review. Additionally, the MSPH has also been added as a professional degree program. The MPH, MTM&H and MSPH all require that students take courses across the core public health areas to acquire a broad understanding of public health issues. The DrPH, PhD degree in Medical Zoology, and the recently added PhD in EHS, also provide a broad didactic coverage of the public health areas and support the core MPH curriculum.

**V.A.3.b. Weaknesses**

Our program does not offer graduate degrees in non-traditional formats. Therefore, individuals working full-time, geographically separated from the campus, and/or not able to attend our regularly scheduled classes are not able to participate.

**V.A.3.c. Recommendations**

A Distance Learning Working Group has been established to investigate the feasibility of offering degrees in this non-traditional format. This group should continue to encourage the web-enhancement of current courses so that the transition to distance-learning can be facilitated in the future.

**This criterion is met.**

**CRITERION V.B.: Each professional degree program identified in V.A., as a minimum, shall assure that each student a) develops an understanding of the areas of knowledge which are basic to public health, b) acquires skills and experience in the application of basic public health concepts and of specialty knowledge to the solution of community health problems, and c) demonstrates integration of knowledge through a culminating experience.**

In addition to the MPH degree program, other PMB Graduate Programs include the following:

The Master of Tropical Medicine and Hygiene (MTM&H) is a professional degree program designed to provide each student with the necessary background to practice as a competent public health officer and tropical infectious disease physician in the Uniformed Services. The MTM&H, like the MPH, is a twelve month program. Students complete the MPH core courses and are required to have sixty-quarter credit hours. MTM&H students all specialize in Tropical Public Health and are required to spend six weeks seeing patients overseas. In addition to the core MPH courses, MTM&H students are also required to take Principles & Practice of Tropical Medicine, Epidemiology and Control of Arboviruses and Malaria Epidemiology and Control. These courses are designed to ensure that all students acquire an in-depth of knowledge of the agents of tropical diseases, medical parasitology, and vector biology while receiving hands-on experience with the epidemiology, pathology, diagnosis, management, treatment, prevention, and control of selected tropical infectious diseases.

The MSPH program admitted its first students in the fall of 1998 and was not operating at the time of the last CEPH visit. The MSPH is a twenty-four month, 120-quarter credit-hour program requiring at least sixty credit hours of coursework. The MSPH program is designed for the public health practitioner planning a career in the environmental health sciences. There are three specialty tracks within the MSPH degree program: Environmental and Occupational Health (EOH), Health Physics (HP), and Medical Entomology. Each MSPH student is required to complete twenty-four quarter credit hours of core courses. Depending on specialty, there are a number of additional track-specific required courses that are completed during Year one or Year two of their program. Practicum experiences are included in Year 2. Additionally, MSPH students are required to write and defend a thesis based upon original research.

The MSPH degree program includes the following three specialty tracks: Environmental and Occupational Health, Health Physics, and Medical Entomology

Environmental and Occupational Health: Students who complete this specialty track will be able to demonstrate in-depth knowledge and understanding of the science and practice of public health pertaining to industrial hygiene, environmental chemistry, health physics, environmental health risk assessment, analytic instrumentation, environmental surveillance, and toxicology.

Health Physics: Students who complete this interdisciplinary specialty track will be able to function effectively as uniformed health physicists and demonstrate in-depth

knowledge and understanding of medical physics and its application to public health practice in the following areas: health effects of ionizing and non-ionizing radiation, industrial hygiene, ventilation, toxicology, and laboratory analytic methodologies. Graduates will be eligible to take the American Board of Health Physics examination.

Medical Entomology: Students who complete this specialty track will be able to function effectively as medical entomologists in the Uniformed Services and demonstrate in-depth knowledge and understanding of vector biology and its relationship to human health; to conduct vector-borne disease risk assessments; and to plan, implement, and coordinate vector control operations.

The Doctor of Public Health (DrPH), a professional and academic degree, requires a minimum of three years of full time study. Students are expected to complete at least 144 quarter credit hours of which 48 must be from graded courses. Military officers with doctoral degrees in a health-related field receive preference for admission into this program. The minimum requirements for admission include a Master's degree, with an outstanding academic record, some health-related work or volunteer experience and a demonstrated interest in pursuing a career in public health. The DrPH program of study consists of the basic academic foundation consisting of the MPH curriculum, additional required advanced electives, critical thinking seminar series, minimum of one teaching assistant assignment per year and a dissertation. For a DrPH student to advance to candidacy, they must successfully pass a written and oral comprehensive qualifying examination. The DrPH requirements are designed to provide rigorous advanced public health training and produce health professionals who are broadly knowledgeable in the diverse fields of public health (epidemiologic research, health policy development, environmental risk assessment and management; disaster and emergency preparedness; tropical public health; and, other fields relevant to public health).

The Department of PMB offers Doctor of Philosophy (PhD) degrees in environmental health sciences (EHS) - a relatively new program that was not in place at the time of the last CEPH review - and medical zoology (Med Zoo). The PhD is a research and academic degree requiring a minimum of 144-quarter credit hours of which 48 credit hours must be devoted to formal coursework. The PhD program of study requires a minimum of three years of full time study and includes many of the core and elective courses taken by MPH students followed by advanced elective courses and a dissertation.

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biostatistics, two courses in epidemiology, medical parasitology and principals and practice of public health). Medical Zoology students must also pass a two-part qualifying examination in order to advance to candidacy. All PhD students have a requirement to complete a written dissertation based upon original research that must be privately and publicly defended.

As described in detail in *Criterion V.A.*, every student in the professional degree program is required to have a broad understanding of public health upon graduation. This is accomplished by requiring all students who pursue an MPH or other degree in our program to successfully complete a consistent set of core courses that cover the five core areas of knowledge basic to public health. The number and scope of the current courses required by PMB represents a substantial change since the last CEPH review. The Accreditation Summary provided by CEPH dated 3 Oct 1998, states, “The substantial commitment to the quantitative sciences in the core is a defining characteristic of the professional degree curricula at this institution. It is, at the same time, a factor that results in little flexibility in terms of elective courses or in achieving much depth in the areas of concentration.” Moreover, the summary noted that the institution provides “little guidance about how this can or should be done”. Following the CEPH report, PMB carefully evaluated the existing core requirements to achieve greater balance in core and elective coursework for breadth and depth of learning.

A review of the curriculum after the last Self-Study determined that the fall and winter quarters were especially dense with core course requirements. A decision was made to decrease the number of core courses taught during this part of the schedule. It was decided that Statistical Computing, Epidemiology II, and Health Service and Resource Management were no longer to be considered core course requirements. Biostatistics II was also dropped as a core course, but, it was subsequently determined that every area of concentration made it a required course; therefore, Biostatistics II was reinstated as a core course requirement. While these changes do not in any way lessen the Department’s substantial commitment to the quantitative sciences, students now have greater flexibility in terms of selecting elective courses while ensuring that every student is well prepared to receive maximum benefit from experiences related to the practicum and independent project. These changes also allow each program or area of concentration greater flexibility in adding specific requirements. Several new courses were designed and added to the core curriculum predominately in the spring and summer quarters to ensure that students are able to develop, execute, and present their independent projects and engage in valuable practicum activities.

These courses include:

- PM0671 Intro to the MPH Project and Practicum Implementation (1 credit)
- PM0672 MPH Project/Practicum Design & Development (1 credit)
- PM0673 Project/Practicum Implementation & Evaluation (1 credit)
- PM0670 Public Health Practicum (3 credits)
- PM0674 MPH Independent Project (3 credits)

Since the last CEPH review and in concert with the revision of the CEPH criteria in 1994, a practicum experience is now a requirement for our MPH degree. “This practicum is

considered an essential component of the USUHS MPH program. It represents an opportunity for students to enhance their classroom learning by participating in a variety of public health activities at local, regional, and national organizations, military and civilian, within the National Capitol area and, possibly, more distant sites. “To fulfill the MPH practicum requirement a student must complete a minimum of 108 hours of a planned public health activity under the direct supervision of an experienced public health professional (the Practicum Site Preceptor).” (*Appendix III-1*, page 17).

A six-week field practicum at a Department of Defense overseas research laboratory is incorporated into the curriculum of the MTM&H program. The Division of Tropical Public Health has a standing relationship with multiple overseas sites and preceptors, and provides guidance for students in selecting an appropriate experience.

The MSPH degree program requires a field or practicum experience which is identical to that required for the MPH degree. MSPH students must also complete and defend a written thesis based on their original research.

**V.B.1. Identification of the means by which the program assures that all professional degree students have a broad understanding of the areas of knowledge basic to public health.**

Core courses required for all MPH and MTM&H students are listed below.

**PRE-FALL REQUIRED CORE COURSES**

- PMO505 Microcomputer Applications (1)**
- PMO530 Behavioral & Soc Sciences Applied to PH (4)**
- PMO540 Environmental Health (4)**
- PMO680 Intro to Public Health (1)**

**FALL REQUIRED CORE COURSES**

- PMO503 Biostatistics I (4)**
- PMO511 Introduction to Epidemiology I (4)**
- PMO526 Health Systems (4)**
- PMO671 Intro to the MPH Project and Practicum (1)**

**WINTER REQUIRED CORE COURSES**

- PMO504 Biostatistics II (4)**
- PMO672 MPH Project/Practicum Design & Dev (1)**

**SPRING REQUIRED CORE COURSES**

- PMO673 MPH Proj/Practicum Implementation & Eval (1)**

**SUMMER REQUIRED CORE COURSES**

**REQUIRED COURSES FOR MPH**

- PMO670 Public Health Practicum (3)**
- PMO674 MPH Independent Project (3)**
- PMO681 Current Problems & Practice of Preventive Medicine & Public Health (1)**

**ADDITIONAL REQUIRED COURSES FOR MTM&H**

- Overseas Rotation (satisfies practicum requirement)**
- PMO563 Clinical Tropical Medicine (1-12)**

**V.B.2. Description of the program's policies and procedures regarding practice placements, including criteria for selection of sites, methods for approving preceptors, approaches for faculty supervision and methods of assessment of students.**

The policies and procedures which govern the details for the practicum experience including placement, selection of sites, methods for approving preceptors, and methods of assessment of students may be found in the Practicum & Independent Project Handbook (*Appendix V-1*). A proposal for the practicum experience, jointly prepared by the student and the Practicum Site Preceptor, includes a minimum of three learning objectives. The deliverables associated with the practicum include a 3-5 page report, an activity log, and completed evaluation forms from the student and the site preceptor. Additional information on the evaluation of the practicum experience may be found under *Criterion V.C*.

Following the practicum experience, every student and practicum site preceptor is required to complete an evaluation form. (*Appendix V-1, pages B2 and B3*). These data are reviewed and appropriate program changes are made to ensure that students derive maximum benefit from their experiences.

**V.B.3. Identification of agencies and preceptors used for formal practice placement experiences for students, over the last three years.**

Some examples of a practicum sites over the last few years include: National Security Agency, State of Maryland's Department of Health & Mental Hygiene, U.S. Consumer Product Safety Commission, White House Commission on Complementary and Alternative Medicine Policy, and American Association of Retired Persons (AARP) Public Policy Institute, among many others. Listed below are the names of the students, degree program, practicum site, and site preceptor for the Class of 2004.

**CLASS OF 2004**

<b>Student Name</b>	<b>Degree</b>	<b>Practicum Site</b>	<b>Site Preceptor</b>
Kimberly Beck CPT, MC, USA OEM Res	MPH	Occupational Health Clinic Walter Reed Army Medical Center Washington, D.C.	LTC Pearline McKenzie Garner
Elizabeth Berbano MAJ, MC, USA Int Med Fellow	MPH	Humanitarian Assistance in Military Medicine Program General Internal Medicine Department Walter Reed Army Medical Center Washington, D.C.	Dr. Jean Rinaldo
Michael Bonhage MAJ, VC, USA LAM	MPH	Veterinary Services, Emergency Programs Animal and Plant Health Inspection Service U.S. Department of Agriculture Riverdale, MD	Dr. Sebastian E. Heath

<b>Student Name</b>	<b>Degree</b>	<b>Practicum Site</b>	<b>Site Preceptor</b>
Lyndon Bowden III CPT, MC, USA GPM Res (Madigan)	MPH	Howard County Health Department Columbia, MD	Dr, Cindy Lipsitz
Sean Boyd LCDR, USPHS FDA	MPH	Office of the U.S. Surgeon General Office of Public Health and Science Office of the Assistant Secretary for Health Department of Health and Human Services Rockville, MD	CDR Kathy Poneliet
Lorie Brosch LtCol, USAF, MC GPM Res	MPH	Program Analysis and Evaluation Bureau of Medicine and Surgery Washington, D.C.	CDR Michael S. Schaffer
David Cockrum Maj, USAF, MC RAM	MPH	Office of Public Health Preparedness and Response Baltimore City Health Department	Dr. Christa-Marie Singleton
Brad Cogswell Capt, USAF, MSC Intl Hlth	MPH	Humanitarian Assistance, Disaster Response, and International Health Policy Office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict Stability Operations Pentagon	CAPT Ken Schor
David Cramer LCDR, USPHS Ind Hlth Srv	MPH	Health Risk Communication Program U.S. Army Center for Health Promotion and Preventive Medicine Aberdeen Proving Ground, MD	Marilyn K. Null
Melinda Eaton Capt, USAF, BSC AF PHO	MPH	National Burn Center Report System Division of Hazard and Injury Data Systems U.S. Consumer Product Safety Commission Bethesda, MD	Cathy Downs
Wayne Hachey LTC, MC, USA HSA (Ob-Gyn)	MPH	Department of Family Health Services Johns Hopkins Children's Medical Center Baltimore, MD	Dr. Pamela K. Donohue
Dale Harman LCDR, MC, USN OEM Res	MPH	War-Related Illness and Injury Study Center Washington VA Medical Center Department of Veterans Affairs Washington, D.C.	Andrew Lincoln
Nishith Jobanputra LCDR, MC, USN GPM Res	MTM&H	Naval Medical Research Unit #3 Cairo, Egypt	John W. Sanders
Bradford Lang Civilian (attorney)	MPH	Congressional Research Service The Library of Congress Washington, D.C.	Sarah A. Lister
James Lawler LCDR, MC, USN Inf Dis Fellow	MPH	Office of Research and Development Coordination Office of the Assistant Secretary for Public Health Emergency Preparedness Department of Health and Human Services Washington, D.C.	Edward Eitzen

<b>Student Name</b>	<b>Degree</b>	<b>Practicum Site</b>	<b>Site Preceptor</b>
Thomas Luke LCDR, MC, USN GPM Res	MPH	Center for Outcomes and Evidence Agency for Healthcare Research and Quality Rockville, MD	Dr. David Atkins
Anne MacLarty MAJ, VC, USA LAM	MPH	DoD Global Emerging Infections Surveillance and Response System U.S Army Preventive Medicine Walter Reed Army Institute of Research Silver Spring, MD	CDR Clara J. Witt
Nicole McPherson Civilian (pre-vet)	MPH	Mortality Surveillance Division Office of the Armed Forces Medical Examiner Armed Forces Institute of Pathology Washington D.C.	Dr. Lynne Oetjen- Gerdes
Brian Moore Maj, USAF, BSC Intl Hlth	MPH	Office of International Health Affairs Bureau of Oceans, Intern'l Environmental and Scientific Affairs, U.S Department of State Washington, D.C.	Judith R. Kaufmann
Gregory Ostrander, MAS LT, MSC, USN Aerosp Phys	MPH	Aeromedical Division Naval Safety Center Norfolk, VA	CDR Richard Erickson
William Otto, MD CPT, MC, USA OEM Res	MPH	Division of Data Systems Directorate of Epidemiology U.S. Consumer Product Safety Commission Bethesda, MD	Cathy Downs
Christine Poel, DVM Maj, USAF, BSC AF PHO	MPH	Headquarters, US Air Force Safety Center Kirtland AFB, NM	Lt Col Bruce Copley
Eispeth Richie, MD COL, MC, USA Prev Psych Fellow	MPH	American Psychiatric Institute for Research and Education American Psychiatric Association	Dr. Darrel Regier
Paul Rockswold, MD CDR, MC, USN GPM Res	MPH	National Center for Health Statistics Centers for Disease Control and Prevention Department of Health and Human Services Hyattsville, MD	Wibur "Bill" Hadden
Richard Schaefer COL, MC, USA Ortho	MPH	AAOS Leadership Fellows Program American Academy of Orthopedic Surgeons	COL(Ret) Richard D. Haynes
Monica Selent, DVM Capt, USAF, BSC Intl Hlth	MPH	Office of International Affairs Bureau of Oceans and Intern'l Environmental Scientific Affairs U.S. Department of State Washington, D.C.	Judith R. Kaugmann
Mark Strauss LT, USPHS Indian Hlth Srv	MPH	Contingency Operations National Naval Medical Center Bethesda, MD	LT Chris Gillette

Student Name	Degree	Practicum Site	Site Preceptor
Julia Sundstrom Capt, USAF, BSC Aerosp Phys	MPH	Joint Cockpit Office Spatial Disorientation Countermeasures Pgm. Human Effectiveness Division Headquarters Air Force Research Laboratory Wright-Patterson AFB, OH	Col Peter B. Mapes
Johann Westphall, MD Maj, USAF, MC RAM	MPH	Air Force Medical Support Agency Bolling AFB Washington, D.C.	Col Vince Michaud
Keith Wilson Capt, USAF, NC Intl Hlth	MPH	Humanitarian and Refugee Health Affairs Office of Global Health Affairs Department of Health and Human Services Washington, D.C.	Ruth B. Walkup

**V.B.4. Identification of the culminating experience required for each degree program.**

The completion of an independent project is required for the MPH and MTM&H degree and represents the “culminating” or capstone experience. The independent project is designed to demonstrate students’ ability to synthesize and integrate the fundamental concepts and principles of the core public health disciplines in order to assess a public health problem, support decision-making, or answer a research question.

Independent project requirements include the creation of a pre-proposal which briefly describes the proposed study or project and its public health significance, and includes a draft research question and estimated time-line for completion. Students identify a team of faculty advisors; develop a 4-5 page proposal describing study design, sampling methods, sample size calculations, data sources and/or survey instrument; and submit appropriate forms for institutional review. At the completion of the project, the students are required to give a 10-minute oral presentation, with 5 minutes for questions and answers, and also produce a final written report, both of which are graded by a multi-disciplinary team of faculty. A list of independent projects completed over the last three years can be found in *Attachment VI-1* in the next section of this Self-Study.

The MSPH, DrPH and PhD programs require a written dissertation which must be presented and defended before the candidate’s Dissertation Committee, followed by a public defense. A list of graduate theses completed over the last three years can be found in *Attachment VI-2* in the next section of this Self-Study.

**V.B.5. Assessment of the extent to which this criterion is met.**

**V.B.5.a. Strengths**

The core courses of the PMB public health degree programs clearly cover the five core public health areas. Additionally, specific courses are required in every specialty track along with selected elective courses. These courses combined with the new practicum requirement

ensures that every student acquires a broad and comprehensive knowledge of public health along with the opportunity to apply new public health knowledge and skills. The students culminating experience (i.e. successfully completing an independent project or thesis) clearly demonstrates integration of knowledge and skills acquired during the course of their academic program.

**V.B.5.b. Weaknesses**

While the National Capital region has abundant opportunities for practicum and project experiences, funding for experiences outside the region is limited.

**V.B.5.c. Recommendations**

The PMB Department should continue to seek additional funding sources to support practicum experiences outside the National Capital Region.

**This criterion is met.**

**CRITERION V.C.: For each program and area of specialization within each program identified in Criterion V.A., there shall be clear learning objectives.**

After the last site visit by CEPH, which occurred in June 1998, the accreditation action summary stated: “there does not appear to be programmatic learning objectives that establish expected-competency based outcomes for the areas of specialization ....” In response to the June 1998 finding, PMB developed clear learning objectives for each of its programs and areas of specialization. Criterion I of this Self-Study describes in detail the mission, goals and objectives for the PMB Graduate Programs in public health. Included in this section is a specific mission statement for PMB’s graduate program, a set of programmatic learning objectives for each of its six graduate degree programs (i.e., MPH, MTM&H, MSPH, DrPH and PhD in Medical Zoology and PhD in Environmental Health Sciences) and one example of concentration-specific learning objectives.

Our Information Handbook for Graduate Medical and Public Health Programs includes a summary of the program learning objectives for the core disciplines of public health, as well as summary statements of the concentration-specific learning objectives, and course requirements and offerings for the various areas of specialization (*Appendix III-1*). This Handbook is distributed to incoming students at the beginning of each school year. Learning objectives for specific courses are provided to the students with the syllabus on the first day of class. For every course offered by the department of PMB, a course file folder is maintained by the Graduate Programs administrator. Included in each course file folder is a current course syllabus which contains course requirements, the specific course learning objectives, and previous course evaluations completed by the students.

**V.C.1. Identification of a set of learning objectives for each program of study identified in the matrix for V.A. If individualized learning objectives are used, identification of a sample set that is typical of each program of study and which can be verified through on-site inspection.**

All graduates (MPH, MTM&H, MSPH, DrPH, PhD) are expected to be knowledgeable, that is, able to describe and apply the skill, in the following areas:

- Define, assess, and understand the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention, and factors influencing the use of health services
- Define a public health problem and appropriately identify, collect, analyze, and interpret quantitative and qualitative data in order to generate an evidence-based assessment or solution
- Identify and apply basic public health research methods
- Collect, summarize, and interpret information relevant to a policy or program planning issue
- Identify, retrieve, and critically appraise current relevant scientific evidence
- Develop a lifelong commitment to rigorous critical thinking

- State the case for public health programs and activities, drawing upon knowledge of the history of public health promotion and research efforts associated with a topic, an audience, and one's organization
- Communicate effectively in writing and orally to present accurate information for professional and lay audiences
- Interact appropriately, sensitively, effectively, professionally, and without bias with persons and organizations from diverse cultural, socioeconomic, educational, racial, ethnic and professional backgrounds, and with persons of all ages and lifestyle preferences
- Utilize leadership, team building, negotiation, and conflict resolution skills to build community relationships and partnerships and to facilitate cooperation among organizations and agencies
- Identify the interplay of cultural, social, behavioral, environmental, and genetic factors in the development of disease, in disease prevention, and in health promoting behaviors, and the impact of these factors on medical service organization and delivery of services to maximize wellness and prevent disease
- Integrate and apply the basic public health sciences, including behavioral and social sciences, biostatistics, epidemiology, environmental public health, and prevention of chronic and infectious diseases and injuries
- Use the full range of electronic communication and information technology tools to identify, locate, access, assess, and appropriately interpret and use public health-related information and data, ensuring that confidential information is appropriately protected
- Apply ethical principles to communication about health and health information and to the collection, maintenance, use, and dissemination of data

In addition, all graduates are expected to be aware of, concepts in the following areas:

- The need to promote active community involvement in the processes that shape research and intervention strategies and in the conduct of research studies
- Global health issues and their determinants and the need to work with individuals from other countries to solve the problems affecting our global community
- The values, beliefs, and ethical principles intrinsic to a public health perspective and the ethical tensions due to public health mandates and the powers entrusted to public health authorities

### **MPH Concentration-Specific Competencies and Learning Objectives**

Detailed concentration-specific competencies and associated learning objectives linked to curriculum development are provided in the document entitled "PMB Graduate Programs' Mission, Goals, and Objectives" at *Appendix I-1*.

The MPH program includes the following eight areas of concentration: Aerospace Physiology, Epidemiology and Biostatistics, Environmental and Occupational Health, General Preventive Medicine and Public Health, Health Services Administration, International Health, Occupational Ergonomics and Tropical Public Health.

Aerospace Physiology: Students completing this concentration will be able to identify and evaluate the effect of human factors on performance in military operational settings, to acquire fundamental knowledge of the major issues involved in aviation mishap investigation, and to apply population health principles to issues of importance to the aviation community. Students will be eligible to take the Aerospace Physiology Certification examination administered by the Aerospace Physiologist Society of the Aerospace Medical Association.

Epidemiology and Biostatistics: Students completing this concentration will acquire the knowledge and skills to be able to apply basic epidemiologic principles, interpret epidemiologic evidence, and select the appropriate statistical test or analytic approach to evaluate a public health problem in a defined population.

General Preventive Medicine and Public Health: Students completing this generalist pathway will become proficient in a broad set of public health skills necessary to function effectively as a Preventive Medicine or Public Health Officer in the Uniformed Services.

Health Services Administration: Students completing this concentration will be able to apply the necessary skills to design and develop, implement and evaluate, and continuously improve programs and systems related to health promotion and education and health care delivery in the Uniformed Services. Students will also understand and be able to apply concepts of financial management, decision making, and quality assessment to health systems and be able to develop broad policy statements concerning health care programs in the public sector as a Health Services Officer in the Uniformed Services.

International Health: Students completing this concentration will be prepared to serve as globally focused military professionals in positions that support complex contingency operations and medical crises around the world, both in wartime and in peacetime. The program emphasizes interoperability in global military-military and military-civilian activities. In addition, students will have a basic knowledge of major international health issues, particularly with respect to political, economic, and socio-cultural factors, including ethical considerations, impacting the health of populations in developing countries, and be able to apply public health principles in assessing international health needs and in planning, conducting, and evaluating international health-related activities and projects.

Occupational Ergonomics: Students completing this concentration will acquire knowledge and skills in technical human factors engineering and occupational ergonomics to have competency in the assessment, prevention, control, and management of work-related musculoskeletal disorders, disease non-battle injuries, and garrison, field, and training injuries in military and civilian occupational settings. This area of concentration in the MPH program is the first year of a two-year training program and is followed by a practicum year conducted and supervised by the U.S. Army Center for Health Promotion and Preventive Medicine.

Tropical Public Health: Students who complete this concentration will be able to function effectively worldwide as General Preventive Medicine Officers in the Uniformed Services. Graduates will acquire the knowledge and skills to apply basic concepts and principles of tropical medicine, medical parasitology, and vector biology to the epidemiology, diagnosis,

treatment, prevention, and control of tropical diseases.

Both the core and concentration-specific learning objectives are clearly articulated, quantifiable and consistent throughout the curriculum. The core learning objectives common to all our public health graduate degree programs in the five major areas of public health (biostatistics, environmental health, epidemiology, health services administration, and social and behavioral sciences) are listed below.

<b>Core Learning Objectives</b>
<b>a. Core Learning Objectives - Biostatistics</b>
Describe and interpret public health data using simple descriptive and graphical statistical methods, including exploratory data analysis (EDA) methods.
Apply the concept of probability to statistical inference.
Use the conditional probabilities of sensitivity, specificity, and predictive value to evaluate diagnostic and screening tests.
Understand and appropriately apply major statistical probability distributions (binomial, Poisson, normal, Chi-square, Student's t, and F).
Describe the appropriate use of sampling techniques, and the concept of the sampling distribution and its role in statistical inference.
State the Central Limit Theorem and describe its use in statistics.
Compute and interpret point and confidence interval estimates, based upon a given sample (or samples), for univariate and bivariate parametric and non-parametric situations.
Compute and interpret hypothesis tests, based upon a given sample (or samples), for univariate and bivariate parametric and non-parametric situations.
Determine the simple random sample size needed for a biomedical study by the confidence interval and hypothesis testing approaches.
Apply and interpret the analysis of contingency tables.
Describe and interpret the linear association between two continuous variables using linear regression and correlation.
Understand and apply basic principles of experimental design, including randomization, pairing, blocking, blinding, nesting, and replication.
Extend the analysis of the difference between two population means to more than two means via analysis of variance and covariance.
Use and interpret multiple regression to predict a dependent variable as the function of many independent predictors.
Explain and apply appropriate statistical methods to the analysis of survival data.
<b>b. Core Learning Objectives - Environmental Health</b>
Define environmental epidemiology, and discuss major regional and global environmental health problems in the context of their scientific, social, political and economic aspects.
Discuss basic toxicological principles as they apply to environmental health, including routes of exposure, factors that influence human effects, endpoints for toxicologic evaluation, and the

<b>Core Learning Objectives</b>
establishment of human exposure limits.
Discuss significant workplace environmental health issues, including the leading causes of workplace-related disease and injury, basic exposure control mechanisms, and workplace monitoring.
Discuss the impact of air quality on human health, and describe the major sources of air pollutants, general means of reducing air pollution, and trade-offs associated with any control measure.
Discuss the principal environmental health issues related to food, including food service facility inspections, types of contamination, major food borne illnesses, the essential components of food sanitation, and regulatory mechanisms to protect the safety of food supplies.
Discuss the principal environmental health issues related to drinking water, including selection of sources, treatment and disinfection processes, alternative treatment methods, bacteriological monitoring, and regulatory mechanisms to insure appropriate water quality.
Discuss the principal environmental health issues related to wastewater treatment, handling, disinfection, and disposal, describe the treatment processes in a wastewater plant, and discuss the public health aspects of sludge disposal options.
Discuss the principal environmental health issues related to solid waste, including major approaches to treatment, disposal, and recycling, regulatory requirements for hazardous and non-hazardous wastes, and incorporation of community input in site selection for waste disposal sites.
Discuss the public health impact of principal disease vectors and hosts, and integrated pest management techniques.
Discuss the leading causes of death and injury for adults and children in the U.S., and outline basic control mechanisms including industrial safety methods, analysis of accidents and injury control policies.
Discuss the impact of major environmental health legislation on control of hazardous and toxic wastes and substances, the protection and regulation of air, water, food and drugs, and occupational safety and health.
Discuss the basic methods, limitations, and applications of environmental risk assessment, risk management and risk communication.
Describe the common sources of ionizing and non-ionizing radiation, quantification of dosage, basic biological effects, and methods for limiting human exposure.
Discuss the health impact of global environmental issues such as ozone depletion, acid rain, global warming, deforestation, loss of biodiversity, topsoil erosion, wetland destruction, and land use changes associated with rapid development.
<b>c. Core Learning Objectives – Epidemiology</b>
Define epidemiology and appropriately use the language of epidemiology.
Understand the differences, advantages, and limitations of each of the following analytic and descriptive study designs: case series, ecologic, cross-sectional, case-control, cohort, and clinical trials.
Select the best study design to answer a specific question.
Formulate clear case definitions and precise exposure measures in epidemiologic studies.

<b>Core Learning Objectives</b>
Calculate and interpret statistical measures of association, including rate ratios/relative risks, odds ratios, and attributable risks.
Evaluate and explain the impact that chance, bias, confounding, and effect modification, as well as statistical power, sampling methods, and sample size, have on epidemiologic findings and generalizability.
Interpret and critically evaluate the scientific literature.
Explain how to use epidemiological evidence to judge causal relationships among possible factors and health outcomes.
Design and conduct a basic outbreak investigation, including data collection and analysis, interpretation of findings, and formulation of intervention recommendations.
Calculate, graphically display, and interpret basic epidemiologic measures of disease frequency (epidemic curves, frequency counts, proportions, prevalence, attack rates, incidence, mortality, case fatality, and confidence intervals).
Characterize disease patterns and trends within a population by describing “agent-host-environment” and “person-place-time” variables.
Interpret sensitivity, specificity, predictive values, validity, and reliability for screening and confirmatory diagnostic tests.
Design and evaluate a basic survey instrument.
Manipulate, merge, analyze, and interpret electronic data sets using spread sheets, databases, and other software in common use in epidemiology and public health.
Design, establish, and evaluate basic medical surveillance systems.
Use epidemiology as a tool for the implementation and evaluation of preventive medicine and public health interventions.
Identify sources of national, international, and military epidemiologic data.
List the components of a proposal to conduct an epidemiological study, including specific aims, sample size consideration, and human subjects.
Evaluate the ethical implications of epidemiologic and other scientific studies.
<b>d. Core Learning Objectives - Health Services Administration</b>
Discuss the evolution of the current U.S. health care system, including the military health care system, and explain the effect of medical, fiscal, administrative, legal, social, and political issues on major transitions.
Identify the macroeconomic factors that influence the need, demand, and cost of medical care and discuss how these factors have led to rapid growth in U.S. health care expenditures.
Describe the mechanisms for financing healthcare organizations, to include reimbursement of professionals and institutions by third-party payers, and assess their relationship to cost containment.
Describe the organization of health care services in the U.S., addressing types of facilities (hospitals, outpatient clinics, hospital emergency departments, community health centers, surgicenters, urgent care centers) and levels of care (acute, convalescent, extended care, home care).
Describe the dimensions of health care quality assessment.

<b>Core Learning Objectives</b>
Describe the legislative process and how laws are enacted that affect the U. S. health care system.
Describe the concept of outcomes measurement in medical care and its application to management of the health care organization.
Describe available government and non-governmental programs for financing, delivering, and assessing health care in America.
Discuss the impact of advancing medical technology on the delivery of health care services.
Compare international health service systems, and describe the essential differences between the health services systems in industrialized versus developing countries.
<b>e. Core Learning Objectives - Social and Behavioral Sciences</b>
Describe how behavior contributes to national patterns of morbidity and mortality.
Discuss means of reducing risk behaviors, and promoting health behaviors, which have received empirical support in the scientific literature.
Identify challenges inherent in measuring risk behavior and how to increase the validity of such measurement.
Explain the importance of assessing a target audience's knowledge, attitudes and practices prior to attempting to influence their health-related behaviors.
Cite cognitive factors, other than knowledge, which influence health-related behaviors.
Discuss how social determinants such as socioeconomic status, culture, and social support can influence health.
Analyze a health behavior problem from a sound theoretical perspective.
Perform analyses that reflect an appreciation for the ways in which intrapersonal, interpersonal, organizational and societal influences act together to threaten or promote health.

Additionally, every specialty concentration has its own set of clearly defined learning objectives. Here is one example from Health Services Administration.

### **Concentration Specific Objectives - Health Services Administration**

Upon completion of the HSA concentration, in addition to meeting the core curriculum objectives, graduates should be able to:

1. Analyze the evolution of the current U.S. health care system and the effect of medical, fiscal, administrative, legal, social, and political issues on major transitions.
2. Assess financing mechanisms for health care services in the U.S.
3. Characterize types of health maintenance organizations (HMO).
4. Compare and contrast cost control measures under managed care and traditional medical care systems.
5. Formulate health services policy, including the collection and summarization of data relevant to an issue; statement of policy options; and determination of the feasibility and expected outcomes of the policy options.

6. Manage a health program under an enrollment-based capitation plan, including human and fiscal resources.
7. Apply the concept of outcomes assessment to health services management.
8. Develop quantitative models that describe program functioning to support decision-making.
9. Develop and implement a program evaluation plan.
10. Develop, implement, and monitor a plan for a deployed force to interact with and support the local health care infrastructure of the host country.
11. Conduct cost-benefit analyses of programmatic interventions and impact analysis of programmatic changes.
12. Conduct legislative program impact analysis.
13. Describe the Federal annual budget process and its impact on the DoD health services system.
14. Develop and present program budget plans.
15. Develop and implement a continuous quality improvement plan for a particular process of care, health care service, or medical treatment facility.
16. Implement and evaluate a clinical guidelines program, the JCAHO Oryx program, or the NCQA HEDIS program.
17. Describe the major management theories that pertain to health services administration.
18. Discuss the major issues involved in personnel management within the health care industry.
19. Identify the medical information management needs of a health care organization.
20. Define the major legal concepts that pertain to medical care (e.g. standard of care; informed consent; medical records; confidentiality; licensing, credentialing, and privileging; litigation)
21. Identify important legal issues that could potentially impact health care delivery (e.g. liability of health care providers, administrative law for health care organizations; rights of patients; federal, state, and local government regulations).
22. Describe the various statutes governing the U.S. civilian health care system and the DoD health care system.
23. Discuss ethical considerations as they pertain to current and emerging topics of public health importance (e.g. reproduction issues, maternal and fetal rights, experimental treatments, organ transplantation, death, health care rationing).
24. Use a framework to characterize the health care system of a particular nation or geographic region or to compare the health services systems of different countries.
25. Describe the major differences between health care services in developed and developing nations.
26. Identify major international assistance programs within the health care sector and the important cultural issues that may impact program effectiveness.

A listing of core and concentrations-specific learning objective is available in *Appendix V-2*.

**V.C.2. A description of the manner in which learning objectives are developed, used and made available to students.**

All program, concentration, and course learning objectives are regularly reviewed and appropriately modified by Departmental faculty in conjunction with current and former student input. Sources of data for this review include student course evaluations, student exit surveys, alumni surveys, feedback from field site preceptors and current public health documents.

As previously stated, a year-long process of review in 1999 resulted in a comprehensive set of graduate program learning objectives. In addition, there was a detailed re-review during academic year 2001-02 by the ad hoc Core Competency Validation Subcommittee of the PMB Graduate Affairs Committee. In July 2004, the PMB Graduate Affairs Committee directed an assessment of the competencies expected of the graduates of the various degree programs and specialty tracks offered by PMB. Expected competencies were based on the Core Competencies for Public Health Professionals developed by the Council on Linkages Between Academia and Public Health Practice and the Institute of Medicine and (IOM) and Content Area Competencies for Public Health Professionals. The next step in this assessment process examined how PMB's academic programs prepared students to achieve the range and level of competencies expected of them. To accomplish this effort, every PMB course director completed CEPH Competencies-Course Matrix worksheets (*Appendix V-3*). Emphasis is placed on introducing the overall program objectives to the students during orientation and course-specific learning objectives at the beginning of every course. Learning objectives are included in all course syllabi and posted on Blackboard, the web-enhanced component of our core courses.

**V.C.3. A description of the manner in which the program periodically assesses the changing needs of public health practice and uses this information to establish the learning objectives for its educational programs.**

In order to ensure that the graduate program curriculum offered within PMB is congruent with current public health needs and practices, the Director, Graduate Programs, manages changes to learning objectives for educational programs through the recommendations of the Graduate Affairs Committee and its various subcommittees in support of program mission, goals and objectives. Course content is mapped against the learning objectives for both core and track requirements. (*Appendix V-2*). The PMB Curriculum Subcommittee reviews all course changes (e.g., additions, deletions, major changes in a course learning objectives) and forwards their recommendation through the PMB Graduate Affairs Committee, the Director of the Graduate Programs, and the Chair of PMB. Upon completion of that review, the course proposal and supporting documentation are forwarded for review and approval to the Associate Dean for Graduate Education and the University's Graduate Education Committee prior to requesting the approval of the Dean, SOM. Any significant revision of a course description must meet the same rigorous review and approval process. The specific details for this process are covered in the USUHS Instruction 1322, "Policy for Developing USUHS Graduate Courses", which is available at [http://www.usuhs.mil/usuhs\\_only/asd/1322.pdf](http://www.usuhs.mil/usuhs_only/asd/1322.pdf).

This program recently conducted a survey of alumni and their supervisors. The data are currently being analyzed and will be used to identify any areas or topics not adequately covered and to make modifications to learning objectives where appropriate.

The Director, Graduate Programs, or his designated representative, also participates in the Council of Graduate Program Directors of the Association of Teachers of Preventive Medicine and is fully knowledgeable about current public health issues as a Course Director for a core public health course both in Graduate Education and Undergraduate Medical Education and member of multiple Department and University Committees.

<b>V.C.4. Assessment of the extent to which this criterion is met.</b>
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**V.C.4.a. Strengths**

The Department has a well-defined mission and clearly stated goals and objectives for each of the academic and professional programs offered. The learning objectives for concentrations and individual courses are specific, quantifiable, regularly reviewed, and updated as appropriate in order to ensure that they meet the overall program and specialty area goals.

**V.C.4.b. Weaknesses**

None

**V.C.4.c. Recommendations**

The PMB Department should continue the comprehensive review process as described above. The next step is to transition to using the domains and competencies using the Core Competencies for Public Health Professionals developed by the Council on Linkages Between Academia and Public Health Practice and the Institute of Medicine and (IOM) and Content Area Competencies for Public Health Professionals.

**This criterion is met.**

**CRITERION V.D.: There shall be procedures for assessing and documenting the extent to which each student has attained these specified learning objectives and determining readiness for a community health/preventive medicine career.**

The procedure for assessing and documenting the extent to which each PMB student has attained the general and specialty specific learning objectives as well as their overall readiness to perform in a community/preventive medicine career involves processes at multiple levels. Even before students begin their program of study, each is individually matched to an appropriate academic advisor within the Department of Preventive Medicine and Biometrics. Advisors are responsible for assisting the student in developing a course of study which is relevant to his or her career plans and objectives. Advisors provide guidance in the selection of a course of study which will meet the students' educational goals and satisfy the University's requirements for granting graduate degrees and the requirements of the American Board of Preventive Medicine, or other comparable organization, for those students who are interested in board certification. The student with the assistance of his or her advisor also completes a planning worksheet (*Attachment V-1*).

The syllabus of each course in all specialty concentrations clearly identifies student evaluation criteria. See *Table V-3* for the specific grading criteria for the core courses. A file folder for every course offered by the program is maintained and updated regularly by the Graduate Program office. These file folders contain course description and changes, current syllabus and historical data, periodic reviews, cover sheet from course director's evaluation, and course evaluations. These file folders will be made available to the site evaluation team.

Following each academic quarter, every student is expected to meet with their academic advisor and review their progress from the previous quarter. In some instances, course directors may identify an individual student who is having difficulty grasping the presented material. Course directors would normally notify the individual's academic advisor and work with the students in helping to identify the particular reason(s) why the student is not progressing as expected and to help develop a study plan to maximize the likelihood of success in meeting all course learning objectives.

In addition to formal course work, as described in *Criterion V.A.* all MPH students are required to complete a 108-hour practicum and an independent project. The student's performance during the practicum is evaluated by the practicum site supervisor. Every practicum site supervisor is asked to complete a detailed form (*Appendix V-1*, page B 3) which is used to assess the overall performance of our graduate student(s) placed at that specific practicum site. The independent project represents the culminating experience and effectively demonstrates a student's ability to synthesize and integrate the fundamental concepts and principles of the core public health disciplines in order to assess a public health problem, support decision-making, or to answer a research question with public health relevance.

Academic success is determined both by performance in formal courses and by other aspects of academic performance, including demonstrated skills, attitudes, and personal attributes judged by the graduate faculty to be important for success as a public health professional.

These include academic honesty and integrity; demonstrating good judgment, reliability, and social and emotional competency in relating to others; cultural awareness and sensitivity; and research ethics, among others. Faculty concerns regarding these factors may be brought to the attention of the Departmental Graduate Affairs Committee and, if necessary, to the University Graduate Education Committee.

**V.D.1. Description of the procedures used for monitoring and evaluating student progress in meeting stated learning objectives.**

Every course offered by the Department has a syllabus which clearly identifies all course requirements including how each student will be evaluated. Most courses include a combination of exams, quizzes, laboratory exercises, and oral and written presentations. Student performance in most formal courses taken for credit is evaluated and ordinarily reported as a letter grade. *Table V-3* describes the grading criteria for the core courses. Some courses (e.g., directed tutorials or research), where objective evaluation of comparative quality cannot be made, are graded as “pass” or “fail”. Students must maintain an overall 3.0 grade point average (GPA) to be eligible for any graduate degree. The academic advisor and the Director of Graduate Programs monitor the overall performance of each student and counsel those in academic difficulty. When appropriate, a student in academic difficulty is brought to the attention of the Departmental GAC along with plans for remediation and monitoring progress. Students who receive any grade of D or below, or who fail to achieve a GPA of 3.0 after two quarters of study, are referred to the University Graduate Education Committee for review of their academic performance. The Graduate Education Committee, with advice from the Department, forwards recommendations for remedial action or dismissal. More details of these procedures are found in USUHS Instruction 1306, "Academic Standing of Graduate Students" (available at [http://www.usuhs.mil/usuhs\\_only/asd/1306.pdf](http://www.usuhs.mil/usuhs_only/asd/1306.pdf) ) and USUHS Instruction 1323, "Examination, Grading, and Enrollment Policies for Graduate Education Programs at USUHS" (available at [http://www.usuhs.mil/usuhs\\_only/asd/1323.pdf](http://www.usuhs.mil/usuhs_only/asd/1323.pdf) ).

**V.D.2. Identification of outcomes which serve as measures by which the school will evaluate student achievement in each program, and presentation of data assessing the school's performance against those measures over the last three years.**

Traditional outcome measures of student achievement are degree completion rates and job placement rates, both of which are near 100% for the past three years. USUHS is unique in that virtually all students are sent for training by their employers (U.S. military or other federal agencies), and graduates go back to their organizations to designated positions. In addition, the program has extensive opportunities to assess and document whether or not students have attained specific learning objectives through exams, laboratory exercises, homework assignments, and other graded projects in individual courses. Classes are small enough for faculty to assess student learning through class participation. In order to successfully complete the “culminating experience” (independent project), the students are

required to give a ten-minute oral presentation and prepare a final written report, both of which are graded by independent, multi-disciplinary teams of faculty. It is felt that these measures accurately reflect student learning. Performance by PMB residents on the American Board of Preventive Medicine certification examination is another measure used to assess PMB Graduate Programs' effectiveness. The overall pass rate for both residency programs, 1999-2004, is 94% (Table V-2), comparing very favorably with national averages during this time period. All residents are in the Uniformed Services, and, therefore, job placement following completion of the academic and practicum portion of the residency is 100%.

**Table V-2. PMB Residency Board Examination Results**

Occupational and Environmental Medicine (OEM)

Class Year	# Graduates	# Taking Exam	# Passing Exam
1999	5	5	5
2000	5	5	4
2001	3	2	2
2002	4	4	3
2003	6	6	6
2004	6	6	5
Totals	29	28	25

Overall pass rate for OEM residents who took the exam, 1999-2004, (25/28) = 89%

General Preventive Medicine (GPM)

Class Year	# Graduates	# Taking Exam	# Passing Exam
1999	3	2	2
2000	5	5	5
2001	3	3	3
2002	5	5	5
2003	4	4	4
2004	2	2	2
Totals	22	21	21

Overall pass rate for GPM residents who took the exam, 1999-2004, (21/21) = 100%

**V.D.3. If the outcome measures selected by the school do not include degree completion rates and job placement rates, then data for these two additional indicators must be provided, including experiential data over the last three years. If degree completion rates, in the normal time period for degree completion, are less than 80 percent, an explanation must be provided. If job placement rates, within 12 months following award of the degree, are less than 80 percent, an explanation must be provided.**

Not applicable.

<b>V.D.4. Assessment of the extent to which this criterion is met.</b>
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**V.D.4.a. Strengths**

Over the last three years, our program has graduated at or near 100% of all students who enrolled and all graduating students have been placed into appropriate positions (i.e., the military Services select students for training billets, and graduates go back to positions in the military). This rate is explained by the unique student population of predominately active duty officers in the Uniformed Services. The students move as a cohort through the program from admission to graduation and virtually all students graduate at the same point in time.

**V.D.4.b. Weaknesses**

None.

**V.D.4.c. Recommendations**

None.

**This criterion is met.**

**Table V-3. Grading Criteria for Required Graduate Courses**

COURSE	TITLE	PERCENT OF FINAL GRADE	
		PM0503	BIOSTATISTICS I
PMO504	BIOSTATISTICS II	Mid-Term Final	50 50
PM0505	MICROCOMPUTER FUNDAMENTALS	Laboratory Exercises	100
PM0511	INTRODUCTION TO EPIDEMIOLOGY I	Mid-term Final Class participation	40 50 10
PM0526	HEALTH SERVICES ORGANIZATION	Final project Exam Class participation	50 30 20
PM0530	BEHAVIORAL SCIENCES IN HEALTH CARE	Critique Presentation Final Class Participation	25 40 25
PM0540	ENVIRONMENTAL HEALTH	Mid-Term Final Paper Class participation	35 35 20 10
PMO670	PUBLIC HEALTH PRACTICUM	Pass/fail based on proposal (with learning objectives), 3-5 page report, activity log, and 2 completed evaluation forms.	
PMO671	INTRO TO THE MPH PROJECT AND PRACTICUM	Pass/fail based on specific deliverables.	
PMO672	MPH PROJECT/PRACTICUM DESIGN AND DEVELOPMENT	Pass/fail based on specific deliverables.	
PMO673	MPH PROJECT/PRACTICUM IMPLEMENTATION AND EVALUATION	Pass/fail based on specific deliverables.	
PMO674	MPH INDEPENDENT PROJECT	Proposal Oral presentation Final report	15 35 50
PM0680	INTRODUCTION TO PUBLIC HEALTH	Pass/fail based on participation, written assignment, and attendance.	
PM0681	CURRENT PROBLEMS AND PRACTICE OF PREVENTIVE MEDICINE	Pass/fail based on participation and attendance.	

**CRITERION V.E.: If the program also offers curricula for academic degrees, then students pursuing them shall have the opportunity and be encouraged to acquire an understanding of public health problems and a generic public health education. These curricula shall cover as much basic public health knowledge as is essential for meeting their stated learning objectives.**

**V.E.1. Identification of all academic degree programs. The matrix in V.A. may be referenced for this purpose.**

The Doctor of Philosophy degree programs in Medical Zoology and in Environmental Health Sciences are the two graduate academic degree programs offered by the PMB Department. (*Table V-1*)

**V.E.2. Identification of the means by which the program assures that students in research curricula have the opportunities and are encouraged to acquire a public health orientation.**

Students in the PhD programs of the PMB Department are required to take a series of core courses in biostatistics, epidemiology, and environmental health offered by the Department. Most students take additional elective course work from the other public health disciplines. Each student is expected to work as a teaching assistant, with priority placed on core courses, including epidemiology, environmental health, or introduction to public health. Each student has a permanent Advisory Committee, which determines, in concert with the student, his or her specific program of study. The Committees typically encourage programs of study that include elective courses across the spectrum of public health. The majority of our Medical Zoology PhD students take additional coursework in epidemiology and tropical medicine and hygiene.

The Information Handbook (*Appendix III-1*) describes in more detail the requirements for both PhD programs. The diverse course offerings listed in the Handbook provide ample opportunity for broad-based learning in a variety of public health disciplines. The Dissertation Committee for each student for both PhD degree programs consists of representatives from across the Department and at least one member from outside the Department. This helps ensure that each PhD candidate understands basic public health concepts and acquires a public health perspective as they pursue their specific research interests.

**V.E.3. Identification of the culminating experience required for each academic degree program.**

Culminating experiences for both PMB doctoral programs consist of the oral and written qualifying examinations and the private and public defense of the doctoral dissertation. The qualifying examination for the PhD consists of written and oral portions designed to test the student's knowledge in his/her field of study. The examinations are administered during the

quarter after the student's last formal courses are completed. After successful completion of the written portion, the student is administered the oral examination. The student is required to pass both the written and oral portions of the qualifying examination. If a student fails either portion, one retake is allowed. If the student fails a second time, the student will be disenrolled from the program. Once a student passes the qualifying exam and advances to candidacy, work may begin on the doctoral dissertation. When completed, the doctoral dissertation is defended privately to the student's Dissertation Committee and publicly at a seminar open to the entire University community. Passing of both defenses is required before the doctoral degree can be awarded.

<b>V.E.4. Assessment of the extent to which this criterion is met.</b>
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**V.E.4.a. Strengths**

A small student body enables the faculty to give extensive individual guidance to each student. There are numerous opportunities for exposure, familiarization, and mastery of public health concepts throughout the course of study. The geographic proximity of USUHS to a wide variety of academic, government, military, and private institutions engaged in the teaching and practice of public health is a distinct advantage to our doctoral students. This combination of constant faculty guidance and wealth of opportunities ensure that students acquire an understanding of public health problems and approaches to managing them.

**V.E.4.b. Weaknesses**

None.

**V.E.4.c. Recommendations**

Because these PhD programs exist in a department with an overarching interest in public health, prospective PhD students should express an interest in the broad application of their individual area of study to public health in their personal statements.

**This criterion is met.**

**CRITERION V.F.: 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.**

The Department of Preventive Medicine and Biometrics (PMB) does not offer a joint degree program.

**CRITERION V.G.: If the program offers degree programs using non-traditional formats or methods, these programs must a) be consistent with the mission of the program and within the program's established area of expertise; b) be guided by clearly articulated student learning outcomes which are rigorously evaluated; c) be subject to the same quality control processes that other degree programs in the program and university are, and d) provide planned and evaluated learning experiences which take into consideration and are responsive to the characteristics and needs of adult learners. If the program offers non-traditional 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 teaching and learning methodologies and to systematically use this information to stimulate program improvements.**

The Department of Preventive Medicine and Biometrics (PMB) does not currently offer a degree using a non-traditional format. However, PMB is currently exploring offering courses and degrees using a combination of web-based teaching and traditional classroom instruction.