

PNB INFORMATION HANDBOOK

THE DEPARTMENT OF PREVENTIVE MEDICINE AND BIOSTATISTICS GRADUATE MEDICAL AND PUBLIC HEALTH PROGRAMS

Uniformed Services University F. Edward Hébert School of Medicine 2018-2019

Revised August 8, 2018

IMPORTANT NOTICE: This Handbook is subject to change. The curricula for all of graduate degree programs described in this edition of the Handbook (and on the web site) are continually updated and may be revised. Since academic requirements may vary from that which is currently listed, all quarterly course registrations must be reviewed and approved by the student's Academic Advisor. Please consult the web site for periodic updates during the academic year: http://www.usuhs.edu/pmb

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PMB GRADUATE PROGRAM 2018-2019 CALENDAR

Pre-Fall Session

Friday, 6 Jul 2018 – Orientation, Incoming PMB Graduate Students

Monday, 9 Jul 2018 – Pre-Fall Session Classes Begin

Friday, 20 Jul 2018 - PMB Orientation for Fall Quarter

Monday-Friday, 23 - 27 Jul 2018 - Registration for Fall Quarter Classes

Wednesday, 15 Aug 2018 - Pre-Fall Session Classes End

Thursday - Friday, 16-17 Aug 2018 - End of Session Recess

Fall Quarter

Monday, 20 Aug 2018 - Fall Quarter Classes Begin

Friday, 31 Aug 2018 – Last Day to Drop/Add Fall Courses

Monday, 3 Sep 2018 – Labor Day (Holiday)

Monday, 8 Oct 2018 – Columbus Day (Holiday)

Tuesday - Friday, 9-12 Oct 2018 - Registration for Winter Quarter Classes

Wednesday, 7 Nov 2018 - Fall Quarter Classes End

Thursday – Friday, 8 -9 Nov 2018 – End of Quarter Recess

Monday, 12 Nov 2018 – Veterans Day (Holiday)

Winter Quarter

Tuesday, 13 Nov 2018 - Winter Quarter Classes Begin

Tuesday, 20 Nov 2018 - Last Day to Drop/Add Winter Courses

Thursday – Friday, 22-23 Nov 2018 - Thanksgiving Recess

Friday, 21 Dec 2018 - Wednesday, 2 Jan 2019 - Winter Recess

Monday, 14 Jan 2019 - Martin Luther King, Jr's Birthday (Holiday)

Monday - Friday, 28 Jan 2019 - 1 Feb 2019 - Registration for Spring Quarter Classes

Wednesday, 13 Feb 2019 - Winter Quarter Ends

Thursday - Friday, 14-15 Feb 2019 - End of Quarter Recess

Monday, 18 Feb 2019 - President's Day

Spring Quarter

Tuesday, 19 Feb 2019 – Spring Quarter Classes Begin

Monday, 4 Mar 2019 – Last Day to Drop/Add Spring Courses

Monday - Friday, 25-29 Mar 2019 - Spring Recess

Monday – Friday, 22-26 Apr 2019 – Registration for Summer Quarter Classes

Wednesday 15 May 2019 - Graduate Student Colloquium

Wednesday, 15 May 2019 - Spring Quarter Ends

Thursday - Friday, 16-17 May 2019 - End of Quarter Recess

Saturday, 18 May 2019 - USU Graduation

PMB Summer Session

Monday, 20 May 2019 - Summer Session Begins

Monday, 27 May 2019 - Memorial Day (Holiday)

Monday, 3 June 2019 - Last Day to Drop/Add Summer Courses

Monday – Tuesday, 10 - 11 Jun 2019 - Oral Presentations (Masters degree candidates)

Thursday, 20 Jun 2019 - Summer Session Ends

Thursday, 20 Jun 2019 - PMB Graduation Ceremony

SOM GRADUATE PROGRAMS 2018-2019 ACADEMIC CALENDAR

Orientation for New Graduate Students & Pre-Fall Events for PMB Students (July 6, 2018 – August 15, 2018)

Friday, July 6, 2018 – Orientation for New PMB Graduate Students

Monday, July 9, 2018 – Pre-fall Session Classes Begin for PMB Students Only

Monday - Friday, July 23-27, 2018 - Registration for Fall Quarter Classes for Current Graduate Students

Monday, August 6, 2018 – CHR Orientation for New Graduate Students (Except PMB)

Tuesday – Friday, August 7-17, 2018 – Pre-class Orientation Program for New Graduate Students (Except PMB)

Wednesday, August 15, 2018 – Pre-fall Session Classes End for PMB Students

Fall Quarter

Monday, August 20, 2018 - Fall Quarter Classes Begin

Friday, August 31, 2018 – Last Day to Drop/Add Fall Courses

Friday, August 31, 2018 – Summer Quarter Grades Due

Monday, September 3, 2018 – Labor Day (Holiday)

Monday, October 8, 2018 – Columbus Day (Holiday)

Tuesday-Friday, October 9-12, 2018 – Registration for Winter Quarter Classes

Wednesday, November 7, 2018 – Last day of Fall Quarter Classes for PMB Programs

Thursday-Friday, November 8-9, 2018 - End of Quarter Recess for PMB Programs

Friday, November 9, 2018 – Last day of Fall Quarter Classes for EID, MCB, MCP and NES Programs

Monday, November 12, 2018 - Veterans Day (Holiday)

Winter Quarter

Tuesday, November 13, 2018 – Winter Quarter Classes Begin

Monday, November 19, 2018 - Last Day to Drop/Add Winter Courses

Monday, November 19, 2018 - Fall Quarter Grades Due

Thursday-Friday, November 22-23, 2018 - Thanksgiving Recess

Monday, December 17, 2018 - Wednesday, January 2, 2019 - Winter Recess

Monday, January 21, 2019 – Martin Luther King, Jr's Birthday (Holiday)

Monday-Friday, January 28, 2019-February 1, 2019 - Registration for Spring Quarter Classes

Wednesday, February 13, 2019 - Last day of Winter Quarter Classes for PMB Programs

Thursday - Friday, February 14-15, 2019 - End of Quarter Recess for PMB Programs

Friday, February 15, 2019 - Last day of Winter Quarter Classes for EID, MCB, MCP and NES Programs

Monday, February 18, 2019 – President's Day (Holiday)

Spring Quarter

Tuesday, February 19, 2019 - Spring Quarter Classes Begin

Monday, March 4, 2019 – Last Day to Drop/Add Spring Courses

Monday, March 4, 2019 - Winter Quarter Grades Due

Monday-Friday, March 25-29, 2019 – Spring Recess

Monday Friday, April 22-26, 2019 – Registration for Summer Quarter Classes

Wednesday, May 15, 2019 – Last day of Spring Quarter Classes for PMB Programs

Thursday Friday, May 16-17, 2019 – End of Quarter Recess for PMB Programs

Friday, May 17, 2019 - Last day of Spring Quarter Classes for EID, MCB, MCP and NES Programs

Saturday, May 18, 2019 – USU Graduation at the DAR Constitution Hall

Summer Quarter

Monday, May 20, 2019 – Summer Quarter Classes Begins

Monday, May 27, 2019 – Memorial Day (Holiday)

Monday, June 3, 2019 – Last Day to Drop/Add Summer Courses

Monday, June 3, 2019 - Spring Quarter Grades Due

Thursday, June 20, 2019 – Last Day of Summer Session Classes for PMB Programs
Thursday, June 20, 2019 – Graduation Ceremony for PMB Master Degree Programs
Thursday, July 4, 2019 – Independence Day (Holiday)
Monday Friday, July 22-26, 2019 – Registration for Fall Quarter Classes
Friday, August 9, 2019 – Last day of Summer Quarter Classes for EID, MCB, MCP and NES Programs
Friday, August 9, 2019 – Academic Year Ends

Uniformed Services University (USU) (http://www.usuhs.edu) was established by Congress in 1972 and was authorized to develop advanced degree programs in the various health sciences with a priority on preparing qualified individuals for careers as Medical Officers in the Uniformed Services. As the Nation's only federal institution for higher learning in the health sciences, it is committed to excellence in military medicine and public health during peacetime and during war, fulfilling a unique mission among U.S. Schools of Medicine.

The University's F. Edward Hébert School of Medicine and the Graduate School of Nursing are resources for the Surgeons General of the Army, Navy, Air Force, and the U.S. Public Health Service. The University faculty serves as educators, researchers, and consultants for military medical readiness, disaster relief and emergency preparedness, and force health protection issues. Located next to the Walter Reed National Military Medical Center (WRNMMC) on the Naval Support Activity, Bethesda, Maryland, it has close proximity to resources at the National Institutes of Health, the Armed Forces Radiobiology Research Institute (AFRRI), and the National Library of Medicine.

GRADUATE MEDICAL & PUBLIC HEALTH PROGRAMS IN PMB

PMB GRADUATE PROGRAM MISSION: The mission of the PMB Graduate Programs in Public Health is to enhance and protect the health of members of the Uniformed Services by producing knowledgeable and highly skilled public health professionals and by promoting evidence-based policy making, research, and service initiatives that support the global mission of the Uniformed Services.

The graduate education programs within the F. Edward Hébert School of Medicine (SOM) fall under the auspices of the Graduate Education Office (http://www.usuhs.mil/graded), and are administered by the Associate Dean for Graduate Education. The Department of Preventive Medicine and Biostatistics (PMB) (http://www.usuhs.mil/pmb/index.html) plays a key role in the education and training of physicians dedicated to careers in public service with expertise in military medicine, preventive medicine, tropical medicine, and disaster medicine. While this Handbook describes the particular PMB graduate programs, the USU SOM Graduate Program Handbook (http://www.usuhs.mil/graded/graduatehandbook.doc) gives a description of the policies and practices of the USU graduate programs overall. The Graduate Programs in PMB are located on the campus of Uniformed Services University and the adjacent AFRRI building. Well-equipped laboratories support the tropical medicine and environmental health programs. Up-todate computer equipment is available at the University's Learning Resource Center and within the Department. The affiliated teaching hospitals in the Washington area are the Walter Reed National Military Medical Center and the Malcolm Grow Air Force Medical Clinic. The affiliated overseas laboratories include the U.S. Army and Navy biomedical research laboratories in Bangkok, Thailand; Nairobi, Kenya; Cairo, Egypt; Jakarta, Indonesia; and Lima, Peru. These and other standing agreements, for example, with the US Army Public Health Command and the Federal Bureau of Investigation (FBI), provide abundant opportunities for our students.

The Graduate Programs at USU are fully accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools. In addition, the Graduate Programs in the Department of Preventive Medicine and Biostatistics are accredited by the Council on Education for Public Health, the national accrediting organization for programs and Schools of Public Health. In 2013, our MPH program received full accreditation for the maximum seven-year term through 2020. In addition, the Master of Science in Public Health (MSPH) program in the area of Environmental Health Science is certified under

the Accreditation Board for Engineering and Technology (ABET). The MHAP is currently accredited with the Commission on Accreditation of Healthcare Management Education (CAHME).

The Department of Preventive Medicine and Biostatistics offers programs of study leading to the degrees of Master of Public Health (MPH), Master of Tropical Medicine and Hygiene (MTM&H), Master of Science in Public Health (MSPH), Master of Health Administration and Policy (MHAP), Doctor of Public Health (DrPH), and Doctor of Philosophy (PhD) in either Environmental Health Science or Medical Zoology. Students may enroll in only one PMB degree program at a time. The total maximum number of students that will be accepted into the MPH, MTM&H, and MSPH programs during any given academic year is approximately 50. The total number of students that may be accepted in the MHAP program during any given academic year is approximately 20. Students also have the opportunity to hear invited speakers with the expertise in a wide variety of disciplines at the PMB Department's noon seminars on Wednesday. Attendance is highly encouraged.

MASTER OF PUBLIC HEALTH (MPH), MASTER OF TROPICAL MEDICINE AND HYGIENE (MTM&H), MASTER OF SCIENCE IN PUBLIC HEALTH (MSPH), AND MASTER OF HEALTH ADMINISTRATION AND POLICY (MHAP)

The MPH degree program provides a broad didactic experience in public health and preventive medicine. It is a rigorous curriculum with a quantitative focus, is sequenced to be completed within 12 months, and is primarily designed for individuals planning careers in Preventive Medicine and Public Health within the Uniformed Services. An MPH degree or its academic equivalent is a specific requirement for physicians seeking residency training and board certification in Aerospace Medicine, General Preventive Medicine and Public Health, Occupational and Environmental Medicine, and several other public health specialties. Matriculants may include physicians and other academically qualified health professionals, such as veterinarians, dentists, sanitary engineers, microbiologists, entomologists, environmental scientists, nurses, and pharmacists, who wish to apply the core disciplines of public health to their career field. Uniformed personnel with education or experience in a health-related discipline are given priority as candidates for admission.

Graduates are expected to use their acquired quantitative and analytical skills in biostatistics and epidemiology to identify and measure community health needs and to investigate the impact of biological, environmental, and/or behavioral factors to solve public health problems. Each graduate will understand the components, operations, and financing of healthcare delivery services, particularly those in the public sector, and have the administrative skills to plan, analyze, manage, and improve public health programs for the Uniformed Services. In addition, many graduates will complete an "area of concentration" with required and elective course work in a specific area of public health and demonstrate the ability to apply appropriate specialized knowledge and skills to their chosen field.

The goal of the MTM&H program is to provide each student with the necessary academic background to practice as a competent public health officer and tropical disease expert in one of the Uniformed Services.

The program is designed for medical officers desiring specific preparation for assignment to tropical medicine clinical, research and teaching positions. Graduates of the MTM&H program will acquire the same quantitative and analytical skills in biostatistics and epidemiology as MPH graduates. They will also

be able to assess the health needs of international communities and to investigate the impact of biological, environmental, and behavioral factors on community health. Graduates will acquire an indepth knowledge of the agents of tropical diseases, medical parasitology, and vector biology. During the practicum, students will have the opportunity for hands-on experience in an overseas location with the epidemiology, pathology, diagnosis, management, treatment, prevention, surveillance, and control of selected tropical diseases. The MTM&H degree also represents suitable academic preparation for residency training and board certification in General Preventive Medicine/Public Health.

The MPH and MTM&H degree programs each consist of a minimum of 60 quarter credit hours. The MPH degree requires 35 credit hours in core courses in the Department of Preventive Medicine and Biostatistics, including epidemiology, biostatistics, environmental health, health services administration, and social and behavioral sciences. The minimum credit load per quarter required for a full-time student is 12, the maximum allowed is 22, and the typical load is 16-18. The satisfactory completion of an independent project and a practicum experience is required, and the courses related to these requirements are part of the core curriculum. The independent project is the capstone of the MPH and MTM&H programs and should represent the synthesis, integration, and application of core public health concepts and principles to solve or advance our understanding of a public health problem. The requirements for the MPH and MTM&H independent project and practicum experience are described in detail in the "Practicum and Independent Project Handbook."

In addition to completing the MPH core course work, the MTM&H student must complete additional required courses: PMO560 Principles and Practice of Tropical Medicine, PMO561 Medical Parasitology, PMO564 Epidemiology and Control Arboviruses, PMO565 Vector Biology, PMO569 Malaria Epidemiology and Control, PMO613 Public Health Issues of Disasters, PMO614 Tropical Medicine Rounds, PMO661 Current Topics in Preventive Medicine and Biostatistics, PMO990 Travel Medicine, PMO992 Travel Clinic Practicum, and PMO563 Tropical Medicine Practicum. PMO563 serves as the MTM&H practicum and typically consists of a supervised clinical, research, or epidemiological rotation of four to six weeks spent at an affiliated overseas facility and involves supervised diagnosis and treatment of patients, as well as field study of diseases endemic to tropical regions and the principles and methods of disease surveillance in the region. The student must still satisfy the separate requirements for the project as outlined in the "Practicum and Independent Project Handbook." This is typically accomplished during the academic year, but can also be satisfied during an overseas rotation if requirements for both project and practicum are satisfied and written approval is obtained from the academic advisor, residency director, and the Director of Graduate Research and Practicum Programs. If the project will be done in conjunction with the practicum, the requirement for an oral presentation of the project must still be satisfied. This may be done through presentation of the detailed plan for the project before the practicum takes place. Associated travel and per diem expenses are the responsibility of the applicant or applicant's sponsoring institution or Service. Some funds may be available from the University for members of the Uniformed Services through a grant from the Defense Health Agency. This curriculum offers less opportunity for elective courses than the MPH degree program and typically adds four-six weeks to the timeline for degree completion.

The university confers a Certificate in Training in Tropical Medicine and Travelers' Health including graduate course credit. One of a limited number of programs globally that fulfills the eligibility requirements for physicians and other licensed healthcare professionals to take the ASTMH Certificate of

Knowledge Examination, CTropMed®. This comprehensive lecture, seminar, laboratory, and case-based curriculum incorporates courses that are a part of the MTM&H program. Additional information on the ASTMH examination is available at http://www.astmh.org.

The goal of the two-year thesis-based MSPH program is to provide students with the necessary academic background to function as public health specialists within the Uniformed Services. It is primarily designed for the public health practitioner planning a career in the environmental health sciences, industrial hygiene, or medical zoology. Graduates of this program will acquire basic knowledge and skills in the five core disciplines of public health, plus in-depth knowledge in their selected area of concentration. The graduate will gain competence in the recognition, evaluation, and control of a variety of environmental and occupational health problems and will have the ability to develop policy initiatives in response to these issues. The MSPH degree provides suitable academic preparation for board certification in selected disciplines of public health. Prior education or experience in the biological or physical sciences or in a health-related field is required to be considered for admission to this program.

The MHAP 2-year program is modeled on the current Masters in Public Health program. The first year consists of five academic quarters. During this didactic year, students must attain passing grades in all courses in order to progress to the second year.

The second year of the program consists of an administrative residency in the National Capital Area (NCA) and is meant to provide practical experience in health policy and healthcare administration and may occur at any number of sites in the NCA. Residency rotations are 12 months in duration and are accomplished at one site for each student (although there could be different rotations within the site over that year). Sites may vary according to the needs of the individual student, but opportunities will be available at sites including major tertiary healthcare facilities, a major research facility, inter-agency federal health policy partner, combatant commanders, or the MHS oversight offices at the Defense Health Agency. Specific healthcare facilities like local VA Medical Centers or other federal healthcare entities may also be included.

The Master of Health Administration and Policy (MHAP) degree at Uniformed Services University addresses service requirements by providing an innovative approach to graduate education and by offering access to top policy-making federal government agencies, think-tanks, universities, and speakers in the NCA. Such a degree also targets a large population of potential students from multiple services and agencies. This degree, delivered on a major research University campus, will enable federal healthcare professionals to apply a systems approach wherever care is delivered and to impact both wellness and the population-health aspects of care delivery. For additional MHAP information, please visit: http://www.usuhs.edu/pmb/hsagradedprograms.html.

THE CORE DISCIPLINES OF PUBLIC HEALTH

Summary of Program Learning Objectives

Biostatistics: Upon completion of the core courses in this discipline, students will be able to collect, analyze, and interpret data of public health importance using appropriate descriptive and inferential statistical techniques, including both bivariate and multivariate methods. In addition, students will become familiar with the use of a statistical software program for the PC, such as SPSS.

Environmental and Occupational Health: Upon completion of the core courses in this discipline, students will be able to identify, measure, and analyze environmental and occupational factors affecting health. Students will have the ability to (1) describe the factors that may impact health in the community, home,

and workplace, (2) effectively communicate risk, and (3) explain the standards and controls necessary to mitigate these factors.

Epidemiology: Upon completion of the core course in this discipline, the student will be able to (1) discuss the basic concepts pertaining to the natural history of disease in populations, (2) identify and list the strengths and weaknesses of various sources of data, (3) define measures of disease in populations, and (4) critically assess the validity and relevance of descriptive and analytical studies. Students will develop an understanding of the basic concepts of epidemiology and be able to apply them to the analysis and interpretation of epidemiologic data.

Health Services Administration: Upon completion of the core course in HSA, the student will acquire the necessary skills to critically analyze the organization, structure, function, and effectiveness of health care systems and be able to (1) describe and compare the variety of health services in developed countries, (2) discuss, in depth, the current policy issues that impact the United States health care system, and (3) explain the behavioral and economic foundations for health promotion and disease prevention strategies in the United States. Students completing the HSA concentration will be equipped to become leaders and managers able to create, develop, and continuously improve high quality health systems.

Social and Behavioral Sciences: Upon completion of the core course in this discipline, the student will be able to (1) list and explain behaviors and social factors associated with morbidity and mortality, and (2) describe behavior-related theories and prevention strategies for modification and reduction of injuries and illnesses. Students will develop the ability to identify and utilize the relationship of human behavior and social factors in public health practice.

DEGREE PROGRAMS & CURRICULUM

MASTER OF PUBLIC HEALTH (MPH) DEGREE PROGRAM

Graduates of this program 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. In addition to completing the core courses in the five public health disciplines described above, MPH students may select an area of concentration from among the following: biostatistics and epidemiology, environmental and occupational health, health services administration, global health, tropical public health, or generalist public health. These areas of concentration are intended to help guide students who wish to focus their training and coursework in a particular area of public health. The following elective courses are recommended by the faculty in each discipline.

BIOSTATISTICS AND EPIDEMIOLOGY: Students completing this concentration will be able to function as epidemiologists in the Uniformed Services. They will acquire an understanding of advanced concepts in acute and chronic disease epidemiology, and have the ability to select and apply appropriate epidemiological and biostatistical methods in planning and carrying out epidemiological investigations.

Required courses include PMO512 Epidemiologic Methods and PMO513 Advanced Epidemiologic Methods, as well as at least four of the following: PMO514 Epidemiology and Control of Infectious Diseases, PMO515 Chronic Disease Epidemiology and Control, PMO522 Meta-analysis, PMO519 Occupational and Environmental Epidemiology, PMO611 Classic Studies in Epidemiology, and PMO508 Biostatistics III.

ENVIRONMENTAL AND OCCUPATIONAL HEALTH: This concentration provides students with the fundamental concepts and principles of environmental and occupational health, toxicology, industrial hygiene, health physics, and a survey of occupational/environmental diseases.

In addition to the MPH core requirements, non-physician MPH students in this concentration should take PMO549 Principles of Toxicology, PMO550 Industrial Hygiene and Laboratory, as well as additional courses recommended by their Academic Advisor chosen from among the courses offered by the PMB Division of Occupational and Environmental Health Sciences or courses from another division closely related to this field.

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 promotion and health 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.

Recommended courses beyond the core MPH curriculum include PMO523 Fundamentals of US Health Policy, PMO527 Principles of Health Care Management, PMO529 Health Care Financial Management, PMO532 Quality Assessment and Improvement in Health Care, PMO533 Decision Making in Health Services, and PMO535 The Law of Healthcare. The PMB Division of Health Services Administration offers other courses as part of the Master's Degree in Health Administration and Policy.

GLOBAL HEALTH: The USU Global Health (GH) program's mission is to prepare globally minded military professionals who will be able to plan and execute health engagement in support of security cooperation,

stability operations, complex humanitarian emergencies and medical crises around the world, in wartime and peacetime. This area of concentration incorporates the global health competencies of capacity strengthening, collaborating and partnering, ethical reasoning and professional practice, health equity and social justice, program management, socio-cultural and political awareness, and strategic analysis as described by the Associations of Schools and Programs of Public Health. The concentration also provides a strategic and operational perspective of global and international health issues as applicable to US national security and especially as applicable to dealings with developing nations. Health systems are examined from the international perspective looking at resources, access, policies, current challenges, potential solutions and opportunities for reform. The student will have a whole of US government knowledge on global health policy and engagement through both the lenses of civil society and the joint operator.

Required courses for this area of concentration include PMO528 Global Health1, PMO539 Global Health 2, PMO548 Joint Health Operations 1&2, PMO531 Program Planning and Development, PMO631 Public Health issues of disasters in developing countries. To complete the required 18 credits students need to take global health electives. For general global health expertise the highly recommended electives include PMO531 Program Planning and Development; PMO1007 Advanced Seminar in Global Health Policy; and PMO1014 Measures of Effectiveness in Global Health. For a disaster focused global health curriculum, the highly recommended electives are: PMO613 Public Health Issues of Disasters in Developing Countries and PMO1009 Domestic Disaster Management and Response. Additional acceptable electives include: PMO512 Epidemiologic Methods, PMO541 Advanced Environmental Health, PMO560 Principles and Practice of Tropical Medicine; PMO569 Malaria Epidemiology and Control; PMO599 Introduction to Health Risk Communication, PM602 Air Pollution and Waste Management; PMO604 Hydrology, Water

Treatment and Wastewater Treatment, PMO990 Travel Medicine, PMO991 Ethics in Public Health, PMO1016 Infectious Diseases of Public Health Importance, and PMO1017 Health Context Analysis

TROPICAL PUBLIC HEALTH: This concentration will enable students to function effectively worldwide as Preventive Medicine, Public Health, and Medical Officers in the Uniformed Services. Graduates will be able to apply the basic concepts and principles of tropical medicine, malaria control, and vector biology to the epidemiology, diagnosis, treatment, prevention, and control of tropical diseases.

Students interested in this area of concentration should take PMO565 Vector Biology, PMO512 Epidemiologic Methods, PMO560 Principles and Practices of Tropical Medicine, PMO569 Malaria Epidemiology and Control, and PMO613 Public Health Issues of Disasters in Developing Countries. Other recommended courses include PMO548 Joint Health Operations, PMO561 Medical Parasitology, and PMO564A Epidemiology and Control of Arboviruses, as well as other courses offered by the PMB Division of Tropical Public Health.

GENERALIST PUBLIC HEALTH: Students completing this concentration will have a broad education in all of the traditional areas of public health, and will be prepared for a wide variety of potential public health positions.

Students interested in this area of concentration should take a minimum of three courses beyond the MPH core requirements. These three additional course should consist of at least one of these four courses: PMO512 Epidemiologic Methods, PMO514 Epidemiology and Control of Infectious Diseases, PMO515 Chronic Disease Epidemiology and Control, and PMO508 Biostatistics III; at least one of these four courses: PMO528 Global Health I, PMO613 Public Health Issues of Disasters in Developing Countries, PMO548 Joint Health Operations, and PMO990 Travel Medicine; and at least one of these three courses:

PMO527 Principles of Health Care Management, PMO529 Health Care Financial Management, and PMO531 Program Planning and Development.

MPH & MTM&H CURRICULUM

REQUIRED COURSES

МРН		
Pre-Fall		Credits
PMO505	Computer Applications in PH	1
PMO530	Behav & Social Sciences	4
PMO540	Intro to Env Health	4
PMO680	Intro to Public Health	1
Fall		
PMO503	Biostatistics I	4
PMO511	Intro to Epidemiology	4
PMO526	Health Systems	4
PMO671	Intro MPH Proj/ Practicum	1
Winter		
PMO504	Biostatistics II	4
PMO527	Principles of Healthcare Mgm	2
PMO672	MPH Proj/Prac Design & Dev	1
Spring		
PMO673	MPH Proj/Pract Impl & Eval	1
Summer		
PMO670	MPH Practicum	3
PMO674	MPH Independent Project	3

1		
MTM&H		
Pre-Fall		Credits
PMO505	Computer Applications in PH	1
PMO530	Behav & Social Sciences	4
PMO540	Intro to Env Health	4
PMO680	Intro to Public Health	1
Fall		
PMO503	Biostatistics I	4
PM0511	Intro to Epidemiology	4
PMO526	Health Systems	4
PMO671	Intro MPH Proj/Practicum	1
PMO565	Vector Biology	2
Winter		
PMO504	Biostatistics II	4
PMO672	MPH Proj/Prac Design/Dev	1
PMO990	Travel Medicine*	2
PMO992	Travel Clinic Practicum**	1
Spring		
PMO673	MPH Proj/Pract Impl Eval	1
PMO560	Princ & Prac of Trop Med	6
PMO561	Med Parasitology	3
PMO564A	Epi & Control Arboviruses	2
PMO569	Malaria Epi & Control	3
PMO613	PH Issues of Disasters	4
PMO614	Trop Med Rounds	2
PMO661	Current Topics in Prev Med	1
PMO990	Travel Medicine*	2
PMO992	Travel Clinic Practicum**	1
Summer		
PMO674	MPH Independent Project	3
PMO563	Clin Trop Med(Practicum)	3 to 12
PMO992	Travel Clinic Practicum**	1

^{*}For students in the 1-year program, summer June; for 2-year students, summer quarter ends in August. This applies to "Summer" for both the MPH and MTM&H Curricula

^{**} Course offered in the Winter & Spring

^{**} Course offered in the Winter & Spring &

ELECTIVE COURSES FOR MPH & MTM&H

Pre Fall		Credits
PMO642	Clin Prev Services & Selected Top	3
PMO558	Fund Clin Occ Env/Prev Med	3
PMO610	General Entomology	2
Fall		
PMO528	Global Health I	3
PMO541	Advanced Env Health	3
PMO549	Principles of Toxicology	4
PMO555	Industrial Ventilation	3
PMO567	Chg Patt Arthropod-borne Dis	4
PM0577	Intro to GIS Methods in PH	2
PMO584	Intro to Health Physics	3
PMO601	Env Health Risk Assess	2
PMO611	Classic Studies in Epi	2
PMO615	Sand Flies & Disease	3
PMO652	Occupational Ergonomics	2
PMO683	Critical Reading Seminar	2
PMO684	Clinical Reading Seminar	1
PMO688	Info Gathering in Clin Med	2 to 12
PMO701	Advanced Biometrics Tutorial	1 to 12
PMO841	Aerospace Oper Physiology I	3
PMO971	Doctoral Student J Club	1
PMO973	GPM & OEM J Club	1
Winter		
PMO502	Intro to SAS	1
PMO512	Epidemiologic Methods	4
PMO514	Epi & Control Infectious Dis	3
PMO523	Fund od US Health Policy	3
PMO524	Healthcare Perform Improv	2

PMO531	Prog Plan & Development	3
PMO535	The Law of Healthcare	2
PMO539	Global Health II	3
PMO548	Joint Health Operations	3
PMO550	Industrial Hygiene I & Lab	4
PMO566	Phys Params of Vector Compt	4
PM0571	Biosystematics in Med Zoo	2
PM0578	Remote Sensing Meth in PH	3
PMO594	Intro to Med Informatics	3
PMO598	Health Economics	3
PMO600	Fund of Human Physiology	2
PMO602	Air Pollution & Waste Mgm	3
PMO605	Anal Instr Meth in Env Health	3
PMO631	OEHS Journal Club	1
PMO634	Public Health Surveillance	1
PMO651	Human Factors Engineering	3
PMO655	Current Issues in Safety & Injury I	1
PMO661	Current Topics in Prev Med	1
PMO683	Critical Reading Seminar	2
PMO684	Clinical Research Seminar	1
PM0701	Advanced Biometrics Tutorial	1 to 12
PM0971	Doctoral Student J Club	1
PMO972	Seminar in Critical Thinking	2
PMO973	GPM & OEM J Club	1
PMO990	Travel Medicine	2
PMO992	Travel Clinic Practicum	1
PMO1003	Survey Design	3
PMO1009	Domestic Disaster Management &	3
PMO1013	Molecuar Parasitology	3
PMO1016	Infec Dis of PH Importance	1
PMO1020	Global Health Systems DL	3

Spring		
PMO508	Biostatistics III	5
PMO513	Advanced Epi Methods	4
PMO515	Chronic Dis Epi & Control	2
PMO519	Occupational & Env Epi	3
PMO520	Molecular Epidemiology	2
PMO522	Meta-Analysis	1
PMO529	Healthcare Financial Mgm	2
PMO532	Qual Assess & Improvement	2
PMO533	Decision Making in Health Ser	2
PMO537	Clinical Decision Making	1
PMO542	Clinical Occ & Env Medicine	3
PMO548	Joint Health Operations	3
PMO552	Industrial Hygiene II	4
PMO560	Princ & Practice Trop Med	6
PMO561	Medical Parasitology	3
PMO564A	Epi & Control Arboviruses	2
PMO564B	Lab Tech in Arbovirology	4
PMO569	Malaria Epi & Control	3
PMO582	Radiation Biology	3
PMO595	Intro Complex Survey Anal	2
PMO599	Intro Health Risk Comm	2
PMO604	Hydrology, Water Treatment & W	3
PMO607	Environmental Chemistry	4

PMO682	History of Preventive Med	2 to 4
PMO683	Critical Reading Seminar	2
PMO684	Clinical Research Seminar	1
PMO810	Integrated Pest/Vector Mgm	2
PMO845	Human Factors in Aviation	3
PMO848	Special Topics in Aerospace Medi	3
PMO971	Doctoral Student J Club	1
PMO973	GPM & OEM J Club	1
PMO990	Travel Medicine	2
PMO991	Ethics in PH	3
PMO992	Travel Clinic Practicum	1
PMO996	Clinical Trial Design & Anal	2
PMO997	Field Epidemiology	2
Summer		
PMO553	Industrial Hygiene Field Stud	1
PMO568	Medical Acarology	4
PMO570	Mod Tech & Vector-borne Dis	4
PMO572	Intro Med Malacology	3
PMO573	Epi & Prevention of Vaccine Prevention	1
PMO592	Healthcare Tech Assessment	2
PMO992	Travel Clinic Practicum	1
PMO1014	Monit & Eval Global Health	2

^{*}Additional electives may be found under the "Course Descriptions" section of this Handbook. Courses offered by other basic science departments in the School of Medicine are listed in the University Graduate Education Bulletin and are also available as electives (with permission of the Course Director or Department Chair).

MASTER OF SCIENCE IN PUBLIC HEALTH (MSPH) DEGREE PROGRAM

The MSPH degree program is designed for uniformed services members, and is a two-year program. There are two specialty tracks within the MSPH degree program: Environmental and Occupational Health (EOH) and Medical Zoology (MZ). Upon completion of the MSPH program, students will be able to demonstrate in-depth knowledge and understanding of the science and practice of public health pertaining to their specialty track. The coursework hours include electives and directed studies. The courses in the MSPH curriculum are listed below for each respective specialty track. Waivers for a core course program requirement on the basis of previous coursework may be granted on a case-by-case basis with approval by the Course Director and the Research Advisor (Academic Advisor may be substituted if a Research Advisor has not yet been selected). A written, orally-defended thesis is required for the MSPH degree. Credit hours may be graded or pass-fail, as determined by the respective Course Director, provided the percentage of pass-fail course credits does not exceed 25% of the total number of credits for coursework taken.

Thesis. Students must complete and defend a written thesis based on their original research within the two-year program. The thesis is submitted to the student's Research Advisor for approval and subsequently presented and defended before a Thesis Examination Committee followed by a public presentation (such as USU Research Days and/or conference presentations). The student's Research Advisor must have an academic appointment in the PMB Department. Credit for research is received by enrolling in either PMO941 Environmental Occupational Health Directed Research or PMO964 Research in Medical Zoology, with the approval of the student's Academic Advisor. Students will be assigned a grade or pass/fail by the Research Advisor for each quarter corresponding to the credit hours taken in that quarter.

<u>Thesis Defense</u>. The Thesis Examination Committee will be composed of at least three members: the Research Advisor, the Committee Chair, and one other member. At least two of the three members must be full-time faculty with primary appointments in the PMB Department, and one member must be within the sponsoring PMB Division in which the student is enrolled. In order for MSPH students to participate in the USU graduation exercise held annually in May, the Thesis Examination Committee must approve the thesis defense in writing by early April (exact date specified by the Graduate Education Office) of the year of graduation. After successful completion of thesis and defense, where possible, students are encouraged to compose a publishable manuscript.

MSPH SPECIALTY TRACKS

ENVIRONMENTAL AND OCCUPATIONAL HEALTH (EOH): The EOH specialty track curriculum includes courses in environmental health, industrial hygiene, environmental chemistry, analytical instrumentation, environmental surveillance, risk assessment, and toxicology. This specialty track is administered by the faculty of the PMB Division of Occupational and Environmental Health Sciences (OEHS), and is guided by a Joint Steering Committee whose membership includes related specialty leaders from Air Force, Army, Navy, and Public Health Service branches. Upon completion of this curriculum, the student will have the fundamental knowledge required to take the National Environmental Health Association (NEHA)

Registered Sanitarian/Registered Environmental Health Specialist (RS/REHS) and/or the Certified Industrial Hygienist (CIH) examinations. The EOH specialization requires a minimum of 100 credit-hours. At least 55 credit hours of coursework (non-research hours) are required and will include 2 credit hours of journal club.

<u>Practicum Experience</u>. The EOH specialization allows for an opportunity to complete a specific field or practicum experience based on supporting agency/service requirements and previous student experience in their respective professional field. This is identical to that required for the MPH degree, which is described in this PMB Handbook and the Department's "Practicum and Independent Project Handbook." MSPH EOH students enroll in PMO942 Environmental/Occupational Health Directed Rotations in the Summer Session, although the hours devoted to the practicum may be spread over several academic quarters (students must maintain a log of activities).

MEDICAL ZOOLOGY (MZ): Students in the MZ specialty track will gain knowledge and understanding of the biology of arthropod vectors and zoonotic reservoirs, arthropod-borne and zoonotic diseases, disease transmission and epidemiology; medical and veterinary impact of arthropod vectors, zoonotic reservoirs, and diseases they transmit on public and global health; how to conduct vector-borne and zoonotic disease risk assessments and how to strategically plan, coordinate, and implement vector surveillance and control operations and disease prevention. The MZ specialization requires a minimum of 120 credit-hours. At least 60 credit hours of coursework (non-research hours) are required and will include a practicum experience and 1-2 credit hours of journal club or seminar in Current Topics in PMB. The coursework hours include electives and directed studies.

<u>Practicum Experience</u>. The MZ specialization requires a specific field or practicum experience. This is identical to that required for the MPH degree, which is described in this PMB Handbook and the Department's "Practicum and Independent Project Handbook." Students take PMO670 Public Health Practicum for MPH students.

MSPH CURRICULUM

EOH Track Required Course

Year One

Pre Fall		Credits
PMO530	Behavioral & Soc Sci	4
PMO540	Intro to Env & Occ Health	4
PMO680	Intro to Public Health	1
PMO940	EOH Dir Studies	1
Fall		
PMO503	Biostatistics I	4
PM0511	Intro to Epidemiology	4
PMO541	Advanced Env Health	3
PMO940	EOH Dir Studies	1
PMO549	Toxicology	3
Winter		
PMO504	Biostatistics II	4
PMO550	Industrial Hygiene and Lab	4
PMO631	OEHS Journal Club	1
PMO940	EOH Dir Studies	1
	Winter Elective*	2-3
Spring		
PMO607	Environmental Chemistry	4
PMO631	OEHS Journal Club	1
PMO940	EOH Dir Studies	1
PMO941	EOH Directed Research	3
	Spring Elective**	2-5
Summer (12-week)	
PMO941	EOH Dir Research	12
PMO942	EOH Dir Rotation****	3

****Summer Electives

PMO553 Industrial Hygiene Field Studies (1)
PMO942 EOH Directed Rotation (3)
EOH Directed Rotation: Practicum requirements will
be based on supporting agency or service requirements
for students with less than 3 years of practical
experience in their field.

Year Two

Fall		Credits
PMO940	EOH Dir Studies	1
PMO941	EOH Dir Research	6
	Fall Elective***	2-4
Winter		
PMO527	Prin of Healthcare Managmnt	2
PMO940	EOH Dir Studies	1
PMO941	EOH Dir Research	9
	Winter Elective*	2-3
Spring		
PMO940	EOH Dir Studies	1
PMO941	EOH Dir Research	12
	Spring Elective**	2-5
Summer (6-week)		
PMO941	EOH Dir Research	3

*Winter Electives

PMO578 Remote Sensing Methods in PH (3) PMO601 Intro to Health Risk Assessment (2)

PMO602 Air Pollution & Waste Mgmt (3)

PMO605 Analytical Instrumentation (3)

PMO1009 Domestic Disast Mgmt & Resp (3)

**Spring Electives

PMO508 Biostatistics III (5)

PMO552 Assessing & Mnging Occ Exposures (4)

PMO599 Intro to Risk Communication (2)

PMO604 Hydrology, Water, & Wastewater (3)

PMO613 PH Issues of Disast in Dev Cntry (4)

PMO1021 Occupational Noice Control (3)

***Fall Electives

PMO528 Global Health I (3)

PMO548 Joint Med Ops & Humanit Asst (3)

PMO555 Industrial Ventilation (4)

PMO577 GIS Methods in PH (2)

PMO584 Health Physics (3)

PMO600 Fundamentals of Physiology (2)

PMO652 Occupational Ergonomics (2)

Note: Electives may vary based on student needs and academic recommendations.

Medical Zoology Track Required Courses

Year One		
Pre-Fall So	ession	Credits
PMO505	Computer Applications in PH	1
PMO530	Behavioral & Social Sci	4
PMO540	Intro to Env. Health	4
PMO680	Intro to Public Health	1
PMO610	General Entomology ^a	1
Fall Quart	er	
PMO503	Biostatistics I	4
PMO511	Intro to Epidemiology	4
PMO565	Vector Biology	2
PMO567	Changing Patterns/Arthropod	4
PMO577	GIS Methods in PH	2
PMO671	Intro to MPH Proj/Pract	1
Winter Q	uarter	
PMO504	Biostatistics II	4
PMO571	Biosystematics in Med Zoo ^b	2
PMO566	Physiological Parametersb	4
PMO578	Remote Sensing Methods ^b	3
	Winter Elective**	
Spring Qu	arter	
PMO564A	Epi & Cntrl of Arboviruses	2
PMO569	Malaria Epi and Control	3
PMO661	Current Topics in PMB	1
	Spring Elective*	
Summer (Quarter	
PMO670	Public Health Practicum	3
PMO964	Research in Med Zoo	15

Year Two		
Fall		
PMO964	Research in Med Zoo	15
	Fall Elective***	
Winter		
PMO964	Research in Med Zoo	15
	Winter Elective**	
Spring		
PMO964	Research in Med Zoo	15
	Spring Elective*	
Summer		
PMO964	Research in Med Zoo	6

*** Fall Electives PMO528
Global Health I (3) PMO541 Advanced
Environmental Health (3) PMO548 Joint
Med Ops and Humanitarian Asst. (3) **

Winter Electives PMO602 Air Pollution

and Waste Management (3)

PMO605 Analytical Instrumentation (3)

PMO1009 Domestic Disaster Mgmt & Response (3)

* Spring Electives

PMO561 Medical Parasitology (3)

PMO599 Intro to Risk Communication (2)

PMO604 Hydrology, Water, and Wastewater (3)

PMO613 PH Issues of Disasters in Devel Countries (4)

PMO810 Integrated Pest/Vector Mgmt (yr 2) (2)

MASTER OF HEALTH ADMINISTRATION AND POLICY (MHAP) DEGREE PROGRAM

The vision of the Master of Health Administration and Policy (MHAP) is to be the premier provider of health policy and administration education for the Military Health System, federal health policy partners and Allied Host Nation personnel through a sustained commitment to leadership in academics, research and scholarship. The program provides an innovative approach to graduate education by offering access to top policy-making federal government agencies, think-tanks, universities, and speakers in the National Capital Area. Graduates of this program are uniquely situated for major leadership roles in health administration and policy.

The MHAP consists of both a didactic and residency phase, each one year in length. The first (didactic) year is composed of 5 academic quarters. During this year, students engage in an in-depth approach to the study of health policy, applied science, and leadership. The didactic year concludes with an integrative capstone poster presentation. The second (residency) year of the program consists of an administrative residency in the National Capital Area and is meant to provide practical experience in health administration, policy, and leadership. Preceptors along with the Residency Director of the MHAP collaborate to provide a customized residency experience that meets both the requirements for graduation and the professional development needs of the individual resident. Mentoring and guidance of the student is a key component of the residency phase of the program, not only to assess performance, but to provide academic oversight of the student's Graduate Management Project. Potential residency opportunities are available at sites including major tertiary healthcare facilities, major research facilities, DoD and federal health / policy agencies, and policy think-tanks.

MHAP COMPETENCY DOMAINS

Summary of MHAP Competency Model

Our competency model is based on that of the National Center for Healthcare Leadership, with two additional domains. Our six domains are:

<u>Policy Domain</u> - Allows for an understanding of policy analysis and the role of different actors in the policy arena. Students will gain knowledge of policy formulation and the application and communication of policy tools in decision-making scenarios that add value to federal sector organizations. This includes application of the core elements of policy analysis to key issues in U.S. health services and public health policy; description and critical assessment of the political, legal, economic, information, financial and /or social frameworks of U.S. health policy; development of policy options for the achievement of an agency or program's objectives; and comparative analysis of legislative guidelines, administrative regulations, judicial opinions, and agency rulings.

<u>Readiness Domain</u> - Synthesizes and characterizes the inter-relationships between the Department of Defense, federal health policy partners and Host Nations as employing unique and diverse capabilities that may augment one another for the improvement of health, health systems and policy in a myriad of environments. Students will be able to assess and discuss the roles and relationships between interagency partners, international organizations and Host Nations through a culture that finds strength in diversity and embraces transparent communication; evaluate the impact and value of missions, programs

and policies on populations, organizations and/or desired outcomes; illustrate the different types of diplomacy and bases of power that may affect global health policy decision-making; and understand and characterize humanitarian assistance, disaster relief and contingency operations, structures and policy.

<u>Transformation Domain</u> - This domain focuses on visioning, energizing and stimulating a change process that coalesces communities, patients and professionals around new models of healthcare wellness. This encompasses in-depth work in achievement orientation, analytical thinking, community orientation, financial skills, information seeking, innovative thinking, and strategic orientation.

<u>Execution Domain</u> - Provides the foundation for translating vision and strategy into optimal organizational performance including concepts of accountability, change leadership, communication, collaboration and coordination, impact and influence, information technology management, initiative, organizational awareness, performance measurement, process management, and organizational design.

<u>People Domain</u> - Involves the creation of an organizational climate that values employees from all backgrounds and provides an energizing environment. Includes the leader's responsibility to understand his or her impact on others and to improve his or her capabilities as well as the capabilities of others through a detailed understanding and application of human resources management, interpersonal understanding, professionalism, relationship building, self-confidence, self-development, talent development, and team leadership.

<u>Leadership Domain</u> – Students understand the art and science of leadership in health administration and policy making and are prepared to take on the role of health leader.

MHAP Residency

Upon completion of the didactic year, students will enter a 12-month approved administrative residency designed to develop practical experience in health administration, policy, and leadership. Preceptors along with the MHAP Residency Director will team to provide a customized residency experience that will meet not only the requirements for graduation, but also the professional development needs of the individual resident.

The objectives of the MHAP Administrative Residency program are to enable students to: (1) develop the leadership and management skills necessary to lead healthcare systems in an ever-changing environment, (2) develop policy analysis skills and comprehensive expertise to influence the strategic policy decision required in federal healthcare, (3) obtain (synthesize and apply) practical information and knowledge about health systems leadership and policy, (4) produce a Graduate Management Project (GMP) that makes a measurable contribution to the effective delivery of health services, and (5) build lasting professional relationships.

MHAP Graduate Management Project. As part of the residency year students are required to complete a GMP. The GMP demonstrates the student's ability to synthesize and integrate the fundamental concepts and principles of health administration and policy leadership. It should be directly linked to the experiences derived from the administrative residency and give students the opportunity to draw on the core disciplines and competencies taught throughout the didactic year. Students will utilize the MHAP

educational foundation to assess health administration and policy problems, create sound, practical alternatives, and evaluate the effectiveness of programs and policies.

Subject matter for the GMP may encompass, but is not limited to global health policy and humanitarian assistance, health finance / economics, health policy, health systems support and delivery, organization and leadership, or population health. Throughout project preparation the faculty and Preceptor will place a special emphasis on applied, publishable research.

The final GMP will include an oral presentation and a written paper. The presentation will be held with the resident's Preceptor and senior staff along with invited MHAP faculty.

MHAP CURRICULUM

Year One					
Pre-Fall	Credits				
PMO401	Sem in H Admin & Policy	1			
PMO530	Behav & Social Sciences	4			
PMO1010	Diversity & Leadership	2			
PMO592	Health Information Technology	2			
Fall					
PMO103	Fundamentals of Healthcare Finance	3			
PMO526	Health Systems	4			
PMO528	Global Health I	3			
PMO1011	Quant Anal & Methods for Hlth Ldrs & Exec I	2			
Winter					
PMO401	Sem in H Admin & Policy	2			
PMO523	Fundam US Health Policy	3			
PMO527	Princ US Healthcare Mgmt	2			
PMO535	Law of US Healthcare	2			
PMO598	Health Economics	3			
PMO1012	Quant Anal & Methods for Hlth Ldrs & Exec II	3			
Spring					
PMO401	Sem in H Admin & Policy	1			
PMO529	Healthcare Finan Mgmt	2			
PMO532	Qual Assessm & Improv	2			
PMO533	Decisions in Health Serv	2			
PMO576	HR Mgmt in Healthcare	3			
PMO991	Mangerial Epidemiology	2			
PMO1007	Adv Sem in Global Health	3			
Summer					
PMO401	Sem in H Admin & Policy	2			
PMO998	Foundations of Leadership	1			
PMO1005	Strategic Plan & Marketing for Healthcare Sys	3			
	Total Hours: 69				

Year Two				
Pre-Fall		Credits		
PMO1015	MHAP Residency*	12		
Fall				
PMO1015	MHAP Residency*	12		
Winter				
PMO1015	MHAP Residency*	12		
Spring				
PMO1015	MHAP Residency*	12		
	MHAP Projects Due fo	r Submission		
Summer				
PMO1015	MHAP Residency *	12		
Total Hours: 60				

^{*}Requires successful completion of Organizational Learning Objectives mutually reviewed by Preceptor and MHAP Faculty.

INDEPENDENT PROJECT GUIDELINES

The satisfactory completion of an independent project is an academic requirement for the MPH or MTM&H degree. The independent project represents a "culminating experience" and should demonstrate a student's ability to synthesize, integrate, and apply the knowledge and skills acquired through course work in the core disciplines of public health. For example, a student will identify a public health problem or issue; formulate a focused research question; conduct a systematic review of the scientific literature; develop a research protocol using the appropriate study design; obtain the necessary institutional assurances and approvals; collect data; select and apply appropriate analytic techniques; and interpret and communicate study findings, including public health significance or policy implications. Students are encouraged to expand their horizons and stretch their capabilities at every opportunity. The submission of a manuscript for publication is encouraged.

At the beginning of the academic year, each student is assigned an **Academic Advisor** who is responsible for overall guidance on matters pertaining to curriculum planning and meeting all of the master's degree program requirements. Students should meet with their Academic Advisor as soon as possible upon arrival at USU and at least once per academic quarter to discuss their proposed curriculum. In the process of selecting an independent project, students should start by discussing their areas of interest and ideas with their Academic Advisor. Ideally, students should decide on a project topic, draft a research question, and select a **Project Mentor** by the end of the Fall Quarter. Past MPH students are unanimous in their recommendation for an early start to the independent project. The primary Project Mentor should be a public health professional and USU faculty member or individual with outside affiliation with the necessary subject-matter expertise to supervise the student's work on his/her independent project. An Academic Advisor may serve as a Project Mentor for any student. If the primary Project Mentor is not a USU faculty member, the student is encouraged to recruit a Co-Project Mentor from among the USU faculty.

Once an independent project topic has been selected, a brief description of the proposed project (the preproposal) should be submitted to the Director of Graduate Research and Practicum Programs. This usually occurs around the middle of the Winter Quarter. All pre-proposals will be reviewed for appropriateness (e.g., research involving human participants or animal care) and students will be given timely feedback. Students and their Project Mentors should meet regularly to develop the protocol, complete necessary forms to submit for institutional assurances and approvals, discuss human participants in research issues (if applicable), and/or seek advice or assistance from other faculty, as appropriate. Students are encouraged to combine their practicum activity with their independent project, if at all possible. This will prove to be a time-efficient way of meeting the two separate requirements.

Federal and USU regulations for research involving human participants are applicable to all PMB student projects, including masters and doctoral level research protocols. It is the student's responsibility to submit the appropriate University forms along with the study proposal to the USU Office of Research (REA) for a determination of whether or not the research activity is considered to be human research and subject to review by the Institutional Review Board (IRB) prior to beginning work on the study. Some studies may receive an expedited administrative review. The University is held accountable for reviewing all human-use protocols prior to the conduct of the study, as well as continuing reviews on an annual basis thereafter, if the study continues for more than one year.

Once all necessary approvals have been obtained, the Academic Advisor and/or the Project Mentor may suggest additional course work and provide guidance on timelines for project deliverables: final proposal, oral presentation, and draft and final written report, among others. Students are also encouraged to draw upon the expertise of additional PMB faculty members as issues related to the project arise (e.g., statistical consultation). When the practicum experience is combined with the independent project, the student will work with both the Project Mentor and a **Practicum Site Preceptor** to develop learning objectives for the practicum component.

Students receive guidance on the design, development, and implementation of their MPH independent project throughout the year in three consecutive seminar courses, PMO671 Introduction to the MPH Project and Practicum, PMO672 MPH Project/Practicum Design and Development, and PMO673 MPH Project/Practicum Implementation and Evaluation, collectively known as the "PIP" series. Each course is one credit (pass/fail) for a total of three credits, and all three courses are required for MPH/MTM&H students.

Students are also required to register for PMO674 MPH Independent Project in the Summer Session just prior to graduation. This course provides a means for students to receive a letter grade and three credit hours for the final products of the required independent project. The primary Project Mentor reviews draft reports, provides feedback to the student, and assigns a grade for both the project proposal and the final written report. A secondary reviewer from among the PMB faculty will also assign a grade to the project. A panel of PMB faculty members will grade the oral presentations. Grades for the following components will constitute the final grade for PMO674: the proposal (15%), the oral presentation (35%), and the final written report (50%).

Students whose efforts on their independent projects exceed the standard three credit hours for PMO674, plus the cumulative three credits for the PIP series, may enroll in either a tutorial, independent study, or directed reading/research course(s) for a variable number of credits during any academic quarter. The Project Mentor determines the number of credits using the general guideline that an average of three hours a week for 12 weeks equals one credit hour. The courses listed below may be used for this purpose with the permission of the designated Course Director (usually the Project Mentor):

PMO701Independent Study in Biostatistics

PMO760Tropical Medicine Research Tutorial

PMO811Independent Study in Epidemiology

PMO830Independent Study in Social and Behavioral Science

PMO862Global Health Independent Study

PMO881 Military Preventive Medicine Study Topics

PMO911Research in Epidemiology

PMO926Health Services Administration Directed Research

PMO940Environmental/Occupational Health Directed Studies

PMO941Environmental/Occupational Health Directed Research

PMO960Directed Laboratory Research

PMO962 Directed Clinical Research

PMO963 Directed Field Research

PMO964Research in Medical Zoology

PMO970Directed Studies in Preventive Medicine

Timeline for project deliverables:

- 1. The pre-proposal for the independent project consists of a brief description of the study or project, its public health significance, a draft research question, and an estimated timeline for project completion. Students should also have completed a preliminary literature search. This document is submitted to the Director of Graduate Research and Practicum Programs during the Fall or Winter Quarter.
- 2. Each student should identify a team of faculty advisors (e.g., epidemiologist, biostatistician, among others) depending on your area of research interest. Students should seek advice or consultation from these faculty members, as needed, beginning with the earliest phases of the project. Students need to stay on a timeline to complete all preparatory activities (e.g., literature search, institutional approvals) so that work on the project itself can ideally begin no later than the beginning of the Spring Quarter. This will be very important for those students actually collecting data for a study involving human participants.
- 3. A proposal for the independent project is submitted to the Project Mentor for signature and subsequently to the Director of Graduate Research and Practicum Programs. The proposal is a four to five-page description of the project including study design, sampling methods and sample size or power calculations, and data sources and/or survey instruments, and should include references. Notice of project approval from the Office of Research must be received by the student before definitive work begins on the project.
- 4. Oral presentations of the independent projects (10 minutes with five minute for questions) will be scheduled during the summer session towards the end of the academic year. All students are expected to attend all of the presentations, and PMB Department faculty, preceptors from outside organizations, as well as other guests, will be invited to attend.
- 5. A final written report must be submitted to the Project Mentor and the Director of Graduate Research and Practicum Programs for distribution to a secondary faculty reviewer approximately three weeks prior to graduation.

PRACTICUM EXPERIENCE GUIDELINES

The practicum experience is a requirement for the MPH/MSPH degree, separate from the independent project. The Council on Education for Public Health (CEPH), one of the national accrediting bodies for our Graduate Programs, provides the following guidelines:

"The [graduate] program must provide opportunities for professional degree students to apply the knowledge and skills being acquired through their courses of study. Practical knowledge and skills are essential. A planned, supervised, and evaluated practice experience is considered a very important component of a public health professional degree program. These opportunities should be arranged in cooperation with as wide a range of community agencies as possible, including especially local and state public health agencies in the program's geographic area. Individual waivers should be based on well-defined criteria; the possession of a prior professional degree in another field or prior work experience that is not closely related to the academic objectives of the student's degree program would not be sufficient reason for waiving the practice requirement."

A public health practicum is considered to be an essential component of the USU MPH/MSPH 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. The opportunities in this geographic area are rich and varied, and the potential for personal and professional reward is great. Because this is an educational activity, the practicum is expected to meet explicit learning objectives.

To fulfill the MPH/MSPH 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). The practicum experience may involve research, clinical practice, program/service delivery, or policy-making settings. Examples of appropriate types of experiences include, but are not limited to, the following: observation of day-to-day operations within a public health agency to determine how important public health issues are identified and prioritized; participation in the development of public health educational materials, reports, or survey instruments at a government or private agency; primary data collection, database development for a health surveillance system, or an outbreak investigation; management system or program evaluation; or public health policy development. A proposal for the practicum experience, jointly prepared by the student and the Practicum Site Preceptor, includes a minimum of three learning objectives and should be submitted by the end of winter Quarter. At the conclusion of the practicum experience, the student and the Site Preceptor will complete and submit separate evaluation forms.

To receive academic credit for the practicum, students register for PMO670 Public Health Practicum, MSPH students register for PMO942 EOH Directed Rotations in the Summer Session, although the hours devoted to the practicum may be spread over several academic quarters (students must maintain a log of activities). Students receive a total of three credits (pass/fail) for their practicum activity after the final report plus two evaluation forms have been submitted to the Director of Graduate Research and Practicum Programs. MTM&H students register for PMO560 Tropical Medicine Practicum. The number of credits awarded will be determined by the MTM&H Program Director, based on the duration and scope of the rotation. A minimum of 3 credits is required to meet the degree requirements. Students are directed to discuss this with the Program Director prior to course registration.

Students are referred to the Handbook on Independent Projects and Practicum Experience (under separate cover) for more complete information, guidelines, and sample forms, or contact the Director of Graduate Research and Practicum Programs (Office: A1040G, Phone: 301-295-1975; Fax: 301-295-6282; E-mail: tomoko.hooper@usuhs.edu). EOH MSPH students must coordinate with their academic advisor(s).

DOCTORAL PROGRAMS

PMB DOCTORAL PROGRAMS

The Department of Preventive Medicine and Biostatistics offers three doctoral programs. The Doctorate in Public Health program prepares individuals for leadership roles in research, teaching, or policy development in the field of public health. Two Ph.D. programs are offered: Medical Zoology, for students with a master's degree in entomology or parasitology who wish to pursue further study in field-oriented medical parasitology or vector biology; and Environmental Health Sciences, which includes environmental health science research particularly in the area of military-relevant exposure assessment. While each PMB doctoral program has specific requirements detailed in later this handbook, general requirements apply to all.

Program and Course Requirements

The minimum residency requirements for a doctoral degree will be 36 months of full-time graduate study. All requirements for a doctoral degree must be completed no later than seven years after initiating the program of graduate study at USU. Formal course work, participation in PMB teaching programs as teaching assistants, research fellows or senior research fellows, directed research, and participation in other academic activities in approved programs of graduate study are all components of the pre-doctoral graduate education program. Academic credit will be given for participation in these activities. Full-time status for trainees in graduate education programs will be defined as 12 or more credit hours per academic quarter. The minimum requirement for formal course work will be 48 credit hours, and the minimum requirement for total academic credit will be 144 credit hours.

Qualifying Examination

The qualifying examination for each approved program of study shall be conducted and graded by a committee consisting of a minimum of four graduate faculty members at the rank of assistant professor or above. Three members must be from the PMB department. The fourth member may hold either a faculty position in the PMB department or in another department at USU or have an appointment outside of USU. Additional members if desired, may either hold a faculty position at USU or have an appointment outside of USU. The majority of the Committee must always have full-time appointments at USU and be members of the Department granting the degree. The Examination Committee shall be appointed by the Director of PMB Doctoral Programs with the approval from the PMB Department Chair and the Associate Dean of Graduate Education.

Advancement to Candidacy

Aspirants for a PMB doctoral degree must complete all requirements for advancement to candidacy no later than two years of attendance after initiating a program of study at USU. The requirements for advancement to candidacy include the minimal requirement of 48 credit hours of formal course work at the graduate level, a cumulative grade point average of 3.0 (B), successful completion of the qualifying examination and formation of a thesis committee. Waivers to the two-year requirement are considered in exceptional cases and be recommended by the Director of PMB Doctoral Programs and approved by the Associate Dean of Graduate Education. Waivers may not to exceed one year. Final approval of advancement to candidacy rests with the Associate Dean for Graduate Education acting on the recommendation of the student examination committee and the Director of PMB Doctoral Programs.

Dissertation

For the purposes of the PMB doctoral programs the terms "dissertation" and "thesis" are considered interchangeable. The thesis or dissertation is defined as an extensive written treatment of a public health

topic based on the original scholarly research. A dissertation is required of all aspirants for a PMB doctoral degree. An acceptable alternative pathway is the manuscript-based thesis if agreed upon by the candidate and his or her thesis committee. The Dissertation Committee, also known as the "Thesis Committee" or "Thesis Advisory Committee" advises the doctoral candidate and helps guide his or her research.

Dissertation Defense

The Dissertation Examination Committee is responsible for reading the dissertation, and certifying its acceptability as to scope and quality, and conducting the defense of the dissertation. In most cases, the candidate's Dissertation Committee also serves as the Dissertation Examination Committee; however the PMB Department and Associate Dean of Graduate Education may appoint other faculty to the Dissertation Examination Committee if it is in the best interest of the student or the University. The defense of the dissertation, under the direction of the Dissertation Examination Committee Chair, consists of an oral presentation of the dissertation and response to questions. A private defense (involving the candidate, his or her dissertation examination committee members and invited guests) and a public defense using a seminar format are required.

DOCTOR OF PUBLIC HEALTH

THE DRPH PROGRAM IS NO LONGER ACCEPTING NEW STUDENTS. THE INFORMATION BELOW APPLIES TO CURRENT STUDENTS, AND WILL REMAIN IN EFFECT UNTIL THE LAST CURRENTLY ENROLLED STUDENT GRADUATES FROM THE PROGRAM.

The DrPH is an advanced professional degree intended to prepare graduates for public health leadership and practice-based research. The USU curriculum integrates the five core areas of public health to develop competencies in the domains of leadership, advocacy, critical analysis, communication, community/cultural orientation, management, and professionalism and ethics. Practical public health experience is also central to the USU DrPH program. USU students have unique opportunities to work with a variety of public health agencies due to its centralized location near Washington DC. Students receive broad exposure to the major public health issues confronting the U.S., as well as more global issues, and they learn to systematically and critically evaluate the scientific literature, identifying the inherent strengths and weaknesses of various sources of data. The PMB Doctoral Programs Subcommittee (DPS) provides advice and recommendations on all issues related to doctoral student admissions, grading and remediation of doctoral students, and overall program planning of PMB doctoral programs.

Active duty military medical, dental, and veterinary officers in the Uniformed Services or other Uniformed Services officers with doctoral degrees in a health-related field receive preference for admission to this program. Non-uniformed applicants will be considered for admission on a space-available basis, with preference given to health professionals sponsored by U.S. government agencies. A graduate degree that is relevant to public health should be considered a prerequisite for admission to the DrPH program. In addition, the minimum requirements include an outstanding academic record, some health-related work or volunteer experience, and a demonstrated interest in pursuing a public health career. Exceptions to the post-baccalaureate degree requirement will be considered on a case by case basis. Typically, students without a prior MPH degree will first be required to enroll in the USU MPH program, and, upon completion of the MPH degree, apply for admission into the DrPH program.

Course of Study: The DrPH program normally requires a minimum of three years of full-time study. Students must earn a grade of "B" or better in every required course. Students are expected to complete at least 144 credit hours, 48 of which must be formal, from graded courses.

The DrPH program of study is structured of the following components:

- Basic academic foundation consisting of the MPH curriculum
- Additional required advanced core courses and electives
- Attending seminars and journal clubs
- Minimum of two teaching-assistant assignments
- Oral and written qualifying examination
- Practicum
- Dissertation

Students transferring into the DrPH program from other institutions may apply up to 24 academic credits of comparable graduate level courses to meet the MPH and DrPH requirements. The individuals

responsible for this approval include the student's advisor, The Director of PMB Doctoral Programs, the Director of PMB Graduate Programs, and the Associate Dean for Graduate Education. The grades from transferred courses will not contribute to the overall grade point average for coursework completed at this University. Students who have previously completed the MPH program at this University may apply up to 24 credits from elective courses toward the required 48 credits of formal coursework. Academic Advisor: Based on interaction with the applicant prior to acceptance into the program the DPS identifies a willing and logical advisor. Upon mutual acceptance into the program, The Director, PMB Doctoral Programs, appoints an Academic Advisor for each incoming DrPH student. The student working closely with his/her academic adviser will determine which courses will be taken during each academic quarter.

DrPH Curriculum (144 minimum quarter hour credits)

Year One					
Pre-Fall	Credits				
PMO530	*Behav Soc & Sciences	4			
PMO540	*Intro to Env Health	4			
PMO505	Computer Applications in PH	1			
PMO680	Intro to Public Health	1			
Fall					
PMO503	*Biostatistics I	4			
PM0511	*Intro to Epidemiology	4			
PMO526	*Health Systems	4			
PMO528	Global Health I	4			
PMO541	*Advanced Env. Health	3			
PM0671	Intro to MPH Proj/Practicum	1			
PMO971	PMB Doctoral Journal Club	1			
Winter					
PMO502	Introduction to SAS	1			
PMO504	*Biostatistics II	4			
PMO512	*Epidemiologic Methods	4			
PMO523	*Fundamentals of U.S. Healthcare Policy	3			
PMO531	*Program Plan & Devel	3			
PMO672	MPH Proj/Prac Design Dev	1			
PMO971	PMB Doctoral Journal Club	1			
Spring					
PMO508	*Biostatistics III	5			
PMO513	*Advanced Epi Methods	4			
PMO991	Ethics in Public Health	3			
PMO971	PMB Doctoral Student JC	1			

Summer				
PMO998/P	Foundations of Leadership OR	1 to 2		
MO1010	Diversity and Leadership			
PMO1005	Strategic Plan & Marketing for	3		
	Healthcare Systems	Ŭ		
	Year Two			
Fall		Credits		
PMO577	Intro to GIS Methods in PH	2		
PMO971	PMB Doctoral Journal Club	1		
Winter				
PMO598	Health Economics	3		
PMO527	Principles of Healthcare Mgmt	2		
PMO971	PMB Doctoral Journal Club	1		
Spring				
PMO533	Decision Making in Health Services	2		
PMO599	Introduction to Health Risk Communication	2		
PMO971	PMB Doctoral Student J Club	1		
As offered				
IDO704	Ethics and the Responsible Conduct of Research	1		
	Advanced Biometrics Tutorial -OR-			
PMO701	equivalent course in data	3+		
	management			
PMO691	Doctoral Stud Teaching Prac	2+		
Courses m	arked with a () must be taken prior to	the written		
examination	···			
All				
PMO675	DrPH Public Health Practicum	1 to 6		

Attendance at Departmental Seminars: PMB seminar attendance is strongly recommended for all DrPH students and candidates while they are in residence at the USU campus. Doctoral students can register for course credit for attendance at all the departmental seminars. Attendance at seminars conducted by other departments, the Packard Lecture and other University events is strongly encouraged.

Teaching Assistant Assignments

DrPH students are required to serve as teaching assistants (TA) annually (minimum 2 times) after completing their first year of the program. At least one of their TA assignments should be in a 4 credit MPH core course (i.e. PMO503, PMO511, PMO526, PMO530, or PMO540). The role of the TA will vary by course content but TAs are expected to make significant and measurable contributions to the courses in which they participate, sharing responsibility with the Course Director. Course Directors are responsible for developing specific learning objectives for the TA and for articulating the responsibilities of the TA.

The following are examples of the ways in which Teaching Assistants may contribute to teaching and learning:

- Maintain class Sakai site for student and lecture postings.
- Preview lectures, lecture notes, tests, and laboratory sessions
- Prepare and present lectures; lead labs or small group discussions
- Prepare and grade quizzes, examinations, and papers
- Assist students who need extra instruction
- Provide feedback to the Course Director to improve the course

Practicum

The purpose of the DrPH practicum is to observe senior practitioners and researchers in public health, to engage in policy analysis and development, and to develop leadership and research competencies. Students are required to devote at least 240 hours to a practicum experience prior to graduation. The practicum will typically be conducted after the student reaches DrPH candidacy. With permission of the student's advisor and PMB doctoral programs director, the practicum may be conducted jointly with the development of the student's dissertation proposal. Forms, requirements and more details about the practicum are available from the PMB doctoral programs director.

The **DrPH Qualifying Examination** is composed of a written and an oral examination. The overarching intent of the qualifying examination is to determine if the doctoral student has developed the knowledge and skills needed for the application and synthesis of public health research.

Written Qualifying Examination

The Doctoral Examination Committee (a subcommittee of the Doctoral Programs Subcommittee of the PMB Graduate Affairs Committee) is responsible for developing and administering the DrPH written qualifying examination. The written exam will be given once a year typically between Spring and Summer quarters. Under special circumstances the committee may decide to give the exam at alternate times. The written exam will be designed to allow the students to demonstrate their mastery of the five core areas of public health and the seven domains through integrated scenario/vignette style essay questions. The length and structure will be determined by the Committee, but will typically be an open-book take-home exam administered over several consecutive days. The committee will assign a score of Pass (80% or higher), or Fail to the overall exam. Students receiving a passing score on the written examination are then eligible to sit for the oral portion of the qualifying exam.

A student receiving a score of "Fail" on the written exam will be offered the opportunity to take a second comprehensive written examination at the next time the exam is offered by the committee. The Doctoral Exam Committee will provide the student with advice as how they can better prepare for re-taking the

exam to address their areas of weakness. A second examination will be graded as pass or fail. Students receiving a second failing grade will be disenrolled from the DrPH program.

Oral Examination Committee

The student will request the formation of an oral qualifying examination committee after successful completion of all core courses in the DrPH program and the written qualifying examination. The composition of the committee is described above. Students may begin the qualifying committee appointment process when they are within twelve (12) or fewer course credits of completing all required courses. The student should meet with his or her committee members as needed prior to the oral examination.

Oral Qualifying Examination

After passing the written exam, on a date and time agreed upon by the student and the student's oral examination committee, the student will take the oral qualifying examination. All committee members and the PMB doctoral programs director may attend in person, telephonically, or virtually, and the examination should be scheduled so that the at least the majority of members can attend in person.

The examination will consist of a presentation by the student centering on the basic research proposal he/she intends to conduct for the dissertation, followed by questions from the committee. At least two weeks prior to the examination the student will provide committee members with a copy of his/her research proposal. At least one week prior to the examination to the student will provide a copy of the presentation he/she intends to present to the committee as part of the oral qualifying exam. The proposal and presentation should be developed by the student with minimal input from their advisor.

The committee will ask questions pertaining to the proposal, the presentation, issues remaining from the written examination, or any other items or topics the Chair considers germane to the student's training and research. The Doctoral Programs Director or his/her designate will attend the meeting as an observer and to clarify any administrative questions that arise. The Director may not ask questions of the student.

The committee must decide if the proposed research is of sufficient scope and quality for the student to advance to candidacy, and may assign a score of Pass, Provisional Pass, or Fail. A passing score means the committee recommends the student for doctoral candidacy. A provisional pass indicates that a student has demonstrated ability to advance to candidacy in almost all aspects. The student may advance to candidacy after presenting to the committee, orally or in writing, any requested changes or clarifications. Students who fail will be offered one additional opportunity to re-take the oral exam. A score of "Fail" on the second oral exam means the committee recommends the student's disenrollment from the DrPH program.

Upon the successful completion of the oral examination, the candidate in consultation with their advisor and taking into account comments of the exam committee will finalize and submit the formal research protocol to the Office of Research, and if required, to the Institutional Review Board. Prior to submission, all the members of the candidate's committee must agree that the research protocol is consistent with the approved proposal. Students may begin their formal research program once the protocol is approved by the Office of Research and, if required, the Institutional Review Board. Prior approval for research by another institution does not automatically constitute approval for this research to be done as a thesis project at USU.

The <u>Dissertation Advisory Committee</u> is typically the same as the oral examination committee. Modification to the committee membership must be approved by the Director of Graduate Programs and the Associate Dean for Graduate Education. The dissertation committee will consist of no fewer than four members. Three of these committee members must have a doctoral degree, an academic rank of

Assistant Professor or above, and a faculty appointment in the PMB Department. The thesis advisor is also a member of the committee and can serve as one of the required PMB members, if appropriate. The most senior PMB faculty member (excluding the thesis advisor) will serve as Chair of the thesis advisory committee. Additional members may hold a faculty appointment at USU or have an equivalent appointment outside of USU. Members from outside of USU need the consent of the thesis advisor to serve on the thesis committee. At least one member of the committee must be a USU faculty member, but not have a primary or secondary appointment of any kind in the PMB Department. Students are strongly encouraged to have five faculty members on their committee.

Advancing to Candidacy

Students will advance to candidate status within the DrPH program once they have successfully passed both the written and oral components of the DrPH Qualifying Examination, successfully completed 48 credit hours of formal course work (including all core courses) with a cumulative grade point average of 3.0 (B), and formed a Dissertation Committee.

Ongoing Progress

At least twice per academic year, the DPS Chair will contact faculty advisors for updates on each student's progress. This will allow for timely discussion of any students who appear to be at risk. If a majority of the members of the DPS feels that the student is not making sufficient progress, the student is formally placed on probation.

Thesis/ Dissertation Requirement

The final completed thesis must be presented and defended both privately and publicly. The DrPH dissertation must be based on original research, be worthy of publication, and acceptable to University Graduate Education Office and the University Board of Regents. The format and requirements for the dissertation are described in the USU Thesis and Dissertation Manual, posted on the Graduate Education Office website (http://www.usuhs.edu/graded/currentstudents.html).

DOCTOR OF PHILOSOPHY IN ENVIRONMENTAL HEALTH SCIENCES

The PhD degree program in Environmental Health Sciences (EHS) offers military students extensive classroom and research experience in the field of environmental health sciences and in selected subspecialties concerned with the health effects of biological, chemical, physical, and radiological hazards encountered in air, soil, and water. Completion of this doctoral degree program requires both independent scholarship and original research. An individualized program of study will be designed to meet the needs of each doctoral student. Graduates will have the training and experience necessary to enter research and/or operational careers in the environmental health sciences and have the expertise to support military operations worldwide.

Applicants will be accepted as full-time students and a minimum of three years of study in residence is required. Students must complete all program requirements (including defense of the dissertation) within 7 years from the start of the program.

Required Committees

Advisory Committee

The Director of PMB Doctoral Programs, in consultation with the Director, PhD EHS Program, will appoint an Advisory Committee for each PhD student within his/her first year of study. The Committee will consist of at least four members, with doctoral degrees, of the faculty (a chairperson, an academic advisor, and two others) to oversee and direct the student's program. When formed, the Advisory Committee, in concert with the student, will prepare an individually tailored program of study (including all degree requirements) and submit it for approval to the PMB Department Chair, through the Director of PMB Doctoral Programs, and forward it to the Associate Dean for Graduate Education. Any changes made by the Associate Dean, Program Directors, or PMB Chair will be in consultation with the student and his/her Advisory Committee. This Advisory Committee Report, as amended, will be regarded as the statement of program requirements.

Qualifying Exam Committee

The Qualifying Examination Committee for PhD degree students will be composed of at least four faculty members holding doctoral degrees and the rank of Assistant Professor or above. Three members will be from the PMB Department; the fourth member may be a PMB faculty member, faculty from another USU Department, or faculty from outside the University. The Qualifying Examination Committee is appointed by the Director of PMB Doctoral Programs, with the approval from the Associate Dean of Graduate Education.

Dissertation Advisory Committee

Each EHS doctoral candidate must form a Dissertation Advisory Committee composed of at least four persons with doctoral degrees. At least three of these must be USU faculty members at the rank of Assistant Professor or above with a primary appointment in the Department of Preventive Medicine and Biostatistics. A fourth member of this Committee will be from another Department at USU. Additional members may either hold a faculty position at USU or have an appointment outside of USU. The majority of the Committee must be full-time faculty of the PMB Department. Dissertation Committee appointments are recommended by the Director of PMB Doctoral Programs and approved by the Associate Director of Graduate Education using USU form 641, Thesis Advisory Committee Form.

Course of Study

All students/candidates must complete a total of at least 144 credit hours. A minimum of 48 credit hours must be devoted to formal coursework, as this is the minimum number of classroom hours needed to acquire the knowledge base necessary to support the research phase. The minimum number of credit hours devoted to research (PMO 941- Directed Research) is 96 credit hours. Students who have not yet completed all course requirements by the end of their 3 year in-residence period must continue to enroll in PMO 941 – Directed Research (12 credits/quarter) until all program requirements are complete.

Each doctoral student must work closely with his/her Advisory Committee to plan both the overall course of study and the dissertation research. Candidates who are active duty military members have the ability to tailor their coursework and research to meet the specific needs of their sponsoring Uniformed Service.

	CORE REQUIREMENTS	
Course #	Course Title	Credits
PMO 504	Biostats II ^{1,2}	4
PMO 508	Biostats III	5
PMO 512	Epidemiological Methods ^{1,2}	4
PMO 541	Advanced Environmental Health ¹	3
PMO 631	OEHS Journal Club (Years 1: Winter and Spring)	2
PMO 691	Teaching Practicum (Fall quarter of Years 2 and 3)	6
PMO 971	Doctoral Journal Club (Years 2 & 3: Fall)	2
PMO 794	Scientific Ethics and the Responsible Conduct of Research	1
PMO 881	Principles of Scholarly Writing (Year 2)	3
	Total Core:	30

¹The first course in the series (Biostats I, Epidemiology I, and/or Introduction to Environmental Health) can be waived in some cases. However, waivers will not be granted if the student has little or no academic background or practical experience in the topic area.

²Neither Biostatistics I nor Epidemiology I will be waived if the student has not completed an equivalent (or higher) course within the past 5 years.

Course Option	ns for Environmental Health Focus Area	
Course#	Course Title	Credits
PMO 519		2
PMO 549		3
PMO 601		2
PMO 602		3
PMO 604		3
PMO 605		3
PMO 606		4
Select at least 12 credits from		
Environmental Health Focus Area		
Select at least 6 credits from Epidemiology Electives		

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Course Option	ons for Occupational Hygiene Focus Area	
Course #	Course Title	Credits
PMO 519	Occupational and Environmental Epidemiology	2
PMO 521	Industrial Hygiene & Laboratory	4
PMO 522	Assessing and Managing Occupational Exposures	4
PMO 549	Principles of Toxicology	3
PMO 553	Industrial Hygiene Field Studies	1
PMO 555	Industrial Ventilation	4
PMO 584	Introduction to Health Physics	3
PMO 605	Analy Instrumentation Methodologies in Enviro Health	3
PMO 652	Occupational Ergonomics	2
PMO 1021	Occupational Noise Control	3
Select at least 12 credits from		
Occupational Hygiene Focus Area		
Select at least 6 credits from		
Epidemiology Electives		

	Epidemiology Electives	
Course #	Course Title	Credits
PMO 513	Advanced Epidemiological Methods	4
PMO 516	Design and Analysis of Epi Studies	3
PMO 522	Meta Analysis	1
PMO 595	Intro to Complex Sample Survey Analysis	2
PMO 634	Public Health Surveillance	1
PHD 833	Analytic Approaches to Data Analysis and Interpretation	3

	Research Requirements	
Course #	Course Title	Credits
PMO 941	Directed Research	96

Elective Courses

In addition to PMB courses offered by the Department, several other courses offered by other USU Departments, may be taken by students in the EHS program, if desired. PhD students must work with their Advisory Committee to identify electives that are suitable to their particular study focus. With permission, students may also take courses offered by the Foundation for Advanced Education in the Sciences (FAES) at the National Institutes of Health. FAES courses are offered in the disciplines of biochemistry, biophysics, biology, genetics, chemistry, physics, general studies, languages, mathematics, computer science, medical subspecialties, medicine, physiology, microbiology, immunology, pharmacology, toxicology, psychiatry, psychology, and statistics.

Teaching Assistant Assignments

Teaching experience is considered to be an integral part of graduate education. Thus, all graduate students in the EHS PhD program must serve as a laboratory instructor or teaching assistant in appropriate courses as assigned. At a minimum, each PhD candidate will serve as a teaching assistant (PMO 691-Teaching Practicum) in at least one

course per year, starting no later than the second year of his/her program. The recommended timeline for Teaching Assistant assignments are the Fall quarters in Year 2 and Year 3.

Qualifying Examination for Advancement to Candidacy

The Qualifying Examination in EHS will consist of two parts: a written examination followed by an oral examination. The written examination is comprehensive and designed to test the student's knowledge in the core areas of environmental health, as well as problem-solving and analytic abilities. We anticipate that the Qualifying Examination will be administered within one year, and no later than 24 months post-admission, to those students entering the program with a Master's degree.

Dissertation Requirement

The EHS doctoral program is focused on conducting original, innovative, and hypothesis-driven research leading to a doctoral dissertation. Following successful completion of the written and oral portions of the Qualifying Examination and formal advancement to doctoral candidacy, the candidate develops a research hypothesis and a formal research proposal for approval by the student's Dissertation Advisory Committee. The process is rigorous, with the candidate presenting the proposal to the Dissertation Advisory Committee in a seminar format. Committee members provide constructive feedback to ensure that the proposed research is of acceptable quality and relevance. All major changes to the proposal must be submitted to the Dissertation Advisory Committee for approval. After obtaining the appropriate institutional approvals and assurances, the candidate will begin research activities at the earliest opportunity to maximize the likelihood of developing capabilities for independent research culminating in the dissertation.

Defense of Dissertation

The EHS candidate must prepare a written dissertation based on their original research and submit it for approval to the Dissertation Advisory Committee. The candidate must also defend his or her dissertation privately (to Dissertation Examination Committee) and publically using a seminar format. Generally, the Dissertation Advisory Committee serves as the Dissertation Examination Committee. Final defense of the dissertation must be completed within 7 years from the program start date.

DOCTOR OF PHILOSOPHY IN MEDICAL ZOOLOGY

This PhD degree program provides a broad didactic and research experience in Medical Zoology and its principal subspecialties and is primarily designed for individuals interested in Medical Parasitology or Medical Entomology. Specific goals for this PhD degree program are to develop independent scholarship, originality, and competence in research, teaching, and professional service. This program is designed for outstanding students with a strong commitment to careers in Medical Zoology. Within the PhD program, an individualized course of study is designed for each graduate student to meet his or her specific needs. The PhD program provides the training and experience necessary for research careers in Medical Parasitology or Medical Entomology. Matriculants should have a Master's degree in an appropriate field of biology. Only under the most exceptional circumstances will individuals with only a Baccalaureate degree be considered for admission to the program.

Advisory Committee

For each PhD student, the Director of PMB Doctoral Programs in consultation with the Medical Zoology Section Lead will appoint an Advisory Committee within his/her first year of study. The Committee will consist of at least four members of the faculty (a chairperson, an academic advisor, and two others) to oversee and direct the student's program. When formed, the Advisory Committee, in concert with the student, will prepare an individually tailored program of study (including all degree requirements) and submit it for approval to the PMB Department Chair, through the Director of PMB Doctoral, and forward it to the Associate Dean for Graduate Education. Any changes made by the Associate Dean or PMB Chair will be in consultation with the student and his/her Advisory Committee. This Advisory Committee Report, as amended, will be regarded as the statement of program requirements.

Course of Study

Two tracks will be offered to students, one in Medical Entomology and the other in Medical Parasitology. All students will be expected to complete a minimum of 144 credit hours, of which 48 credit hours must be devoted to formal coursework. Applicants will be accepted as full-time students, and a minimum of three years of study in residence is required.

A series of core courses will be required of all students in the Medical Zoology PhD program. In addition, students in the medical parasitology track will take courses in experimental parasitology, helminthology and protozoology, while students in the medical entomology track are required to take courses in insect physiology, arbovirology and biosystematics. Students are also encouraged to take a series of courses in molecular biology. Extensive course offerings in molecular biology are available from other USU Departments and from the National Institutes of Health. A list of core and elective courses is presented below:

Core Courses	
Biostatistics I & II	8
Changing Patterns of Arthropod-Borne Diseases	4
Environmental Health	4
Epidemiology I & II	8
Malaria Epidemiology and Control	3
Medical Parasitology	3
Principles and Practice of Tropical Medicine	6
Epi and Control of Arboviruses	2
Ethics and the Responsible Conduct of Research	1
Total credits	39

All core courses must be completed before a student can advance to candidacy.

A partial list of elective courses within PMB and other departments that may be used to fulfill program requirements follows:

Department of Preventive Medicine and Biostatistics

Biosystematics in Medical Zoology

Epidemiology and Control of Arboviruses

Epidemiology and Control of Infectious Diseases

Principles of Toxicology

History of Preventive Medicine

Immunoparasitology Tutorial

Global Health I and II

Joint Health Operations

Medical Acarology

Medical Parasitology

Computer Applications in Public Health

Modern Technology and Vector-Borne Diseases

Physiological Parameters of Vector Competence

Introduction to GIS in Public Health

Remote Sensing Methods in Public Health

Research in Medical Zoology

Topics in Medical Zoology

Tropical Medicine Research Tutorial

Tutorial in Medical Zoology

Tutorial in Aquatic Biology

Vector Biology

Department of Anatomy

Practical Histologic Techniques

Department of Microbiology

Animal Virology

Cellular and Molecular Immunology

Elementary Immunology

Laboratory Microcomputer Programming

Microbial Physiology and Genetics

Department of Pathology

Practical Methods in Cell Mediated Immunology Recombinant DNA Technology and Applications

Interdepartmental Courses

Electron Microscope Techniques

Principles and Techniques for the use of Animals in Teaching and Research

Tutorial in Transmission Electron Microscopy

Tutorial in Scanning Electron Microscopy

Tutorial in Freeze-Etching Techniques

Students may also be eligible to take, as electives, courses at The Foundation for Advanced Education in the Sciences (FAES) Graduate School at the National Institutes of Health. FAES courses are offered in the disciplines of biochemistry, biophysics, biology, genetics, chemistry, physics, general studies, languages, mathematics, computer science, medical subspecialties, medicine, physiology, microbiology, immunology, pharmacology, toxicology, psychiatry, psychology and statistics.

Teaching experience is considered to be an integral part of graduate education, and all graduate students in the program will participate in the Diagnostic Parasitology course offered to second-year medical students and/or in other PMB Department courses.

Qualifying Examination

To advance to candidacy in Medical Zoology, students must pass a Qualifying Examination consisting of two parts: The written examination is comprehensive and designed to test the student's knowledge of selected topics in medical zoology, as well as the student's problem-solving abilities. For those who matriculate with a master's degree, the Qualifying Examination will normally be scheduled one year post-admission and no later than 24 months post-admission. The Qualifying Examination Committee for PhD degree candidates will be composed of at least four faculty members at the rank of Assistant Professor or above, three from the PMB Department, and appointments are made by the PMB Director of Graduate Programs. The fourth member may hold either a faculty position in this Department, in another USU Department, or have an appointment outside of USU. Additional members, if desired, may be USU faculty or affiliated with an outside institution. The majority of the Committee will be full-time faculty members of the PMB Department. The Qualifying Examination Committee is appointed by the Director of PMB Doctoral Programs with the approval from the Associate Director of Graduate Education. While all core courses must be successfully completed prior to advancement to candidacy, with the approval of their academic advisor, students may form and take their qualifying examinations prior to completion of all core courses.

Dissertation Requirement

A written dissertation based on the student's original research must be prepared by the student, submitted for approval to the Advisory Committee, and presented and defended before a Dissertation Committee.

Defense of Dissertation

The Dissertation Examination Committee will be composed of at least four persons with doctoral degrees. At least three of these must be USU faculty members at the rank of Assistant Professor or above with a primary appointment in the Department of Preventive Medicine and Biostatistics. A fourth member of this Committee will be from another Department at USU. Additional members may either hold a faculty position at USU or have an appointment outside of USU. Outside appointments will be recommended by the Dissertation Committee appointments are recommended by the Director of PMB Doctoral Programs and approved by the Associate Director of Graduate Education using USU form 641, Thesis Advisory Committee Form.

PROCEDURES & POLICIES

APPLICATION & ADMISSION PROCEDURES

FOR ALL PMB GRADUATE PROGRAMS

COMPLETE APPLICATION PACKAGES ARE DUE AT THE OFFICE OF GRADUATE EDUCATION BY JANUARY 1st EACH YEAR FOR ALL GRADUATE PROGRAMS IN THE DEPARTMENT OF PREVENTIVE MEDICINE AND BIOSTATISTICS (PMB)

Application forms for all graduate degree programs offered by the University may be obtained by contacting the Office of Graduate Education:

Associate Dean for Graduate Education Uniformed Services University of the Health Sciences 4301 Jones Bridge Road, Bethesda, MD 20814-4799 Telephone (301) 295-3913; DSN 295-3913

Forms may also be downloaded from the USU web site: http://www.usuhs.edu/graded/application.html

In addition to the USU Application for Admission to Graduate Study, the University requires the following documents: Official academic transcripts for all post-secondary education; results of the Graduate Record Examination (GRE); three letters of recommendation from individuals familiar with the applicant's academic, professional, and/or military service background; and a personal statement describing how the applicant became interested in public health and how they envision incorporating the training they would receive in their future careers. The number used to identify USU for the results of the Test of English as a Foreign Language (TOEFL) and the Graduate Record Examination (GRE) is 5824. The GRE requirement may be waived for recent (within last five years) graduates of accredited schools of medicine, dentistry and veterinary medicine, or for applicants who have recently completed a doctoral degree in a health science discipline at an accredited college or university. Applicants wishing to have the GRE requirement waived must submit a formal, written request for a waiver to the Associate Dean for Graduate Education.

Active-duty Uniformed Services personnel must obtain the sponsorship of their parent organization and may incur an obligation for additional service in accordance with the applicable regulations governing sponsored graduate education. Uniformed Service members should make mention in their packet of where they stand in the process of obtaining sponsorship.

The completed application form and supporting documents must be submitted to the Associate Dean for Graduate Education by January 1st each year. Careful consideration is given to all eligible applicants, and students are selected for admission to the PMB Graduate Programs on a competitive basis without regard to race, color, sex, creed, or national origin. However, preferential admission is granted to active duty Uniformed Services personnel with Service sponsorship. Civilian applicants are admitted on a space-available basis.

The appropriate subcommittee within the PMB Department reviews all completed application packages. The names of applicants recommended for admission are forwarded to the Director of Graduate Programs, who in turn submits a recommendation to the Associate Dean for Graduate Education through the PMB Department Chair. The Office of the Associate Dean for Graduate Education provides official notification of acceptance.

Complete application packages will be reviewed after January 1st. If active duty service members require a letter of competitiveness or early consideration for admission before that date, they should notify the University's Graduate Education office. Late applications are considered on a case-by-case basis, especially as they concern the needs of the Uniformed Services.

For additional information, please go to the USU website. If you have specific questions, please contact the Program Administrator for PMB Graduate Programs at (301) 295-1977 or address written correspondence as follows:

Director of Graduate Programs
Department of Preventive Medicine and Biostatistics
Uniformed Services University of the Health Sciences
4301 Jones Bridge Road, Bethesda, MD 20814-4799

MPH Program

Preference for admission goes to medical, dental and veterinary officers on active duty in the Uniformed Services, as well as to other Uniformed Services officers possessing doctoral degrees in health-related fields. Applicants without a doctoral degree in a health-related field may also be considered for admission. However, these applicants must have, as a minimum, a Baccalaureate degree with an outstanding academic record (college transcript(s) and GRE scores), some health-related experience, and demonstrated interest in pursuing a public health career. Civilian applicants will be considered for admission on a space-available basis, with preference given to physicians and other health professionals sponsored by other U.S. government agencies. Although civilians accepted as MPH students are not charged tuition, they are not eligible for a stipend since there are no USU sources of financial aid for Master's degree students.

MTM&H Program

The MTM&H program is restricted to physicians with a medical degree from an accredited institution and at least one year of post-doctoral clinical training. The sponsoring Service or agency will be responsible for funding the travel and per diem for overseas travel completed as part of the MTM&H practicum and for verifying the applicant's professional credentials and unrestricted privilege to practice medicine. Some funds may be available from the University for members of the Uniformed Services through a grant from the DoD Global Emerging Infectious System. Civilians and Foreign Military (MASL students not part of a USU residency program) accepted as MTM&H students are not eligible for stipends and are personally responsible for travel and living expenses for the overseas experience.

MSPH Program

Admission into the MSPH program will be preferentially offered to military personnel on active duty in one of the preventive medicine/public health disciplines. Applicants should possess, as a minimum, a Baccalaureate degree in one of the biological or health science disciplines or in engineering, an outstanding academic record, some health-related experience, and demonstrated interest in pursuing a career in public health. With the permission of the PMB Director of Graduate Programs, outstanding civilian applicants may be considered on a space-available basis, with preference given to health professionals sponsored by other U.S. government agencies. Civilians accepted as MSPH students are not eligible for a stipend, and there are no USU sources of financial aid for Master's degree students.

MHAP Program

Preference for admission goes to medical, dental, nurse, applied science, medical service corps and veterinary officers on active duty in the Uniformed Services. Applicants from federal agencies and specific Partner/Host Nations may also be considered for admissions. Applicants without a background in health care and/or policy may also be considered for admission. However, these applicants must have, as a minimum, a Baccalaureate degree with an outstanding academic record (college transcript(s) and GRE Scores) and demonstrated interest in pursuing a career as a leader in health administration and policy. Civilian applicants will be considered for admission at the discretion of the MHAP Program Director on a space-available basis, with preference given to health professionals sponsored by other U.S. government agencies. Although civilians accepted as MHAP students are not charged tuition, they are not eligible for a stipend since there are no USU sources of financial aid for Master's degree students.

DrPH Program

This program is no longer accepting new students.

PhD Programs

Qualified active duty uniformed officers serving in fields related to environmental health and medical zoology will be preferentially reviewed for admission to the PhD programs in Environmental Health Science and Medical Zoology. Civilian applicants are considered on a space available basis with preference given to health professionals sponsored by other U.S. government agencies. At a minimum, applicants for both programs must have a Master's degree with an outstanding academic record (undergraduate transcript and GRE scores) and documented successful completion of rigorous coursework related to their desired area of graduate study. A limited number of pre-doctoral teaching/research assistantship stipends are available for civilian graduate students in PhD programs through the Graduate Education Office.

Academic Advisor

Each graduate student in the PMB Department will be assigned an academic advisor, who is a member of the Departmental faculty. The advisor is responsible for guiding the student in the selection of an appropriate curriculum based on his or her career objectives, for monitoring student performance, and for counseling, as appropriate.

Transfer Credits and Waivers

Students wishing to waive a program requirement for a core course on the basis of previous coursework and/or relevant work experience may request exemption for up to eight credit hours of required formal coursework. The procedure involves direct negotiation with the appropriate Course Director in the PMB Department and will include, but is not limited to, documentation of previous academic credit with course description and objectives; evidence of relevant experience demonstrating mastery of subject matter; and/or "testing out" of the course requirement. The course requirement may be satisfied by modifying the process, for example, by taking the final examination or by serving as a teaching assistant in the course. Alternatively, an individual may be given permission to substitute an individually tailored "special topics" course. Doctoral students may still receive teaching credit for serving as a Teaching Assistant in an exempted course.

OFFICER STUDENT STATUS

USU graduate students who are members of the Armed Forces are detailed/attached to the University for purposes of graduate study only. Navy graduate students are assigned to the Naval School of Health Sciences; and Air Force graduate students are assigned to the Air Force Institute of Technology located at Wright-Patterson Air Force Base in Ohio. Overall records management is the responsibility of each student and their respective military organization. In this regard, Armed Forces graduate students are in a different status than medical students assigned to USU.

While a graduate student at USU, members of the Uniformed Services will conform to all University uniform and dress code standards applicable to medical students, staff, and faculty, as promulgated and enforced by the Commandant, School of Medicine. Moreover, uniformed graduate students are expected to set a good example for the rest of the student body by displaying proper military courtesy and discipline at all times, and, when appropriate, assisting the Commandant in enforcing standards of conduct among military members.

A limited number of Uniformed Service members may be admitted into the Master of Public Health (MPH) degree program with their billet remaining at their parent agency. These students will have two years to complete all course requirements. In order to be enrolled as a two-year student, the officer must furnish a letter from their immediate supervisor, or other appropriate individuals in his/her chain of authority, approving the officer's participation in the graduate degree program and agreeing to support his/her commitment to graduate study at USU. The non-billeted program is open only to uniformed officers and U.S. government civilian employees, at the discretion of the Director of Graduate Programs.

AUDITING/ SHADOWING CLASSES

Students may register to "AUDIT" a class with permission of the course director. The student must attend class, participate in exams, assignments, and other course requirements; however these will not be graded. The student will receive an AU (Audit) in the quarter hours section of the transcript and 0 in the grade point section. With the permission of the Graduate Programs Director and the concurrence of the course director, an individual, even if not officially enrolled in a PMB graduate program, may be permitted to "sit in" (attend classes but usually do not take examinations), or shadow (fully participate in all class activities, including examinations) a particular PMB graduate course.

STUDENT EVALUATION

Grading: Student performance in all formal courses taken for credit, whether at USU or at an affiliated institution, will be evaluated and ordinarily reported as a letter grade. Some courses are graded for credit as pass/ fail. Graduate students must have a cumulative grade point average (GPA) of "B" (3.0) or better at the end of the academic year to be eligible for the degree. On a quarterly basis, the Departmental Graduate Affairs Committee reviews the performance of each graduate student and makes recommendations for counseling, remediation, and/or academic probation for those in academic difficulty. Students who fail to achieve a GPA of 3.0 after two quarters of study, or who receive any grade below a "C," will be referred to the University Graduate Education Committee for academic performance review. (See University policy on "Graduate Student Grading, Promotion, and Dismissal Procedures")

Academic Ethics: Satisfactory academic standing is determined both by performance in formal courses and by personal attributes related to professionalism and ethical standards. The USU faculty considers other aspects of

academic performance, such as attitudes and perceptions, honesty and integrity, reliability, fairness, judgment, insight, interpersonal skills, and institutional loyalty, as important attributes for success as a biomedical scientist. These comprise the elements of academic ethics. Students whose behavior or performance is judged to be unethical are subject to dismissal even though they are otherwise in good academic standing.

Awarding of Degrees: Upon successful completion of all requirements for the MPH, MTM&H, MSPH, DrPH or PhD degree, the Director of Graduate Programs, through the PMB Department Chair, will certify student eligibility for the graduate degree to the Associate Dean for Graduate Education. Following review and approval, the Associate Dean for Graduate Education will recommend to the Board of Regents that the appropriate degrees be awarded.

UNIVERSITY POLICIES ON ACADEMIC CONDUCT

RESPONSIBLE CONDUCT OF SCIENCE

The Graduate Students' Code on the Responsible Conduct of Science was developed by USU faculty and modified and adopted by USU Graduate Students. Your behavior as a graduate student and biomedical scientist should adhere to these principles.

"I will demonstrate honesty, integrity and professionalism in planning, conducting, interpreting and reporting my scientific research. My work will be rigorous, unbiased, ethical, scholarly, and as far as possible, objective. I will undertake only research for which I am qualified, and will collaborate and cooperate with other specialists when that is beneficial to the research.

I will show respect for my animal research subjects and human research volunteers. I will use both appropriately and humanely. I will consider both the animals and the volunteers' comfort, not causing unnecessary pain or distress in my research, while maximizing potential benefits to both the subjects and to society, while minimizing risks. With human volunteers, I will maximize their welfare and secure fully informed consent stressing voluntariness. I will be knowledgeable about applicable laws and regulations concerning the use of animals and human research participants, and be diligent in ensuring that they are followed.

I will show respect for fellow students and researchers, ensuring that they receive appropriate credit for their contributions to the research. I will share my knowledge, methods, and results with others in a fair and expeditious way. I will provide objective, unbiased reviews of other scientists' work. I will provide accurate and understandable information to fellow scientists and to the public.

I will consider my responsibilities to society in my choice of research topics, in using my resources wisely and safely, and in avoiding conflicts of interest or commitment. I will be involved with the social and ethical ramifications and the environmental impact of my discoveries, proceeding in the best interests in society."

ACADEMIC HONESTY

The USU policy on academic "cheating" is articulated in USU Instruction 1306, "Academic Standing of Graduate Students", revised, effective January 1, 1996.

It states, in part:

Students/fellows whose performance is academically unethical are subject to dismissal even though they are otherwise in good academic standing.

- a) Students/fellows shall not:
 - (1) Use, attempt to use, or copy an unauthorized material during any examination or graded exercise:
 - (2) Knowingly present the work of someone else as their own work without attribution;
 - (3) Forge or alter for advantage any academic document;
 - (4) Knowingly disregard instruction for the proper performance of any examination or graded exercise;
 - (5) Intentionally impede or interfere with the ability of fellow students/fellows to use academic materials or to complete academic work; or
 - (6) Knowingly assist a fellow student/fellow in any of the above activities.
- b) In addition to those actions listed [above], GEC [Graduate Education Committee] may determine that other actions demonstrate unethical academic behavior.

This subject is extremely important and is treated as such by the USU community. If you have any questions or wish to discuss or review this policy, please see the Director, Graduate Programs, Department of Preventive Medicine and Biostatistics, or the Associate Dean for Graduate Education.

ACADEMIC FREEDOM

USU students have the privilege of respectful dialogue amongst academic colleagues and may debate any subject related to the USU course materials within the classroom setting. Indeed, one of the goals of professional federal/military education is to develop officers and civilian students who can employ innovative thinking when confronted with changing situations; it is imperative that the University provide a learning environment that encourages officers and civilians to cast a critical eye on traditional or accepted concepts. In this regard, the University is a safe and proper setting for students to practice the art of communicating innovative and non-traditional concepts. It is expected that officers and civilians will debate their viewpoints responsibly reflecting professionalism and courtesy.

PERSONAL INTERACTIONS WITH FACULTY

Students should interact with faculty in a professional manner and with respect for the academic knowledge and authority of the faculty. However, students must not be coerced or become involved in interactions with faculty that create, in fact or appearance, academically inappropriate behavior in what is, by its very nature, an unequal relationship.

A School of Medicine Dean's Policy Memorandum on "Personal Interactions or Relationships of School of Medicine Faculty and Students" states that "members of the Faculty shall not engage in relationships with students which could be conceived as "dating", while the student and the member of the faculty are, or could be during the student's course of study, engaged in a formal course of instruction. Such relationships are considered inappropriate because they compromise the academic distinction of mentor and student, not only in the eyes of those involved, but in others who may perceive such actions as a compromise. Relationships between faculty and students may also compromise the academic validity of the student's credentials."

Perceived faculty misconduct and/or inappropriate interactions or behavior with or toward a student should be reported to the Program Director, Advisor, Department Chair, and/or the Associate Dean for Graduate Education.

HARASSMENT AND DISCRIMINATION

USU and PMB support an environment where the worth and dignity of each student is recognized and respected and where each student has the opportunity to achieve academic success. During the course of their academic and research activities at USU, graduate students must not be the recipients of discriminatory or intimidating actions or behaviors based on sex, race, ethnicity, religion, or sexual orientation. Graduate students should not engage in or be involved in promoting discrimination.

Sexual Harassment is defined as any unwelcome sexual advance, which includes any verbal or physical behavior of a sexual nature, and any direct or implied requests for sexual favors. It also includes any sexually- oriented conduct where a student's acceptance or rejection of such behavior affects his or her level of work performance by creating an intimidating, hostile, or offensive work environment. The majority of sexual harassment incidents are relatively subtle in nature, frequently associated with the abuse of real or perceived power and are not gender-specific.

It is important for anyone who feels that he or she is or has been a victim of discrimination, intimidation, or sexual harassment to inform the person or persons involved that his or her conduct is unwelcome and must stop. If this behavior continues, or if a hostile work environment is created, the victim should communicate his/her grievance to the Program Director, Advisor, Department Chair, and/or the Associate Dean for Graduate Education.

UNIVERSITY POLICIES ON GRADUATE STUDENT GRADING, PROMOTION, & DISMISSAL PROCEDURES

Standards of performance and procedures regarding academic status for graduate students are contained in USU Instruction No. 1306 "Academic Standing of Graduate Students" of 10 August 1982. A summary of these standards is as follows:

- Satisfactory academic standing is defined as a cumulative grade point average of B (3.0), with no grade below "C" in any course. Doctoral level students in the Department of Preventive Medicine and Biostatistics must earn at least a "B" in each required course.
- Satisfactory academic standing is determined both by performance in formal courses and by the
 aspects of academic performance, including skills, attitudes and attributes judged by the graduate
 faculty to be important for success as a basic medical scientist. These include factors such as honesty,
 integrity, reliability, perception, balanced judgment, personal insight, and the ability to relate to
 others.

Graduate students will be referred to the Graduate Education Committee for review for any of the following reasons:

- 1. When a final grade of "D" or "F" is received in any course.
- 2. When the cumulative grade point average is below 3.0 at the end of the third academic quarter or any time thereafter.
- 3. For failure to maintain appropriate academic standing or violation of academic integrity.

Following review the Graduate Education Committee may recommend:

- 1. Dismissal.
- 2. Appropriate remedial action within a specified period of time. NOTE: A grade of F will not be allowed to stand unremediated on a graduate student's transcript regardless of the student's overall academic performance. If a grade of D is received in a course, the Committee may require remedial

work depending upon the student's overall academic performance. Grades for the original course and the remedial work will both remain on the student's transcript. In calculating the cumulative GPA, the original D or F and the grade for the remedial work will be averaged, and the averaged grade will be applied to the number of quarter credit hours for the original course to calculate the final grade point average.

3. Other action appropriate to the specific cause under review.

Any student reviewed by the Graduate Education Committee and found to be academically deficient will either be recommended for dismissal or placed in a probationary status until a satisfactory academic standing is achieved. Specific details of these policies can be obtained from the Office of the Associate Dean for Graduate Education.

ACADEMIC PROMOTION, PROBATION, AND TERMINATION PROCESS FOR THE MARK (MATRICE) (MARRIE (MARRIE) PROCESS AND THE MARK (MATRICE) (MARRIE) (MATRICE) (MATRICE)

FOR THE MPH/MTM&H/MSPH/MHAP PROGRAMS

The current policy for satisfactory academic standing is defined in USU Instruction 1306 as:

"...a cumulative grade point average of B (3.0), with no grade below "C" in any course.

Satisfactory academic standing is determined both by performance in formal courses and by the aspects of academic performance, including skills, attitudes and attributes judged by the graduate faculty to be important for success as a [public health professional]. These include factors such as honesty, integrity, reliability, perception, balanced judgment, personal insight, and the ability to relate to others."

The Masters level graduate programs (MPH, MTM&H, and the first year of the MSPH and MHAP) within the Department of Preventive Medicine and Biostatistics (PMB) consist of a compressed schedule of core and elective courses over a one year period. Therefore, the academic progress of students in these programs requires more frequent monitoring than that of students in multiyear programs. Accordingly, in addition to the stated policy in USU Instruction 1306, the PMB Department's policy on academic probation is as follows:

If a student receives a grade of "C" or less in any core course or a "D" or "F" in any other course or if his/her overall GPA falls below 3.0 at the end of any academic quarter, he/she will be placed on academic probation. The student, his/her Academic Advisor, and the Course Director(s), if appropriate, will develop a corrective plan of action. A memorandum from the Academic Advisor describing the student's status and the agreed upon plan of action will be presented to the student and a copy placed in the student's official file. A copy of the memorandum will also be submitted to the Director of Graduate Programs for review.

The student will remain on academic probation until the corrective plan is completed. All grades of "D" and "F" must have been remediated to a grade of at least a "C."

If the student receives another grade of "C" or less in any core course or a "D" or "F" in any other course or if his/her overall GPA falls below 3.0 or does not maintain satisfactory academic standing for two consecutive quarters, the Graduate Programs Director will then refer him/her to the USU Graduate Education Committee for the process of review and possible dismissal from the program.

PMB DEPARTMENT DOCTORAL STUDENT ADVISOR GUIDELINES

Faculty assigned as advisors are responsible for guiding students through the Department's academic program which includes course work and completing University and Departmental requirements for granting a doctoral degree.

These guidelines provide recommendations on specific activities Advisors should consider in optimizing their role as the primary faculty contact for PMB doctoral students during their academic journey. The recommendations provided are not comprehensive and may not apply in all cases. Some students may require more individual attention and some less. It is left to the Advisor to determine the appropriate manner by which to complete his or her duties. These guidelines SHOULD NOT be considered an item checklist for evaluating an Advisor's performance or effectiveness.

Background

There are two basic categories of advisors; Academic Advisors assigned at the time the student matriculates into the University and Research Advisors who help guide student through their thesis research. Most often at USU, the research advisor also serves on the student's thesis/dissertation committee when he or she advances to candidacy. However, the roles and activities of academic and research advisors are somewhat different.

Academic

Before beginning his or her degree program, each student is assigned a faculty member Academic Advisor by the PMB Doctoral Programs Director with the consent of the named faculty member and in consultation with Graduate Program Director, Doctoral Programs Subcommittee, and appropriate Division Directors. While any Departmental faculty member may serve, Advisors are normally assigned based on the student's academic and research program. In the case of the Medical Zoology and Environmental Health Sciences Divisions, advisory committees, led by the assigned Advisor, are established for each student.

Students are allowed to change academic advisors at any time during their program. They must have the consent of the faculty member who will serve in the advisory capacity and are required to report the change to the Doctoral Program Director.

Recommended Academic Advisor Activities

- Meet with the new student during orientation and at least once each term.
- Be a familiar person to whom the new graduate student can come for counsel and advice.
- Make sure the student understands the academic expectations of their graduate program, procedures, culture, etc.
- Provide students with accurate information about academic progression and degree requirements. It is, however, ultimately the responsibility of student to understand and meet all degree requirements.
- Assist students developing educational plans that are consistent with their life goals.
- Help the student create a schedule of deadlines to ensure timely progress of their program.
- Provide advice and direction to students as they proceed into and through their program.
- Advise the student in course selection in accordance with the stated program direction.
- Be familiar with the student's degree requirements

- Meet regularly with students to oversee their progress towards completion of degree requirements.
- Provide advice on electives.
- The Advisor must approve all student Add/Drop requests.
- Help students keep up to date with current University, and Department policies, procedures, and requirements.
- Provide support and information to the student regarding Departmental and University activities.
- Keep the student apprised of new developments or news pertaining to all aspects of their program.
- Help the student access campus resources that will enhance their ability to be academically successful. Refer to off campus resources as appropriate.
- Be aware of the standards to which a major paper, thesis, dissertation or creative project must conform.
- Be familiar with the University's rules for student research approval and emphasize to students the importance of meeting all such requirements.
- Inform students of the need for Departmental/University approval for presentations and publications.
- Inform students on how to access appropriate forms required by the University, Department or Graduate Program for submission to complete their program of study.
- Periodically review student's academic and educational needs, performance, aspirations and problems.
- Evaluate student progress towards established goals.
- Assist students in overcoming educational and personal problems.
- Identify systemic and personal conditions that may impede student academic achievement and developing appropriate interventions.
- Encourage the student to attend conferences and meetings in their field of study.
- Assist the student with finding resources for travel when appropriate.
- Alert Program Director and Committee Chair to student problems.
- Periodically update the Program Director on the student's progress.
- Notify the Doctoral Program Director when if the student is experiencing academic or personal difficulties.
- Make recommendations to the Program Director for use in refining or revising institutional/agency decisions, policies and procedures.
- Make satisfactory arrangements for supervision of the student during an extended absence from the program.

Research Advisor

In most cases the academic advisor transitions to serve as the student's research advisor when the didactic phase of his/her training nears completion or when he or she seeks candidacy. However the student may elect to ask a different faculty member to serve as research advisor; particularly if he/she finds a faculty member who is more qualified or familiar with his/her research area or if the student's original areas of interest changes during training. Ideally, the research advisor should have experience in grant writing and the conduction of research in the candidate's area of interest. The advisor should have a basic understanding dissertation committee processes.

A mutual commitment by the student and research advisor to the research effort is an essential component to the successful completion of the doctoral degree program and the evolution from student status to academic colleague. In many cases, the candidate works under the research advisor's grant. There are, however, instances where the research advisor instead assists the candidate in the development of an independent grant or in coordinating with other investigators to acquire research funding. Thus research advisor should have substantial knowledge of the processes involved in acquiring research funding.

Recommended Research Advisor Activities

- Help the student identify research areas/topics they might be interested in pursuing for a research project
- Assist the student in identifying people who might serve as subject matter experts.
- Work with the student to develop a research proposal of sufficient scope and scholarly quality to merit a doctoral degree upon completion.
- Serve on the student's oral qualifying examination committee.
- Serve on the student's thesis/dissertation committee The research advisor does not serve as thesis/dissertation committee chair.
- Be familiar with USU forms required for proposal submission.
- Maintain an overview of progress in completing the candidate's research.
- Assisting in coordinating access to necessary resources for project completion.
- Serve a primary point of contact for the student during the execution of thesis research and help to ensure the Thesis/Dissertation Committee Chair is apprised of any problems.
- Read and comment on thesis/dissertation draft, by chapter, before they are forwarded to the Thesis/Dissertation Committee for review.
- Advise the student on the qualities of a good oral presentation and help ensure that the student is adequately prepared for his/her private and public defenses.

INCLEMENT WEATHER POLICY

The University is usually open for business in inclement weather unless the Federal Government is closed for the day due to extreme weather conditions (such as heavy snow or ice on the roads). If the Federal Government is closed for the day, then the University is closed and all classes for that day are canceled. Occasionally, the Federal Government will announce a delayed opening or liberal leave policy for "non-essential" personnel when the weather conditions are not severe enough to warrant the closure of the government for the day. However, students, faculty and staff required for teaching support are defined as essential personnel and are expected to report for work on time, within the bounds of safety and common sense.

The opening status of the Federal Government on inclement weather days is broadcast on local television and radio stations, and is available online at the USU website: www.usuhs.mil and on a taped telephone USU message system at 301-295-3039. The color codes used to describe the opening status of the Federal Government and USU are in the table below:

NOTE: YOU WILL HEAR ONE OF THE MESSAGES BELOW WHEN YOU CALL 301-295-3039 DURING PERIODS OF INCLEMENT WEATHER.

THE INCLEMENT WEATHER MESSAGES AND COLOR CODES ARE AS FOLLOWS:

COLOR CODE	MESSAGE NO.	MESSAGE
GREEN	MESSAGE 1	"This is the Uniformed Services University of the Health Sciences. The University is open. All employees are expected to report to work on time. Students will report to classes as scheduled. Code "GREEN" is in effect for the University."
YELLOW	MESSAGE 2	"This is the Uniformed Services University of the Health Sciences. OPM has announced an unscheduled leave policy. The University is open. Due to the existing weather conditions, employees may take leave without prior approval. However, employees should inform their supervisors of their intentions. Students, faculty and staff required for teaching support are defined as essential personnel and are expected to report for work on time, within the bounds of safety and common sense. Emergency personnel or those entrusted with patient or animal care, or emergency facilities or research requirements as designated by their Activity Heads or Chairs are expected to report to work on time unless other arrangements have been made. Code "YELLOW" is in effect for the University."
BLUE	MESSAGE 3	"This is the Uniformed Services University of the Health Sciences. OPM has announced an adjusted home departure policy of hour(s). The University is open. Due to the existing weather conditions, employees should adjust their normal home departure time consistent with the OPM announcement. Students, faculty and staff required for teaching support are defined as essential personnel and are expected to report for work on time, within the bounds of safety and common sense. Emergency personnel or those entrusted with patient or animal care, or emergency facilities or research requirements as designated by their Activity Head or Chairs are expected to report to work on time unless other arrangements have been made. Code "BLUE" is in effect for the University."
ORANGE	MESSAGE 4	"This is the Uniformed Services University of the Health Sciences. OPM has announced an adjusted home departure/unscheduled leave policy of hour(s). The University is open. Due to the existing weather conditions, employees should adjust their normal home departure time consistent with the announcement. Employees may take leave without prior approval, but they should inform their supervisors if they plan to take leave. Students, faculty and staff required for teaching support are defined as essential personnel and are expected to report for work on time, within the bounds of safety and common sense. Emergency personnel or those entrusted with patient or animal care, or emergency facilities or research requirements as designated by their Activity Heads or Chairs are expected to report to work on time unless other arrangements have been made. Code "ORANGE" is in effect for the University."
RED	MESSAGE 5	"This is the Uniformed Services University of the Health Sciences. OPM has announced that the Federal Government is closed. Due to the extreme weather conditions, the University is closed. Students, faculty and staff required for teaching support or essential personnel are NOT to report to class. However, all emergency personnel who are entrusted with patient or animal care, or emergency facilities or requirements as designated by their Activity Heads or Chairs are to report to work. Code "RED" is in effect for the University."
WHITE	MESSAGE 6	"This is the Uniformed Services University of the Health Sciences. The status on opening, closing or a possible unscheduled leave or adjusted home departure policy for the University and all Federal Agencies in the Washington METRO area is pending an official announcement from the Office of Personnel Management (OPM). This message will be updated in accordance with the OPM announcement. Code "WHITE" is in effect for the University."

SEXUAL HARASSMENT POLICY AND PROCEDURE

Overview:

Uniformed Services University (USU) and the Graduate Education Office do not tolerated incidents of sexual harassment. All of the staff, faculty, and students should strive to maintain an environment that is inclusive and is free of harassment and hostility. However, if an incident of sexual harassment does occur, all student should understand what their reporting requirements and responsibilities are

Defining Sexual Harassment:

Sexual harassment is a form of gender based discrimination that violates Title VII of the Civil Rights act of 1964. This pertains to all federal institutions and is guided by the U.S. Equal Employment Opportunity Commission (EEOC). The EEOC defines sexual harassment as:

Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitute sexual harassment when this conduct explicitly or implicitly affects an individual's employment, unreasonably interferes with an individual's work performance, or creates an intimidating, hostile, or offensive work environment.

Sexual harassment can occur in a variety of circumstances, including but not limited to the following:

The victim as well as the harasser may be a woman or a man. The victim does not have to be of the opposite sex.

The harasser can be the victim's supervisor, an agent of the employer, a supervisor in another area, a co-worker, or a non-employee.

The victim does not have to be the person harassed but could be anyone affected by the offensive conduct.

Unlawful sexual harassment may occur without economic injury to or discharge of the victim.

The harasser's conduct must be unwelcome.

What To Do If You Are Sexually Harassed:

If an incident of sexual harassment does occur, people are encouraged to inform the harasser directly that the conduct is unwelcome and must stop. If this is not an option or the harassment continues all students can utilize their advisor, program director, and/or their dean to discuss their concern. Additionally, all students should understand that there are mechanisms available to report incidents of sexual harassment that are independent of their academic supervisors. These specific mechanisms of these systems are based on the individual student status and are detailed below.

Military Students within the Graduate School:

Military students that are assigned to graduate education programs should report all incidents of sexual harassment and equal opportunity (EO) violations through their respective chains of command. The reporting mechanisms and investigative processes differ by each military branch and can be identified through their respective military command. Additional information is available at https://www.usuhs.edu/brigade/eeo.

Civilian Students who are Administratively Determined Federal Employees:

Civilian graduates students, who are in their first three years of training, are considered to be U.S. Government Administratively Determined (AD) employees. By this status students are protected under the federal equal employment opportunity (EEO) statues that are enforced through the U.S. Equal Employment Opportunity

Commission (EEOC). By extension this includes the USU Office of Equal Employment Opportunity (EEO). If a student feels that they are a victim of sexual harassment and would like to file a complaint, they may do so by contacting the USU EEO Director, Ms. Polly Saddler, at (301) 295-9732.

A complaint must be filed within 45 days of the date the discriminatory event occurred. The EEO complaint process is complex. An abbreviated summary is provided for your convenience. You can get detailed information by contacting the USU EEO office or www.eeoc.gov

The EEO complaint process is two-fold. All EEO complaints begin at the informal or pre-complaint stage. At the informal stage of the complaint process, a counselor is assigned to counsel the EEO complaint. The counselor has 30 calendar days to complete the counseling session. The counselor can request an extension for an additional 30 days for a total of up to 60 days to complete the counseling inquiry. If the issue(s) of the complaint is/are not resolved during the informal complaint stage, the aggrieved is issued a notice of right to file letter which states that he/she has 15 calendar days to file a formal complaint.

Formal complaints are accepted or dismissed by the agency IAW 29 Code of Federal Regulation (C.F.R.) Part 1614 and the Equal Employment Opportunity Commission Management Directive 110 (MD 100). If a formal complaint is accepted by the agency, it is investigated within 180 days. If the formal complaint is dismissed by the agency, the aggrieved employee can appeal the dismissal to the Equal Employment Opportunity Commission (EEOC)

Alternative Dispute Resolution (ADR) in the form of mediation is offered at the informal and formal stage of the complaint process.

Alternative Dispute Resolution (ADR) can be utilized

Civilian Students who are contract employees:

Civilian students that are contractors are subject to their employer's guidance when it comes to identifying and reporting incident of sexual harassment.

If a student here at USU is involved in an incident of sexual assault there are multiple mechanisms to receive support. The coordination of care is provided through sexual assault response coordinators (SARCs) that are available through the USU military chain of command and on NSA Bethesda. These individuals can be identified through the military branch specific chains of command or at USU website (https://www.usuhs.edu/brigade/sexual-assualt-victim-advocates). These individuals can provide additional information and direct care if needed.

In addition to this, there are several hotlines available where a student can report an incident of sexual assault by name or anonymously. NSA Bethesda provides a 24/7 hotline, which can be contacted at 301-442-8225. Additionally, the Department of Defense (DoD) provides access to a 24/7 hotline through the Rape, Abuse, and Incest National Network (RAINN) and can be contacted at 1-877-995-5247.

The services that are provided to victims of sexual assault are dependent on the student's individual status:

- If the victim is a military service member, these resources are available for any sexual assault regardless of the location of the assault, the identity of the assailant, or the timeframe in which it was committed.
- If the victim is a civilian student assaulted by a military service member, whether on or off the NSA Bethesda campus, the incident should be reported through a SARC. In this scenario, the care for the victim and investigation will be conducted through the military.
- If the victim is a civilian student assaulted by another civilian on the NSA Bethesda campus, the

- sexual assault can be reported to a SARC. Initial care and support will be provided by the military system and further care will be coordinated with civilian organizations.
- If the victim is a civilian student assaulted by another civilian outside of the NSA Bethesda campus, the assault should be reported through local law enforcement.

GRADUATE MEDICAL EDUCATION PROGRAMS (RESIDENCIES)

National Capital Consortium (NCC)/Uniformed Services University (USU)

OCCUPATIONAL AND ENVIRONMENTAL MEDICINE (OEM) RESIDENCY

Mission

The mission of the residency is to train physicians to become leaders in the field of occupational and environmental medicine (OEM), who at the end of training are fully competent and capable of independent practice, board eligible, and can expertly apply the knowledge, skills and abilities to practice the full scope of occupational and environmental medicine. OEM residency graduates are capable of serving in a wide variety of military assignments that include direct support of globally stationed and deployed operational forces, fixed based clinical settings, world class biomedical research facilities, and policy positions at the highest policy-making levels of each service and the DoD. Graduates possess preventive and occupational medicine skills and they are able to practice in a broad range of civilian and international settings.

Background and Overall Residency Structure

The NCC/USU OEM Residency is a 2-year program for Medical Corps officers sponsored by the Army, Navy, and Air Force. Commissioned Corps Officers of the US Public Health Service have completed the residency in the past and are eligible to apply with Public Health Service sponsorship. Foreign medical officers, when sponsored by their home country's department of defense, have also completed the residency.

The NCC/USU OEM Residency is co-located and shares resources with the NCC/USU General Preventive Medicine Residency (GPM) that trains residents primarily from the Air Force and Navy. Between the General Preventive Medicine and Occupational Medicine residencies, all uniformed Services are therefore represented.

PGY2 Academic Year

The USU Academic Year is twelve months in duration. It begins the first week in July and ends the last week in June. The primary objective of the academic year is to provide the residents with a solid academic foundation. To successfully complete the academic year, residents must meet 75% of the requirements for an MPH degree. The MPH degree requires a minimum of 60 course credits. For the purposes of board certification in Occupational and Environmental Medicine, the American Board of Preventive Medicine requires courses in epidemiology, biostatistics, health services administration, environmental health, and behavioral health.

PGY2 residents will be full time MPH students during the pre-fall, fall and winter quarters. During the spring quarter, residents will complete seven credit hours, spending one day per week at USU, and the remainder of the week, they will provide direct patient care in an occupational setting. During the summer session they will complete a 3 credit Public Health Practicum PMO670, and the Field Industrial Hygiene Course PMO553, while continuing to provide direct patient care in an occupational setting. The resident will maintain at least 1 credit hour of academic work towards their MPH each term of their PGY3 year based upon their participation in journal club or enrollment in credit hours of independent study with a member of the USU residency faculty. The MPH will be awarded at the completion of their PGY3 year.

In addition to the core requirements, OEM residents must complete PMO973 GPM and OEM Journal Club, PMO511 Introduction to Epidemiology, PMO512 Epidemiologic Methods, Biostatistics I and II, PMO549 Principles of Toxicology, PMO550 Industrial Hygiene and Laboratory, PMO642 Clinical Preventive Services and Selected Topics in Occupational Health, PMO558 Fundamentals of Clinical Occupational, Environmental and Preventive Medicine, PMO652 Occupational Ergonomics, PMO519 Occupational and Environmental Epidemiology, PMO542 Clinical Occupational and Environmental Medicine, PMO553 Industrial Hygiene Field Studies, PMO655 Current Issues in Safety and Injury Prevention, and PMO599 Health Risk Communication, and PMO990 Travel Medicine. It should be noted that while not required, PMO613 Public Health Issues in Disasters, and PMO548 Joint Health Operations are strongly recommended but may be taken pass/ fail. This academic training culminates with the awarding of a Master of Public Health (MPH).

PGY3 Practicum Year

In order to obtain an MPH or MTM&H, an individual research project is required in addition to the above course work. Each resident must choose a project mentor from the USU or residency faculty. It is expected that residents will initiate their independent projects during the fall of the first year and complete the project by May of the first year or at the latest by December of their second year. All residents will attend weekly journal club from September to May.

Some residents entered training having completed an MPH degree. In these cases, transcripts are carefully reviewed by the program director for content and currency of knowledge is assessed. An individual needs assessment is done and residents may be asked to take additional MPH coursework if the degree was earned more than 4 years prior to coming to USU.

The object of the second year is to permit the resident to progress in attainment of clinical competencies and to give the resident opportunities to apply the 'book knowledge' to real world occupational medicine practice situations. The challenge of occupational medicine is to make rational, evidenced-based decisions based on sound data and science in the face of uncertainty, inadequate information, politics, and economics.

The second year is structured as a series of clinical and administrative rotations, typically lasting 4-8 weeks each. Each rotation is built around ACGME competencies, and each rotation has a designated preceptor who supervises and guides the resident. The resident is expected to fully participate in a "hands-on" mode during practicum rotations, assuming significant responsibilities, often supervising first year residents who are rotating at the same rotation site. Usually, in addition to dealing with the day-to-day work at the rotation site, the clinical rotation preceptor and resident will mutually agree on a quality improvement project for the resident to complete.

Because of the unique circumstances of the USU OEM residency (robust support for the residency, fully funded and salaried residents, and a prime location in Washington, DC), a large number of practicum rotations are possible. The greatest dilemma for most residents in the second year is choosing among the different rotation possibilities. Doing a variety of rotations is desirable because it allows the resident to experience a wide range of occupational medicine practice situations.

The second year will be tailored to the needs of the individual and his/her sponsoring service. The practicum year may be viewed as the hands-on application of the academic knowledge. Specific residency educational goals and objectives for each practicum rotation are expressed in clear behavioral and measurable terms in the letter of agreement between the residency and the practicum site and in the resident rotation evaluation. These educational goals and objectives for each practicum rotation are reviewed with the resident prior to each rotation and are included as an appendix to the residency handbook.

In addition to their rotations, practicum year residents continue to participate in didactic sessions and journal club. They are expected to take a more active leadership role in these activities. They are expected to serve as mentors for first year residents, advising them on their courses and teaching them about the practicum year. The residents

are expected to present the results of their research projects at a national professional meeting or submit a manuscript for publication.

In order to permit an on-time graduation, residents may not take more than two weeks of leave each year.

Core Rotations

Required "core" rotations, are typically 4-8 weeks in duration. They are designed to cover a wide spectrum of preventive and occupational medicine practice, including front-line clinical military and civilian public health agencies. They also provide experience with higher-level policy organizations in the military and civilian sectors. If a resident already has significant experience in one of these areas then a core rotation may be waived at the discretion of the Program Director.

Per the residency program requirements, each resident must complete a minimum of four months of direct patient care in an occupational setting during each year of the program. In additional several other administrative rotations are required including Occupational Safety and Health Administration and respective service-specific sites. More information regarding rotations can be found in the OEM Residency Handbook.

Application Process

The NCC/USU OEM Residency does not participate in the civilian residency match program, but instead uses the DoD Joint Graduate Medical Education Selection Board (JGMESB) to select our residents. The JGMESB typically meets early in December each year, and notification of those selected occurs shortly thereafter, usually by posting to the Service respective graduate medical education websites.

Army, Air Force and Navy information on the JGMESB process is available from:

Army

GENERAL INFORMATION FOR MEDICAL EDUCATION DIRECTORATE HQDA, OTSG ATTN: DASG-PSZ-M 5109 LEESBURG PIKE Skyline 6, Room 691

FALLS CHURCH, VA 22041-3258

Phone Numbers: (877) 633-2769, (703) 681-7781, DSN 761-7781

Fax Numbers: 703-681-8044, DSN 761-8044 Email: DASG.ZHM@OTSG.AMEDD.ARMY.MIL

Internet: http://www.mods.army.mil/medicaleducation/

Navy

Naval Medical Education and Training Command Graduate Programs - Code OG12 Bldg 1, Tower 15 8901 Wisconsin Avenue Bethesda, MD 20889-5611 FTOS/OFI PROGRAMS ASSISTANT (CODE-OG151)

COMM: (301) 319-4511 DSN: 285-4511

FAX: (301) 295-6113

Internet: http://nshs.med.navy.mil/gme/mcpp.htm

Air Force

HQ AFPC/DPAME 550 C Street W Suite 25 Randolph AFB, TX 78150-4727

COMM: 210-565-2638 DSN 665-2638

Toll Free: 1-800-531-5800 FAX: 210-565-2830

E-Mail: afpc.dpame@randolph.af.mil

Internet: http://www.afpc.randolph.af.mil/medical/PhysicianEducation/default.htm

The NCC/USU OEM residency program has the capacity for fifteen total residents between the PGY2 and PGY3 years. The number of sponsored (fully funded) residency training authorizations varies from year-to-year, based upon Service training needs. Canadian military officers are accommodated on a space available basis after the DoD match is completed.

Application to the USU MPH is done separately after acceptance to the NCC/USU Preventive Medicine residency program through the JGMESB. Information on application to the USU Graduate School is available at http://www.usuhs.mil/graded. The deadline for application to the MPH or MTM&H program is 1 January.

Applicants must have, at a minimum, completed an internship of which at least 11 months are clinical. Fulfilling this requirement allows the internship to count as the PGY1 year for ABPM certification eligibility.

The most competitive physician applicants have completed an initial tour as a general medical officer (GMO), undersea medical officer (UMO) or flight surgeon (FS) prior to residency. Many past and current residents enter the OEM residency already board certified in another specialty, such as Family Practice.

National Capital Consortium (NCC)/Uniformed Services University (USU)

PUBLIC HEALTH AND GENERAL PREVENTIVE MEDICINE (GPM) RESIDENCY

Mission

The NCC (USU) Public Health and General Preventive Medicine (GPM) Residency trains residents to be fully competent, board-certified and lifelong learning physicians who expertly apply population-based methods in order to advance global health and to promote, protect, preserve and rehabilitate the health of those who go in harm's way.

Overall Learning Objectives

At the completion of this training program, residents will be able to:

- Apply principles and methods of biostatistics and epidemiology effectively
- Plan, administer, and evaluate health systems and medical programs
- Recognize, assess, and control environmental and occupational health hazards
- Address social, cultural and behavioral factors influencing individual and public health
- Implement primary, secondary, and tertiary prevention for assessed needs
- Identify and counter disease and injury threats related to military service
- Communicate clearly to multiple professional and lay target groups, in both written and oral
 presentations, the level of risk from hazards and the rationale for and results of interventions

Background and Overall Residency Structure

The NCC (USU) GPM Residency is a two year graduate medical education training program for Medical Corps officers sponsored by the Uniformed Services of the United States and is fully accredited by the Accreditation Council for Graduate Medical Education (ACGME). This program trains residents from the Air Force, Navy, and Army. The GPM residency program is normally approved by the ACGME to train twelve (12) total residents split between the Post-Graduate Year two (PGY2) and PGY3 training phases. The number of sponsored (fully funded) residency training authorizations varies from year-to-year, based upon Service training needs. The GPM Residency is co-located and shares resources with the NCC (USU) Occupational and Environmental Medicine (OEM) Residency. Both programs may also at times train sponsored foreign military with fully fluent English language skills and Public Health Service physicians on a space-available basis after the results of the Joint Services Graduate Medical Education Selection Board (JSGMESB) are known.

PGY2 Year

The GPM PGY2 Year is twelve months in duration, beginning the first week in July and ending the last week in June. For the purpose of board certification in Public Health and General Preventive Medicine, the ABPM requires a course of academic study and award of a Master of Public Health or equivalent masters or doctoral post-graduate degree. This academic training culminates in either the Master of Public Health (MPH) or less frequently, a Master of Tropical Medicine and Hygiene (MTM&H) degree, both of which are available at USU.

Most of the coursework for the Graduate Degree will occur during the PGY2 year, but one or more requirements will be met in the PGY3 year with current ACGME requirements for Direct Patient Care (DPC) in the PGY2 year. Masters degrees are awarded at the end of the PGY3. Within the USU MPH degree program, there are several "concentration areas" from which GPM residents generally select in order to focus their studies. Full details on available options may be found elsewhere in the graduate handbook for the Department of Preventive Medicine and Biostatistics. Residents receive guidance throughout the year regarding required coursework as well as recommended electives. A curriculum planning worksheet is used to guide Individual Education Plans for each resident.

PGY3 Year

GPM Core Practicum rotations - Following the PGY2 year, 12 months of practicum "on the job" training, including a minimum of 2 months of direct patient care and a minimum of 2 months experience at a governmental public health agency are required by the ACGME. The current required "core" practicum rotations are as below:

- Two months in county public health (most commonly Montgomery, Anne Arundel, or Fairfax counties)
- Two months of direct patient care: Various sites are used for this requirement to include Walter Reed National Military Medical Center, US Naval Academy, US Air Force Academy, Trainee Health at Lackland Air Force Base, Barnard Medical Center, and the Department of State travel clinic.
- Policy rotation (Bureau of Medicine and Surgery or Air Force Medical Support Agency)
- A clinical preventive services rotation at the Agency for Healthcare Research and Quality (AHRQ)
- A surveillance/practical application of epidemiology principles rotation at the Armed Forces Health Surveillance Branch (AFHSB)
- Operational preventive medicine at Navy Environmental and Preventive Medicine Units or Air Force Medical Operations Agency

PGY3 Elective Rotations

There are a wide range of additional rotations available. The remainder of the practicum year can be tailored to an individual resident's interests, needs, and experience level. Potential electives include:

- Navy and Marine Corps Public Health Center, Norfolk, VA
- National Committee for Quality Assurance (NCQA), Washington, DC
- Military Overseas Research Activities (Lima, Bangkok, Kenya)
- Naval Health Research Center, San Diego, CA
- USU Department of Preventive Medicine and Biostatistics, USU
- USU Center for Global Health Engagement (CGHE), USU
- Immunization Healthcare Branch, Defense Health Agency, Falls Church, VA and WRNMMC
- National Center for Medical Intelligence (NCMI), Fort Detrick, MD

Many other rotations within the DC metro area are available or can be created based on the resident's interests and initiative. Due to need for ongoing didactic training and budgetary constraints, residents are generally limited to 2 months of "away" rotations during the PGY3 year.

PGY3 Year Didactic Components

During the practicum year, a variety of didactic training activities occur in addition to the rotations. Conferences, selected courses and other non-rotation requirements for the PGY3 year are described below:

<u>PMB Seminars</u>: When residents are in the National Capital Area, they are required to attend the weekly Wednesday Preventive Medicine and Biostatistics (PMB) seminar.

<u>Weekly Residency Journal Clubs</u>: During both the PGY2 and PGY3 year, PMO973 or Journal Club, is mandatory for all GPM residents in the National Capital Area. During this didactic session, residents hone critical appraisal skills, review relevant clinical preventive medicine literature, discuss current preventive medicine issues, and give presentations. A variety of topics are covered, including updates and discussions of resident projects, ABPM examination preparation and review, career planning, orientation to the real world culture and expectations of PM, and discussion of residency policy issues.

<u>Professional Conferences</u>: During the PGY3, each resident is required to attend at least one major national conference, typically the American College of Preventive Medicine (ACPM) Annual Conference (www.acpm.org).

Other Courses: There are a wide variety of short courses and external seminars which are required or potentially available to residents. Required courses are labeled with "**" below. This requirement may be waived by the program director with prior experience or equivalent training. Some of the courses available include:

- **Centers for Disease Control and Prevention (CDC) course, "Epidemiology and Prevention of Vaccine Preventable Diseases". This is an online course accessible from https://www.cdc.gov/vaccines/ed/webinar-epv/index.html
- ** USAPHC Risk Communication Course: https://phc.amedd.army.mil/topics/envirohealth/hrc/Pages/Health-Risk-Communication-Training.aspx
- **Medical Management of Chemical and Biological Casualties Course (MMCBC) http://www.usamriid.army.mil/education/
- **Medical Effects of Ionizing Radiation (MEIR) Course https://www.usuhs.edu/afrri/meircourseschedule
- The Denver TB Course, (https://www.nationaljewish.org/education-training/pro-ed/live-events) the premier biannual four-day course held in at the National Jewish Medical and Research Center each October and April. Information on the course is made available a few months before the course.
- Course offerings from the Center for Global Health Engagement: https://www.usuhs.edu/cghe
- Military Tropical Medicine (often taken by Navy residents between residency and reporting to assignment): http://www.med.navy.mil/sites/nmpdc/courses/Pages/Military%20Tropical%20Medicine.aspx
- ACLM Lifestyle Medicine Course (depending on funding, may be funded by residency): https://www.lifestylemedicine.org/Lifestyle-Medicine-Course-Syllabus
- ACPM Board Review Course (post-residency) http://www.acpm.org/page/brc The residency can usually

fund the course itself or the materials for the course, but not the travel/TAD for the course.

Additional National Courses and Meetings which can be considered if funding is available and/or could be attended on PTAD/PTDY status:

- The Association for Prevention Teaching and Research (previously the American Society of Teachers of Preventive Medicine) http://www.aptrweb.org
- CDC Epidemiology Intelligence Service Conference https://www.cdc.gov/eis/conference/index.html
- American Public Health Association Annual Meeting http://www.apha.org
- American Society of Tropical Medicine and Hygiene Annual Meeting http://www.astmh.org
- International Conference on Emerging Infectious Diseases http://www.iceid.org
- International Society of Travel Medicine Conference http://www.istm.org

Application Process

The NCC (USU) GPM Residency does not participate in the civilian residency match program, but instead uses the DoD Joint Service Graduate Medical Education Selection Board (JSGMESB) to select our residents. The JSGMESB typically meets early in December each year, and notification of those selected occurs shortly thereafter, usually by posting to the Service respective graduate medical education websites in mid-December. Information on the JSGMESB process is available from service specific sources below:

Air Force

HQ AFPC/DP2NP Physician Education 550 C Street West JBSA-Randolph AFB, TX 78150-4727 COMM: 210-565-2638 DSN 665-2638

E-mail: <u>AFPC.DP2NP.PhysicanEducation@usaf.mil</u>

http://www/airforcemedicine.af.mil/Organizations/Physician-Education-Branch/

Navy

Naval Medical Professional Development Center Code 1WMC1 8955 Wood Road, Bldg 1 18th Floor Bethesda, MD 20889-5628

E-mail: usn.bethesda.navmedprodevctrmd.list.nmpdc-gmesb@mail.mil

GME website:

http://www.med.navy.mil/sites/nmpdc/professional-

<u>development/SitePages/Graduate%20Medical%20Education%20Overview.aspx</u>

Army

Director of Medical Education, OTSG 7700 Arlington Blvd, Suite 5145 Falls Church, VA 22042-5145 usarmy.ncr.hqda-otsg.mbx.otsg-gme@mail.mil https://www.mods.army.mil/medicaleducation/

Residents designating the NCC (USU) GPM residency training program as their first choice are required by the JSGMESB to interview with the residency Program Directors either in person or by phone if travel is not possible based on individual circumstances. It is also advisable to arrange for an interview even if USU is your second choice, as sometimes the selection process results in residents being placed in other than their first choice for

training. Please contact the residency director or administrator to arrange for an interview (see contact information below).

Application to the USU MPH or MTM&H program is done separately after acceptance to the NCC (USU) General Preventive Medicine residency program through the JSGMESB. Information on application to the USU graduate school is available at http://www.usuhs.mil/graded/application.html. The deadline for application to the MPH or MTM&H program is 31 January.

Applicants must have, at a minimum, completed an internship of which at least 11 months were providing direct patient care. Fulfilling this requirement allows the internship to count as the PGY1 year for ABPM certification eligibility. It is experientially helpful and preferred by the sponsoring Services for prospective residents to complete at least an initial tour as a general medical officer (GMO), flight surgeon (FS), or undersea medical officer (UMO) or practice and be board-certified in another specialty. However, qualified and motivated applicants have been accepted for training immediately after internship some years.

Contact information

The Program Coordinators for both the GPM and OEM residency programs may be reached by phone at 301-295-3717 or 301-295-1668 for further inquiries. Further information on the program is also available at our website at https://www.usuhs.edu/pmb/gpmresidency.html

GPM Residency Program Director PMB Department (301)295-3717(Program Coordinator) Gpm_residency@usuhs.edu

COURSE DESCRIPTIONS

LIST OF COURSES

Course No. Title Division	Division	Page
PMO103 Fundamentals of Healthcare Finance (2)	HSA	73
PMO401 Seminar in Health Administration and Policy (1-2)	HSA	73
PMO502 Introduction to SAS (1)	EPI/BIOST	69
PMO503 Biostatistics I (4)	EPI/BIOST	69
PMO504 Biostatistics II (4)	EPI/BIOST	69-70
PMO505 Computer Applications in Public Health (2)	EPI/BIOST	70
PMO508 Biostatistics III (5)	EPI/BIOST	70
PMO511 Introduction to Epidemiology (4)	EPI/BIOST	70
PMO512 Epidemiologic Methods (4)	EPI/BIOST	70
PMO513 Advanced Epidemiologic Methods (4)	EPI/BIOST	70
PMO514 Epidemiology and Control of Infectious Diseases (3)	EPI/BIOST	70-71
PMO515 Chronic Disease Epidemiology & Control (2)	EPI/BIOST	71
PMO516 Design and Analysis of Epidemiologic Studies (3)	EPI/BIOST	71
PMO519 Occupational & Environmental Epidemiology (3)	EPI/BIOST	71
PMO520 Molecular Epidemiology (2)	EPI/BIOST	71
PMO522 Meta-Analysis (1)	EPI/BIOST	71-72
PMO523 Fundamentals of U.S. Health Policy (3)	HSA	73-74
PMO526 Health Systems (4)	HSA	74
PMO527 Principles of Healthcare Management (2)	HSA	74
PMO528 Global Health I (4)	GH	86
PMO529 Health Care Financial Management (2)	HSA	74
PMO530 Social and Behav Sciences Applied to Public Health (4)	SOC/BEHAV	78
PMO531 Program Planning and Development (3)	SOC/BEHAV	78
PMO532 Quality Assessment & Improvement in Health Care (2)	HSA	74
PMO533 Decision Making in Health Services (2)	HSA	74-75

PMO534 Medical Anthropology (3)	GH	86
PMO535 The Law of Health Care (2)	HSA	75
PMO539 Global Health II (4)	GH	86
PMO540 Intro to Environmental and Occupational Health (4)	OEHS	63
PMO541 Advanced Environmental Health (3)	OEHS	63
PMO542 Clinical Occupational and Environmental Medicine (3)	DEPT	90
PMO548 Joint Health Operations (6)	GH	86-87
PMO549 Principles of Toxicology (3)	OEHS	63-64
PMO550 Industrial Hygiene and Laboratory (4)	OEHS	64
PMO552 Assessing and Managing Occupational Exposures (4)	OEHS	64
PMO553 Industrial Hygiene Field Studies (1)	OEHS	64
PMO555 Industrial Ventilation (4)	OEHS	65
PMO558 Fundamentals of Clinical Occupational Health Environmental & Preventive Medicine (1)	DEPT	90
PMO560 Principles & Practice of Tropical Medicine (6)	ТРН	78
PMO561 Medical Parasitology (3)	TPH	79
PMO563 Tropical Medicine Practicum (1-12)	ТРН	79
PMO564AEpidemiology and Control of Arboviruses (2)	TPH	79
PMO564BLaboratory Techniques Arbovirology (4)	ТРН	79
PMO565 Vector Biology (2)	ТРН	79-80
PMO566 Physiological Parameters of Vector Competence (4)	TPH	80
PMO567 Changing Patterns of Arthropod-borne Diseases (4)	TPH	80
PMO568 Medical Acarology (4)	ТРН	80
PMO569 Malaria Epidemiology and Control (3)	TPH	80-81
PMO570 Modern Technology and Vector-borne Disease (4)	TPH	81
PMO571 Biosystematics in Medical Zoology (2)	TPH	81
PMO573 Epidemiology and Prevention of Vaccine-preventable Diseases (1)	TPH	81
PMO576 Human Resource Management in Healthcare (3)	HSA	75
PMO577 Introduction to GIS in Public Health (2)	TPH	81-82

PMO578	Remote Sensing Methods in Public Health (3)	TPH	82
PMO582	Radiation Biology (3)	OEHS	65
PMO584	Introduction to Health Physics (3)	OEHS	65
PMO592	Health Information Technology (3)	HSA	
	Introduction to Complex Sample Survey Analysis (2)	EPI/BIOST	72
	Health Economics (3)	HSA	75
	Introduction to Health Risk Communication (2)	OEHS	65
	Fundamentals of Human Physiology (2)	OEHS	65-66
	Environmental Health Risk Assessment (2)	OEHS	66
PMO602	Air Pollution and Waste Management (3)	OEHS	66
PMO604	Hydrology, Water Treatment & Wastewater Treatment (3)	OEHS	66
PMO605	Analytical Instrumentation Methodologies in Environmental Health (3)	OEHS	66-67
PMO607	Environmental Chemistry (4)	OEHS	67
PMO608	Doctoral Data Club (1) – Inactive	DEPT	90
PMO610	General Entomology (2)	TPH	82
	General Entomology (2) Classic Studies in Epidemiology (2)	TPH EPI/BIOST	82 72
PMO611			
PMO611 PMO613	Classic Studies in Epidemiology (2) Public Health Issues of Disasters in Developing	EPI/BIOST	72
PMO611 PMO613 PMO614	Classic Studies in Epidemiology (2) Public Health Issues of Disasters in Developing Countries (4)	EPI/BIOST GH	72 87
PMO611 PMO613 PMO614 PMO615	Classic Studies in Epidemiology (2) Public Health Issues of Disasters in Developing Countries (4) Tropical Medicine Rounds (2)	EPI/BIOST GH TPH	72 87 82
PMO611 PMO613 PMO614 PMO615 PMO631	Classic Studies in Epidemiology (2) Public Health Issues of Disasters in Developing Countries (4) Tropical Medicine Rounds (2) Sand Flies and Disease (3)	EPI/BIOST GH TPH TPH	72 87 82 82-83
PMO611 PMO614 PMO615 PMO631 PMO634	Classic Studies in Epidemiology (2) Public Health Issues of Disasters in Developing Countries (4) Tropical Medicine Rounds (2) Sand Flies and Disease (3) OEHS Journal Club (1)	EPI/BIOST GH TPH TPH OEHS	72 87 82 82-83 67
PMO611 PMO614 PMO615 PMO631 PMO634 PMO642	Classic Studies in Epidemiology (2) Public Health Issues of Disasters in Developing Countries (4) Tropical Medicine Rounds (2) Sand Flies and Disease (3) OEHS Journal Club (1) Public Health Surveillance (1) Clinical Preventive Services and Selected Topics in Occ.	EPI/BIOST GH TPH TPH OEHS TPH	72 87 82 82-83 67 83
PMO611 PMO614 PMO615 PMO631 PMO634 PMO642 PMO651	Classic Studies in Epidemiology (2) Public Health Issues of Disasters in Developing Countries (4) Tropical Medicine Rounds (2) Sand Flies and Disease (3) OEHS Journal Club (1) Public Health Surveillance (1) Clinical Preventive Services and Selected Topics in Occ. Health (3)	EPI/BIOST GH TPH TPH OEHS TPH DEPT	72 87 82 82-83 67 83
PMO611 PMO614 PMO615 PMO631 PMO634 PMO642 PMO651 PMO652	Classic Studies in Epidemiology (2) Public Health Issues of Disasters in Developing Countries (4) Tropical Medicine Rounds (2) Sand Flies and Disease (3) OEHS Journal Club (1) Public Health Surveillance (1) Clinical Preventive Services and Selected Topics in Occ. Health (3) Human Factors Engineering (3)	EPI/BIOST GH TPH TPH OEHS TPH DEPT OEHS	72 87 82 82-83 67 83 90-91
PMO611 PMO614 PMO615 PMO631 PMO634 PMO642 PMO651 PMO652 PMO652	Classic Studies in Epidemiology (2) Public Health Issues of Disasters in Developing Countries (4) Tropical Medicine Rounds (2) Sand Flies and Disease (3) OEHS Journal Club (1) Public Health Surveillance (1) Clinical Preventive Services and Selected Topics in Occ. Health (3) Human Factors Engineering (3) Occupational Ergonomics (2)	EPI/BIOST GH TPH TPH OEHS TPH DEPT OEHS OEHS	72 87 82 82-83 67 83 90-91 67
PMO611 PMO614 PMO615 PMO631 PMO634 PMO642 PMO651 PMO652 PMO654 PMO655	Classic Studies in Epidemiology (2) Public Health Issues of Disasters in Developing Countries (4) Tropical Medicine Rounds (2) Sand Flies and Disease (3) OEHS Journal Club (1) Public Health Surveillance (1) Clinical Preventive Services and Selected Topics in Occ. Health (3) Human Factors Engineering (3) Occupational Ergonomics (2) Safety Engineering (3)	EPI/BIOST GH TPH TPH OEHS TPH DEPT OEHS OEHS	72 87 82 82-83 67 83 90-91 67 67

PMO671 Introduction to the MPH Project and Practicum (1)	DEPT	91
PMO672 MPH Project/Practicum Design and Development (1)	DEPT	91-92
PMO673 MPH Project/Practicum Implementation and Evaluation (1) DEPT	92
PMO674 MPH Independent Project (3)	DEPT	92
PMO675 DRPH Public Health Practicum	DEPT	92
PMO676 Mindfulness Based Stress Reduction (2)	DEPT	92-93
PMO680 Introduction to Public Health (1)	DEPT	93
PMO682 History of Preventive Medicine (2-4)	DEPT	93
PMO683 Critical Reading Seminar (2)	DEPT	93
PMO684 Clinical Research Seminar (1)	DEPT	93-94
PMO688 Information Gathering in Clinical Medicine (2-12)	DEPT	94
PMO691 Teaching Practicum (3)	DEPT	94
PMO694 Global Health Disparities & Social Determinants of Health (3)	GH	87
PMO701 Independent Study in Biostatistics (1-12)	EPI/BIOST	72
PMO760 Tropical Medicine Research Tutorial (1-12)	TPH	83
PMO763 Tutorial in Medical Zoology (1-12)	TPH	83
PMO764 Tutorial in Aquatic Biology (4)	TPH	83-84
PMO810 Integrated Pest/ Vector Management (2)	TPH	84
PMO811 Independent Study in Epidemiology (1-12)	EPI/BIOST	72
PMO830 Independent Study in Social and Behavioral Science (1-12) SOC/BEHAV	78
PMO841 Aerospace Operational Physiology I (3)	OEHS	68
PMO845 Human Factors in Aviation (3)	OEHS	68
PMO848 Special Topics in Aerospace Medicine (2-3)	OEHS	68
PMO862 Global Health Independent Study (1-12)	GH	87-88
PMO900 Introduction to Clinical Trials (2)	DEPT	94
PMO911 Research in Epidemiology (1-12)	EPI/BIOST	73
PMO926 Health Services Administration Directed Research (1-12)	HSA	75-76
PMO940 Environmental/Occupational Health Directed Studies (1-15)	OEHS	68

PMO941 Environmental/Occupational Health Directed Research (1-15)	OEHS	68-69
PMO942 Environmental/Occupational Health Directed Rotations (1-15)	OEHS	69
PMO963 Directed Field Research (1-12)	TPH	84
PMO964 Research in Medical Zoology (1-15)	TPH	84
PMO970 Directed Studies in Preventive Medicine (1-12)	DEPT	94
PMO971 PMB Doctoral Student Journal Club (1)	DEPT	94-95
PMO972 Seminar in Critical Thinking (4)	DEPT	95
PMO973 GPM and OEM Residency Journal Club (1)	DEPT	95
PMO990 Travel Medicine (2)	TPH	84
PMO991 Ethics in Public Health (3)	GH	88
PMO992 Travel Clinic Practicum (1)	TPH	84-85
PMO996 Clinical Trials Design and Analysis (2)	DEPT	95-96
PMO997 Field Epidemiology (2)	EPI/BIOST	73
PMO998 Foundations of Leadership (1)	HSA	76
D101005 () D1		
PMO1005 Strategic Planning & Marketing for Healthcare Systems (3) HSA	76
PMO1005 Strategic Planning & Marketing for Healthcare Systems (PMO1007 Advanced Seminar in Global Health Policy (3)	3) HSA HSA	76 76-77
PMO1007 Advanced Seminar in Global Health Policy (3)	HSA	76-77
PMO1007 Advanced Seminar in Global Health Policy (3) PMO1008 Independent Study in GIS (1-12)	HSA TPH	76-77 85
PMO1007 Advanced Seminar in Global Health Policy (3) PMO1008 Independent Study in GIS (1-12) PMO1009 Domestic Disaster Management & Response (3) PMO1010 Diversity and Leadership (2) PMO1011 Quant. Anal. & Methods for Health Leaders and	HSA TPH GH	76-77 85 88
PMO1007 Advanced Seminar in Global Health Policy (3) PMO1008 Independent Study in GIS (1-12) PMO1009 Domestic Disaster Management & Response (3) PMO1010 Diversity and Leadership (2)	HSA TPH GH HSA	76-77 85 88 77
PMO1007 Advanced Seminar in Global Health Policy (3) PMO1008 Independent Study in GIS (1-12) PMO1009 Domestic Disaster Management & Response (3) PMO1010 Diversity and Leadership (2) PMO1011 Quant. Anal. & Methods for Health Leaders and Executives I (3)	HSA TPH GH HSA HSA	76-77 85 88 77 77
PMO1007 Advanced Seminar in Global Health Policy (3) PMO1008 Independent Study in GIS (1-12) PMO1009 Domestic Disaster Management & Response (3) PMO1010 Diversity and Leadership (2) PMO1011 Quant. Anal. & Methods for Health Leaders and Executives I (3) PMO1012 Quant. Anal. & Methods for Health Leaders and	HSA TPH GH HSA HSA	76-77 85 88 77 77
PMO1007 Advanced Seminar in Global Health Policy (3) PMO1008 Independent Study in GIS (1-12) PMO1009 Domestic Disaster Management & Response (3) PMO1010 Diversity and Leadership (2) PMO1011 Quant. Anal. & Methods for Health Leaders and Executives I (3) PMO1012 Quant. Anal. & Methods for Health Leaders and Executives II (3)	HSA TPH GH HSA HSA	76-77 85 88 77 77
PMO1007 Advanced Seminar in Global Health Policy (3) PMO1008 Independent Study in GIS (1-12) PMO1009 Domestic Disaster Management & Response (3) PMO1010 Diversity and Leadership (2) PMO1011 Quant. Anal. & Methods for Health Leaders and Executives I (3) PMO1012 Quant. Anal. & Methods for Health Leaders and Executives II (3) PMO1013 Molecular Parasitology (3)	HSA TPH GH HSA HSA HSA	76-77 85 88 77 77 77
PMO1007 Advanced Seminar in Global Health Policy (3) PMO1008 Independent Study in GIS (1-12) PMO1009 Domestic Disaster Management & Response (3) PMO1010 Diversity and Leadership (2) PMO1011 Quant. Anal. & Methods for Health Leaders and Executives I (3) PMO1012 Quant. Anal. & Methods for Health Leaders and Executives II (3) PMO1013 Molecular Parasitology (3) PMO1014 Monitoring and Evaluation in Global Health (2)	HSA TPH GH HSA HSA HSA TPH GH	76-77 85 88 77 77 77 85
PMO1007 Advanced Seminar in Global Health Policy (3) PMO1008 Independent Study in GIS (1-12) PMO1009 Domestic Disaster Management & Response (3) PMO1010 Diversity and Leadership (2) PMO1011 Quant. Anal. & Methods for Health Leaders and Executives I (3) PMO1012 Quant. Anal. & Methods for Health Leaders and Executives II (3) PMO1013 Molecular Parasitology (3) PMO1014 Monitoring and Evaluation in Global Health (2) PMO1015 MHAP Residency (12)	HSA TPH GH HSA HSA TPH GH HSA	76-77 85 88 77 77 77 85 88 77-78
PMO1007 Advanced Seminar in Global Health Policy (3) PMO1008 Independent Study in GIS (1-12) PMO1009 Domestic Disaster Management & Response (3) PMO1010 Diversity and Leadership (2) PMO1011 Quant. Anal. & Methods for Health Leaders and Executives I (3) PMO1012 Quant. Anal. & Methods for Health Leaders and Executives II (3) PMO1013 Molecular Parasitology (3) PMO1014 Monitoring and Evaluation in Global Health (2) PMO1015 MHAP Residency (12) PMO1016 Infectious Diseases of Public Health Importance (1)	HSA TPH GH HSA HSA TPH GH HSA	76-77 85 88 77 77 77 85 88 77-78
PMO1007 Advanced Seminar in Global Health Policy (3) PMO1008 Independent Study in GIS (1-12) PMO1009 Domestic Disaster Management & Response (3) PMO1010 Diversity and Leadership (2) PMO1011 Quant. Anal. & Methods for Health Leaders and Executives I (3) PMO1012 Quant. Anal. & Methods for Health Leaders and Executives II (3) PMO1013 Molecular Parasitology (3) PMO1014 Monitoring and Evaluation in Global Health (2) PMO1015 MHAP Residency (12) PMO1016 Infectious Diseases of Public Health Importance (1) PMO1017 Health Context Analysis (2)	HSA TPH GH HSA HSA HSA TPH GH HSA TPH GH	76-77 85 88 77 77 77 85 88 77-78 85 88-89

PMO1021 Occupational Noise Control (3)	OEHS	69
PMO1022 Fundamentals of Global Health Engagement (3)	GH	89
PMO1023 Global Mental Health	GH	89-90
PMO1024 The Constitution; Public Health and the Body Politic (1)	DEPT	96

OCCUPATIONAL AND ENVIRONMENTAL HEALTH SCIENCES (OEHS)

PMO540 INTRODUCTION TO ENVIRONMENTAL AND OCCUPATIONAL HEALTH

This course provides a broad exposure to basic environmental health subjects, including toxicology, epidemiology, indoor and outdoor air quality, food service sanitation, insects and rodents, environmental noise, energy, drinking water treatment, wastewater treatment, solid waste disposal, injury control, the workplace, risk assessment, risk communication, and environmental regulations. Discussions will cover the specific, general and global issues associated with these environmental health topics. Several site visits are scheduled during the course which will reinforce understanding of selected topics.

Prerequisites: None

Pre-Fall Sharp/Stubner 4 Quarter Hours/Graded

PMO541 ADVANCED ENVIRONMENTAL HEALTH

Provide the student with advanced instruction on environmental health subject areas typically encountered by a public/global health professional. Upon completion of this course, a student will be able to discuss issues relating to general environmental health in high-, middle-, and low-income countries, and austere environments to include military deployed settings. This course will consist of student presentations, a mid-term, and a comprehensive final exam. In addition to the graded course content, qualified students will be provided the opportunity to study for and take the Registered Environmental Health Specialist (REHS) credentialing exam.

Prerequisites: PMO 540 and Concurrence of Course Director

Fall Sharp 3 Quarter Hours/Graded

PMO549 PRINCIPLES OF TOXICOLOGY

Upon completion of this course the student should be able to explain the general principles of toxicology including but not limited to toxicity, dose-response, absorption, distribution, metabolism, and excretion, mechanisms of cellular toxicity, variations in toxic responses, and manifestations of toxicity from cellular to organ to organism levels. Students will identify major mechanisms of carcinogenesis, reproductive toxicity and developmental toxicity and describe the toxic responses of the following organ systems: endocrine, skin, respiratory, cardiovascular, liver, kidney, blood, nervous and immune systems. Students will access, analyze and interpret the toxicological literature and develop presentations that illustrates the toxic effects of selected substances including but not limited to solvents, metals, pesticides, fibers, venoms, and radiation and utilize toxicological principles in risk assessment and risk communication. Previous exposure to biology and organic or biochemistry is very useful.

Prerequisites: Concurrence of Course Director Recommended: PMO600 (if limited background in biomedical sciences)

PMO550 INDUSTRIAL HYGIENE AND LABORATORY

This course will cover the essentials of the practice of industrial hygiene through the concepts of hazard anticipation, recognition, evaluation and control. It is designed as an overview for those students with limited prior experience in industrial hygiene. Topics covered include threshold limit values and OSHA exposure limits, calculations of exposure data, classification of agents, monitoring techniques for particulates and gases/vapors, introduction to ventilation principles, noise, respiratory protection practices and physical hazards. The laboratory will familiarize students with commonly used industrial hygiene sampling equipment. Laboratories will emphasize calibration of sampling pumps, direct reading gas/vapor sampling equipment, sampling particulates, industrial ventilation, and industrial noise. Prerequisites: Concurrence of Course Director

Winter Schaal/Stubner 4 Quarter Hours/Graded

PMO552 ASSESSING AND MANAGING OCCUPATIONAL EXPOSURES

This course provides an in-depth study of specific industrial hygiene topics that are vital to advanced practice of industrial hygiene. Mastery of these topics will provide students with solid background to prepare for certification examinations in industrial hygiene and to have an academic knowledge of industrial hygiene that is congruent with managing industrial hygiene programs. Upon completion of this course, student should be able to understand the origins and applications of Threshold Limit Values (TLVs) to a variety of chemical and physical hazards that are encountered in dynamic work environments. In addition, students will gain an understanding of how these TLVs are related to specific and non-specific health effects and what sampling methodology and control measures can be utilized to manage potential adverse health effects from occupational exposures to chemical and physical agents. Prerequisites: PMO550 and Concurrence of Course Director

Spring Benchoff 4 Quarter Hours/Graded

PMO553 INDUSTRIAL HYGIENE FIELD STUDIES

This course is designed to familiarize the student with functional industrial hygiene operations. This will be accomplished by a series of lectures that support field trips to military and civilian work sites. Industrial facilities will be toured and industrial hygiene operations reviewed on site. The practice of industrial hygiene in the workplace will be demonstrated.

Prerequisites: PMO550 and Concurrence of Course Director

Summer Schaal/Stubner 1 Quarter Hour/Graded

PMO555 INDUSTRIAL VENTILATION

This course is intended to give in-depth instruction in design and testing of local exhaust hoods and industrial ventilation systems. The course will cover contaminant generation, principles of air flow, general and contaminant-specific hoods, duct sizing and layout, ventilation system balancing, fan selection, air cleaning devices, and ventilation system testing. Upon completion of the course, the student should be able to correctly design and evaluate existing designs of industrial ventilation systems for correctness. Prerequisites: PMO550 and Concurrence of Course Director

Fall Benchoff 4 Quarter Hours/Graded

PMO582 RADIATION BIOLOGY

The use of ionizing radiation in medical and industrial applications continues to expand. For example, approximately 320 million diagnostic medical and dental x-ray procedures are performed each year in the US. This

fact highlights the need to study and quantify the stochastic (chronic) and non-stochastic (acute) effects of ionizing radiation. At the end of the course the student will demonstrate an understanding of the fundamentals of ionizing radiation interactions with matter, human radiation exposure scenarios, fundamentals of radiation chemistry and cellular radiobiology, biological effects of low doses of ionizing radiation (chronic effects), radiation risks in perspective, biological effects of high doses of ionizing radiation (acute effects), and radiation accidents and biodosimetry.

Prerequisites: Concurrence of Course Director

Spring Blakely 3 Quarter Hours/Graded or Credit

PMO584 INTRODUCTION TO HEALTH PHYSICS

Upon the completion of the course, students will be able to: Describe the various modes of decay, determine the types of equilibrium achievable for chains of nuclides, describe the basic interaction mechanisms for all types of ionizing radiation, describe the various components of a radiation safety program, recognize naturally occurring and manmade radionuclides, calculate equilibrium activities and specific activities, understand the difference between SI units and traditional units of measure used in health physics, and determine external and internal dose based on simplified scenarios. Prerequisites: Concurrence of Course Director

Fall Champine 3 Quarter Hours/Graded or Credit

PMO599 INTRODUCTION TO HEALTH RISK COMMUNICATION

This course is an introduction to the basic principles of risk communication theory and practice. The student is oriented to the fundamentals, principles, and processes that have proven effective in communicating health risk in a high concern / low trust environment. Students are guided through the process of responding to difficult questions from a hostile or suspicious audience, of identifying key stakeholders, and of working with the media. Students will, while working in a small group, develop and present a risk communication strategy for a provided scenario. Prerequisites: Concurrence of Course Director

Spring Stubner 2 Quarter Hours/Credit

PMO600 FUNDAMENTALS OF HUMAN PHYSIOLOGY FOR PUBLIC HEALTH

The objective of this class is to familiarize the student with the concepts and principals involved in human physiology. It is assumed that the student has limited or no background in human physiology or the biological sciences. The class will also benefit students who need a refresher course in physiology. It will provide a basic foundation in physiology and prepare non-clinicians for further study in toxicology. PMO549 Principles of Toxicology (MSPH requirement) and several electives throughout the department of toxicology. The major topic areas covered are cell physiology, genetics, cardiovascular and respiratory systems, digestive system, nervous system, immune system, endocrine system, and exercise physiology, the various systems of the body, metabolism and exercise physiology basic nutrition and the relevance of having a basic understanding of human physiology to public health through lecture, discussion and case studies.

Prerequisites: None

Fall TBD 2 Quarter Hour/Graded

PMO601 ENVIRONMENTAL HEALTH RISK ASSESSMENT

Risk assessment impacts many disciplines and various tools are used to evaluate and quantify risk. Environmental Health risk assessment will be covered in depth using the EPA Risk Assessment Guidelines for Superfund sites. Topics to be covered are toxicology concepts, genetics, cancer, animal toxicology studies, exposure assessments,

environmental data collection considerations, and tools used in risk analysis and risk assessment. A comprehensive project will reinforce understanding of a risk assessment.

Prerequisites: PMO540 and Concurrence of Course Director

Winter Sharp 2 Quarter Hours/Graded

PMO602 AIR POLLUTION AND WASTE MANAGEMENT

This course provides an introduction to environmental science and engineering for public health students interested in a deeper understanding of air pollution and waste management topics. Quantitative methods will be used to solve environmental problems involving physical and chemical processes. Students will learn concepts related to air pollution, global atmospheric change, solid waste management, and hazardous waste treatment. This course is designed as the first part of a two course environmental science and engineering sequence with PMO604 Hydrology Water Treatment, and Wastewater Treatment; although each course can be taken independently.

Prerequisites: PMO540 and Concurrence of Course Director

Winter Stubner 3 Quarter Hours/Graded

PMO604 HYDROLOGY, WATER TREATMENT AND WASTEWATER TREATMENT

Students will learn concepts related to surface water and groundwater hydrology; water and wastewater treatment plant design; and the physical and chemical processes involved in water and wastewater treatment. Students will be able to carry out material balances and solve problems involving basic water chemistry concepts. Given a moderately complex water quality problem requiring treatment, students will be able to determine if the processes meet industry guidelines or public health standards.

Prerequisites: PMO540 and Concurrence of Course Director

Spring Sharp 3 Quarter Hours/Graded

PMO605 ANALYTICAL INSTRUMENTATION METHODOLOGIES IN ENVIRONMENTAL HEALTH

Students will examine the major instrumental methodologies used in the quantitative and qualitative analysis of samples taken during environmental health risk assessment or environmental health surveillance procedures. Methods examined will include gas chromatography mass spectroscopy, inductively coupled plasma spectrometry, ion mobility spectrometry, and liquid chromatography. For each methodology the student will learn the scientific basis, equipment set-up and procedures, limitations, interferences, calibration, and sample preparation. The course is conducted through lectures, demonstrations and laboratory exercises. The course grade is based on two examinations and course participation.

Prerequisites: Concurrence of Course Director

Winter Whitaker/Benchoff 3 Quarter Hours/Graded

PMO607 ENVIRONMENTAL CHEMISTRY

This course will provide students with the knowledge and experience needed to predict, study, and describe the origin and distribution of xenobiotic chemical species, and their properties that effect uptake into biological systems.

Prerequisites: PMO540

Spring Whitaker 4 Quarter Hours/Graded

PMO631 OCCUPATIONAL AND ENVIRONMENTAL (OEHS) JOURNAL CLUB

This course will provide students with the knowledge and skills needed to critically read and evaluate a scientific journal article and serve as a forum for discussion of topics in environmental and occupational health including current research, classic case studies, emerging technology, and new or ongoing issues in the field. These discussions are geared to supplement and enhance classroom knowledge and field experience.

Prerequisites: None

Winter/ Spring Stubner 1 Quarter Hour/Credit

PMO651 HUMAN FACTORS ENGINEERING

This course is a practical introduction to the application of human physical, perceptive and cognitive abilities and behaviors, human performance engineering design criteria, and human factors principles and practices to the design of systems, subsystems, equipment and facilities. Particular emphasis is placed on the challenges of integration of the human to the machine and machine to human. Topics include basic human factors research and design methods, perception, cognition, information reception and processing, decision theory, memory, judgment, performance capabilities and limitations in human-machine systems. Prerequisite: Concurrence of Course Director

Winter TBD 3 Quarter Hours/Graded

PMO652 OCCUPATIONAL ERGONOMICS

This introductory course focuses on fundamental ergonomic principles involved in understanding the interactions among the worker, workplace, and job tasks and how these interactions can impact work and health outcomes. Particular emphasis is placed on the recognition and prevention/control of work-related musculoskeletal disorders. Topics covered include basic concepts of Anthropometrics, Biomechanics, and Work Physiology, major sources of occupational ergonomic exposures, and considerations in the development of ergonomic programs.

Prerequisite: Concurrence of Course Director

Fall Whitaker 2 Quarter Hours/Graded

PMO654 SAFETY ENGINEERING

Survey of safety concepts, legal concepts, qualitative and quantitative hazard evaluation, hazard classification, system life cycle safety applied to the design of tools, equipment and the environment to eliminate or control occupational safety hazards. Topics include systems safety analyses, fault hazard analysis, failure mode and effects analysis, fault tree analysis, errors and risk assessment codes.

Prerequisite: Concurrence of Course Director

Spring TBD 3 Quarter Hours/Graded

PMO841 AEROSPACE OPERATIONAL PHYSIOLOGY I

This course introduces students to aerospace physiology. It involves lectures, readings, and discussions that review the history and physiological issues related to exposure to high altitudes. Emphasis is placed on the physical nature of the atmosphere as well as respiratory/circulatory anatomy and physiological effects of exposure to decreased atmospheric pressure. Aircraft and flight equipment designs to counter the physiological threats are included. Prerequisites: Concurrence of Course Director

Fall TBD 3 Quarter Hours/Graded

PMO845 HUMAN FACTORS IN AVIATION

This course will introduce the student to the multifaceted concept of human factors in aviation. It will discuss the impact of human limitations and human interaction in the flight environment. Emphasis will be placed on identifying the role of human factors in aircraft mishaps. The course will also include preventive techniques used to reduce human error. Crew/Cockpit Resource Management Training teaches crews to use all resources available to them to increase mission effectiveness and flight safety. Secondly, Operational Risk Management attempts to identify hazards and alleviate or compensate for them. Lastly, technical advances enable more realistic simulator training to better prepare crews for high threat contingencies. At the completion of the course the student will be able to effectively evaluate aviation related CRM/ORM issues.

Prerequisites: Permission of Course Director, PMO841

Winter TBD 3 Quarter Hours/ Graded

PMO848 SPECIAL TOPICS IN AEROSPACE MEDICINE

Focus is current medical issues within Aerospace Medicine and physiology. Topic theme can vary annually depending on student/faculty interest. Themes can include medicine in extreme environments, diving medicine, wilderness medicine, hyperbaric medicine to mention a few. Each theme will be dealt from both a physiologic and clinical viewpoint while keeping in mind that overarching principles of preventive medicine and public health.

Prerequisites: Concurrence of Course Director

Spring TBD 2-3 Quarter Hours/Graded

PMO940 ENVIRONMENTAL/OCCUPATIONAL HEALTH DIRECTED STUDIES

The student will conduct an independent study project concerning some specific aspect of environmental health, industrial hygiene or occupational health under the close supervision of his/her academic advisor. This course is designed for students working independently to explore a defined topical area or problem or on their MPH year final academic project. Selected students may utilize this independent study option to expand their knowledge in selected subject areas relative to the public health or occupational medicine and general preventive medicine residencies. Enrolled students must submit a study plan to the course instructor for approval at the beginning of the term. Credits are assigned commensurate with the complexity of the plan.

Prerequisites: Concurrence of Course Director

All Schaal/Majar/Staff 1-15 Quarter Hours/Graded or Credit

PMO941 ENVIRONMENTAL/OCCUPATIONAL HEALTH DIRECTED RESEARCH

The student will conduct an independent research project in environmental and/or occupational health or industrial hygiene under supervision of his/her academic advisor. The research project will be designed to involve field studies, laboratory studies, and/or a policy study. Enrolled students must submit a study plan to the course instructor for approval at the beginning of the term. Credits are assigned commensurate with the complexity of the plan.

Prerequisites: Concurrence of Course Director

All Staff 1-15 Quarter Hours/Graded or Credit

PMO942 ENVIRONMENTAL/OCCUPATIONAL HEALTH DIRECTED ROTATIONS

The student will gain relevant experience and specified knowledge, skills, and abilities while working closely with a mentor. The directed rotation will cover staff and technical functions of environmental/occupational health and/or industrial hygiene to include laboratory, field, and policy situations.

Prerequisites: Concurrence of Course Director

All Staff 1-15 Quarter Hours/Graded or Credit

PMO1021 OCCUPATIONAL NOISE CONTROL

Provide the student with broad exposure to occupational noise control techniques. Concepts involving ear anatomy and physiology and hearing loss characteristics will be discussed. Practices involving noise measurement, interpretation, and comparison to noise standards will be examined. Practical industrial/environmental noise control solutions will be reviewed. Industrial site visits scheduled during the course will reinforce understanding of selected topics.

Prerequisites: None Spring Schaal 3 Quarter Hours/Graded or Credit

EPIDEMIOLOGY AND BIOSTATISTICS (EPI/BIOST)

PMO502 INTRODUCTION TO SAS

This hands-on course is designed for students who want to perform statistical analyses using SAS, a popular statistical software package. The course will cover basic skills in writing SAS programs, managing data, and performing various statistical procedures covered in PMO504. Concepts and techniques covered will also be useful when using other statistical software packages.

Prerequisites: PMO503, PMO504 concurrently

Winter Kao 1 Quarter Hour/Graded

PMO503 BIOSTATISTICS I

This course instructs students in the application of elementary statistical procedures commonly used in biomedical and public health research. Topics include techniques of exploratory data analysis, probability, discrete and

continuous statistical distributions, sampling procedures, confidence intervals, hypothesis testing, and sample size determination for experiments and observational studies.

Prerequisites: None

Fall Cruess 4 Quarter Hours/Graded

PMO504 BIOSTATISTICS II

This continuation of PMO503 covers many of the advanced statistical procedures commonly used in biomedical and public health research. Statistical methods include techniques for the analysis of contingency tables or frequency data, non-parametric methods, simple linear regression and correlation, analysis of variance, multiple regression, logistic regression, and analysis of survival data.

Prerequisites: PMO503

Winter Chen 4 Quarter Hours/Graded

PMO505 COMPUTER APPLICATIONS IN PUBLIC HEALTH

This course introduces the basic software applications that are commonly used in the Uniformed Services
University Department of Preventive Medicine and Biostatistics graduate programs. Successful completion of this
course should enable students to access and document the scientific literature, identify internet sources of public
health information, manipulate, merge, analyze, graphically display, interpret and present electronic data sets
using spread sheets, databases, statistical, presentation and other software in common use in epidemiology and
public health. Emphasis is on acquisition of basic familiarity with progression toward intermediate level skills.

Prerequisites: None

Pre-Fall

Kao

2 Quarter

Hour/Graded or Pass/Fail

PMO508 BIOSTATISTICS III

This course instructs students in understanding the concepts of more advanced statistical methods, using the SAS statistical package. Topics include: basic concepts of matrix algebra used in biostatistics, introduction to generalized linear models, maximum likelihood estimation, advanced analysis of multiple linear regression, analysis of covariance, Poisson regression, advanced binary logistic regression, multinomial logistic regression, logistic regression for matched studies, generalized estimating equations (GEE), review of survival analysis, and Cox Proportional Hazards regression.

Prerequisites: PMO502 and 504

Spring Kao 5 Quarter Hours/Graded

PMO511 INTRODUCTION TO EPIDEMIOLOGY

This course introduces the student to basic epidemiologic principles. The course focuses first on the measurement of disease and then transitions to instruction on basic principles of study design. Instruction is provided through lectures and small-group exercises.

Prerequisites: None

Fall Singer 4 Quarter Hours/Graded

PMO512 EPIDEMIOLOGIC METHODS

This course expands upon the basic concepts of epidemiology presented in PMO511. Methodological issues discussed include sampling, measurement error, bias, confounding and study design with special emphasis on how to analyze categorical data.

Prerequisites: PMO503, 504 & 511

Winter Staff 4 Quarter Hours/Graded

PMO513 ADVANCED EPIDEMIOLOGIC METHODS

This course expands on the content of PMO511 and 512. Particular emphasis is placed on data analysis. Small-group exercises and simulations provide the student with hands-on experience in solving selected epidemiologic problems. The course covers advanced material on data analysis, rates and measures, bias, confounding, and specific methodological problems in epidemiology. Prerequisites: PMO503, 504 511, 512 and Concurrence of

Course Director

Spring Staff 4 Quarter Hours/Graded

PMO514EPIDEMIOLOGY AND CONTROL OF INFECTIOUS DISEASES

The natural history, distribution patterns, and risk factors of selected infectious diseases are discussed. Strategies for prevention or control are derived from such epidemiologic concepts as natural reservoir, modes of transmission, in apparent versus apparent infections, herd immunity, and the effects of immunization. Student participation in case studies and presentations will constitute a major part of the course. Prerequisites: PMO511, Concurrence of Course Director

Winter Tribble 3 Quarter Hours/Graded

PMO515 CHRONIC DISEASE EPIDEMIOLOGY AND CONTROL

The current strategies for the population-based control of selected chronic diseases are presented in the context of their epidemiology to include definition, distribution patterns, natural history and risk factors of etiologic or prognostic significance and primary, secondary and tertiary preventive interventions. Prerequisites: PMO511, 512, Concurrence of Course Director

Spring Servies/Witkop/Zhu 2 Quarter Hours/Graded

PMO516 DESIGN AND ANALYSIS OF EPIDEMIOLOGIC STUDIES

This course is designed primarily for the doctoral student. The students will use the knowledge and abilities acquired in previous epidemiologic courses to conduct a cohort or a case-control study. This includes writing the study protocol, analyzing and interpreting the data, and writing a final report in the way of a journal article. The study will be based on existing databases and students will work under the supervision of a faculty member. Enrolled students must submit a study plan to the course instructor for approval at the beginning of the term.

Prerequisites: PMO513, Concurrence of Course Director

All Staff 3 Quarter Hours/Graded

PMO519 OCCUPATIONAL AND ENVIRONMENTAL EPIDEMIOLOGY

This course emphasizes the epidemiologic methods/tools used in assessing occupational and environmental risk factors. A series of lectures, case studies and exercises are integrated in order to teach various methodologic and analytic approaches to studying the relationship between occupational and environmental exposures and outcome measures in specific populations.

Prerequisites: PMO503, 504A, 511, 512

Spring Rusiecki 3 Quarter Hours/Graded

PMO520 MOLECULAR EPIDEMIOLOGY

This course reviews the application of techniques in molecular biology to the study of epidemiological problems. The range of techniques discussed includes variations of the polymerase chain reaction, nucleic acid hybridization, mutation screening, solid phase immunoassays, fluorescence activated cell scanning, and other immunoassay techniques. The application of these techniques is discussed in relation to the epidemiological study of transmission, pathogenesis, and etiology of infectious diseases, genetic predisposition to cancer and other diseases, gene discovery, and the genome project. A prerequisite for this course is the course, "Concepts in Molecular Biology and Immunology," unless the requirement is waived by the course director. It is the goal of these two related courses that each student will develop the capability to critically evaluate use of and apply molecular techniques in epidemiological studies.

Prerequisites: Concurrence of Division Director

Spring Staff 2 Quarter Hours/Graded

PMO522 META-ANALYSIS

Using interactive, small group self-directed learning techniques, the course objectives are to (1) understand the strengths and weaknesses of meta-analysis and when the method is appropriate; (2) understand the steps of meta-analysis, including question definition, literature review, data abstraction, analysis and publication; and (3) understand the theory and statistical methods of meta-analysis including fixed and random effects models, tests of heterogeneity, publication bias, file drawer tests, and sensitivity analysis. By the conclusion of the course, students will have the skill set necessary to conduct a meta-analysis. Prerequisites: PMO503, 511 & Concurrence of Course Director

Spring Douglas 1 Quarter Hour/Credit

PMO595 INTRODUCTION TO COMPLEX SAMPLE SURVEY ANALYSIS

This course is developed to enable the students to do basic statistical analysis based on the complex surveys with sample weights. Such population complex surveys have been conducted in U.S. for civilians and military personnel. Well-known surveys are: the third National Health and Nutrition Examination Surveys (NHANSES III) funded by National Center for Health Statistics (NCHS), Center for Disease Control and Prevention (CDC), and surveys of Health Related Behaviors among Military Personnel (HRB) funded by the Department of Defense (DOD). A real data extracted from one of the HRB will be used to illustrate the concepts in complex surveys and related statistical analyses. Statistical software, SAS-callable SUDAAN (by performing the statistical analysis of complex survey under the SAS environment) using SAS will be taught. Prior knowledge in using SAS, one of the popular statistical software is not required, although it is preferred. Lectures, labs for statistical analysis using SUDAAN, and written assignment for homework problems will be used throughout the course. Prerequisites: PMO504 or Approval of the Course Director

Spring Kao 2 Quarter Hour/Graded

PMO611 CLASSIC STUDIES IN EPIDEMIOLOGY

Students will analyze the original articles in the medical literature that formed the basis for current practices in epidemiology. Focus will be on the conceptual and methodologic advances in the field. Articles will be selected for discussion based on their quality, originality and, above all, on their influence on the field of epidemiology. Definitions of "classic" studies vary, but we will concentrate on those which changed the way epidemiologic studies are conducted and the way that epidemiologists think.

Prerequisites:

None

Fall DeFraites/Singer 2 Quarter Hours/Graded

PMO701 INDEPENDENT STUDY IN BIOSTATISTICS

Selected advanced topics in biostatistics not covered in other graduate courses that are of interest to the student. Prerequisites: Concurrence of Course Director

All Staff 1-12 Quarter Hours/Graded

PMO811 INDEPENDENT STUDY IN EPIDEMIOLOGY

This course provides experience in epidemiologic investigations as well as programs of reading and research in specific areas of epidemiologic interest. Students work under the supervision of a faculty member. Enrolled students must submit a study plan to the course instructor for approval at the beginning of the term. Credits are assigned commensurate with the complexity of the plan. Prerequisites: Concurrence of Division Director

All Staff 1-12 Quarter Hours/Graded or Credit

PMO911 RESEARCH IN EPIDEMIOLOGY

This course teaches students methods in conducting epidemiologic studies. Under mentorship of a faculty member, the student continues research already started or participates in research in progress at USU. Enrolled students must submit a study plan to the course instructor for approval at the beginning of the term. Credits are assigned commensurate with the complexity of the plan. Prerequisites: PMO511, 512, Concurrence of Course Director

All Staff 1-12 Quarter Hours/Credit

PMO997 FIELD EPIDEMIOLOGY

This course uses a series of lectures and classroom-based interactive case studies to teach the principles and practice of field epidemiology, including descriptive epidemiology, outbreak investigation, population screening, and surveillance. It is based on a course developed by Dr. Richard Dicker, former director of the CDC's Epidemic Intelligence Officer Education program. The course focuses on the use of sound epidemiologic judgment.

Following completion of the course, the student should be familiar with the principles of epidemiology relevant to the practice of public health, and should be able to apply those principles to address public health problems.

Prerequisites: None Spring Servies/ Witkop 2 Quarter Hours/Credit

HEALTH SERVICES ADMINISTRATION (HSA)

PMO103 FUNDAMENTALS OF HEALTHCARE FINANCE

This is an introductory course designed to provide students sound foundation in accounting concepts critical to managerial decisions, and financial management theory and principles to guide decisions that enhance the

financial viability of a healthcare organization. Beyond theoretical concepts, the course will emphasize the application of financial management and accounting principles.

Prerequisites: None

Fall Haag 2 Quarter Hours/Graded

PMO401 SEMINAR IN HEALTH ADMINISTRATION AND POLICY

This course is a recurring (offered each quarter) seminar wherein students are exposed to a variety of current issues related to healthcare administration and policy. Each quarter will have a different theme and students will be expected to participate in in-depth discussions and analysis about that theme in relation to healthcare administration and policy. Themes for each quarter will be identified prior to the beginning of each academic year but may be altered as circumstances dictate (i.e. focus on healthcare reform; focus on global epidemics; focus on healthcare tort reform).

Prerequisites: None

Winter/Spring/Summer/Pre-Fall Staff 1-2 Credit Hours Per Quarter/Graded

PMO523 FUNDAMENTALS OF U.S. HEALTH POLICY

This course examines the application of concepts and techniques of advocating or influencing policy on behalf of organizations, the community, and the health services industry. Legislative, executive and judiciary branches and their role in national and state policy will be discussed. Comparisons of the roles and effects of public and private policy will be conducted. The role of interest groups in the policy process, and the concept of political competence at the individual and organizational levels will be examined. Prerequisites: Concurrence of Course Director

Winter Dietrich 3 Quarter Hours/Graded

PMO526 HEALTH SYSTEMS

This course provides an overview of the organization and function of health services in the U.S., including the pluralistic nature of the systems, the behavioral and economic foundations for understanding its function, major historical and legislative events that have shaped the current system, current research relating to the health system financing and staffing, and current policy issues in regard to the organization of health services. At the completion of this course, students will be able to explain the historical development of American health care and to analyze the factors that effect change in the system. Prerequisites: None

Fall Koehlmoos 4 Quarter Hours/Graded

PMO527 PRINCIPLES OF HEALTHCARE MANAGEMENT

This course provides a survey of health care management principles, including strategic and health systems planning, leadership, resource and information management, performance measurement and improvement, and organizational theory and design. Note: This course is delivered primarily in an online format through Sakai.

Prerequisites: None

Winter Dietrich/Luan 2 Quarter Hours/Graded

PMO529 HEALTH CARE FINANCIAL MANAGEMENT

This course introduces students to resource the management concepts that influence an organization's financial performance. Topics includes: the government resource environment, the defense resource environment,

budgeting and cost analysis, accounting and finance, TRICARE contract financial incentives, and the public healthcare resource environment.

Prerequisites: PMO526 and PMO527 or Concurrence of Course Director

Spring Blighton 2 Quarter Hours/Graded

PMO532 QUALITY ASSESSMENT & IMPROVEMENT IN HEALTH CARE

This course is designed to develop a working knowledge of Lean and Six Sigma principles, process, and implementation, and provides the required application and information for taking the American Society of Quality – Six Sigma Green Belt certification exam upon completion of two Lean Projects. Lean Six Sigma is a proven performance improvement method for solving problems in any field. This course is focused on the science of improvement in healthcare. This structured approach to problem solving incorporates business process management, statistical process control, quality, and project management principles and practices with a goal of satisfying the full body of knowledge of the ASQ – Green Belt certification.

Prerequisites: Concurrence of the Course Director

SpringGardner2 Quarter Hours/Graded

PMO533 DECISION MAKING IN HEALTH SERVICES

Decision Making in Health Services discusses health service organizational structures and the management theories and principles necessary for effective managerial decision making in a complex health care environment.

Prerequisites: Concurrence of the Course Director

Spring Crawford 2 Quarter Hours/Graded

PMO535 THE LAW OF HEALTH CARE

This course provides an introduction to the law and the legal process in relation to health care administration, and is designed to provide the student an ability to deal with legal concepts in health care settings. Topics include constraints that law and regulations impose on the health care industry; liability of health care providers; rights of patients; consent issues; and administrative law for health care organizations. Prerequisites: Concurrence of Course Director

Winter Peterson 2 Quarter Hours/Graded

PMO576 HUMAN RESOURCE MANAGEMENT IN HEALTHCARE

This course provides an overview of the myriad of human resource programs and challenges facing the healthcare executives in the 21st century. Learning objectives will be approached from the middle management perspective. Six essential disciplines within human resources will be covered: employment law, training, compensation and benefits, employee relations/labor relations, and health, safety, and security.

Prerequisites: None

Spring Dietrich 3 Quarter Hours/Graded

PMO592 HEALTHCARE INFORMATION TECHNOLOGY

This course provides an introduction to technology assessment as a tool for public policy, evidence-based health administration, and clinical decision-making. There are two modules in this course. The first module introduces medical technology assessment and its role in health systems and evaluates the priorities and strategies of the

major initiatives in healthcare technology assessment. This includes an appraisal of the role of government agencies like the Centers for

Medicare and Medicaid Services, the Food and Drug Administration, and the Agency for Healthcare Research and Quality; industry entities such as the Blue Cross Blue Shield Technology Evaluation Center; and academic efforts such as the Cochrane Collaboration. The second module introduces the tools of economic evaluation of health services and interventions, to include cost-effectiveness, cost-utility, and cost-benefit analyses; and provides guidance on the presentation and use of economic evaluation results. Prerequisite: None

Spring Stone/Dietrich 3 Quarter Hours/Graded

PMO598 HEALTH ECONOMICS

This course applies economics concepts to: analyze health, the healthcare market and policies for healthcare. Two primary themes for this course are: public health care economics, and military health care economics. As they relate to the primary topics of the course, the primary objectives of this course are: 1) to understand the distinctive economics characteristics of health, the healthcare industry and the professional responsible for delivering health services 2) from the standpoint of economics, to analyze and evaluate, the American systems of healthcare financing and delivery 3: to discuss multiple current policy issues such as health care costs, uncompensated care, managed care and health insurance reform.

Prerequisites: None

Winter Richard 3 Quarter hours/ Graded

PMO926 HEALTH SERVICES ADMINISTRATION DIRECTED RESEARCH

Students undertake selected research projects emphasizing organizational and management studies and program evaluation. At times the project will include teaching a technique or methodology. More often the study will be an actual operational problem of a health agency. At the end of the research students will be able to describe and defend the methods used and the findings discovered in a traditional scientific forum (e.g., formal presentation or journal article publication). Enrolled students must submit a study plan to the course instructor for approval at the beginning of the term. Credits are assigned commensurate with the complexity of the plan. Prerequisites: Concurrence of Course Director

All Staff 1-12 Quarter Hours/Graded or Credit

PMO998 FOUNDATIONS OF LEADERSHIP

This course is designed to provide a framework for understanding the process of working effectively with and leading others in a healthcare environment. Students will develop an understanding of the role of the organizational leader, the essential knowledge and skills the role requires, and the leader's link to organizational effectiveness. Drawing from a variety of disciplines, the course places emphasis on the role of the leader in developing a vision for the future, leading change, and building adaptive organizational cultures. We will critically examine multiple aspects of leadership including its theoretical basis, styles, traits, and its unique challenge in the military health care sector. As a course designed to provide a focus on contemporary approaches to organizational leadership, we will explore leadership using multiple modalities including lecture, readings, discussions, debate, experiential activities, team projects, individual projects, written assignments, films, and peer-review. Since leadership is contextual, we will often draw upon our own personal experiences and those of our guest speakers. By linking these with our understanding of various theories and models, we will gain a better understanding of this critical phenomenon we call leadership. Prerequisites: None

Summer Sculley 1 Quarter Hours/Credit

PMO1005 STRATEGIC PLANNING AND MARKETING FOR HEALTHCARE SYSTEMS

Through lectures and case exercises students learn to apply, adjust, and link institutional strategic planning principles and practices to day-to-day operations of health service delivery organizations. The focus of the course is in recognizing strategic planning as a process whereby an organization takes into careful consideration the present and future environment in which it operates, as well as the unique internal strengths of the organization. Likewise, the course will recognize and delve into the true value of the strategic planning process - the process itself, which includes an exhaustive analysis of the major internal and external stakeholders relevant to the organization. Topics include history of institutional planning in health care; evolution of theory and practice; strategic management linking mission and values with vision, direction, goals, objectives, budget, and operations; structure, process, and resource requirements for effective planning and operations; integrated planning and budgeting systems; the role of information and information analysis; monitoring results and adjusting to reality.

Prerequisite: None

Summer Luan 3 Quarter Hours/Graded

PMO1007 ADVANCED SEMINAR IN GLOBAL HEALTH POLICY

This course will explore the policy aspects of unequal distribution of health and disease around the world and will focus on several areas related to global health policy including the question of government responsibility for their nation's health. As part of our exploration we will analyze diverse organizational strategies, programs and public health policy initiatives for major diseases, epidemics and pandemics worldwide. Our comparative analysis will allow for a critique of national and international public health policy agendas and public health support systems with a special focus on pharmaceutical enterprises, international trade, intellectual property rights and vulnerable populations. With an eye toward global health policy reform, this course will review and question the key issues, concepts and theories related to the reform, planning, financing, organization, and management of personal care and population-oriented health systems and policy worldwide.

Prerequisite: None

Spring Riley 3 Quarter Hours/Graded

PMO1010 DIVERSITY AND LEADERSHIP

This course is designed to provide a framework for understanding diversity in organizations and the process of working effectively with and leading others in a multicultural environment. Students will develop an understanding of the concepts of "culture" and "diversity," the role of the multicultural leader, the essential knowledge and skills thereof, policy implications, the characteristics and systems of cultures, and the link to organizational effectiveness. Finally, this course will address the challenges and benefits of diversity and offer practical tools for living and working together in a multicultural society. This course will also examine current legislation, literature, and case studies to reinforce critical thinking skills.

Prerequisite: None

Pre-Fall Luan 2 Quarter Hours/Graded

PMO1011 QUANTITATIVE ANALYSIS & METHODS FOR HEALTH LEADERS AND EXECUTIVES I

This course is an introduction to applied statistics, data analysis, and research methodology for healthcare leaders and, as such, introduces students to concepts and techniques essential to the basics of statistical analysis. As part of this course, students will receive an introduction to probability, statistics, and decision analysis emphasizing the

ways in which these tools are applied to practical healthcare administration and policy questions. Topics include: descriptive statistics, inferential statistics, basic probability, sampling design, and hypothesis testing. Prerequisites: Concurrence of Course Director

Pre-Fall Leroux 3 Quarter Hours/Graded

PMO1012 QUANTITATIVE ANALYSIS & METHODS FOR HEALTH LEADERS AND EXECUTIVES II

This course builds on your knowledge of applied statistics, data analysis, and research methodology for healthcare leaders. We will review concepts and techniques essential to the basics of statistical analysis and learn the intermediate concepts of predictive modeling, Analysis of Variance (ANOVA) and Regression. As part of this course, students will review an introduction to probability, statistics, and decision analysis emphasizing the ways in which these tools are applied to practical healthcare administration and policy questions. Topics include: descriptive statistics, inferential statistics, basis probability, sampling design, hypothesis testing, predictive modeling, ANOVA, and Regression.

Prerequisites: Concurrence of Course Director

Winter Leroux 3 Quarter Hours/Graded

PMO1015 MHAP RESIDENCY

year

The MHAP Residency is an approved administrative residency designed to develop practical experience in health administration, policy and leadership. The Residency Preceptors along with the MHAP Residency Director, will team to provide a customized residency experience that will meet not only the requirements for graduation but also the professional development needs of the individual resident. Detailed information about the residency can be found in the Administrative Residency Manual, which will be given to students prior to the start of the residency program.

Prerequisites: Completion of first

All Leroux/Malone 12 Credit Hours Per Quarter/Graded

SOCIAL AND BEHAVIORAL SCIENCES (SOC/BEHAV) PMO530 SOCIAL AND BEHAVIORAL SCIENCES APPLIED TO PUBLIC HEALTH

This course examines how the behavioral and social sciences can be used to: 1) understand human health-related behavior and 2) guide the application of behavioral theory to change behavior and prevent, reduce, or eliminate public health problems. The first part of the course focuses on behavior-oriented perspectives from the health promotion/education, psychology, and communication disciplines. The remainder of the course focuses on important social determinants of health with an emphasis on applying health behavior theory to primary and secondary disease prevention.

Prerequisites: None

Pre-Fall Wilcox 4 Quarter Hours/Graded

PMO531 PROGRAM PLANNING AND DEVELOPMENT

This course is designed for students who are already familiar with health behavior theory and want to learn how to develop health behavior change programs. While a planning framework will be covered in lecture format, the acquisition of needs assessment skills is emphasized throughout the quarter. Program implementation and evaluation will also be covered, as will ethical issues relevant to health promotion. Prerequisites: PMO530 or Course Director Concurrence

Winter Girasek 3 Quarter Hours/Graded

PMO830 INDEPENDENT STUDY IN SOCIAL AND BEHAVIORAL SCIENCES

Under the mentorship of a faculty member, students will conduct an independent study project in the social and behavioral sciences as they relate to public health. The objective is to acquire specific methodological skills or deepen their understanding of the field's science base. Enrolled students must submit a study plan to the course instructor for approval at the beginning of the term. Credits are assigned commensurate with the complexity of the plan. Prerequisites: Concurrence of Course Director

All Staff 1-12 Quarter Hours/Graded or Credit

TROPICAL PUBLIC HEALTH (TPH)

PMO560 PRINCIPLES AND PRACTICE OF TROPICAL MEDICINE

This course presents a comprehensive approach to the principles and practice of tropical medicine. Tropical illness will be presented from both a pathogen and organ system perspective (i.e., cardiac, neurological, dermatological). The epidemiology, pathogenesis, clinical manifestations, complications, differential diagnoses, diagnostic features, and treatment of each disease will be presented. Methods for the prevention and control of these diseases are emphasized. Rational approaches to patients with various symptom complexes are discussed. Students are strongly encouraged to enroll concurrently in PMO 614 Tropical Medicine Rounds. Graded; or Pass/Fail in limited circumstances with instructor permission. Prerequisites: PMO600 Fundamentals of Human Physiology

(For non-clinicians only)... or Concurrence of Course Director

Spring Garges 6 Quarter Hours/Graded or credit

PMO561 MEDICAL PARASITOLOGY

This course consists of lectures, practical exercises, and demonstrations covering the important helminthic and protozoan diseases of man. The life cycle, epidemiology, geographic distribution, pathology and immunology together with laboratory and field methods of diagnosis, treatment, and prevention are covered.

Prerequisites: Concurrence of Course Director

Spring Stewart 3 Quarter Hours/Graded

PMO563 CLINICAL TROPICAL MEDICINE

This course serves as the Masters in Tropical Medicine & Hygiene practicum rotation (in place of PMO 670 MPH Practicum) and, with faculty permission, may also be taken as an elective course by other students. The primary focus of this course will involve an OCONUS rotation, although some students, with approval from the course

directors, may complete the program at appropriate U.S. based sites that support tropical medicine oriented clinical care, research, and/or public health surveillance activities may also be utilized. Travel is contingent upon available funding. The minimum requirement to satisfy the Masters of Tropical Medicine & Hygiene practicum is three credit hours.

Prerequisites: Concurrence of Course Director

All (Overseas) Garges 1-12 Quarter Hours/Credit

PMO564A EPIDEMIOLOGY AND CONTROL OF ARBOVIRUSES

This course covers the epidemiology, prevention and control of viruses that are biologically transmitted by arthropods such as mosquitoes and ticks. In addition, some of the important African and South American hemorrhagic fever viruses and the Hantaviruses are covered. At the end of the course, students should have an extensive understanding of how these viruses may cause outbreaks of human disease in urban and/or rural environments, how to assess risk of exposure to these viruses, and how to prevent and/or treat these viral diseases. Lectures and discussions will cover topics such as arthropod infection and transmission of viruses, the epidemiology of various viruses carried by arthropods and rodents, clinical course and pathology of certain viral diseases, risk assessment of arthropod-borne virus transmission, prevention/control of arthropod-borne virus transmission, and development of new antiviral drugs. Students taking the laboratory will receive extensive training in the latest techniques for isolating, diagnosing, and cultivating certain viruses. All students will have a wide variety of current scientific articles to read and discuss. Graded; or Pass/Fail in limited circumstances with instructor permission. Prerequisites: Concurrence of Course Director

Spring Wanja/Ortigao/English 2 Quarter Hours/Graded or Credit

PMO564B LABORATORY TECHNIQUES IN ARBOVIROLOGY

This course is focused on the student gaining practical experience in laboratory techniques used in arthropod-borne virus research. Students will receive extensive training in state-of-the-art techniques for isolating, cultivating and identifying certain arboviruses. Students will have a wide variety of current scientific articles to read and discuss the methodology used. Prerequisites: PMO564A and Concurrence of Course Director

Summer Wanja/Ortigao/English 4 Quarter Hours/Graded

PMO565 VECTOR BIOLOGY

This course presents an overview of vector biology as it relates to the epidemiological patterns of arthropod-borne diseases in human populations. Vector species of major arthropod-borne diseases will be selected to illustrate different types of disease transmission and to examine vector potential as influenced by climate and habitat, susceptibility to infection, vector longevity, length of extrinsic incubation, host preferences and the relationships between vector behavior, socio-cultural characteristics of human populations, and disease incidence. The influence of vector biology on the methods and success of control efforts will be emphasized. The course will be presented in a series of lectures, discussions and class projects. Prerequisites: Concurrence of Course Director

Fall Murphy 2 Quarter Hours/Graded

PMO566 PHYSIOLOGICAL PARAMETERS OF VECTOR COMPETENCE

This course presents essential aspects of arthropod physiology and basic physiological principles that regulate competence for transmission of disease agents. Lectures and discussions will cover subjects such as growth and metamorphosis of vectors, movement of the various life stages of vectors, sensory functions of vectors which aid in host location and feeding, digestion of blood in mosquitoes, and adaptation of different vectors to climatic stresses. Laboratories will demonstrate various physiological phenomena such as effects of hormones on growth

and development of mosquitoes, ovarian development in mosquitoes, feeding stimuli for flies, effects of repellents on mosquito feeding, and effects of insecticides on mosquito locomotion. Prerequisites: Concurrence of Course Director

Winter Wanja/Ortigao/English 4 Quarter Hours/Graded

PMO567 CHANGING PATTERNS OF ARTHROPOD-BORNE DISEASES

This course provides students with an overview of the current status of arthropod-borne diseases in the world today. Lectures and discussions will cover the biology and ecology of major groups of arthropod vectors, epidemiology of vector-borne diseases, arthropod-borne disease surveillance techniques and control measures. Laboratory sessions will acquaint students with the basic techniques used in medical entomology, including field collection methods, specimen preparation, preservation and storage, use of taxonomic resources for specimen identification and implementation of simple surveillance and control measures to reduce disease transmission. Prerequisites: Concurrence of Course Director

Fall Wanja/Ortigao/English 4 Quarter Hours/Graded

PMO568 MEDICAL ACAROLOGY

This is a survey course designed to familiarize students with the major groupings of medically important mites, ticks, spiders and scorpions. Lectures will be presented on morphology, classification, behavior, ecology and control of the major groups of acarines, spiders and scorpions. Emphasis will be placed on those families of greatest medical importance. Procedures for collecting, preserving, clearing, mounting and identifying specimens will be covered in the laboratory sessions. Students will be required to complete a class project. Prerequisites: PMO567, Concurrence of Course Director

Fall Wanja/Ortigao/English 4 Quarter Hours/Graded

PMO569 MALARIA EPIDEMIOLOGY AND CONTROL

This course covers the epidemiology, prevention and control of malaria parasites that are biologically transmitted by anopheline mosquitoes. At the end of the course, students should have an extensive understanding of how malaria parasites may cause outbreaks of human disease in urban and/or rural environments, how to assess risk of exposure to these parasites, and how to prevent and/or treat malaria. Lectures and discussions will cover such topics as the history of

malaria, the biology of the anopheline vectors and of the malaria parasite, the clinical course and pathology of malaria, current chemotherapy and chemoprophylactic regimens for malaria, immunological aspects of malaria and the prospect of vaccines against malaria, the epidemiology of malaria, and the strategies for the prevention and control of malaria. In the laboratory, the student will learn how to identify malaria parasites and vectors, to diagnose human malaria using various techniques, to grow the malaria parasites and vectors in the laboratory, to conduct malaria surveys, and to control the anopheline vectors. Graded; or Pass/Fail in limited circumstances with instructor permission. Prerequisites: Concurrence of Course Director

Spring Stewart 3 Quarter Hours/Graded or Credit

PMO570 MODERN TECHNOLOGY AND VECTOR-BORNE DISEASE

This course provides an in-depth look at vector-host-parasite-reservoir relationships and the modern techniques utilized to study the causes of outbreaks of arthropod-borne human diseases. The lectures and discussions will focus on the factors that lead to the successful transmission of human pathogens by particular arthropod species under various ecological conditions. Laboratories will focus on utilizing the latest research techniques to examine various aspects of vector biology and disease transmission ecology. Students will have the opportunity to read and

discuss a wide variety of current, cutting-edge scientific articles. Prerequisites: Graduate-level medical entomology course Concurrence of Course Director

Summer Wanja/Ortigao/English 4 Quarter Hours/Graded

PMO571 BIOSYSTEMATICS IN MEDICAL ZOOLOGY

This course will be presented in the form of lectures, discussion, demonstrations, and individual projects. The first half of the course will consist of lectures on the history and importance of systematics, the International Code of Zoological Nomenclature, the concept of species, sources of variation, population genetics and mimicry. The second half of the course will examine the major systems of biological classification and how behavioral, physiological, biochemical, and molecular techniques are applied in classifying medically important taxa. Prerequisites: Concurrence of Course Director

Winter Wanja/Ortigao/English 2 Quarter Hours/Graded

PMO573 EPIDEMIOLOGY AND PREVENTION OF VACCINE-PREVENTABLE DISEASES

The primary focus of this course will be to provide updates on vaccine-preventable diseases, vaccine management and safety, and standard immunization practices. The course is a self-paced distance-learning course using an annual teleconference from the National Immunizations program at the Centers for Disease Control and Prevention in Atlanta, GA. The teleconference is held live in the spring, so this course uses the archived video online. Session one will cover principles of vaccination, general recommendations on immunization, vaccine safety, storage and handling, and vaccine administration. Session Two will cover pertussis, pneumococcal disease (childhood), polio and Hib, Session Three will cover measles, rubella, varicella, smallpox and meningococcal disease. Session Four will cover hepatitis B, Hepatitis A, influenza, and pneumococcal disease (adult). For more information about this course see the course director.

Prerequisites:

Concurrence of Course Director

Summer TBD 1 Quarter Hours/Credit

PMO577 INTRODUCTION TO GIS IN PUBLIC HEALTH

Geographic Information Systems (GIS) have a variety of uses including: mapping and analyzing the spatial distribution of diseases, determining the proximity of diseases to environmental factors, and planning the distribution of public health services. The goal of the course is to give students an understanding of GIS and spatial analysis techniques, example applications, and hands-on experience in the lab using hardware and software that will enable students to use the techniques discussed in class in a knowledgeable way in their research and future work in public health. The lectures will cover GIS data structures, entering data into a GIS, GPS, geographic analysis, cartographic presentation, and applications of GIS to public health.

Prerequisites: Concurrence of Course Director

Fall Masuoka 2 Quarter Hours/Graded

PMO578 REMOTE SENSING METHODS IN PUBLIC HEALTH

Images acquired from aircraft and satellites have an increasing role in public health research as a way to map environmental factors that can affect health (such as mosquito larval habitats, water pollution, dust storms, etc.). The lectures will cover types of remote sensing imagery, image processing, photointerpretation of various imagery

types, and examples of applications of remote sensing to public health from the literature. The laboratory will give students experience in photointerpretation, image processing, and use of remote sensing data with GIS data.

Prerequisites: Concurrence of Course Director Winter Masuoka 3 Quarter Hours/Graded

PMO610 GENERAL ENTOMOLOGY

This course provides general instruction in entomology in preparation for advanced study in disciplines associated with medical zoology. This is a course for those graduate students without prior training or experience in entomology. This course provides the basic fundamentals in arthropod systems that will facilitate a rapid educational transition to higher level graduate courses and laboratory study. The course will primarily consist of lectures, demonstration, and practical field based exercise.

Prerequisites: Concurrence of Course Director

Pre-Fall Wanja/Ortigao/English 2 Quarter Hours/Graded

PMO614 TROPICAL MEDICINE ROUNDS

This is a clinical case management course, geared toward the diagnosis and treatment of actual clinical cases. X-rays, basic laboratory specimens and photographs will be available for consideration. Discussion will include differential diagnosis, specific treatment, complications, epidemiological implications and preventive measures that could have avoided disease. Upon completion of this course the students should be able to (1) develop a tropical medicine disease case management strategy that is logical, realistic and comprehensive; (2) discuss the differential diagnosis of a patient symptom complex and recommend diagnostic and therapeutic actions; (3) know the chemotherapeutic treatment and case management strategy for common tropical diseases; and (4) devise a public health program to prevent further disease transmission in the community. This course is strongly recommended for anyone enrolled in PMO560 Principles and Practice of Tropical Medicine.

Prerequisites: Concurrence of Course Director

Spring Garges 2 Quarter Hours/Credit

PMO615 SAND FLIES AND DISEASE

This course presents a thorough coverage of the phlebotomine sand flies and their importance as vectors of diseases such as the leishmaniases, bartonellosis and sand fly fever. Particular emphasis is given to the leishmaniases and the ecology of Leishmania transmission, including Parasite vector and vector host interactions, sand fly and Leishmania surveillance and leishmaniasis prevention and control. The course also covers in less detail the biting midges (also called sand flies) and the diseases they transmit, such as blue tongue and Oropouche viruses, and certain microfilariae. Students will gain an extensive understanding of sand fly and biting midge biology and ecology, and will be able to recognize sand flies and biting midges by sight and identify important vector species using dichotomous keys. They will learn to organize and conduct sand fly and Leishmania surveys to assess the risk of human exposure, and will be able to recommend appropriate countermeasures for vector and disease suppression. Students will be required to rear sand flies in the laboratory and to collect age-specific lifetable data through an entire colony generation.

Prerequisites: Concurrence of Course Director

Winter TBD 3 Quarter Hours/Graded

PMO634 PUBLIC HEALTH SURVEILLANCE

The course includes an overview of public health surveillance, history of surveillance, considerations in planning public health surveillance, sources and collection of data, analysis and interpretation of surveillance data,

communication of data, and evaluation of surveillance systems. Civilian surveillance will be examined at the local, regional/state, and federal levels. Military surveillance will be examined at installation, service, and DoD levels. Global health surveillance will be introduced, particularly the application of surveillance towards DoD force health protection.

Prerequisites: PMO511, Co-requisite PMO512

Winter Blazes 1 Quarter Hour/Graded

PMO760 TROPICAL MEDICINE RESEARCH TUTORIAL

Students, with faculty advice, will develop a study question for a directed research project during the overseas quarter. Background research of the medical/scientific literature will be required to formulate a hypothesis to be investigated. Laboratory procedures necessary for the study, but with which the student is unfamiliar, will be identified. This tutorial will include learning these techniques. There will be requirements for outside reading to understand the theory, as well as laboratory hands-on instruction to master the mechanics of the procedure(s) required to do the research project. Prerequisites:

PMO560, Concurrence of Course Director

All Garges 1-12 Quarter Hours/Graded

PMO763 TUTORIAL IN MEDICAL ZOOLOGY

The faculty will prescribe a literature review to cover a broad background in medical parasitology and vector biology. The students will meet with the faculty member for discussion of the material. Prerequisites: Concurrence of Course Director

All Wanja/Ortigao/English 1-12 Quarter Hours/Credit

PMO764 TUTORIAL IN AQUATIC BIOLOGY

This course is designed to familiarize the student with the major groupings of aquatic arthropods, with emphasis on those families which are vectors of disease, which prey on disease vectors; and which serve as useful indicators of environmental pollution. Lectures will be presented on morphology, classification, behavior and ecology of the major groups. Procedures for collecting, preserving, mounting and identifying the different groups of aquatic arthropods will be covered in the laboratory sessions. Students will be required to develop and turn in an extensive collection, complete with field notes, of preserved and identified specimens of genera represented in the locale of Washington, DC. Prerequisites: Concurrence of Course Director

Summer/ Fall Wanja/Ortigao/English 4 Quarter Hours/Graded

PMO810 INTEGRATED PEST/ VECTOR MANAGEMENT

This course provides comprehensive instruction on the principles of integrated pest management. Although the topic is often restricted to insects and other arthropods, other animals of public health significance are included here. The course consists of lectures, discussions, and individual exercises. Integrated Pest and Vector Management introduces the scope of challenges in applying pest management tactics and focuses on 6 major components for consideration in an integrated program.

Prerequisites: Concurrence of Course Director

Spring Murphy 2 Quarter Hours/Graded

PMO963 DIRECTED FIELD RESEARCH

The student may elect a mini-project under the supervision of a faculty member in a field study. The aim of this directed research is to provide practical field experience in epidemiological and clinical research. The graduate student will, with faculty review, design the study, conduct the experiments and data collection, do the appropriate analysis, including a literature review, and prepare an oral presentation and a written report.

Prerequisites: Concurrence of Course Director

All (Overseas) Staff 1-12 Quarter Hours/ Graded

PMO964 RESEARCH IN MEDICAL ZOOLOGY

Graduate students will conduct a project of original research under the supervision of a faculty member. The graduate student will, with faculty review, design the study, conduct the experiments and data collection, do the appropriate analysis, including a literature review, and prepare oral presentations and a written dissertation. Enrolled students must submit a study plan to the course instructor for approval at the beginning of the term. Credits are assigned commensurate with the complexity of the plan. Prerequisites: Concurrence of Course Director

All Wanja/Ortigao/English 1-15 Quarter Hours/Credit

PMO990 TRAVEL MEDICINE

This clinically-oriented lecture course will teach and demonstrate the principles of travel medicine from the perspective of the tourist and the military unit. The course will consist of lectures and practical exercises. Students will be introduced to multiple sources of travelers' health information, including travel medicine computer software, published sources, and the Centers for Disease Control and Prevention. Preventive medicine will be emphasized, including the use of vaccines, personal protective measures, and malaria chemoprophylaxis. After-travel evaluation and care of ill travelers will be introduced.

Prerequisites: M.D., D.O., P.A., N.P., Concurrence of Course Director

Spring Garges 2 Quarter Hours/Credit

PMO992 TRAVEL CLINIC PRACTICUM

This course is an optional clinical practicum course for students who are taking or who have taken PMO 990 Travel Medicine. It demonstrates and teaches best practices in counseling pre-travel patients in a clinical setting. The Travel Clinics at the National Naval Medical Center and Walter Reed Army Medical Center, and eventually at the Walter Reed National Military Medical Center, are used to teach the clinical requirements for preparing tourists and business travelers of all ages and health states to travel safely abroad. Students assist scheduled staff physicians in seeing patients in these clinics. A minimum of 6 patient appointments must be seen, with appropriate preparation and follow-up. The expected total time requirement is approximately 12 hours.

Prerequisites: M.D., D.O., P.A., N.P., Concurrence of Course Director

Spring/ Summer Garges 1 Quarter Hour/Graded or Credit by request

PMO1008 INDEPENDENT STUDY IN GIS

This course provides students the opportunity to develop skills in using geographic information systems. Students may choose to develop a research project using GIS or may complete a series of GIS tutorials or informal training modules. This class is open to both students with GIS experience and to students with no experience. With direction from the instructor, the student will propose and complete a course of work (tutorials) or a research project suitable to the student's current skill level and interests. A proposal must be submitted to the course

director for approval and credits are assigned commensurate with the complexity of the project. Prerequisites: None

All Masuoka 1-12 Quarter Hours/Graded

PMO1013 MOLECULAR PARASITOLOGY

The proposed class would meet the need for a graduate-level course in the science of parasitology, with considerably reduced emphasis on the parasites of humans except as they particularly relate to a topic in cutting-edge science of parasitology. Thus in addition to covering examples of diseases created by the taxonomic spectrum of parasites, there would be emphasis on scientific themes, including such topics as immunology at the host-parasite interface, the molecular biology behind *var* gene complexes, how worms can alter host responses to suit their own survival, parasites as initiators of malignant transformation and parasite ecology. Prerequisites: None

Spring Davies 3 Quarter Hours/Graded or Credit by request

PMO1016 INFECTIOUS DISEASES OF PUBLIC HEALTH IMPORTANCE

The course is a survey of the most important global infectious disease threats with emphasis on the developing world, as a less clinically-focused alternative to PMO560, the Principles and Practice of Tropical Medicine, and will cover a broader array of conditions than addressed in PMO514, Epidemiology and Control of Infectious Diseases. It will encompass the basic and pathology of these infections, scope and burden of disease in affected populations, and strategies for their control and prevention. Although treatment will be discussed, the course will not focus on diagnosis and management of the individual patient. This course is tailored for students who require sufficient knowledge of major infectious diseases to support future work with global health programs intended to control or eradicate these diseases, but do not require or desire in-depth study of clinical management (diagnoses and treatment) of these conditions. Experienced clinicians can also benefit from the course emphasis on disease control in populations as opposed to treatment of individuals. Prerequisites: None

Winter TBD 1 Quarter Hour/ Credit

GLOBAL HEALTH

PMO528 GLOBAL HEALTH I

This is a survey course that provides students with a comprehensive introduction to the field of global health from a development perspective, as well as providing a more detailed examination of some of the most pertinent issues in the field. This course covers topics ranging from international health regulations to surgical concepts in global health, along with maternal and reproductive health, child health, nutrition, cultural considerations, and even an introduction to the role of the DoD in global health, among others.

Various adult-learning techniques are used including recorded presentations, selected readings, class discussions, expert panels, a term paper, and Sakai discussion boards. This class utilizes the "flipped classroom" method of teaching which involves recorded lecture and other material that students study at home, thus freeing class time for seminar discussions. The live seminar sessions are considered a critical piece of this course, and participation in these class discussions is expected.

Prerequisites: None

Fall Boetig 4 Quarter Hours/Graded

PMO534 MEDICAL ANTHROPOLOGY

This course introduces students to the link between culture and health behaviors (understanding medicine from the patient's point of view) in order to increase understanding between the "healers" and the populations they serve. This understanding will contribute to better compliance and improved health outcomes. At the end of the course, students will be able to characterize barriers to health services produced by cultural differences, evaluate health-seeking behaviors from a cross-cultural perspective, and characterize their own health care system perspectives as they relate to their own culture. This course emphasizes the significance of a medical anthropology perspective (both biological and cultural) as applied to global health and military global health engagement.

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Concurrence of Course Director

Winter Shinwari 3 Quarter Hour/Graded

PMO539 GLOBAL HEALTH II

This is the second course in this series and it is intended to offer a deeper dive into some of the more contemporary topics in global health. Non-communicable diseases, pharmaceutical concepts in LMICs, global health diplomacy and the Global Health Security Agenda will be covered. In addition, topics with multi-dimensional complexity such as female genital mutilation, abortion, and serious ethical challenges in global health engagement will be taught.

Consistent with the Global Health 1 course, various adult-learning techniques will be used including recorded presentations, class discussions, expert panels, and Sakai discussion groups. The live seminar sessions are considered a critical piece of this course, and participation in these class discussions is expected. Students are expected to write an editorial piece within this course. Grading will be by letter grade.

Prerequisites: PMO528 or Concurrence of Course Director

Winter Boetig 4 Quarter Hours/Graded

PMO548 JOINT HEALTH OPERATIONS

Joint Health Operations focuses on the Military Health Service mission within joint operations. This course seeks to give students a foundational understanding of the medical role in joint operations planned, prepared and executed by the military across the conflict continuum. The course further seeks to introduce the students to the terminologies and the basic tenets of medical operations planning. Through this course the students will have a broader understanding of how global health engagements are nested within military engagements. The student will gain familiarity with the different types of global health engagements and be able to define and differentiate between the different GHEs. The course will discuss the importance of socio-cultural communication and review basic cultural competencies. Lastly, the students will have opportunities to practically apply the different GHEs concepts learned through table top and other exercises. This course is built on the instructional scaffolding methodology in that the curriculum will systematically build on the students' experiences and knowledge as they are learning new skills.

Prerequisites:

Concurrence of Course Director Winter TBD 6 Quarter Hours/Graded

PMO613 PUBLIC HEALTH ISSUES OF DISASTERS IN DEVELOPING COUNTRIES

This course focuses on the public health consequences of disasters in developing countries (natural, man-made and technological) and on the principal public health interventions needed to mitigate and respond to the disaster's effects. Students will learn epidemiological tools to assess and monitor the health of populations affected by disasters. The role of the medical community when planning for and/or supporting the response to complex humanitarian crises will be emphasized. The course will use guest speakers to support the course material.

Prerequisites: Concurrence of Course Director

Spring Reed 4 Quarter Hours

PMO694 GLOBAL HEALTH DISPARITIES & SOCIAL DETERMINANTS OF HEALTH

This course will provide students with an opportunity to gain an in-depth understanding of how social factors contribute to racial/ethnic, socioeconomic, gender, age and disease-specific disparities in both global health and health care. A seminar design, incorporating scholarly inquiry, will facilitate achievement of course objectives. Students will complete U.S. and non-U.S. readings in global health disparities and social and cultural determinants of health; explore frameworks useful in addressing global health disparities and social determinants of health; analyze bias in global health data collection and reporting methods; propose a conceptual approach for addressing a health disparity in a specific population group with relevance to the military/federal or global health system; write a paper addressing a specific disparity from a population or global health perspective (including problem identification; a review of the existing literature; and a proposed conceptual framework that explores the reasons both known and unknown for this disparity); and provide a brief presentation based on the paper. Prerequisites:

Concurrence of Course Directors

All TBD 3 Quarter Hours/Graded

PMO862 GLOBAL HEALTH INDEPENDENT STUDY

Under the mentorship of a faculty member, students will conduct an independent research or study project in the area of global health. The objective is to acquire specific skills or deepen their understanding of the multidisciplinary aspects of the field. Often the research or study will involve an actual operational problem of a DoD, domestic, foreign, or international organization that has significant impact in the global health area. There will be requirements for outside reading and collaboration with at least one other organization or academic institution. Enrolled students must submit a study plan to the course instructor for approval at the beginning of the term. Credits are assigned commensurate with the complexity of the plan. Prerequisite:

Concurrence of Course Director

All Staff 1-12 Quarter Hours/Graded

PMO991 ETHICS IN PUBLIC HEALTH

This course is based on the Ethics and Public Health model curriculum developed by HRSA and ASPH in 2003. The course serves to encourage well-informed critical discussions of ethical issues in the field of public health. The scientific considerations in public health policy and interventions sometimes cause political and ethical conflicts. Central to public health practice are questions of autonomy, individual rights, coercion, justice, community, and multicultural values. The population-based perspective of public health goals should be ethically reconciled with

the preservation of human rights and protection of civil liberties. The goals that guide this course curriculum are: stimulating the moral imagination, recognizing ethical issues, developing analytical skills, eliciting a sense of moral obligation and responsibility, and coping with moral ambiguity. The course will enable students to recognize, analyze, criticize, and evaluate ethical issues in public health, and equip them with practical knowledge to construct arguments and make decisions in public health practice.

Prerequisites: None

Spring Matsler 3 Quarter Hours/Credit

PMO1009 DOMESTIC DISASTER MANAGEMENT AND RESPONSE

This course will provide an overview of the National Response Framework and how the US Government responds to domestic disasters. The course will review the phases of disaster response and the roles and responsibilities of local, state, and federal agencies. Federal guest lecturers will be invited to provide overviews of their Department's role in disaster response. The goal of the course is for students to understand the factors that will enable them as medical and public health leaders and responders to comprehensively assess these crises and effectively participate in their management and response. Prerequisites: Concurrence of Course Director Recommended: PMO 548

Winter Strauss-Riggs 3 Quarter Hours/Graded

PMO1014 MONITORING AND EVALUATION IN GLOBAL HEALTH

Students will discuss and demonstrate understanding of the history, evolution and a wide variety of case studies of the use of monitoring and evaluation (M&E) in global and public health interventions, especially those in crises and military humanitarian operations. The course will keep to a practical level, with in-class exercises and discussion during each session. Lectures will place an emphasis on effective planning, formative evaluation, and outcome assessment techniques, using the course director's personal experience and examples from literature and DoD 'lessons learned' databanks.

Prerequisites: None

Summer TBD 2 Quarter Hours/ Graded

PMO1017 HEALTH CONTEXT ANALYSIS

Students will explore the elements that determine the health context of a given locality in order to optimize health interventions and DoD global health engagement. This course uses a seminar format with background readings, prepared presentations, invited speakers, and group discussion. Students will use a Health Context Analysis Framework to prepare a detailed analysis of a selected country as an ongoing project and for final presentation.

Prerequisites: PMO534 Medical Anthropology (recommended, not required)

Spring Shinwari 2 Quarter Hours/Graded

PMO1018 GLOBAL HEALTH 1-DL VERSION

This course is the introductory global health course offered at Uniformed Services University. It is intended to serve as a survey course and will provide a broad-based introduction to the field of global health from a development perspective, as well as provide a more detailed examination of some of the most pertinent issues in the field. This course will cover topics ranging from global burden of disease to measures of effectiveness, along with maternal and reproductive health, child health, nutrition, cultural considerations in global health, and even an introduction to the role of the DoD in global health, among others. Prerequisites: None

PMO1019 GLOBAL HEALTH 2-DL VERSION

"Global Health 2, 11 is the second in the series of global health courses. It is intended to offer a "deeper dive" into some of the more contemporary topics in global health such as non-communicable diseases, pharmaceutical concepts in global health, and even ethical concepts in global health and global health engagement, among several others. Prerequisites: Global Health 1 & Global Health 2Or with concurrence of course director

Winter Boetig 3 Quarter Hours/Credit

PMO1020 GLOBAL HEALTH SYSTEMS DISTANCE LEARNING

Students will use Roemer's Model of Health Systems to examine resource allocation, management, and health outcomes in the United States and around the globe. The course will focus on the structure and functioning of national health systems based on geographic location and governance in both developing and developed countries (democracies, monarchies, and communist nations). Resource allocation across the continuum of nations, and relationship to national health needs, health status, and longevity, are examined. Prerequisites: Approval of Course Director

All Koehlmoos 3 Quarter Hours/Credit

PMO1022 FUNDAMENTALS OF GLOBAL HEALTH ENGAGEMENT

The Fundamentals of Global Health Engagement Course for DL is designed to establish awareness and a basic level of competency towards participating in and successfully executing global health engagements. The course is taught by a diverse cadre of subject matter experts with expertise and experience in many aspects of health. Participants in this course will gain a greater understanding of 1) the strategic, operational, and civil-military considerations in DoD GHE;2) the framework for establishing the context of a health engagement; and 3) the components of planning, executing, and monitoring the activity. Prerequisites: Global Health 1 & Global Health 2 or with concurrence of course director

All Reeves 3 Quarter Hours/Graded

PMO1023 GLOBAL MENTAL HEALTH

This course on global mental health will cover topics ranging from the principles of design of mental health interventions in low and middle-income countries and how to scale them up, to research priorities for global mental health in LMICs. Various adult-learning techniques will be use including recorded presentations, class discussions, expert panels, and Sakai discussion groups. Prerequisites: Global Health 1 & Global Health 2 or with concurrence of course director

Fall Baines 3 Quarter Hours/Credit

DEPARTMENTAL COURSES (DEPT)

PMO542 CLINICAL OCCUPATIONAL AND ENVIRONMENTAL MEDICINE

This course constitutes a review of the health risks associated with chemical, physical, and biological exposures in the workplace. It provides an introduction to the complex work environment in which the occupational health

specialist must function. Lecture presentations, assignments, and practical exercises will address methods to detect and prevent occupational illness and injury within the context of an occupational medicine service.

Prerequisites: Concurrence of Course Director

Spring Chern 3 Quarter Hours/Graded

PMO558 FUNDAMENTALS OF CLINICAL OCCUPATIONAL ENVIRONMENTAL AND PREVENTIVE MEDICINE

This course is an introduction to the National Capital Consortium Residencies in Occupational and Environment Medicine (OEM) and General Preventive Medicine (GPM) for academic-year OEM and GPM residents. It provides an introduction, through lectures and group class activities, to concepts and administrative procedures germane to the residency program. Resident competencies will be discussed, and each resident will prepare and present an individual educational plan. The class is also relevant and open to residents who are in the academic year of other service-related GPM or Aerospace Medicine Residency or fellowship programs. Prerequisites: Status as a resident in an ABPM specialty

Pre-Fall Witkop/ Krahl 1 Quarter Hour/Graded

PMO608 DOCTORAL DATA CLUB

This course provides an interactive forum where doctoral students and doctoral candidates discuss research topics and ideas in a collegial environment. Students formulating or actively working on thesis or dissertation research provide periodic updates on the progress of their research and share with fellow students the problems they encountered and how they dealt with them. Students learn from one another through the discussions and the exchange of ideas. Selected faculty members periodically come to class to relate their research "life stories" and providing insights into pathways for success as accomplished research scientists. Faculty would share both the good and the bad experiences they have had as they gained experience as researchers and mentors. By sharing their experiences, they will provide real world insight into the importance of collaboration and teaming in biomedical research.

The course is mandatory for all "in-residence" PMB doctoral students/candidates and open to other students with Course Director Concurrence.

Fall/Winter/ Spring TBD 1 Quarter Hour/Credit (Inactive)

PMO642 CLINICAL PREVENTIVE SERVICES AND SELECTED TOPICS IN OCCUPATIONAL HEALTH

This course is designed primarily for residents in occupational and environmental medicine and for residents in general preventive medicine and provides an introduction to the scope of occupational and environmental health in the United States, the practice of occupational health, administrative and legal aspects of occupational health, and general concepts of toxicology and medical surveillance. Prerequisites: Concurrence of Course Director

Pre-Fall Chern 3 Quarter Hours/Graded

PMO655 CURRENT ISSUES IN SAFETY AND INJURY PREVENTION (Seminar)

Examination of injury prevention policies, initiatives, plans and current knowledge with special emphasis on the examination of analytic and intervention research studies and risk communication methods. Topics include

current Department of Defense policies and initiatives, the Defense Medical Surveillance System (DMSS), epidemiologic studies, case studies and demonstration projects, behavioral issues and risk communication methods. Prerequisite: Concurrence of Course Director

Winter Clasing 1 Quarter Hour/Graded

PMO661 CURRENT TOPICS IN PREVENTIVE MEDICINE AND BIOSTATISTICS

This seminar series presents reviews of current concepts and research in tropical public health. Guest speakers and faculty members present weekly seminars on selected topics. Prerequisites: Concurrence of Course Director

Fall/Winter/ Spring Garges 1 Quarter Hours/Graded

PMO670 PUBLIC HEALTH PRACTICUM

Students will have the opportunity for a variety of experiential training in public health within military and civilian organizations in the local geographic area and possibly other more distant sites. Students will enhance their didactic learning experience by practical application, and they will acquire a broad public health perspective to specific health-related problem solving. Students will receive a total of 3 pass/ fail credits for the practicum experience, which may be spread over more than one quarter.

Prerequisites: PMO503, 511,526,530,540

All Hooper/ Gackstetter 1-6 Quarter Hours/Credit

PMO671 INTRODUCTION TO THE MPH PROJECT AND PRACTICUM

This seminar course is designed to introduce students to the process of designing, developing, executing, and presenting results of their independent projects and practicum activities. Guest speakers from various military and civilian organizations offer potential project and practicum opportunities in class or at practicum and independent project fairs. Goal setting, time lines, and curriculum planning for successful completion of the MPH program will be integrated into the course. By the end of the course, students will be able to describe the criteria for an appropriate independent project and practicum experience, demonstrate familiarity with University and Federal regulations pertaining to research, articulate possible project or practicum activities aligned with their personal and professional goals, , and formulate a focused research question. Prerequisites: Concurrence of Course Director

Fall Hooper/ Gackstetter 1 Quarter Hour/Credit

PMO672 MPH PROJECT/PRACTICUM DESIGN AND DEVELOPMENT

Building on the introductory course in this series, students will receive guidance on developing a pre-proposal and final proposal for their independent project. Protocol development workshops will offer students opportunities for feedback from classmates as well as faculty members. Guest speakers will present overviews on survey development and qualitative research, appropriate content for the analysis section of a protocol, and the IRB approval process for human subject's research. Students will be encouraged to select a project which combines the project and practicum requirements, if possible. By the end of the course, students will develop a study plan to address their research question and demonstrate compliance with the process of institutional review and approval for student research by submitting all required University forms and supporting documents prior to study implementation. Prerequisites: Concurrence of Course Director

Winter Hooper/Gackstetter 1 Quarter Hour/Credit

PMO673 MPH PROJECT/PRACTICUM IMPLEMENTATION AND EVALUATION

This is the third and last in this seminar series on the MPH independent project and practicum. The course will include hands on data management and database construction sessions in the LRC and be a forum for discussing and finding solutions to issues or problems related to the IRB approval process, data collection, analysis plans, study implementation, funding issues, and authorship, among others. Instructors will reinforce the oral and written communication skills essential for effective public health practice, including how to prepare scientific abstracts and posters as well as manuscripts for publication. By the end of the course, students will be able to prepare abstracts, posters, written reports and oral presentation slides related to public health practice or research. They will be able to effectively participate in the iterative process of producing a well-organized and clearly written report and demonstrate effective oral communication skills when reporting research findings. Prerequisites: Concurrence of Course Director

Spring Hooper/ Gackstetter 1 Quarter Hour/Credit

PMO674 MPH INDEPENDENT PROJECT

This is a required course for all MPH/MTM&H students in order to receive grades and credit for the products of their independent project: project proposal, oral presentation, and final written report. Prerequisites: Eligibility for graduation

Summer Hooper/ Gackstetter 3 Quarter Hours/Graded

PMO675 DRPH PUBLIC HEALTH PRACTICUM

Enrolled students will have the opportunity for a variety of training experiences in public health within military and civilian organizations in the local geographic area and possibly more distant sites. Students will enhance their didactic learning with practical application and will acquire a broad public health perspective including experiences with advocacy, communication, community-oriented cultural orientation, critical analysis, leadership, management and/or professionalism and ethics. DrPH students will receive 6 credits for 240 hours and the completion of a final report and requisite evaluation forms documenting the practicum experience. The practicum may be spread over more than one quarter, but the total number of credit hours is not to exceed 6 over the duration of the degree program. Prerequisites: Enrollment in the Doctor of Public Health Program

Fall/Winter/Spring Staff/Olsen 1-6 Quarter Hours/Credit

PMO676 MINDFULNESS BASED STRESS REDUCTION

This 12 week course combines didactic instruction on the influence of mindfulness on prevention therapy, wellness optimization, and biologic systems with an experiential 8 session (20 hours) Mindfulness Based Stress Reduction (MBSR) curriculum.

Prerequisites: None

Spring Scott 2 Quarter Hours/Credit

PMO680 INTRODUCTION TO PUBLIC HEALTH

This course will include lectures providing an overview of the field of public health, including the history of public health and preventive medicine, legal and ethical issues associated with public health and current issues uniformed and civilian public health and preventive medicine officers are working. The objective is to provide students with a solid background in these topics as a foundation for the rest of the academic year. Prerequisites: Concurrence of Course Director

Pre-Fall Witkop 1 Quarter Hour/Credit

PMO682 HISTORY OF PREVENTIVE MEDICINE

The evolution and development of the medical and social aspects of public health and preventive medicine, and specialized disciplines (statistics, epidemiology) will be studied to explicate both the historical background of the present, and to extract the historical foundation for persistent concepts and functions.

Prerequisites: Concurrence of Course Director

Spring Smith 2-4 Quarter Hours/Graded

PMO683 CRITICAL READING SEMINAR

The Critical Reading Seminar is part of the USU/WRAMC Fellowship Program in General Internal Medicine. It is designed to teach participants to read clinical literature critically, using epidemiologic and statistical techniques. The seminar in the Fall quarter is devoted to a study of the critical appraisal materials designed by the Department of Clinical Epidemiology and Biostatistics at McMaster University. Exercises are designed to provide a practical experience in employing McMaster's methodology to significant articles chosen to exemplify both excellent and problematic clinical investigation. Subsequently, participants choose their own critical reading packages. Each session is devoted to reading in depth about a single topic; all participants are provided with three to five articles to read critically prior to the seminar. During the seminar, participants rotate as facilitators; all participants discuss the chosen articles. The articles reviewed are primarily from the internal medicine literature and deal with major topics in preventive medicine, epidemiology, and utilization of diagnostic technology, causation, quality of care, economic analysis, prognosis, and therapy.

Prerequisites: Concurrence of Course Director

Fall/Winter/ Spring Douglas 2 Quarter Hours/Credit

PMO684 CLINICAL RESEARCH SEMINAR

The Clinical Research Seminar is part of the WRNMMC/USU Fellowship Program in General Internal Medicine. The seminars concentrate on how to design clinical investigation projects, with a particular emphasis on areas in academic general medicine, such as ambulatory care, geriatrics, medical interviewing, preoperative evaluation, clinical decision making, medical education, behavioral medicine, and health services research. Speakers emphasize methodologic issues and, in particular, explore problems associated with clinical research. About 1/3 of the seminars will be conducted by WRAMC or USU investigators; 1/3 will focus on special topics in clinical research; and 1/3 will be led by speakers invited from outside agencies and institutions. The format is informal to allow a brisk dialogue between participants and speakers. Students will see how principles of clinical research and implemented in actual projects, and will learn how to identify methodologic problems when designing protocols and reading the literature. Prerequisites:

Concurrence of Course Director

Spring Douglas 1 Quarter Hour/Credit

PMO688 INFORMATION GATHERING IN CLINICAL MEDICINE

Information gathered in the clinical setting becomes data used in epidemiological and health outcomes research. This course will provide opportunities for students to learn from research-oriented practicing clinicians in a clinical setting. Students will learn the problems involved in collecting accurate information from patients through history-taking, physical examination, laboratory testing, and questionnaire administration. Teaching methods will center on observation of the physician at work and, as much as possible, active participation of the students in

collecting data, and will include assigned readings and tutorials. Prerequisites: PMO511, 512, Concurrence of Course Director

All Staff 2-12 Quarter Hours/Credit

PMO691 TEACHING PRACTICUM

As one of the requirements of the DrPH. program, students serve as Teaching Assistants for at least one course per year. In addition to providing assistance to the course director, they are expected to expand and deepen their knowledge of the subject matter taught, sharpen their critical thinking skills, and gain experience in giving lectures, leading seminars, supervising laboratory exercises, preparing and grading examinations, reviewing homework, and counseling students. Prerequisites: Concurrence of Course Director

All Staff 3 Quarter Hours/Credit

PMO900 INTRODUCTION TO CLINICAL TRIALS

Presents students with the rationale for conducting clinical studies and introduces basic clinical trial methodology. Fundamentals of design, conduct, and analysis will be presented through modern and historical examples. Key ethical and regulatory issues related to clinical trials will be highlighted, as will the unique role of the military in past and present examples of clinical research. The course is intended to provide a basis for understanding clinical trial design and analysis. Students interested in developing the skills necessary to independently design clinical trials, including the development of an analysis plan, are advised to enroll in PMO996 Clinical Trial Design and Analysis.

Prerequisites: PMO503 or Concurrence of Course Director

Winter Ottolini 2 Quarter Hours/Credit

PMO970 DIRECTED STUDIES IN PREVENTIVE MEDICINE

Additionally, students may register for this course in order to receive credit for extra work on the MPH independent project. Selected students will use this independent study project to expand their knowledge in a specific area of Preventive Medicine or Public Health.

Prerequisites: Concurrence of Course Director

All Staff 1-12 Quarter Hours/Graded or Credit

PMO971 PMB DOCTORAL STUDENT JOURNAL CLUB

This course is required for all PMB doctoral students. Each student in the class will read the selected scientific article and come prepared to discuss the salient points. A different student each week will present a current scientific paper published in the peer-reviewed scientific literature and lead the discussion. PMB faculty will attend the weekly seminar and are encouraged to join in the discussion. The major objective of the course is to develop and refine critical reading skills, as well as presentation skills. Prerequisites: Concurrence of Course Director

Fall/Winter/ Spring Scher 1 Quarter Hour/Credit

PMO972 SEMINAR IN CRITICAL THINKING

The course is designed to teach formal methods for evaluating arguments and policies; identifying, developing and assessing alternatives; and constructing reasonable, persuasive positions of one's own. In the Winter quarter,

students master specific logical, rhetorical, and critical techniques. In the Spring quarter, they use those techniques to analyze and assess scholarly works and policy documents in their fields of interest. These techniques should provide the student with the verbal skills essential to oral presentation, criticism, and defense as well as a set of reliable methods for producing clear, well-structured, and persuasive written arguments, both original and critical. Course requirements in the Winter quarter include weekly problem sets. In the Spring, each student will provide one article each month along with a short written analysis, and then lead discussion of the article in class. They will also be expected to read the articles provided by the other students and to participate in class discussions. The class will meet once a week for 50 minutes in the Fall quarter and 80 minutes in the Winter. The course will last 24 weeks.

Prerequisites: Concurrence of Course Director; Fall class is a prerequisite for Winter

Fall/ Winter Heitman 4 Quarter Hours/Graded

PMO973 GENERAL PREVENTIVE AND OCCUPATIONAL & ENVIRONMENTAL MEDICINE RESIDENCY JOURNAL CLUB

The overall goals of the GPM/OEM Journal club are to teach problem-based learning to participants by identification of public health problems from "real-world" situations, reviewing the extant scientific literature and utilizing structured critical appraisal skills to determine the evidence-based recommendations that can be translated into policy and practice. The intent of the process is to instill in participants a habit of life-long learning to maintain current and valid knowledge relevant to preventive and occupational medicine. In addition, each student is expected to prepare, present and lead a critical appraisal discussion of an article one or more times during the academic year, as well as to read and participate in the weekly discussions of each article selected. Residency and graduate faculty and are encouraged to attend and contribute to all sessions. Faculty and invited guest speakers may also present "hot topics' of interest at times during the year. Secondary goals are to share experiences and expertise, pass on announcements and events of interests, and foster a sense of collegiality and identity within the residency programs and the graduate students in affiliated residency programs.

Prerequisites: Concurrence of Course Director

Fall/Winter/ Spring Servies/Witkop/Chern/Krahl 1 Quarter Hours/Graded

PMO996 CLINICAL TRIAL DESIGN & ANALYSIS

This course is designed for MPH and other graduate students / researchers interested in synthesizing their learning from previous coursework/experience in the design and analysis of clinical trials. The course is intended for students interested in developing the skills necessary for a more independent role in designing clinical trials, including ones that contribute to effective collaboration in developing a statistical analysis plan. The course will survey advanced topics in clinical trials, discussing issues commonly faced, from the prospective planning phases, through conducting and monitoring an ongoing study, to analyzing a completed study. Lectures will emphasize the conceptual aspects of design/analysis issues in this survey of topics, drawing on examples from the current literature. Each lecture is followed by a lab or a selection of breakout sessions, during which students engage in a topic of their choosing with in-depth coverage of issues and hands-on experience with analysis methods to handle them; pros and cons of various approaches and implementing methods using software will be emphasized. Prerequisites: PMO900 or Concurrence of Course Director

Spring Wilkins 2 Quarter Hours/Credit

PMO1024 THE CONSTITUTION; PUBLIC HEALTH AND THE BODY POLITIC

Upon entering military service we undertake an oath to defend the Constitution but do we really know or fully understand what the Constitution is or means? Are we aware what civic, military, and medical duties are promoted and/or constrained by it? This course provides students an opportunity to learn the history behind, the structure and framework of the Constitution, its application today, and to specifically consider its significance and applicability to Public Health. Students taking this course will read source materials to understand the intellectual and historical roots, the writing of, and its application by the Framers and those who followed. Prerequisites: None

Spring Lipsitz 1 Quarter Hour/Graded

FACULTY

Primary Faculty Appointments

Riddle, Mark, CAPT, M.D. (Tulane University School of Medicine), DrPH (Uniformed Services University), MPH&TM (Tulane University School of Public Health and Tropical Medicine) Chair and Associate Professor

Cruess, David F., Ph.D. (The Johns Hopkins University); Professor and Vice Chair for Biometrics; Director, Graduate Programs; Professor, Emerging Infectious Diseases

Gackstetter, Gary D., DVM (Iowa State College), MPH (Boston University) PhD (University of Minnesota), Professor, Co-Director, Graduate Research and Practicum Programs, Vice Chair Research

Hooper, Tomoko I., M.D. (University of California, San Francisco), M.P.H. (Uniformed Services University of the Health Sciences); Professor and Director, MPH Program and Graduate Research and Practicum Programs; Deputy Director, Graduate Programs

Agan, Brian, M.D (University of Colorado Health Sciences Center, Denver, CO); Associate Professor (Infectious Disease Clinical Research Programs) and Director of HIV/STI Research

Barrett, John, M.D. (Uniformed Services University), MPH (University of Washington), Assistant Professor (Epidemiology and Biostatistics)

Benchoff, Theodore (Ted), Ph.D. (Uniformed Services University), M.S. (University of California, Los Angeles), Assistant Professor, Occupational and Environmental Health Science Division; CDR, MSC, USN

Blakely, William F., Ph.D. (University of Illinois), M.S. (University of Illinois); Assistant Professor

Boetig, Brad, M.D. (Uniformed Services University of the Health Sciences), M.P.H. (Uniformed Services University of the Health Sciences); Assistant Professor and Director Global Health Distance Learning Program; Lt Col, MC, USAF

Burkett, Edwin K., M.D. (Uniformed Services University of the Health Sciences), M.B.A. (Western Governor's University), FAAFP (American Academy of Family Physicians); Associate Professor, Col, MC, USAF, FS

Burnett, Daniel G., M.D. (University of Nevada), M.P.H. (San Diego State University); Associate Professor and Director, General Preventive Medicine Residency; Col, USAF, MC, FS

Byrne, Celia, Ph.D. (University of California, Los Angeles), M.S. (University of California, Los Angeles); Associate Professor (Epidemiology & Biostatistics)

Chen, Dechang, Ph.D. (SUNY, Buffalo); Professor (Epidemiology & Biostatistics)

Chern, Andy, M.D. (Indiana University School of Medicine), MPH (Uniformed University of Health Sciences), Assistant Professor, Associate Director of Occupational and Environmental Medicine Residency Program

Crawford, Raymond S., III, M.D. (University of Arkansas), M.B.A. (Troy State University); Assistant Professor (Health Services Administration)

Coles, Christian, Ph.D. (Johns Hopkins University), MPH (Columbia University, School of Public Health), Associate Professor (Infectious Disease Clinical Research Program)

Dietrich, Erich, PhD. (University of Colorado), MS (Naval Postgraduate School), Assistant Professor, MHAP Director (Health Services Administration); USN

Garges, Eric, M.D., MPH, MPM&H, Assistant Professor and Director of the Division of Tropical Public Health, LTC, MC, USA

Girasek, Deborah, C., M.P.H. (University of Michigan School of Public Health), Ph.D. (Johns Hopkins University School of Hygiene and Public Health); Associate Professor and Director of Social and Behavioral Sciences Division

Haverkos, Harry, M.D. (Medical College of Ohio at Toledo); Associate Professor; CAPT (Ret), USPHS

Henson, Donald, M.D., (St. Louis University School of Medicine), Visiting Professor, Volunteer

Ramalho-Ortigao, David, MSC (Texas A&M University), Assistant Professor (Division of Tropical Public Health); USN

Kao, Tzu-Cheg, M.S. (National Tsing Hua University, Taiwan), Ph.D. (Purdue University); Professor (Biostatistics)

Koehlmoos, Tracey, PhD. (University of South Florida), Associate Professor, Director Health Services Administration

Krahl, Pamela, M.D. (Emory University), MPH (Uniformed Services University), Associate Professor, Director (Occupational Medicine Residency); USN

Lalani, Tahaniyat, M.D. (Duke University School of Medicine), Assistant Professor (Infectious Disease Clinical Research Program)

Lipsitz, Robert, M.D., (Wayne State University School of Medicine), MPH (Uniformed Services University, Chief of Direct Patient Care (DPC) for Preventive Medicine; CDR, USN

Luan, Dian M., Ph.D. (Dartmouth University), M.P.A. (Dartmouth University); Assistant Professor, Global Health Division

Majar, Maria, M.S. (University of Washington); Assistant Professor, Occupational and Environmental Health Sciences; CAPT, MSC, USN

Masuoka, Penny, M.S. (University of Tennessee); Assistant Professor (Tropical Public Health)

Millar, Eugene, Ph.D. (Johns Hopkins University); Assistant Professor and Deputy Director General Infectious Diseases Program (IDCRP)

Murphy, Jittawadee, PhD. (University of California), Assistant Professor (Tropical Public Health); LTC, USA

Olsen, Cara H., M.S. (Cornell University), DrPH. (Uniformed Service University of the Health Sciences); Assistant Professor and Biostatistical Consultant

Neih, Chiping, Ph.D. (University of Illinois at Chicago), Assistant Professor, Epidemiologist, Graduate Programs

Ortigao, Marcelo, D.Sc. (Oswaldo Cruz Institute), Associate Professor, (Tropical Public Health)

Ottolini, Martin G., M.D. (Wayne State University); Col (Ret.), USAF, MC

Paul-Kagiri, Rachelle, M.D. (Medical University of South Carolina in Charleston) Assistant Professor

Quinnan, Gerald V., Jr., M.D. (St. Louis University School of Medicine); Professor; RADM (Ret.), USPHS

Reed, Paul, MD (Boston University); Assistant Professor (Global Health)

Richard, Patrick, Ph.D. (Johns Hopkins University); Assistant Professor (Health Services Administration)

Rockabrand, David, PhD. (University of Nebraska-Lincoln), Assistant Professor (Tropical Public Health); LCDR, USN

Rusiecki, Jennifer A., Ph.D. (Yale University, School of Medicine), M.P.H. (Yale University, School of Medicine); Associate Professor (Epidemiology and Biostatistics)

Schaal, Nicholas Cody, Ph.D. (Indiana University of Pennsylvania), M.S. (Colorado State University); Assistant Professor and Director of the MSPH Program in Environmental Occupational Health; LCDR, MSC, USN

Scher, Ann I, Ph.D. (Johns Hopkins University School of Hygiene and Public Health), M.S. (University of Maryland); Professor and Director of Division of Epidemiology and Biostatistics

Servies, Tammy, M.D. (Uniformed Services University), MPH (Uniformed Services University) Assistant Professor, Associate Director General Preventive Medicine and Occupational Environmental Medicine Residency Programs

Sharp, Jon, DrPH(c) (George Washington University), MPH (University of Illinois at Springfield); Assistant Professor; Occupational and Environmental Health Sciences, MAJ, USA

Stewart, Ann, D.V.M. (Cornell University), Ph.D. (Colorado State University); Professor (Tropical Public Health)

Stubner, Alex, Ph.D. (Tulane University), MSPH, (University of Alabama at Birmingham), Assistant Professor, Occupational and Environmental Health Sciences

Tang, Douglas B., M.S., Ph.D. (University of Minnesota); Professor (Epidemiology & Biostatistics)

Tinling, Walter, W, M.P.H. (University of North Carolina, Chapel Hill), Master of Education (George Washington University); Assistant Professor of Preventive Medicine and Biostatistics; Capt (Ret), MSC, USN

Tribble, David, M.D. (University of Arkansas), M.P.H. (Uniformed Services University of the Health Sciences), DrPH. (Uniformed Services University of the Health Sciences); Professor and Director of General Infectious Diseases Program (IDCRP)

Welsh, Marleen, Ph.D. (Harvard University); Assistant Professor (Epidemiology)

Whitaker, William, M.S. (Eastern Kentucky University); Assistant Professor, Division Director Occupational and Environmental Health Sciences, LTC, USA

Witkop, Catherine Takacs, M.D. (Columbia University), M.P.H. (Johns Hopkins University, Bloomberg School of Public Health); Associate Professor and Program Director, General Preventive Medicine Residency

Zhang, Peng Fei, Ph.D. (National Vaccine and Serum Institute, Beijing); Research Associate Professor (Tropical Public Health)

Zhu, Kangmin, M.D., M.P.H. (Tongji Medical University), Ph.D. (University of Washington); Professor (Epidemiology and Biostatistics)

SECONDARY FACULTY APPOINTMENTS

Aronson, Naomi, M.D., Professor, Department of Medicine

Artino, Anthony R., Jr., Ph.D. (University of Connecticut); Associate Professor (Health Services Administration); CDR, MSC, USN

Bagar, Shahida, Ph.D., (University of Maryland), Assistant Professor

Beadling, Charles William, M.D. (Uniformed Services University of Health Sciences), Associate Professor

Bell, Micahel, MPH, MC, (Uniformed Services University), Assistant Professor, USA

Blazes, David, M.D., M.P.H., Associate Professor, Department of Medicine; Program Director for Military Tropical Medicine Course; CDR, MC, USN

Brueggemeyer, Mary, M.D. (University of Louisville), MPH (University of Texas-Houston Health Sciences Center), Assistant Professor (Occupational and Environmental Health Sciences)

Bui, Han Q., M.D., (Uniformed Services University), Assistant Professor

Calloway, Margaret, M.D., Assistant Professor, School of Medicine Admissions, CAPT, MC, USN

Chen, Wei-Ju, Ph.D., (Johns Hopkins Bloomberg School of Public Health), M.S., (National Taiwan University), Epidemiologist, Assistant Professor

Davies, Stephen, PhD., (Cornell University), Associate Professor

Diehl, Glendon B., Ph.D. (American University, Washington DC), Associate Professor, CAPT, MSC, USN

Deiss, Robert G., M.D. (University of California), Assistant Professor

Ellis, Michael, M.D., Assistant Professor, Department of Medicine, LTC, MC, USA

Feuerstein, Michael, M.S., Ph.D., Professor, Department of Medical and Clinical Psychology

Ganesan, Anuradha, M.D. (Madras Medical College), MPH (Uniformed Services University), Associate Professor

Girton, Joshua, J.D. (Washington University in St. Louis, School of Law), Assistant Professor

Hout, Joseph J., MS (Uniformed Services University, University of Maryland), Assistant Professor, USA

Kaar, Jason, J.D., Assistant Professor

Landrum, Michael, M.D., Assistant Professor, Department of Medicine

Laughlin, Larry, M.D., Ph.D., Professor

Marks, Eric, M.D., Professor, Department of Medicine

Maves, Ryan, M.D., Assistant Professor, Department of Medicine, LCDR, MC, USN

Mende, Katrin, PhD, (Friedrich Schiller University and Westfaelische Wilhelms University), Assistant Professor

Okulicz, Jason Frank, M.D. (New Jersey Medical School), Assistant Professor, Lt Col, USAF, MC

Porter, Chad K., PhD. (University of Maryland), MPH (George Washington University), M.D. (George Washington University), Assistant Professor

Ramsey, Gloria, J.D. (Seton Hall University School of Law), R.N. (Jersey City State College), Associate Professor, Graduate School of Nursing, PhD Nursing Science Program

Robinson, Sheila, M.H.A., Assistant Professor, Department of Military Emergency Medicine, LtCol, MSC, USAF

Sculley, Patrick, D.D.S., M.A., Sr. V.P. for University Programs, Executive Dean Postgraduate Dental College, USU

Sharp, Trueman, M.D., Department of Military Emergency Medicine, CAPT, MC, USN

Shinwari, Sayed Alam, M.D. (Indiana School of Medicine), MPH, (George Washington University), Assistant Professor

Smith, Dale C., Ph.D., Professor and Chair, Department of Medical History

Tarantino, David, Jr., M.D. (Georgetown University), M.P.H. (USU), Associate Director, USU/CDHAM, Associate Professor PMB

Teague, Nathaniel Scott, M.D. (Tulane University School of Medicine), MPH&TM (Tulane School of Health and Tropical Medicine), Assistant Professor, MAJ, USA

Ward, Jane B., M.D. (Uniformed Services University), MPH (George Washington University), Clinical Assistant Professor

Weintrob, Amy, M.D. (University of Virginia School of Medicine), Associate Professor

Wilson, Cindy C., Ph.D., Professor, Department of Family Medicine

Wilkins, Kenneth, Ph.D., Harvard School of Public Health), Assistant Professor

White, Duval William, Ph.D., (University of South Carolina), Assistant Professor

ADJUNCT AND VISITING FACULTY

Abraham, Joseph, Sc.D., M.S., Adjunct Assistant Professor

Achee, Nicole, Ph.D., Adjunct Assistant Professor

Aiyelawo, Pius, Adjunct Assistant Professor, CAPT, MSC, USN

Aviles, Ricardo, M.D., Adjunct Assistant Professor

Bailin, Heike, M.D., Adjunct Assistant Professor

Baine, William, Captain, Adjunct Professor, USPHS

Baines, Lyndsay, Ph.D., Adjunct Assistant Professor

Baker, John E, J.D, LL.M.; Adjunct Professor; COL, JAG, USA (Ret)

Ballard, Sarah-Blythe, LDCR, Adjunct Assistant Professor, MC, USN

Batsel-Stewart, Tanis, M.D., Adjunct Assistant Professor

Barbour, April, M.D., Adjunct Assistant Professor

Barker, A. Paul, M.D., Adjunct Assistant Professor

Bergan, Timothy, LDCR, Adjunct Assistant Professor, MC, USN

Blighton, Gordon, CDR, Adjunct Instructor, USN

Blow, Jamie, Adjunct Assistant Professor, LTC, MC, USA

Bonventre, Eugene, M.D., Adjunct Assistant Professor

Bradshaw, Robert D., M.D., M.P.H., Adjunct Assistant Professor

Brady, Paul J., M.D., M.P.H.; Adjunct Assistant Professor; CAPT, MC, USPHS

Brett-Major, David, M.D., M.P.H.; Associate Professor; CDR, MC, USN

Brininger, Teresa L., PhD, MBA, OTR/L, CHT, Adjunct Assistant Professor, LTC, SP, USA

Brown, Charlene, PhD, Adjunct Assistant Professor

Brown, Lisa, Adjunct Assistant Professor

Brown, Matthew, Adjunct Assistant Professor

Burgess, Timothy, M.D., M.P.H., Adjunct Assistant Professor

Cantrell, Joyce A., M.D. M.P.H. Adjunct Assistant Professor; CAPT, USN, MC

Chambers, Matthew, MAJ, Adjunct Assistant Professor, MC, USA

Charberlin, Judith, D.P.H., Adjunct Assistant Professor

Chao, Chien-Chung, Ph.D., Adjunct Assistant Professor

Ching, Wei-Mei, Ph.D., Adjunct Associate Professor

Clausen, Shawn, Adjunct Assistant Professor, LCDR, MC, USN

Cohen, Sylvie, Adjunct Assistant Professor, LCDR, USPHS

Coleman, Russell, Adjunct Assistant Professor, COL, MSC, USA

Coldren, Rodney L., M.D., M.P.H., Adjunct Assistant Professor, COL, MC, USA

Costello, Amy, Lt.Col, Adjunct Assistant Professor, USAF, MC

Coyne, Jr., Philip E., M.D., M.S.P.H.; Associate Professor; CAPT, USPHS

Creel, Alisha, Ph.D., Adjunct Assistant Professor

Culpepper, Randall, M.D., Adjunct Assistant Professor

David, Martin., M.D., M.P.H., Adjunct Assistant Professor, LCDR, US Navy

Dembek, Zygmunt, Ph.D., Adjunct Assistant Professor

Diaz, Juan, M.D., Adjunct Assistant Professor

Dominitz, Illy, CDR, Adjunct Assistant Professor, MC, USN

Dowling, Glenn, Adjunct Assistant Professor, LCDR, MC, USN

Downs, John, MAJ, Adjunct Assistant Professor, MC, USN

Erickson, Ralph L., Adjunct Assistant Professor; COL, MC, USA

Feighner, Brian H., M.D. Associate Professor, COL, MC, USA

Ferris, Robert, D.O., M.P.H, Adjunct Assistant Professor

Fike, James, M.D., Adjunct Associate Professor, MD, FAACP, Col, USAF (ret)

Fischer, Stephen, LTC, Adjunct Assistant Professor, MC, USN

Fisher, Andmorgan, Ph.D. Adjunct Assistant Professor

Florin, David, Ph.D., Adjunct Assistant Professor,

Foote, Frederick, M.D., Adjunct Assistant Professor

Garcia, Shawn M., M.D, M.P.H. Adjunct Assistant Professor, LCDR, MC, USN

Gardner, John M., Adjunct Assistant Professor, LCDR, MSC, USN

Gardner, John W., MD, DrPH, Adjunct Professor; COL (Ret), MC, USA

Garrett, Andrew, M.D., M.P.H., Adjunct Assistant Professor

Gaydos, Joel C., M.D., M.P.H.; Adjunct Professor

Geller, Schuyler, M.D., Adjunct Assistant Professor

Gleeson, Tifani, LDCR, Adjunct Assistant Professor, MC, USN

Gray, Gregory C., M.D. Adjunct Professor

Greenberg, Warren, Ph.D., Adjunct Assistant Professor

Grieco, John P., Ph.D.; Professor

Grimes, George, LT, Adjunct Assistant Professor, MC, USN

Grizzell, Tifani, M.D., M.P.H U., Adjunct Assistant Professor LCDR, MC, USN

Haffner, Marlene E., Adjunct Professor, RADM, USPHS

Hakkinen, Pertti, Ph.D., Adjunct Associate Professor

Halstead, Scott, M.D., Adjunct Professor

Hameed, Jessica, LCDR, Adjunct Assistant Professor, MC, USN

Hansch, Steven, M.P.H., Adjunct Assistant Professor

Harausz, Elizabeth, M.D., Adjunct Assistant Professor

Henske, Stephen, M.H.A., Adjunct Assistant Professor

Henson, Donald, MD, Cpt, USPHS (Ret) Adjunct Associate Professor

Hesse, Elisabeth, MAJ, Adjunct Assistant Professor, MC, USA

Hickey, Thomas E., Adjunct Assistant Professor, LCDR, MSC, USN

Hines, Stella, M.D., Adjunct Assistant Professor

Hoburg, Andrew, Ph.D., M.B.A., Adjunct Assistant Professor, CDR, MSC, USN

Hoffman, Kenneth J., M.D., M.P.H.; Adjunct Assistant Professor; COL (Ret), MC, USA

Hoffman, Stephen L., M.D., D.T.M.H. & H; Adjunct Professor; CAPT, MC, USN;

Hshieh, Paul B., Ph.D., Adjunct Assistant Professor

Hunter, Christine, M.D., Adjunct Assistant Professor

Huynh, Mylene, Adjunct Assistant Professor, Col, MC, FS, USAF

Jindal, Rahul, M.D., Ph.D., M.B.A., Adjunct Professor

Johnson, Lucas A., M.D., M.P.H., Adjunct Assistant Professor, LCDR, MC, USN

Jones, Bruce, M.D., Adjunct Assistant Professor

Jones, Olcay, M.D., Adjunct Associate Professor, Ph.D.

Juarez, Theodore, Ph.D., Adjunct Assistant Professor

Kasper, Matthew, LCDR, Adjunct Assistant Professor, MSC, USN

Kazandjian, Vahe, Ph.D., M.P.H., Adjunct Assistant Professor

Keep, Lisa W., M.D., M.P.H., Adjunct Assistant Professor; COL (Ret), MC, USA

Kelley, Patrick W., M.D., M.P.H.; Adjunct Assistant Professor; COL (Ret), MC, USA

Kemmer, Teresa, Ph.D., Adjunct Assistant Professor

Kim, Brian, DVM, MPVM, MS, Adjunct Assistant Professor

Kimsey, Linda, Ph.D., M.S.H.A., Adjunct Assistant Professor, CDR, MSC, USN

Kirk, Lisa, Adjunct Assistant Professor

Kleinsmith, Chrisptopher, D.O., Adjunct Assistant Professor, MPH

Korman, Amy, Ph.D.; Assistant Professor; LTC, USA

Kortepeter, Mark, M.D., M.P.H., Adjunct Associate Professor, COL, USA

Komisar, Jack, Ph.D., Adjunct Assistant Professor

Krakauer, Teresa, Ph.D., Adjunct Associate Professor

Krauss, Margot R., M.D., Adjunct Assistant Professor; COL (Ret), MC, USA

Kwon, Paul, LTC, Adjunct Assistant Professor, DO, MC, USA

Lanteri, Charlotte, Adjunct Assistant Professor, MAJ, MS, USA

Leclerc-Madlala, Suzanne, Ph.D., Adjunct Professor

Levin, Lynn, Ph.D., Adjunct Assistant Professor

Lewis, Paul, LtCol, Adjunct Assistant Professor, USAF, MC

Lezma, Nicholas, Adjunct Assistant Professor, USAF, MC

Lin, Kenneth, M.D., Adjunct Assistant Professor

Luan, Diana, Ph.D., Adjunct Assistant Professor

Lyons, Scott, J.D., Adjunct Assistant Professor

Magill, Alan J., M.D., Adjunct Associate Professor, FACP, FIDSA

Mallon, Timothy, M.D., Adjunct Assistant Professor, COL, MC, USA

Mancuso, James, M.D., M.P.H., DrPh., Adjunct Associate Professor, LTC, MC, USA

Marrogi, Aizenhawar, M.D., Adjunct Assistant Professor

Marcozzi, David, Adjunct Assistant Professor, MAJ, MC, USA

Marrogi, Aizen, M.D., Adjunct Assistant Professor, COL, USA

Martin, David B., M.D., Adjunct Assistant Professor; MAJ, USAF, MC, FS

Matos, Peter, MAJ, Adjunct Assistant Professor

Mc Ilreavy, Colin, B.S.E., Adjunct Instructor

Miller, Melissa, MS, Adjunct Instructor

Mirza, Raul, D.O., Adjunct Assistant Professor

Morici, Kathryn, M.D., M.P.H., Adjunct Assistant Professor

Murrel, K. Darwin, Ph.D., Adjunct Professor

Music, Francesca, M.S., Adjunct Assistant Professor

Nelson, Cameron, CDR, Adjunct Assistant Professor

Niebuhr, David W., M.D., M.P.H.; Adjunct Professor; COL, MC, USA

Noah, Donald L., D.V.M., M.P.H.; Adjunct Assistant Professor, Col, BSC, USAF

Noji, Eric K., M.D., M.P.H, Adjunct Assistant Professor

Norton, Scott, M.D., Adjunct Professor

Otto, Jean, Dr.P.H., Adjunct Assistant Professor

Pacha, Laura, Adjunct Assistant Professor, LTC, MC, USA

Patterson, Redford E., M.D., M.P.H., Adjunct Assistant Professor

Pearse, Lisa, M.D., MPH, Assistant Professor, CDR, MC, USN

Piacentino, John, M.D., M.P.H., Adjunct Assistant Professor

Phelps, Benjamin, M.D., Adjunct Assistant Professor

Polyak, Christina, M.D., Adjunct Assistant Professor

Procaccino, Joseph, Jr., J.D., Adjunct Assistant Professor

Prosser, Trish, Ph.D., Adjunct Assistant Professor

Raskin, Sarah, Ph.D., Adjunct Assistant Professor

Reaves, Erik, Adjunct Assistant Professor, LCDR, MC, USN

Reimann, Carolyn, CDR, Adjunct Assistant Professor, MC, USN

Richards, Allen L., Ph.D., Adjunct Associate Professor

Roberts, Donald R., M.S., Ph.D., Professor Emeritus

Rockswold, Paul, Adjunct Assistant Professor, CAPT, MC, USN

Rous, Jennifer, MHS, Adjunct Assistant Professor, CIH

Rouse, Douglas M., M.D., Assistant Professor, Lt Col, MC, USAF

Russell, Kevin L., M.D., M.T.M &H., Adjunct Assistant Professor, CAPT, MC, USN

Ryan, Margaret A. M.D., M.P.H., Adjunct Assistant Professor, CAPT, MC, USN

Sanchez, Jose, M.D., Adjunct Assistant Professor

Sauri, Michael, M.D., adjunct Associate Professor, MPH & TM

Saunders, David, LTC, Adjunct Associate Professor, MC, USA

Saydah, Sharon, CDR, Adjunct Associate Professor, USPHS

Schwab, Karen, PhD, Adjunct Associate Professor

Scott, Paul, M.D., M.P.H., Adjunct Assistant Professor

Seguin, Peter, LCDR, Adjunct Assistant Professor, MC, USN

Singer, Darrell, Adjunct Assistant Professor, CDR, USPHS

Shiau, Danny, CDR, Adjunct Assistant Professor, MC, USN

Shuping, Eric, COL, Adjunct Assistant Professor, MC, USA

Slutsman, Julia, Ph.D., Adjunct Assistant Professor

Smith, Philip A., Ph.D., Adjunct Associate Professor

Smith, Stephanie, CPT, Adjunct Assistant Professor, MC, USA

Smoak, Bonnie L., M.D., Ph.D., M.P.H., Adjunct Associate Professor, COL, MC, USA

Snelling, Anastasia, Ph.D., Adjunct Associate Professor

Southby, Richard, Ph.D., Adjunct Assistant Professor

Srinivasan, Jayaram, M.D., Adjunct Assistant Professor, MPH, CPH

Strauss-Riggs, Kandra, MPH, Adjunct Assistnat Professor

Taylor, Kevin, MAJ, Adjunct Assistant Professor, MC, USA

Thomas, Richard J., M.D., M.P.H., Adjunct Associate Professor, CAPT (Ret), MC, USN

Tillman, Ulder, M.D., M.P.H., Adjunct Assistant Professor

Towers, Tyler, COL, Adjunct Assistant Professor, MC, USN

Travis, Thomas, Adjunct Assistant Professor, Major General, USAF, MC, CFS

Trump, David, Adjunct Associate Professor, CAPT, MC, USN

Turell, Michael J., Ph.D., Adjunct Associate Professor

Umhau, William, M.D., Adjunct Assistant Professor

Uniszkiewicz, Robert, LCDR, Adjucnt Assistant Professor, MC, USN

Vest, Kelly, DVM, Adjunct Assistant Professor

Villasante, Eileen, Ph.D., Adjunct Assistant Professor

Voss, Jameson, Maj, Adjunct Assistant Professor, USAF, MC

Vroegindewey, Gary, Adjunct Assistant Professor, COL, USA

Weina, Peter J., Adjunct Associate Professor; COL, MC, USA

Wiesen, Andrew, COL, Adjunct Assistant Professor, MC, USA

Wilkins, Kenneth, Ph.D, Assistant Professor and Deputy Director of Biostatistics and Data Management (Infectious Disease Clinical Research Programs)

Williams, Carlos, M.D., Adjunct Assistant Professor

Wilson, Ramay, LTC, Adjunct Assistant Professor, MC, USA

Wirtz, Robert, Ph.D., Adjunct Associate Professor

Whitmeyer, Antoinette, M.S. Adjunct Assistant Professor, CAPT, MSC, USN

Wolfe, Martin, M.D., Adjunct Professor

Woodring, Joseph, D.O., Adjunct Assistant Professor

Wu, Shuenn-Jue, Ph.D., Adjunct Professor

Yee, Leslie, M.D., Ph.D., Adjunct Assistant Professor

Zeliff, Barbara, J.D., Adjunct Assistant Professor

GRADUATES

1983

FALK, Leo J., MD, MPH
JACKSON, Frederick L., DO, MPH, CDR MC USN
LONG, Truman E., MD, MPH, CDR MC USN
MARAIST, Donald J., MD, MPH, CDR MC USN
TECEC, Thomas G., DVM, MPH, CPT VC USA

1984

McGINLEY, John L., DDS, MPH, LCDR DC USN MIEDZINSKI, Mollie M., BS, MPH MITCHELL, Benjamin S., MD, MPH, LCDR MC USN PAULSEN, H. Jay, MD, MPH, CDR USPHS

1985

ARTHUR, James S., DDS, MPH, CDR DC USN BESSER, Yheskel, AB, MPH, COL, IDF BISHOP, William C., MD, MPH, CDR MC USN CLARKE, William R., MD, MTM&H, LtCol MC USAF DREIS, Michael W., BS Pharm, MPH, LCDR USPHS KELSEY, Charles, Jr., DVM, MPH, CPT VC USA LEVINE, Debra A., BSN, BA, MPH LYONS, Fred E., DVM, MPH, CPT VC USA ROSENSTOCK, Joel, MD, MPH, LCDR MC USNR

1986

BASH, Margaret C., MD, MPH, LT USPHS BEADLE, Christine, MD, MPH BLUMENBERG, Thomas L., BS Pharm, MPH, LCDR **USPHS** CALDWELL, M. Blake, MD, MPH, LCDR MC USNR IQBAL, Mohammed, MD, MPH, LtCol, Pakistan AMC MICHALOSKI, Cathleen, BSN, MPH PEARSON, Kay, BS Pharm, MPH, CAPT USPHS RECHES, Moshe, MSC, MPH, LtCol, Israeli Defence **Forces** SAVAGE, Gale, MD, MPH SIMMONS, John, MD, MPH, MAJ MC USA SMITH, Kermit, DO, MPH, CDR USPHS SUANSILPPONGSE, Aroon, MD, MPH TAMIR, Arnon, MD, MPH, MAJ, IDF WEIR, Robert, DVM, MPH, CPT VC USA

1987

BORDERS, Rosa M., MD, MPH
BURR, Peggy Q., BS, MPH
DAVEY, Victoria, BSN, MPH
GROCHMAL, David L., DDS, MPH, LCDR DC USN
HEIBA, Ibrahim M., MD, MTM&H
KIRKPATRICK, Laura, AB, MPH
McNABB, Cheryl Hisatomi, BS, MPH

YANEY, Sandra, M.N., MPH, CPT NC USA

OLSON, Richard, MD, MPH, CDR USPHS
PARKER, John A., MD, MTM&H, MAJ MC USA
PEREZ, Thomas R., R.Ph., MA, MPH, LCDR USPHS
RONISH, Ross, MD, MPH, Capt USAF MC
ROSEN, Steven, BS, MPH
STEWART, William R., MD, MPH, LCDR MC USN
TEMPLE, Diana J., AB, MPH

BERTSCHE, Patricia K., BSN, MPH

1988

BEYMER, Charles H., Dr Pharm, MPH, LT USPHS BRADY, William E., BS, MPH CHAUDRY, M. Ashraf, MBBS, MPH, Maj, Pakistan AMC DIEMER, Margretta M., MD, MPH, MAJ MC USA DORON, Eytan, BA, MPH, Lt Col, IDF GUM, Robert M., DO, MPH, CPT MC USA HANSON, Kevin, MD, MPH, LCDR MC USN HOOPER, E.Y., MD, MPH, CDR USPHS JOHNSON, George M., MD, MPH, Capt USAF MC LAI, Sheng-han, MD, MPH MIDDLETON, Timothy, M.E., MPH, Maj USAF BSC MILLER, Marissa A., DVM, MPH, LT USPHS PHILLIPS, Kenneth G., MD, MPH, CPT MC USA SANBORN, Jill S., BS MPH SMERZ, Richard W., DO, MTM&H, LTC MC USA TONAT, Kevin, BA, MPH, LT USPHS TROULLOS, Emanuel S., DMD, MPH ZAFAR, Abdul, MBBS, MPH

1989

CABIRI, Mordechai, BA, MPH, Lt Col, IDF CANDLER, Wm H., Jr., MS, DO, MTM&H, CPT MC USA CARR, Michael W., DVM, MPH, MAJ MC USA CHEN, Kyone (Joe), MBBS, MPH KADLEC, Robert P., MD, MTM&H, Maj USAF MC LIU, Lei, MD, MPH MITCHELL, Glenn W., MD, MPH, LTC MC USA PRUETT, Richard K., MD, MPH REED, William W., MD, MPH, MAJ MC USA SCOTT, Steven G., MD, MPH, LT USPHS SHOSHAN, Nimrod, MD, MPH, Lt Col, IDF SMITH, Phillip L., MD, MPH, LCDR USPHS TAYLOR, Dewayne G., DVM, MPH, MAJ VC USA VINCENT, Dale S., MD, MPH, MAJ MC USA WARFE, Peter G., MBBS, MTM&H, Lt Col, RAAMC WEST, Peter Amory, MD, MPH

1990

ALSHECH, Itzhak, MD, MPH, Maj, IDF

ANDERSON, James W., MD, MTM&H, MAJ, Canadian Forces

BERGEISEN, Gershon H., MD, MPH, CDR USPHS CAUDLE, Lester C., III, MD, MTM&H, CPT MC USA GOFORTH, Gary, MD, MTM&H, MAJ MC USA HEIL, John R., MD, MPH, LCDR MC USN HOLDER, Keith, MD, MPH, LCDR MC USN JAJOSKY, Philip, MD, MPH, Ph.D., CDR USPHS KHAN, Ahmed, M.B.B.S., MPH, Maj, Pakistan AMC MAY, Laurel A, MD, MPH, LCDR MC USN McCARDLE, Peggy D., MPH, Ph.D. MYETTE, Thomas L., MD, MPH, CDR, Canadian Forces NOWAK, Rudolf Z., MD, MPH, MAJ, Canadian Forces OLESEN, Mark C., MD, MPH, LCDR MC USN PELLOSIE, Carmine, D.O., MPH, LCDR MC USN PESSONEY, John T, MD, MPH, CAPT MC USN POLANCO, Jorge A, MD, MPH, Belize MOH RAFORD, Paul, MD, MPH, LCDR USPHS REDFORD, Maryann, DDS, MPH SALAZAR, Guillermo J., MD, MPH SCHUCKENBROCK, David R., DVM, MPH, MAJ VC USA SCHWARTZ, Keith A., BS, MPH SHERMAN, Stephanie J., DVM, MPH, LTC VC USA STINSON, Nathaniel, MD, MPH, PhD, CDR USPHS TANCHEZ, Mario, MD, MPH, Maj USAF MC TANNER, Ann L., BS, MPH WILLIAMS, Richard P., MD, MPH, CDR MC USN ZABARI, Arnon, BA, MPH, Lt Col, IDF

1991

BELIZARIO, Vicente Y Jr., MD, MTM&H BHATTY, Nusrat, MBBS, MPH BURTE, Francoise, MD, MPH CHANDLER, Bruce P., MD, MPH, CDR, USPHS CHEN, Xi, B.S., MPH CRAIG, Stephen C., DO, MTM&H, MAJ MC USA CUMMINGS, Curtis E., MD, MPH, CDR MC USN deJESUS, Antonita V., MD, MPH, CAPT MC USN HEATH, Stephen W., MD, MPH, CAPT USPHS HAR-NOY, Shmuel, MSc, MPH, Lt Col MC, IDF HUNTER, James R., BS, MPH, LCDR USPHS JAJOSKY, Ruth A., DMD, MPH JORDAN, Wanda M., BS, MPH KIM, Dong Hyun, MD, MPH LIMPERT, Scott F., MD, MPH, LCDR MC USN MASTERS, Carolyn F., BA, MPH MIRANDA, Jose R., MD, MPH, LCDR USPHS MOORHEAD, John A., MD, MPH, LCDR USNR OMORI, Deborah J., MD, MPH, MAJ MC USA VASUT, Debbie J., DVM, MPH, CPT VC USA YORK, Andrew K. II, DMD, MPH, LCDR DC USN

BURKE, Laurie B., BS, MPH, LT USPHS CRAIG, Peter George, MBBS, MTM&H FALLON, Ann P., MD, MPH, LT MC USN FERNANDEZ, Ildefonso S., MS, Ph.D. HIRA, Subhash K., MBBS, MPH KACZMARCZYK, Joseph M., DO, MPH, CDR USPHS KARNEI, Karen Z., BSN, MPH KEARY, Frank V., MD, MPH GARKAPARTHI, Mohan Kishore, MBBS, MTM&H LANDRY, Frances J., MD, MPH, CPT MC USA LEE, Lionel Kim H., MBBS, MPH LEWIS, Drew E., MD, MTM&H, LCDR MC USN LYNCH, Kathryn Jo, PhD, MPH MARPLE, Richard, MD, MPH, MAJ MC USA McARTHUR, Jon A., BS, MPH, CDR USPHS McGUIRE-RUGH, Karen, BSN, MPH 1992 (continued) MEO, Ahmed Bashir, MBBS, DPH, MPH, MAJ MC Pakistan AMC OLIGNY, Christopher, BS, PA, MPH PELEG, Jacob, BA, MA, MPH, LtCol IDF (1992 Continued) PITTS, Michael B., MBBS, MPH

1993

BRAITHEWAITE, Lana L., BS, MPH CHADWICK, Gary, DPh, MPH, CAPT USPHS DOWNING, Denise M., BA, MPH FARRAR, Curtis Lynn, MPH, CDR USPHS GEFROH, Gary J., BS, MPH, LT USPHS HENDERSON, Kenrick G, BS, MPH MAAS, Vernon A, MD, MPH, LT USPHS MARLIN, Kay, BA, MPH McMAHON, David, BS, MPH, LTJG USPHS MURPHY, Frances M., MD, MPH NEALE, John Franklin, DDS, MPH, CDR USPHS PIERCE, Elizabeth A, BS, MPH ROHRER, Rebecca J, BS, MPH ROY, Michael, MD, MPH, CPT MC USA SCHUTT, Robert W., DDS, MPH, LCDR DC USN SCOTT-WRIGHT, Alicia O., MD, MPH, MTM&H, **LCDRUSPHS** TAKASHIMA, Herbert T, MD, MPH, CAPT USPHS TANI, Yukiko, BSN, MPH, LT USPHS WATTENDORF, Nicole, BS, MPH WELLS, Glen, MD, MPH, Lt Col RAAMC

RUELL, Ellen Mary, BS, MEd, MPH

1994

ALTARAC, Maja, MD, MPH AUSTER, Rosalie, MD, MPH BALL, Robert, MD, MPH, LCDR MC USN BONA, James D., BS, CDR USPHS, MPH CASERTA, Vito M., MD, MPH, CDR MC USPHS EVERETT, Nancy, RN, BS, MPH FEIGHT, Andrea G., DMD, MPH, CDR USPHS GOLDBERG, Avishy, MA, MPH, Lt Col, IDF GRAF, James A., DO, MPH, CDR MC USN HALL, Elvira L., DVM, MPH HOOPER, Tomoko I., MD, MPH HENDRICK, Byron B., MD, MPH, LCDR MC USNR KARLBERG, Kristen K., BS, MPH LEIENDECKER, Thomas, DDS, MPH, LCDR USN LILLIE, Ralph B, BS, MPH, CDR USPHS, FDA MONDRAGON, Donald, MD, MPH, CPT MC USA MORRIS, Carolyn Blank, BA, MPH MORRIS, Jeffrey S., BS, MPH, LTJG USPHS RYAN, Margaret A.K., MD, MPH, LT MC USNR SCHIBLY, Barbara A., PhD, MPH, MD, CDR MC USN SONG, Guan-hong, MS, PhD STOUTE, Ellen J., BS, MPH TIOKASIN, Linda, BS, MPH, LTJG USPHS WAGNER, Cheryl A., BS, MPH YOSHINAGA, Mary F. Austen, BA, MPH

1995

ALLEN, James W., MD, MPH, CAPT MC USN BALEIX, John C., MD, MPH, LCDR MC USN BEAUJON, Jan R., MS, MPH, LT MSC USN CHAMBERLIN, Judith, BS, MPH CHAREONVIRIYAPHAP, Theeraphap, PhD COLE, Marlene N., DVM, MPH, CAPT VC USPHS EMERSON, Maura A., MD, MPH, CDR MC USN FLORIO, Emily, Ph.D., MPH GALLAURESI, Beverly A., RN, BS, MPH HOOPER, TOMOKO, I., MD, MPH JONES, David L., MD, MPH, MAJ MC USA JONES, Trevor R., MA, PhD, MPH, LCDR MSC USN KANESA-THASAN, Niranjan, MD, MTM&H, MAJ MC KARITIS, J. William, DMD, MPH, LCDR DC USN LANGE, Susan C., BS, MPH LI, Jun, MD, SMMC, PhD LINDQUIST, H.D. Alan, MEnvSci, PhD MAPES, Peter B, MD, MPH, MAJ MC USAF McBRIDE, Wayne Z., DO, MPH, LCDR MC USN McCLOSKEY, Carolyn A., MD, MPH MORGAN, Jacqueline, MD, MPH, Col MC USAF SHERMAN, S. Scott, MD, MPH, LCDR MC USN SMITH, April P., BS, MPH SWARTWORTH, Wm J., MD, MPH, LCDR MC USN TOWLE, Cynthia, PA, MPH WALTERS, Terry J., MD, MPH, MAJ MC USA WILCOX-RIGGS, Sandra L., MD, MPH, LTC MC USA YANCY, April D., DVM, MPH YUND, Alan J., MD, MPH, CDR MC USN

1996

BRIAND, Edward J., DVM, MPH, CPT VC USA BUCHANAN, Kelvin C., DVM, MPH, CPT VC USA CAMPBELL, James R., PhD, MPH, CDR MSC USN DEUSTER, Patricia A., PhD, MPH (1996 Continued) DIEHL, Mark C., DDS, MPH, CDR USN FREEMAN, Annette K., DVM, MPH, CPT VC USA FULLER, Linda J., DO, MPH, CDR MC USN GABRIEL, Mary E., MD, MTM&H, LtCol USAF MC HALL, Matthew D., MD, MPH, LCDR USPHS/USCG HARPER, Kristina, BA, MPH HAZOUT, Yehiel, MA, MPH, LtCol MC IDF HOHENHAUS, Guy S., DVM, MPH HOLLAND, John D., BS, MPH, LT USPHS INOUYE, Lisa S., MD, MPH, LT MC USNR JACKSON, Jeffrey L., MD, MPH, MAJ MC USA LaMAR II, James E., MD, MPH, LCDR MC USN MALAKOOTI, Mark A., MD, MTM&H, LT MC USNR MILLER, Kelly J., BA, MPH PETERSEN, Kenneth E., DVM, MPH RUSSELL, Kevin L., MD, MTM&H, LT MC USN SCHIRNER, Wayne A., DO, MPH, LTC MC USA SILVERS, Linda E., DVM, MPH SMITHWICK, Joel A., MD, MPH, LT MC USNR SNYDER, Ricky L., DO, MPH, LCDR MC USN SUTTON, Ernest L., MD, MPH, COL MC USA

1997

ARMSTONG, Karyn L., DVM, MPH, CPT VC USA BERNIER, J. Jean-Robert S., MD, MPH, MAJ Canadian **Forces** BRADSHAW, Robert D., MD, MPH, LtCol USAF MC DEALMEIDA, Genevive, MS, MPH DUVERNOY, Tracy S., DVM, MPH ELTING, Jeffrey, MD, MPH, LTC MC USA FISHER, Carol A., DVM, MPH, Maj USAF BSC GIBBONS, Robert V., MD, MPH, CPT MC USA HAKRE, Shilpa, BSC, MPH HARRIS, Linda D., DVM, MPH, CPT VC USA HEFFLIN, Brockton J., MD, MPH, LCDR MC USPHS ISENBARGER, Daniel W., MD, MPH, MAJ MC USA LEISHMAN, Martha F., BSN, MPH MARINO, Karma D., MPH MAWN, Stephen V. MD, MPH, CDR MC USN McCARTHY, Michael C., MD, MPH, CDR MC USN McMILLAN, David L., MD, MPH, CDR MC USN MITTON, Robert H., DDS, MPH, LCDR MC USN NAHIN, Richard L., PhD, MPH POTTER, Robert N., DVM, MPH SNEAD, Thomas A., MD, MPH, CDR MC USN THORSON, Lisa T., MD, MPH, LCDR MC USN

1998

ARNESS, Mark K., MD, MTM&H, Maj USAF MC BAUGH, Keith J., MD, MPH, MAJ MC USA BENEDEK, Paul, MD, MPH, COL MC IDF BERG, Thomas C., DVM, MPH, Maj USAF BSC BETTENCOURT, Jr., Bernard M., DO, MPH, MAJ MC

CAMARCA, Margaret M., BSN, MPH CHAUDHRY, Amjad M., DVM, MPH, CPT VC USA COOK, Keith W., BS, MPH, LT USPHS GRAHAM, Sherry L., DVM, MPH, CPT VC USA JAN, Moore, MD, MPH, LCDR MC USN MALEY, Elizabeth A., MD, MPH, LT MC USN MALINER, Beverly I., DO, MPH, LTC MC USA McKULA. Melanie L., BS, MPH O'MALLEY, Patrick G., MD, MPH, MAJ MC USA PETITT, Patricia L., DO, MPH, LT MC USN PRASCSAK, George M., BS, MPH, Maj USAF SANTORO, James A., MD, MPH, CPT MC USA SCHOR, Kenneth W., DO, MPH, CDR MC USN SHEETS, James T., DVM, MPH, CPT VC USA SMART, John D., BS, MPH, LT USPHS STATEN, Jr., David C., BS, MPH STAUDENMEIER, James J., MD, MPH, MAJ MC USA STUART, Kelly A., MD, MPH, CPT MC USA STUTLER, Shannon A., DVM, MPH, CPT VC USA SYLVESTER, Theresa K., BS, MPH TAKAFUJI, Julia A., BS, MPH TONEY, Steven D., DVM, MPH, Maj USAF BSC WEISS, Yosef, MA, MPH, LtCol MC IDF WEST, Norman S., MS, MPH, CPT USAF BSC

1999

BLANKENSHIP, Tammy L., MD, MPH, LCDR MC USN BRADY, P. Jeffrey, MD, MPH, LT MC USNR BRYCE L. Michelle, DO, MTM&H, Maj USAF MC BUTLER, William P., DO, MTM&H, LtCol USAF MC CHAPMAN, Alice S., DVM, MPH, Capt USAF BSC DALAL, Stephen J., DVM, MPH, CPT VC USA (1999 Continued) DUQUE, Jr., David, DVM, MPH, Maj USAF BSC EGGLESTON, Thomas A., DVM, MPH, CPT VC USA FITZHARRIS, Joseph B., MD, MPH, COL MC USA HARRE, Joseph G., DVM, MPH, CPT VC USA KILBANE, Edward M., MD, MPH, CAPT MC USN MacINTOSH, Victor M., MD, MPH, LtCol USAF MC MAGUIRE, Jason D., MD, MPH, LT MC USN MARTSCHINSKE, Robert O., MD, MPH, LCDR MC USN McCORD, Cedric F., MD, MPH, CPT MC USA McDONALD, Kimberly K., MD, MPH, LT MC USN

BANGS, Michael J., MSPH, PhD, LCDR MSC USN

McKENZIE-GARNER, Pearline, MD, MPH, MAJ MC USA

MULLINS, J.Andrew, DVM, MPH, Maj USAF BSC
NESBY-O'DELL, Shanna L., DVM, MPH, CDR USPHS
NIEBLAS, Minda G., MD, MPH, LT MC USN
NIEHOFF, Steve, DVM, MPH, Maj USAF BSC
O'MARA, Ann M., PhD, MPH
PEDERSON, Charles L., MD, MPH, CPT MC USA
PHINNEY, Lloyd T., DVM, MPH, CPT VC USA
PROBST, Richard J., DVM, MPH, CPT VC USA
SCHULTZ, Stephen T., DDS, MPH, LCDR DC USN
SMITH, Doreen A., MS, MPH, Maj USAF NC
TOMKINS, Glen E., MD, MPH, MAJ MC USA
TRIBBLE, David R., MD, MPH, CDR MC USNR
ZENTRICH, Eve C., MA, MS

2000

ADESANYA, Margo R., DDS, MPH, CDR USPHS BATSEL, Tanis M., MD, MPH, LCDR MC USN BROWN, Linda M., MPH, DrPH, CAPT USPHS BURGESS, Timothy H., MD, MPH, LT MC USN CANNON, Loraine D., DVM, MPH, CLAGETT, Christopher D., MD, MPH, LCDR MC USN CLARKE, Thomas F., MD, MPH, Maj USAF MC CROSLAND, Telita, MD, MPH, MAJ MC USA EKSTRAND, John R., MD, MPH, MAJ MC USA FLETCHER, David J., DVM, MPH GOLANI, Rafael, MA, MPH, LTC IDF GOODRICH, Scott G., DO, MPH, LTC DC USA GROSCH, Kit C., BS, MPH, LCDR USPHS GUTMANN, Frank D., MD, MPH HASKE, Terry L., MD, MPH, Maj USAF MC HAYNES, Margaret F., DVM, MPH, Capt USAF BSC HEBRINK, Scott T., DVM, MPH, Capt USAF BSC HOLT, Rebecca K., DVM, MPH, CPT VC USA HUANG, Grant D., MPH JACOCKS, John M., MD, MTM&H, LTC MC USA KATES, Christopher T., BS, MPH, LCDR USPHSR KELSEY, Fred C., DVM, MPH, LtCol USAF BSC KILIAN, Dennis B., MS, MSPH, CPT MS USA KLUCHINSKY, Jr., Timothy A., MBS, MSPH, CPT MS LANGSTEN, Randall L., DVM, MPH, Maj USAF BSC LOPEZ, Kenneth R., DVM, MPH, CPT VC USA LYNCH, John P., MD, Maj USAF MC MARTIN, Gregory J., MD, MPH, CPT MC USA

MILLER, Barry A., MSPH, DrPH, CAPT USPHS

OLLAYOS, Curtis W., MD, MPH, LCDR MC USN ORTMAN, Brian V., DVM, MPH, Maj USAF BSC

SCHWARTZ, Erica G., MD, MPH, LT MC USNR

NAITO, Neal A., MD, MPH, CDR MC USN

RICO, Redro J., DVM, MPH, CPT VC USA

SCHNEIDER, Diana L., MA, DrPH

SEVILLA, Nereyda L., BS, MPH, 1LT USAF BSC SMITH, Pamela D., MD, MPH, Capt USAF MC STETTO, Jayne E., MD, MPH, Maj USAF NC THOMPSON, Jennifer C., MD, MPH, MAJ MC USAR WINTERTON, Brad S., DVM, MPH, Capt USAF BSC

2001

AIMPUN, Pote, MD, DrPH, Capt MC Thai Army ANDERSON, Steven M., BS, MPH, Capt USAF BSC BAILEY, Rachel L., DO, MPH, CPT MC USA BELL, Michael R., MD, MPH, MAJ MC USA BLAZES, David L., MD, LCDR MC USN CHAMBERLIN, Judith A., MPH, DrPH CLABORN, David, MS, DrPH, LCDR MSC USN DANE, Dana, DVM, MPH, Maj USAF BSC DAVIS. Barbara E., DVM, MPH, Mai USAFR BSC DEUTSCH, Wayne M., DDS, MPH, CDR USN DC FAIX, Dennis J., MD, MPH, LT MC USN GOULD, Philip L., MD, MPH, Maj USAF MC GRIECO, John P., MS, PhD HANSON, Chris E., DVM, MPH, MAJ VC USA HUYNH, Mylene T., MD, MPH, Maj USAF MC KETZENBERGER, Bryan K., DVM, MPH, MAJ VC USA KLUCHINSKY, Jr., Timothy A., MBS, MSPH, DrPH, CPT MS USA LANDRO, Frederick J., MD, MPH, CDR MC USN MALONEY, Elizabeth, DrPH McCOY, Gretchen A., MD, MPH MONGEAU, Susan W., DDS, MPH, Lt Col USAF DC NISKA, Richard W., MD, MPH, CAPT USPHS SALERNO, Stephen M., MD, MPH, MAJ MC USA SARDELIS, Michael, PhD, MAJ, USA SHARMA, Archna N., MD, MPH TASHIRO, Ken M., MD, MPH, Lt Col USAF MC SFS THOMAS, Joseph G., MD, MPH, LCDR MC USN WEGNER, Mark V., MD, MPH WEI, Gina S., MD, MPH WELCH, Paul G., MD, MPH, COL MC USA ZINDERMAN, Craig E, MD, MPH, LT MC USN

2002

AMON, Joseph, PhD
CARTER, Gary W., MPH, LT, USPHS
COMPLETO, John D., MD, MPH, CPT, MC, USA
CONNER, Bryon F., MD, MPH, LCDR, MC, USN
DUNN II, James C., MD, CDR MC USN
EADER, Scott A., MD, MPH, CPT, MC, USA
FEUERSTEIN, Michael, MD, MPH
FLYNN, Joseph M., MD, MPH, MAJ, MC, USA
HALL, Tara L., BA, MSPH, CPT, MS, USA
HARTZELL, Michael C, MPH, Lt Col, USAF, BSC
HEMMER, Paul A., MD, MPH, Lt Col, USAF, MC
HROCH, Brian E., MPH, LT, USPHS

KASOWSKI, Eric J., MD, MPH, LCDR, MC, USN KAZEROUNI, Niloufar, DrPH KEELER, Natalie M., MPH, Capt, USAF, BSC KIMM, Gregory L., BS, MSPH, MAJ, MS, USA LAPA, Joyce A., MD, MPH, CAPT, MC, USN LYONS, Keegan M., MD, MPH, Capt, USAF, MC MAHER, Paul D., MD, MPH, LT, USPHS MCCANNON, Charles E., MD, MPH, LCDR, MC, USN MEIER, Michael J., MD, MPH, LCDR, MC, USN MISHOE, Helena O., MPH, CAPT, USPHS MURRAY, Len E., DVM, MPH, MAJ, VC, USA NEWMAN, Sara, DrPH ORTIZ, Jose M., MD, MPH, MAJ, MC, USA ROBINSON, Christopher S., MA, PhD, MPH, Maj USAF **BSC** SCOVILLE, Stephanie, DrPH SHEEHAN, James J., MD, MPH, MAJ, MC, USA STAKER, Michael L., MD, MPH, CPT, MC, USA SZETO, Astrid L., MPH, LCDR, USPHS TAI, Ting J., MD, MPH, CPT, MC, USA THOMAS-FUENTES, Maria R., MD, MPH THORNTON, Venita B., DVM, MPH, LCDR, USPHS TORRIE, Ian D., MD, MPH, Lt (N), Canadian Forces VAUGHN, Andrew F., MD, MPH, LCDR, MC, USN

2003

BENTZEL, David, DVM, MPH, MAJ, VC, USA BERG, Sven, MD, MPH, LtCol, USAF, MC BRANCH, Stacey, DO, MS, MPH, Capt, USAF, MC BUFFETT, Stephanie J., RN, MSN, MPH, Capt, USAF, NC CHAMPINE, Jon D., MPH CIMINERA, Paul, MD, MPH, CPT, MC, USA DANIELS, Colleen, MPH, CPT, SP, USA DUFFY, Mark, MPH, Capt, USAF, BSC FELT, Stephen, DVM, MPH, MAJ, VC, USA FONSECA-RIVERA, Jose, MPA, MPH, Maj, USAF, BSC GIBBINS, John D., DVM, MPH, DACVPM, Maj, USAF, HALL, Francis X., MD, MPH, LCDR, MC, USNR HATZIGEORGIOU, Christos, MD, MPH, MAJ, MC, USA HINDS, Sarah Bro, DVM, MPH, CPT, VC, USA HOLTZCLAW, Suezane, MPH, LCDR, MC, USN HAKRE, Shilpa, DrPH HOOK, Gary, PhD, LCDR, MSC, USN JACOBSEN, Kenneth, DVM, MPH, MAJ, VC, USA JACOBSON, Jon R., DO, MPH, CPT, MC, USA KELLER, Christopher, DVM, MPH, MAJ, VC, USA KUENY, Monica B., MPH, LCDR, USPHS/USCG LANGHAM, Gregory, DVM, MPH, LT, VC, USPHS LEAL, Joanne R., DDS, MPH, CDR, DC, USN MATIS, Steven, DDS, MPH, LCDR, DC, USN MERRILL, Nancy, DVM, MPH, CPT, VC, USA

MILLIKAN, Amy, MD, MPH, CPT, MC, USA MORIN, Nathalie, DDS, MPH, MAJ, Canadian Forces **Dental Services** MULHALL, Brian, MD, MPH, MAJ, MC, USA NGUYEN, TRAM T., MPH OLSEN, Cara, MS, MPH (2003 Continued) PHILLIPS, Stephen, MD, MPH, LTC, MC, USA RICHARDSON, Joanne, MD, MPH, Maj, USAF, MC SEEMAN, Paul, MD, MPH, LCDR, MC, USN SHELTON, Larry, DVM, MPH, CPT, VC, USA STONE, Kari, MPH, Capt, USAF, NC TABATZKY, Christiane, MD, MPH TJADEN, Jeffrey, MD, MPH, LCDR, MC, USN TOMON, John, MSPH, LT, MSC, USN WHITE, Sharon, MPH, LCDR, USPHS WINGER, Kirk, DVM, MPH, Maj, USAF, BSC DANIELS, Colleen, MPH, CPT, SP, USA

2004

ACHEE, Nicole, DrPH AUSTIN-LANE, Joy, DrPH BECK, Kimberly, MD, MPH, CPT, MC, USA BERBANO, Elizabeth, MD, MPH, MAJ, MC, USA BONHAGE, Michael, DVM, MPH, MAJ, MC, USA BOWDEN III, Lynden, MD, MPH, CPT, MC, USA BOYD, Sean, MPH, LCDR, USPHS BROSCH, Lorie, MD, MPH, Lt Col, USAF, MC COCKRUM, David, MD, MPH, Maj, USAF, MC COGSWELL, Brad, MPH, Capt, USAF, MSC CRAMER, David, MPH, LCDR, USPHS EATON, Melinda, Capt, DVM, MPH, USAF, BSC HACHEY, Wayne, MD, MPH, LTC, MC, USA HARMAN, Dale, MD, MPH, LCDR, MC, USN JOBANPUTRA, Nishith, MD, MPH, LCDR, MC, USN LANG, Bradford; MPH LAWLER, James, MD, MPH, LCDR, MC, USN LUKE, Thomas, MD, MPH, LCDR, MC, USN MACLARTY, Anne, MAJ, DVM, MPH, VC, USA MAY, Lisa, DrPH McPHERSON, Nicole, MPH MOORE, Brian, MPH, Maj, USAF, BSC MOORE, Vincent, MAJ, USA OLSEN, Cara, MPH OSTRANDER, Gregory, MPH, LT, MSC, USN OTTO, William, MD, MPH, CPT, MC, USA POEL, Christine, DVM, MPH, Maj, USAF, BSC RITCHIE, Elspeth, MD, MPH, COL, MC, USA ROCKSWOLD, Paul, MD, MPH, CDR, MC, USN SCHAEFER, Richard, MD, MPH, COL, MC, USA SELENT, Monica, DVM, MPH, Maj, USAF, BSC SHUKAN, Evan, Maj, USAF, BSC STRAUSS, Mark, MPH, LT, USPHS

SUNDSTROM, Julie, MPH, Capt, USAF, BSC VEST, Kelly, LT, USN WESTPHALL, Johann, MD, MPH, Maj, USAF, MC WILSON, Keith, MPH, Capt, USAF, NC

2005

ABBOTT, Kevin, MD, MPH, LTC, USA, MC ASSEFF, David, MD, MTM&H, LCDR, USNR, MC BARTHEL, Robert, MD, MPH, LCDR, USN, MC BATZ, Raymond, MD, MPH, LDCR, USNR, MC CLARK, Krystyn, MSPH, Capt, USAF, BSC COLLINS, Todd, MPH, CPT, USA, VC DEZEE, Kent, MD, MPH, LTC, USA, MC EAGAN, Paul, MPH, MAJ, Canada, CFMG FAERBER, Juliann, MD, MPH, LCDR, USN, MC FITZHUGH, Dawn, DVM, MPH, CPT, USA, MC FYFFE, James, MSPH, Lt, USAF, BSC GIBSON, Brent, MD, MPH, CPT, USA, MC GUTKE, Gregory, MD, MPH, Capt, USAF, MC HALVORSON, Heather, MD, MPH, CAPT USAF, MC HANCOCK, Miranda, MPH, Capt, USAF, BSC HEMLOCK, Bethany, MPH, Civ HUNT, James, MPH, LT, USN, MSC JOLIVET, Rima, MPH, CNM, MSN KOCH, David, MSPH, LCDR, USN, MSC KRAUTHEIM, Mark, MD, MPH, LtCol, USAF, MC LANKIN, Kenneth, MD, MPH, CDR, USN, MC LICINA, Derek, MPH, CPT, USA, MS MALONE, John, MD, MPH. MEDELLIN, Christopher, MD, MPH, MAJ, USA, MC MICHAEL, Nack, CPT, MS, USA O'CONNOR, Francis, MD, MPH, COL, USA, MC PARRISH, Douglas, PhD, LT, USN PIPER, Williams, LT, USAF, BSC SHIAU, Danny, MD, MPH, LCDR, USN, MC SHIMEALL, William, MD, MPH, LCDR, USNR, MC SHINABERY, Lynn, DVM, MPH, Maj, USAF, BSC SMELSER, Christopher, MD, MPH, CPT, USAR, MC SUH, Ryung, MD, MPH, MAJ, USA, MC TAYLOR, Jean, DrPH THOMAS, Cynthia, DVM, MPH, USAF, BSC TRIBBLE, David, DrPH WILLIAMS, Piper, MSPH, Lt, USAF, BSC

2006

BEAL, Jessica, MPH, 1LT, USAF, BSC (2006 Continued)
BRADBURY, Meredith, Ph.D, MPH
BROOKS, John, MC, MD, MPH, LCDR, USN, MC
BRUDER, Catherine, M.A. MPH
BRYANT, Chet, MSPH, Capt, USAF, BSC
CARR, Deborah, MD, USAF, BSC
COLLINS, Ryan, MPH

DOUGLAS, Kevin, MD, MPH, MAJ, USA, MC FAJARDO, Kevin, MD, MTM&H, USAF, MC FLORIN, David, Ph.D., LCDR, USN, MSC GARGES, Eric, MD, MTM&H, CPT, USA, MC GREEN, Kathy, MD, MPH, Maj, USAF, MC HAMMETT, Mark, MD, MPH, CDR, USN HOUT, JOSEPH J, MSPH, USA, MS JOHANSON, Scott, MPH KAN, Waikwong, MSPH, Capt, USAF, BSC KRAHL, Pamela, MD, MPH, LCDR, USNR, MC KRYGIER, Julie, MD, MPH, Maj, USAF, BSC LAFORCE, Paul, Maj, MPH, Canadian Forces LAKIN, Terrence, MD, LTC, MPH, USA, MC LEIDEL, Jason, MSPH, Lt, USAF, BSC McGUIRE, Christopher, MD, CPT, MPH, USA, MC McMANUS, Catherine, VMD, MPH MORAN, Michael, MSPH, USAF, BSC NEWKIRK, Scott, MSPH, USA, MS OKAMOTO, Misa, MPH, USAF, BSC OZEROGLU, Muhammed, MSPH, LT, USN RODRIQUEZ, Anne, MD, Maj, MTM&H, USAF, MC SKINNER, Michael, MSPH, Capt, USAF, BSC SOLTIS, Bryony, MD, MAJ, MPH, USA, MC TAMMINGA, Cindy, MD, CDR, MPH, USN, MC WADLEY, Rodney, MD, MAJ, MPH, USA, MC WELLS, Natalie, MD, LT, MPH, USNR, MC WU, Hongu, MD, MPH WURAPA, Eyako, MD, MAJ, MTM&H, USA, MC WYNN, Michael, MD, MPH, USA, MC

2007

AGEE, Brian, MD, LtCol, MPH, USAF, MC ARNOLD, Sarah, MD, LCDR, MPH USN, MC BERTI, Janice, MPH, USAF, NC BOETIG, Bradley, MD, MPH, USAF, MC BURKE, Robin, CPT, USA, VC COOK, Greg, Dr. P.H., LCDR, USN, MSC DERRICK, David, MPH, USA, MS FLETCHER, Kendra, DVM, MSPH, Lt, USAF, BSC GAMBINO-SHIRLEY, Kelly, Capt, MPH, USAF, BSC GLEESON, Todd, MD, MPH, LCDR, USN, MC HAUERSTEIN, Paul, MPH, LCDR, USN, MSC KENT, Robert, MD, MAJ, MPH, USAF, MC KIM, Andrew, MD, MPH, USA, MC KING, Stephanie, DVM, MSPH, Lt, USAF, BSC LACUNZA, Julia, MD, MPH, USN, MC LIPSITZ, Robert, MD, MPH, CDR, USN, MC LIVINGSTON, Brian, DVM, MSPH, Lt, USAF, BSC LLANOS, Joseph, MD, MTM&H, MAJ, MC, USA LUGO-ROMAN, Luis, DVM, MPH, CPT, VC, USA MA, Kai-Wood, MD, LtCol, MPH, USAF, MC MOCCIA, Krinon, DVM, MPH, MAJ, VC, USA MONEY, Nisha, MD, MPH, Capt, USA, MC

MOZZACHIO, Alicia, MPH, LT, USPHS OYSTER, Carolyn, MPH PATTERSON, Steven, MD, MSPH, MAJ, USA, MS RAMIREZ, Juan, MPH, Capt, USAF, BSC RAZURI, Hugo, MD, MPH REAVES, Erik, MD, MTM&H, LT, MC, USN RILEY, Brian, MD, MPH, LCDR, USN, MC RODRIGUEZ, Christopher, MD, MPH, CPT, USA, MC ROGERS, Heather, M.S., MPH SENSINTAFFER, Lowell, MD, MTM&H, LtCol, MC, USAF SZPISJAK Dale, MD, MPH, CDR, USN, MC TAYLOR, Brett, DVM, MPH, CPT, VC, USA, TAYLOR, Kevin, MD, MTM&H, CPT, MC, USA TERHAKOPIAN, Artin, MD, MPH, CPT, USA, MC VICKERY, John, MPH WENTWORTH, Michael, MD, MPH, LCDR, USN, MC WONG, Jason, MD, MPH, LCDR, USN, MC WOODLEE, Charles, MPH, LT, USPHS WOODRING, Joseph, MD, MTM&H, CPT, MC, USA

2008

BEADLING, Matilda, MPH BELLAND, Kris, MD, MPH CAPT, USN, MC BOHEN, Erin, MPH (2008 Continued) BOWENS, Michael, MPH BRETT-MAJOR, David, MD, MPH, LCDR, USN, MC BRITTAIN, Rodney, LCDR, MPH, Canadian Forces BROWN, Kevin, MD, MPH, LCDR, USN, MC CHAPPELL, Mark, DVM, MPH, MAJ, USA, MC CATYB, Joseph, DVM, MSPH, Capt, USAF, BSC CHEN, Naili, MD, MPH, LtCol (Sel), USAF, MC, FS CHERRY, Scott, MD, MPH, CPT, USA, MC COOPER, Jared, MPH DELZER, Jeffrey, MSPH, LT, USN DOWLING, Glenn, MD, MPH, LCDR (Sel), USN, MC EAGAN, Sheena, MPH FINNELL, Val, MD, MPH, LtCol, USAF, MC FREEMAN, Randall, MD, MTM&H, MAJ, MC GREENBURG, David, MD, MPH, CPT, USA, MC HAINES, Joe, MD, MPH, LCDR, USN, MC HARRINGTON, Cherise, MPH HASAN, Nidal, MD, MPH, CPT, USA, MC HAWLEY, John, MSPH, LT, USN HIGH, Patrick, DrPH JACOBS, Michael, MD, MPH, CDR, USN, MC LANG, Paul, MPH, CPT, USA MCPHERSON, Nicole, DrPH McKENZIE, Megan, MPH, Lt (N), Canadian Forces MODY, Rupal, MD, MPH, CPT, USA, MC MOORE, Thomas, MD, MPH, Maj, USAF, MC MORRISON, Stephanie, MPH

MUNDACA, Carmen, MPH
OLSEN, Cara, MPH, DrPH
PAYNE, Kevin, MD, MPH, CPT, USA, MC
POWELL, Blaine, MD, MPH, LCDR, USN, MC
REYNOLDS, Mark, MD, MTM&H, MAJ, USA, MC
RIDDLE, Mark, MD, MTM&H, DrPH, LCDR, USN, MC
SANTIAGO, Patcho, MD, MPH, LCDR, USN, MC
SENSINTAFFAR, Lowell, MD, MPH, LtCol, USAF, MC
SESSIONS, Cecili, MD, MPH, Maj, USAF, MC
SHERMAN, Eric, MD, MPH, Capt, USAF, MC
SLOAN, Lloyd, MD, MPH, CDR, USN, MC
TARANTINO, David Jr, MD, MPH, CDR, USN, MC
WHEELER, Robbie, DVM, MSPH, Capt, USAF, BSC
WU, Hongyan, MD, MPH

2009

BOSWELL, Valerie, MPH BROWN, Mark, MPH, LTC, MC, USA BURKE, Ronald, DrPH CLAUSEN, Shawn, MPH, LCDR MC, USN CURRY, Jennifer, MPH, LCDR, MC, USNR DABBS, Clifton, MPH, MAJ, MC, USA DIEGO, Gonzalez, MTM&H, LTC, MC, USA DRULIS, Michael, MPH, CPT, MS, USA FARRIOR, Hope, MPH, MS GARCIA, Shawn, MPH, LT, MC, USN GEORGE, Susan, MPH, CPT, MC, USN GIRARDI, Alyce, MD GONZALEZ, Diego, MTM&H, LTC, MC, USA GRIZZELL, Tifani, MPH, LT. MC, USN HAYAT, Aatif, MPH, CPT, MC, USA HOLLIS, Ewell, MPH, LCDR, MC, USN JOHNSON, Jeremiah, MPH, Capt, USAF, BSC KLINGENBERGER, Jane, MPH, Col, USAF LANDESMAN, Roxanne, MPH, LT, MC, USN MARTIN, Joesph, MPH, CDR, MC, USN MCINNES, Donald, MSPH, Capt, Canadian Forces MONEY, David, MPH, CDR, USPHS MORROW, Meredith, MSPH MOSS, Marcus, MPH, CPT, USA MURGA, Ricardo, MPH, CDR, USPHS RICHARDS, Erin, MPH, CPT, MS, USA REYNOLDS, Mark, MTM&H SOTO, Giselle, MPH STUBBS, Jeremiah, MPH, LTC, MC, USA TABAKOVA, Anca, MPH TENEZA, Brigilda, MPH, MAJ, MC, USA WARD, Claudine, MPH, MAJ, MC, USAF WILES, Devin, MTM&H, CPT, MC, USA

2010

BACON, Bryan, MPH, MAJ, MC, USA BAUTISTA, Marco Tejeda, MPH, MS

BERRY, Linda, MD BRUNELL, Marla, MPH, MAJ, VC, US CADUA, Edgar, MPH, MAJ, BSC, USAF CATHLIN, Hubert, MPH, CDR, USPHS CHEE, Chan, MD CLARK II, Max, MPH, LT, MC, USN CRON, Kevin, MPH, CPT, MC, USA DEUSSING, Eric, MPH, LCDR, MC, USN DUCKER, Robin, MPH, Capt, USAF, BSC GILLIES II, Duncan, MPH, MAJ, MC, USA GREGG II, Marion, MPH, LCDR, MC, USN HUNTER, Kari, MPH, Capt, USAF, BSC HARMAN JR., Jefferson, MPH, Col, MC, USAF HARPER FARGUS, Jamie, MPH ISIDEAN DAKDOUK, Sandra JOHNSON, Mark, MMT&H, LT, MC, USN MCCUTCHAN KUESTERS, Phoebe LAROCHELLE, Jeffrey, MPH, MAJ, MC, USAF LEE, Dara, MPH, CPT, MC, USA MALLORY, Renee, MPH, CPT, MC, USA MEYERS, Bryce, MPH, CPT, MC, USA MILLEGAN, Jeffrey, MPH, LCDR, MC, USN HINCHEY, Sherri, MPH, CPT, USA POLAK, Suzanne, MPH, PhD ROBERTS, Anne, MPH, LCDR, MC, USN ROYAL, Joseph, MPH, CPT, VC, USA SCHWARTZ, Jenna, MPH, CPT, MC, USA SCHWARZ, Jessica, MPH, LT, USPHS SEGUIN, Peter, MPH, LT, MC, USN SIKORSKI, Cynthia, MPH, CDR, MC, USN STANLEY, Michael, MPH, LTC, MC, USA STEINER, Shane, MPH, MAJ, MC, FS, USAF STEVENS JR., Michael, PhD, LCDR, MSC, USN TOVAR, Jeffree, MPH, LCDR, MC, Peruvian Navy TZENG, Jeff, MPH, CPT, MC, USA VERLO, April, MSPH, CPT, MS, USA YEW, Kenneth, MPH, CAPT, MC, USN

2011

ADAMS, Shannon, MPH, LT, USN BECKETT, Charmagne, MPH, CDR, USN BELILL, Kathryn, MPH, MAJ, USA BOUCHER, Rebecca, MPH, MAJ, USA CASTLE, Valerie, MPH, Maj, USAF COSTELLO, Amy, MPH, Maj, USAF FEDERINKO, Susan, MPH, Maj, USAF GRIMES, George, MPH, LT, USN HAWLEY, Robert, MPH, MAJ, USA HAYS, Russell, MPH, CDR, USN HESSE, Elisabeth, MTM&H, CPT, USA HU, Lianne, MPH HURD, Edward, MPH, LCDR, USN JOLIVET, Rima, DrPH

LYNCH, Victoria, MPH, Capt, USAF MANCUSO, James, DrPH, LTC, USA MIRZA, Raul, MPH, CPT, USA NEYRA, Joan, MPH, Peru Navy ORAVEC, Geoffrey, MPH, Capt, USAF PAOLINO, Kristopher, MTM&H, CPT, USA SHERWOOD, Jeffrey, MTM&H, CPT, USA VEGA, Jaime, MPH, LT, USN WESTBROOK, Chris, MPH, CDR, USN

2012

BARRIENTOS, Raul, MPH, CDR, USN BAUMGARTNER, Jason, MPH, LT, USN BROWN, Carlis, MSPH, LT, USN BURRIS, Gary, MHAP, ENS, USN BYARS, Lvnn, MPH, LT, USN CHARBONNEAU, Vicki, MPH, Capt, USAF CHIU, Alden, MPH, LT, USN DE LA MOTTE, Sarah, MPH DYER, Ricardo, MHAP, CPT, USA ELLIOTT, Linda, MHAP, ENS, USN FLEMING, Michael, MHAP, Capt, USAF FREE, Ross, MPH, Capt, USAF GREIFENSTEIN, Michael, MSPH, CPT, USA GUTIERREZ, Romiro, MPH, CDR, USN ILCUS, Lidia, MPH, LtCol, USAF JANKOSKY, Sharon, MHAP KELLY, Brenna, LT, USN KERSGARD, Colleen, MPH, Maj, USAF LARRU, Manuel, MPH, LT, Peru Navy LEE, Cecilia, DrPH, MPH, RN LESTER, Nancy, MPH, Maj, USAF MAGEE, Charles, MPH, CPT, USA MILLER, David, MPH, Maj, USAF MONTGOMERY, Ralph, MHAP, ENS, USN MORGANTI, Katherine, MPH, LtCol, USAF MUNAYCO, Cesar, MPH, MD PARKER, Alexandra, MPH, Capt, USAF PREYER, Jennifer, MHAP, Capt, USAF SMALLEY, Robert, MHAP, Capt, USAF STRATING, Simon, MSPH, CPT, USA VIADO, Hildehardo, MSPH, CPT, USA

2013

ALTSTATT, Carol, MHAP
ANGKASEKWINAI, Nasikarn, MTM&H, MD
BERNHARD, Jason, MPH, LCDR, MC, USN
BIGLEY, Daniel MPH, LCDR, MC, USA
BLIER, Serge, MPH, MAJ, CF
BRADLEY, Monica, MSPH, Capt, Canadian Forces
BROWN, Sarah, MHAP, LT, MSC, USN
CAMACHO, Angel, MHAP, LTJG, MSC, USN
CANELO, Carlos , MPH, MD

COUCH, Walter, MSPH, MAJ, MS, USA DECASTRO, Arthur, MHAP, LTJG, MSC, USN DEMBELE, Korami, MSPH, CAPT, CF DISEATI, Lori, MPH, Maj, MC, USAF D'ONOFRIO, Michael, MPH, CPT, MC, USA EDMONSON, Kezia, MHAP, LTJG, MSC, USN EPHRON, Paul, MPH, CAPT, MC, USN FERGUSON, Ebonee, MHAP HERNANDEZ, Inna, MHAP, Capt, MSC, USAF HUBBARD, Katherine, MPH, LCDR, USPHS HUSS, Frederick, MHAP, LCDR, MC, USN JOHNSON, Lucas, MTM&H, LT, MC, USN JOHNSON-KANAPATHY, Erin, MSPH, CPT, MSC, USA KRANTZ, Jason, MSPH, MAJ, MS, USA MARTIN, Nicholas, PhD EHS, LCDR, MSC, USN MELANCON, François, MPH, MAJ, CF MILES, John, MPH, Maj, MC, USAF MONAHAN, Patrick, MPH, Col, MC, USAF MUELLER, Scott, MSPH, CPT, MSC, USA MUNDACA, Carmen, DrPH OFFENBACHER-LOONEY, Monica, MPH, MAJ, AN, USA OTTO, Mark, MSPH, LT, MSC, USN RAY, Papiya, MPH, LT, MC, USN RICKARDS, Gretchen, MPH, MAJ, MC, USA RIISE, Scott, MPH, Col, MC, USAF SALAAM-BLYTHER, Tiaji, MHAP SERVIES, Tammy, MPH, LCDR, MC, USN ST. CLAIR, Kristina, MTM&H, LCDR, MC, USN TAYLOR, Timothy, MPH, LT, USPHS TICE, Beau, MHAP, LTJG, MSC, USN VESS, Joshua, MPH, Maj, DC, USAF VOSS, Jameson, MPH, Capt, MC, USAF WASHIGNTON, William, MPH, MAJ, MC, USA WEBBER, Bryant, MPH, Capt, MC, USAF WILSON, Theodore, MSPH, MAJ, MSC, USA

2014

ABDUS-SALAAM, Raushan, CPT, USA
ANDERSON, Calvin, Maj, USAF
BARNES, Kisten, LCDR, FM
BLACKMER, Shannon, LCDR, USN
BREWSTER, Rachel, CPT, USA
BUI, Han, CDR, USN
CLAASSEN, Johnathan, CPT, USA
DAR, David, LT, USPHS
DEES, Jessica, Maj, USAF
DO, Tai, LCDR, USN
DUHANEY, Taneika, LTJG, USN
DUONG, An, Lt Col, USAF
EICKMEYER, William, LT, USN
FISKE, Lauren, LCDR, USN
HEGGE, Sara, CPT, USA

HOUT, Joseph, CPT, USA JACKSON, Ashley, LCDR, USN JUAREZ, Theodore, LCDR, USN LACANILAO, Anna, LT, USN LANGTON, Richard, LCDR, USN MAXWELL, Branden, CPT, USA MCBEE, Elexis, LCDR, USN MILES, Matthew, LTJG, USN MURR, Christopher, LTJG, USN NELSON, Cameron, LCDR, USN O'NEILL, Ryan, LT, USN PAOLINO, Nathalie, CPT, USA PAGE, Mark, CMDR, FM PARSELL, Christopher, LTJG, USN PETERSON, Jasmine, MAJ, USA PETTEBONE, Merrick, LT, USN PHAM, Anh, Lt Col, USAF RAPP-SANTOS, Kamala, CPT, USA REYES, Merson, LTJG, USN Richmond, Luke, LTJG, USN SANCHEZ, Marlene, CDR, USN SLADE, Shane, Capt, USAF SMALLMAN, Darlene, Col, USAF VON THUN, Annette, CAPT, USN WILLOUGHBY, Neville, LTJG, USN WISNER, Grant, Capt, USAF

2015

ANDREWS, Mary, MPH, LT, USN BACSA, Christine, MPH, CPT, USA BALLARD, Timothy, MPH, Maj, USAF BERGAN, Timothy, MPH, LCDR, USN BOCIAN, Margaret, MHAP, LT, USN BROWN, Sterling, MSPH, CPT, USA BYTNER, Julie, SGT CAWLFIELD, Alicia, MPH, CPT, USA CHU, Kasi, MPH, Maj, USAF DEYOUNG, Wade, MSPH, CPT, USA DIFFENDERFER, Jeffrey, MPH, MAJ, USA DOWNS, John, MPH, MAJ, USA FISHER, Andrew, MPH, Capt, USAF FLETCHER, Heather, MPH, LCDR, USN FRANKLIN, Kelly, MPH, Capt, USAF GEHLING, Alicia, MPH, CPT, USA GRIFFAY, Anthony, MPH, CAPT, USN HAMEED, Jessica, MPH, LCDR, USN HEININGER, Robert, MPH, CPT, USA JACKSON, Jeremy, MHAP, LTJG, USN JOAN, Neyra, DrPH, Civ JOHN, Anthony, MSPH, CPT, USA JULEON, Rabbani, DrPH, Civ KENDZIE, John, MSPH, MAJ, USA LEWIS III, Paul, MPH, Lt Col, USAF

MESSENGER, Jon, MHAP, MAJ, USA MEYER, Lyndsy, MSPH, LT, USN MULLER (Leary), Meghan, MHAP, MAJ, USA NOWAK, Bryan, MHAP, CPT, USA O'DELL, Jeffrey, MPH, CAPT, USN OREN, Schwartz, MPH, MAJOR, IDF PEREZ-ABREU, Miguel, MPH, CPT, USA REITER, Cara, MPH, CPT, USA ROBINSON, Anthony, MSPH, MAJ, USA ROBINSON, Donald, MTM&H, COL, USA ROSSI, Carlo, MTM&H, CPT, CANADA RUMERY, Zachary, MHAP, Capt, USAF SELLS, Samuel, MHAP, Capt, USAF STEPHANIE, Morrison, DrPH, Civ SULPIZIO, Hadley, MPH, LT, USN THEODORE, Juarez, PhD, LCDR, USN UNISZKIEWICZ, Robert, MPH, LCDR, USN VAUGHAN, Nicholas, MHAP, LTJG, USN (2015 Continued) WILMOSKI, Conrad, MHAP, MAJ, USA WILSON, Kerry, MPH, LT, USN WILSON, Ramey, MPH, LTC, USA

2016

ANDERSON, Megan Elaine, Capt, USAF, MSC BESWICK-ESCANLAR, Vincent Paul, LCDR, ROYAL CANADIAN MEDICAL SERVICE BLITZ, Jason Bernard, CDR, MC, USN BOOSE, Wesley David, LCDR, MC, USN BUCHANAN, Maccon Alexander, LT, MSC, USN CAMPBELL, Wesley Ray, LCDR, MC, USN CINTRON, Nicole Marie, CPT, MS, USA CHERN, Andy, CPT, MC, USA GONZALEZ (CLINE), Amanda Alicia, CPT, MC, USA DIAZ, Juan Carlso, CPT, MC, USA ESCATE, Cesar Vladimir Munayco HANSON, Jay Delbert, MAJ, MS, USA HARRISON, Daniel Joseph, CPT, MS, USA HASTINGS, Todd Glen, LT, MC, USN HAYS, Meredith Ann, CPT, MC, USA HOANG, Paula Kim, Maj, DC, USAF HOLUTA, Matthew J, CPT, MS, USA KIM, Yeong Hyeon, LTJG, MSC, USN KINDER, Katherine Michelle, MAJ, MS, USA LETIZIA, Andrew Gordon, LCDR, MC, USN LETT, Akil Kwesi, LTJG, MSC, USN LOVETT, Leslis Nicole, Maj, USAF, BSC MABY, Jan Irene, LTC, MC, USA MAURAIS, Tony Hubert Sebastian, Capt, CANADIAN FORCES HEALTH SERVICES MEEKER, Justin Wells, LT, MSC, USN MOODY, Jefferson Milvar, LT, MSC, USN MORRIS, Kristine Marie, Capt, USAF, MSC

NESTOR, Jennifer Leigh, LT, MSC, USN
OWINGS, Alfred John, II, LCDR MC, USN
PAYNE, Chelsea Bianca, Maj, USAF, MC
PEARCE, Teresa Diana, MAJ, MC, USA
RAMOS RIVERA, Elliot, CPT, VC, USA
RIDDLE, Laura Ellen, MAJ, VC, USA
ROBINETTE, Joseph Travis, CPT, MS, USA
SANDERS, David M, Maj, USAF, BSC
SAINATO, Rebecca J, MAJ, MC, USA
SCHRADER, Andrew Jay, CPT, VC, USA
SANTIAGO, Carla Filomena, LTJG, MSC, USN
SMITH, Stephanie Sayre, CPT, MC, USA
SORELL, Jason Allan, MAJ, MSC, USA
TSEPELEV, Andrey Vladimirovich, CPT, MS, USA
WAITE, David, MAJ, USA

2017

ANDERSON, Craig, CPT, MC, USA BAGLIVO, Christopher, MAJ, MS, USA BENCIVENGA, Michael, MAJ, VC, USA BUSS, Kathleen, CDR, DC, USN CICCHINI, Frank, MAJ, MS, USA COPELAND, Nathanial MAJ, MC, USA CULBRETH, Marilynn, MAJ, VC, USA DANIELS, Colleen, MAJ(P), SP, USA DUNCAN, Joshua, Maj MC, USAF EIDE III, Richard, MAJ, MC, USA ELLIS, Danny S., LTJG, MSC, USN ELYAMANI, Karim, CPT, USA GIANFERANTE, D. Matthew, LCDR, USPHS GOTTFREDSON, Ryan, Maj, MC, USAF GUIDO, Robert, CPT, MC, USA HANSEN, John, LCDR, USPHS HARMON, Jonathan, Maj, DC, USAF HENDRICKSEN, Paul, LCDR, MC, USN HNATH, George, LCDR, MC, USN HONEY, Jonathan, Lt(N), RCN, CAF JONES, Brent, LCdr, RCMS, CAF JUNG, Ryan, Maj, BSC, USAF KIRNON, Judy, CPT, USA LANGE, Kevin, LT, USN LEE, Elizabeth LOZIER, Cynthia, CPT, USA MARTIN, Monica, MAJ, VC, USA MONTGOMERY, Jon, LCDR, MC, USN O'HARA, Christina, MAJ, MC, USA PAJULUOMA, Gordon, Capt, RCAF PERKINS, Matthew, MAJ, MC, USA PETERS, Elizabeth, Maj, NC, USAF POLSOMBOON, Suppaluck REEVES, Elizabeth, CDR, MC, USN ROGERS, Amy, LCDR, MC, USN SCHINDLER David, Maj, DC, USAF

SHANK, Lisa, M.S.
SORELL, Jason A., MAJ, MC, USA
STIEGMANN, Regan, Capt, MC, USAF
TASH, Nina, LTJG, MSC, USN
TOAL, Marcus
WARNER, Paul, SGT, USA
WICKLINE, Scott, LTJG, USN