

Graduate Programs in the Biomedical Sciences and Public Health

The goal of graduate study in the basic biomedical sciences at USU is to develop independent scholarship, originality, and competence in research, teaching, and professional service. The Graduate Programs are designed for outstanding students committed to careers in the biomedical sciences and public health.

Application Process

Applicants must complete a bachelor's degree from an accredited academic institution prior to enrollment. Official transcripts of all prior college-level courses taken from and GRE scores (taken within the last two years) must be sent to the Office of Graduate Education. Applicants must also arrange for three letters of recommendation from individuals who are familiar with applicant's academic studies to be sent to the University. The on-line application can be found at <https://gapp.usuhs.edu>. Completed applications should be received before January 1st for matriculation in late August. USU does not charge an application fee.

Graduate Programs in the Biomedical Sciences and Public Health Contact Information

By mail:	Associate Dean School of Medicine Graduate Programs Uniformed Services University 4301 Jones Bridge Road, Room A1045 Bethesda MD 20814-4799
By phone:	Toll free: 1-800-772-1747
Commercial:	(301) 295-9474 DSN: 295-9474
By e-mail:	graduateprogram@usuhs.edu
At website:	http://www.usuhs.edu/graded/prospectivestudents.html

Doctoral and Master's Degree Programs

Doctoral and master's degree programs are available at USU as listed below:

- Interdisciplinary Ph.D. Programs
 - Emerging Infectious Diseases
 - Molecular and Cell Biology
 - Neuroscience
- Department-based Ph.D. Programs
 - Medical and Clinical Psychology
 - Environmental Health Sciences (Military only)
 - Medical Zoology
- Physician Scientist (M.D./Ph.D.) Program
- Doctor of Public Health (Dr.P.H.)
- Master of Science in Public Health (MSPH) (Military Only)
- Master of Health Administration and Policy (MHAP)
- Master of Public Health (MPH)
- Master of Tropical Medicine and Hygiene (MTMH)
- Master of Military Medical History (Military only)

USU School of Medicine Graduate Programs are open to both civilian and military students in general and are an essential part of the academic environment at the University. An excellent faculty-to-student ratio is provided by the more than 150 biomedical science faculty members who teach graduate courses and mentor students. Graduate training programs are conducted in state-of-the-art research facilities on the USU campus. Students can enhance their educational experiences at USU through didactic and research experiences at NIH, Walter Reed Army Institute of Research, and numerous biotechnology companies in the area.

The 210 graduate students currently enrolled in the doctoral and master's Graduate Programs at USU hail from all parts of the country, from all types of undergraduate academic institutions, and from many different careers. Two-thirds of the graduate students are pursuing doctoral degrees (Ph.D. or Dr.P.H.) while one-third of the students are Master's degree candidates.

The university offers stipends that range from \$27,000 to \$32,000 on a competitive basis to civilian doctoral students who are U.S. citizens or permanent residents. Outstanding applicants may be nominated for the Dean's Special Fellowship, which supports a stipend of an additional \$5,000. Civilian graduate students do not incur a service obligation to the United States government after completion of their graduate training. Active-duty military officers accepted for full-time graduate study must have the consent and sponsorship of their parent service. Tuition is waived for USU graduate students.

Graduate Programs and Research Areas

The School of Medicine Graduate Programs offer unique training and research opportunities.

Emerging Infectious Diseases

This interdisciplinary program has two academic tracks within the field of emerging infectious diseases: microbiology and immunology, and preventive medicine. The program offers training for students with primary interests in the pathogenesis, host response, pathology, and epidemiology of infectious diseases. This program's research training emphasizes modern methods in molecular biology, cell biology, and interdisciplinary approaches.

Emerging Infectious Diseases Contact Information

Website:	http://www.usuhs.edu/eid/
Administrative Contact:	Patricia Sinclair (301) 295-5749 patricia.sinclair@usuhs.edu
Program Director:	Dr. Christopher Broder (301) 295-3401 christopher.broder@usuhs.edu

Students in the Emerging Infectious Diseases Program are to (1) provide the scientific community with broadly trained, outstanding research scientists who can contribute significantly to the increasingly complex field of infectious disease mechanisms and pathogenesis and (2) provide a rigorous academic research environment wherein trainees learn to ask well-informed questions, develop the skills to answer those questions at the bench, expand their capacity to think creatively and broadly, and acquire the skills necessary to communicate their ideas orally and in writing to colleagues.

Opportunities may include (1) academicians who seek to bridge the gap between the clinical and basic science worlds as well as those who wish to advance the integration of the basic science fields; (2) research scientists in private, federal, or state public health laboratories who are involved in the discovery of and characterization of new infectious agents, or in the investigation of the epidemiology of these new agents in the United States or overseas, or in the analysis of the molecular or cellular biology of newly described or other pathogens, or in the dissection of the host immune response to such agents at the molecular, cellular, or whole animal/human levels; (3) product development managers who may conduct some basic or clinical studies, but whose primary goal is to develop and evaluate products such as disease detection kits or vaccines; and (4) vector biologists in public health lab settings.

Program of Study

The curriculum is multifaceted and includes a rigorous didactic component that is integrated into a research-centered curriculum. Each student takes a core curriculum and then chooses advanced courses in one of two academic areas of concentration (tracks). In our pre-doctoral training program, the students participate in course work, laboratory rotations, seminars, journals clubs, lab meetings, a comprehensive examination, thesis research, advisory committee meetings, scientific meetings, and preparation and

defense of a dissertation.

The first-year core courses provide students with a strong foundation in molecular biology, cell biology, and genetics. Studies, many unique to this program, are as follows.

- Topics Course: Introduction to the primary literature.
- Models of Emerging Infectious Diseases: Introduction to the interdisciplinary nature of the program, a theme repeated throughout the formal course work. Students are exposed to an in-depth analysis of the epidemiology of and the host immune response/pathology to select emerging (and re-emerging) infectious disease agents. Emphasis is on the molecular mechanisms by which the specific pathogens evoke disease.
- During two to three rotations, the student undertakes a short research project in the laboratories of different faculty members. Rotations last approximately three months and give students a hands-on introduction to research projects and the opportunity to determine which area of concentration, advisor, and laboratory environment best fits his/her needs for dissertation research.

The second-year core courses provide a foundation in histology/pathology, biostatistics, and epidemiology. The courses for the academic track selected (microbiology and immunology, pathology, or preventive medicine/epidemiology), build on the core curriculum courses and provide advanced training in the student's area of research interest.

Together with formal course work, informal teaching and research opportunities contribute to the student's rich academic environment. The activities foster the intellectual development of both pre- and post-doctoral trainees, promote critical thinking, and enable the student to establish and maintain a breadth of knowledge on a wide range of topics. Activities include the following:

- Teaching as part of graduate training
- Participating in seminar programs and journal clubs
- Interacting informally with visiting speakers through the Meet the Professor program
- Presenting a formal seminar once a year after Advancement to Candidacy
- Presenting in weekly journal clubs, scientific reports from the primary literature on timely topics
- Presenting in data clubs, progress reports of their research projects

Faculty and Research Opportunities

The Emerging Infectious Diseases Program with its strong, integrated curriculum and research opportunities, permits broad, optimal research training of young scientists in infectious diseases. The program recruits the most talented and qualified faculty members in each of the core disciplines, regardless of the department in which they hold a primary appointment. This structure has attracted faculty members who are interested not only in investigating broad biological ideas associated with the multifaceted area of infectious diseases but also in focusing on particular aspects of a given infectious disease.

Faculty members are chosen based on their overall research interests in emerging and re-emerging infectious diseases, pathogenesis, immunology, epidemiology of infectious diseases, and/or biodefense. Synergistic educational opportunities are offered by clinical and basic science faculty who hold primary appointments in the Departments of Microbiology and Immunology, Pathology, Preventive Medicine/Epidemiology, Biochemistry, Pediatrics, or Medicine.

Students have the opportunity to engage in cutting edge research either at the bench or in the field. Research programs in cellular and molecular laboratory training in microbial pathogenesis and immunology coexist with research programs that focus on field-oriented medical parasitology or vector biology. The blending

provides a rich research environment, which ensures that students have strong interdisciplinary training. Students' thesis advisors, in addition to the university-based advisors, may include USU faculty members from some of the preeminent infectious diseases research institutes in the country: the Walter Reed Army Institute of Research (WRAIR), the Naval Medical Research Center (NMRC), and the U.S. Military HIV Research Program, Henry M. Jackson Foundation. The ability of these institutes to focus their research programs on select agents and tropical diseases provides stimulating research opportunities for trainees who seek to devote their graduate studies to the areas of emerging and re-emerging infectious diseases. In addition, students have an exceptional opportunity to choose from a variety of training environments that include both field studies and bench studies. Some faculty members have ongoing studies in Belize, Peru, Thailand, and Brazil. The juxtaposition of tropical medicine and pathogenesis research in the same graduate program provides an unparalleled opportunity for students to participate in multiple educational experiences. Further information on the research interests of the Emerging Infectious Diseases faculty can be found at: <http://www.usuhs.edu/eid/>; <http://www.usuhs.edu/mic/>; and <http://www.usuhs.edu/pmb/>

Molecular and Cell Biology

Modern biology has been revolutionized by developments in molecular and cell biology. These developments cross traditional disciplines in ways that involve virtually every aspect of biomedical investigation. Understanding the complex mechanisms involved in cell-cell communication, intracellular signal transduction, regulation of gene expression, the role of stem cells, and immune response to foreign antigens and pathogens all require the application of multidisciplinary methods and thinking. Similarly, the investigation of the basis for the structural organization of cells and their organelles, the control of cell division, and the processes that lead to oncogenic transformation is most productive when techniques and ideas from diverse disciplines are brought to bear, as is the rational design of appropriate strategies and therapeutic agents to combat human disease. The ability to apply a multitude of approaches to a single problem and to exploit the advantages of diverse model systems is the hallmark of interdisciplinary research.

Molecular and Cell Biology Contact Information	
Website:	https://www.usuhs.edu/mcb
Administrative contact:	Tina Finley (301) 295-3642 netina.finley@usuhs.edu
Program Director:	Dr. Mary Lou Cutler (301) 295-3453 mary.cutler@usuhs.edu

The Molecular and Cell Biology interdisciplinary Ph.D. program offers training to address many of the fundamental questions of modern biology ranging from protein-nucleic acid interactions the response to cytokines, growth factors, and developmental biology. Individuals who desire to explore the molecular basis of biological processes and human disease will receive comprehensive didactic and laboratory training in all areas of contemporary biomedical research.

For officers in the uniformed services, the Molecular and Cell Biology program offers a two-year program leading to a Masters of Science Degree in Molecular and Cell Biology. The program is a combination of class work and mentored laboratory research. Prospective students should have a background in biological or chemical sciences.

The faculty is drawn from 11 basic science and clinical departments. Their research programs reflect a wide range of interests, including the molecular virology of HIV pathogenesis, the function of the immune system, cellular and molecular mechanisms of radiation injury, and the mechanisms by which prokaryotic and eukaryotic cells sense, process, and respond to a variety of normal and abnormal stimuli. These programs attract extensive funding from the National Institutes of Health, the National Science Foundation, and a host of other public and private agencies; and they provide students, who come from all over the world, with the opportunity to receive training that prepares them for careers in academic, government, or industry research settings.

Program of Study

The Ph.D. program of study is divided into coursework in fundamental and advanced areas of molecular and cellular biology, and supervised laboratory research. The first year is largely devoted to required courses that include advanced biochemistry, bacterial and eukaryotic genetics, cell biology, immunology, and extensive instruction in the molecular, cellular and physical techniques used in the laboratories of the faculty. Students also are introduced to the research of individual faculty and conduct laboratory rotations with two faculty members of their choosing. In the second year, students can choose from a variety of advanced electives offered by this and other programs and begin their laboratory research.

In addition, students and faculty participate in a journal club designed to foster interaction across disciplines and to develop the critical skills needed for data presentation and analysis. A biweekly seminar series brings renowned scientists to the university, and students are encouraged to take advantage of these and other seminars offered at USU and the National Institutes of Health to enhance their knowledge in their own area of research as well as to broaden their horizons. The Ph.D. is awarded to students upon completion of an original body of research, whose conduct is supervised by a faculty advisory committee. Students who have graduated from this program have gone on to positions in a variety of research settings as well as positions of responsibility in private industry.

Research Interests of Faculty

Students have the opportunity to work with faculty conducting research in virtually every area of contemporary molecular and cell biology including cancer biology, cellular immunology, infectious disease, molecular mechanisms of signal transduction, and molecular therapeutics. Detailed descriptions of faculty research programs can be accessed through the program's homepage: <http://www.usuhs.edu/mcb/>.

Neuroscience

Neuroscience is the study of the structure and function of the nervous system in the normal adult as well as in development and pathology. The nervous system is the most complex system in the body as it plays a regulatory role controlling or influencing the functions of all physiologic systems. Understanding the ways in which the central (brain, spinal cord, retina) and peripheral nervous systems function requires a multidisciplinary approach. Techniques from those of the molecular biologist to the experimental psychologist are required to elucidate the interrelated structure and function of neurons and glial cells throughout the nervous system and to apply this knowledge to the treatment of psychiatric and neurodegenerative diseases.

Neuroscience Contact Information	
Website:	http://www.usuhs.edu/nes/
Administrative contact:	Tina Finley (301) 295-3642 netina.finley@usuhs.edu
Program Director:	Dr. Sharon Juliano (301) 295-3673 sharon.juliano@usuhs.edu

The multidisciplinary approach acquired during training in a neuroscience doctoral program is ideal preparation for future independent research in any of the contributing disciplines. The overlap of molecular, cellular, and physiological techniques with other fields leads to broader potential research directions. In addition to careers in research, the doctoral training in neuroscience can lead to opportunities in industry, administration, private foundations, and government regulatory agencies. This variety of career opportunities is particularly apparent in the Bethesda, Maryland, and Washington, DC, areas.

The Neuroscience program is an interdisciplinary Ph.D. program with courses and research training provided by more than 45 Neuroscience faculty holding primary appointments in the Departments of Anatomy, Physiology and Genetics, Anesthesiology, Biochemistry, Medical and Clinical Psychology, Microbiology and Immunology, Neurology, Obstetrics and Gynecology, Pathology, Pediatrics,

Pharmacology, and Psychiatry in the USU School of Medicine. The interdisciplinary nature of the program permits considerable flexibility in the choice of research areas; training programs are tailored to meet the individual needs of each student.

The program is designed for students who have a strong undergraduate background in biology, physical sciences, or experimental/physiological psychology and who wish to pursue a professional career in neuroscience research. It offers research training in the fields of development, regeneration, and plasticity in the nervous system; molecular neurobiology; and adaptive responses of the nervous system to stress, injury, and a changing environment. It includes integrated instruction in the development, structure, function and pathology of the nervous system and its interaction with the environment.

Program of Study

The program of study is divided into course work in fundamental and advanced areas of neuroscience, and laboratory dissertation research leading to the Ph.D. During the first year, students take courses and participate in research rotations in three laboratories of Neuroscience program faculty members. By the end of the first year, a mentor is usually chosen and research continued in the mentor's lab during subsequent years. Additional advanced courses are taken in the second year after which the successful completion of the qualifying exam will advance the student to candidacy for the Ph.D. degree.

In addition to coursework in neuroscience, formal and informal training is provided to develop more general skills required for diverse career directions. Opportunities for students to obtain teaching experience in neuroscience courses are available and encouraged.

A dissertation advisory committee comprised of the thesis advisor and at least four other USU faculty will guide the direction and progress of the student's dissertation research. Presentation of a written doctoral dissertation proposal, completion of original neuroscience research, preparation of the doctoral dissertation, and the successful oral defense of the dissertation will lead to award of the Ph.D. degree.

Research Interests of Faculty

Research opportunities described here are provided in more detail and updated regularly on our website at <http://www.usuhs.edu/nes/>.

- Nervous system development including the regulation of proliferation and differentiation and the repair potential of neural stem cells and progenitor cells; generation and migration of neurons and glia
- Acquired and inherited brain and spinal cord neurologic dysfunction including traumatic brain and spinal cord injury, epilepsy, and neurodegenerative diseases such as Alzheimers and multiple sclerosis
- Psychiatric and behavioral disorders including post- traumatic stress disorder, addictive behaviors, and schizophrenia

Medical and Clinical Psychology

Doctoral Programs and research in medical psychology emphasize the application of psychology to behavioral medicine and to clinical psychology. Study is offered in applied areas of the interface of health, psychology, and behavior as well as in basic areas of psychology. An American Psychological Association-accredited clinical psychology Ph.D. program is offered to selected members of the uniformed services. The Medical and Clinical Psychology Program provides graduate training in Medical Psychology (two tracks) and Clinical Psychology.

Medical Psychology Programs

The Graduate Programs in Medical Psychology emphasize research training in health psychology, combining psychology with the biomedical sciences. Basic and applied approaches to health psychology and behavioral medicine are emphasized. The Programs are designed to train psychologists to become

scientists, university professors, health policy-makers, and scientific administrators who focus on the study of behavior and mind as they relate to physical and mental health. These training Programs, which include graduate and medical school courses and teaching experience, focus on research activities.

Two training tracks are offered within the Medical Psychology Program: Medical Psychology and Medical Psychology-Clinical

Track. The Medical Psychology Program is open to civilians and uniformed applicants. The Medical Psychology-Clinical Track is only open to civilian applicants. Civilian students do not incur military or national service obligations for their education, and there are no tuition costs.

Medical Psychology Track

This program provides research training in biobehavioral and psychosocial factors involved in the etiology, pathogenesis, treatment, and prevention of physical disease and mental disorders, and in the prevention of problems in high-risk populations. Although a considerable amount of didactic coursework is available within this program, the emphasis of training is upon direct involvement in research on a year-round basis. Hands-on training in experimental design and methods and psychobiology and in behavioral aspects of health and disease are emphasized.

Medical Psychology-Clinical Track

This APA-accredited dual training track builds on the strengths of the Medical Psychology and Clinical Psychology Ph.D. programs and trains psychologists to conduct clinical research in the area of health psychology. This track is aimed at training psychologists who are both academically and clinically prepared to work as researchers in academic or medical settings. This track emphasizes combined year-round training in health psychology research and the development of skills in the clinical application of health psychology. The program requires ongoing practicum experience and completion of a one-year internship to be eligible for clinical licensure.

Clinical Psychology Program

The Clinical Psychology Program, accredited by the American Psychological Association (APA) since 1997, is designed for uniformed students who wish to pursue clinical practice in military settings. The program endorses the scientist-practitioner or “Boulder Model” of training. The Program emphasizes the development of knowledge, skills, and critical thinking to apply to real-world situations, particularly in military and public health environments.

The Program trains clinical psychologists to be (1) effective providers of mental health services, (2) creative problem solvers, (3) critical thinkers sensitive to organizational needs and constraints, (4) effective managers and communicators, and (5) professionals who can evaluate process and/or outcomes related to a varied individual and systems level interventions to improve quality of healthcare.

Clinical Training

Practicum and clerkship training focuses on the development of assessment, intervention, and consultation skills in a wide range of areas (e.g., adult, child, adolescent, family, outpatient, inpatient, and organizational). The internship is a one-year intensive training experience provided during the fifth and final year of the program.

Medical and Clinical Psychology Contact Information

Website:	http://www.usuhs.edu/mps/
Administrative contact:	Trish Crum (301) 295-9669 tricia.crum@usuhs.edu
Medical Psychology Program Director:	Dr. Andrew Waters (301) 295-9675 andrew.waters@usuhs.edu
Clinical Psychology Program Director:	Dr. Jeffrey Goodie (301) 295-9461 jeffrey.goodie@usuhs.edu

Clinical training experiences are available at the university's main affiliated teaching hospitals (Walter Reed National Military Medical Center and Air Force Malcolm Grow Medical Center) and at other APA-accredited military facilities in the United States. Students also train at the National Capital Area Medical Simulation Center, a state-of-the-art training facility where they practice interviewing and psychotherapy skills on "simulated patients."

Military Service Obligation for Clinical Psychology

Applicants to the Clinical Psychology program must be either active duty military or civilians who will join a particular service upon acceptance into the program. Active duty military incur a service obligation of seven years. Civilian applicants who join a specific service will be obligated to seven years of active duty service plus six years of listing on the individual ready reserve (IRR) roster. For service instructions, contact the liaison for the appropriate military service: U.S. Air Force (e-mail: afmps@usuhs.edu), U.S. Navy (e-mail: nmps@usuhs.edu), and U.S. Army (email: amps@usuhs.edu).

Medical History

A Master of Military Medical History (MMH) program is offered to U.S. Army officers. The program, designed to meet the needs of Army officers in the Medical Service Corps (MOS 70H), prepares an officer to be an instructor in professional military medical education programs and to serve as a field historian for specific military medical issues. Graduates qualify for the skill designator 5X, which is awarded by the United States Army Center of Military History and is used by the Army to identify all commissioned military historians.

Military Medical History Contact Information

Website: <http://www.usuhs.edu/mem/graduatemedicalhistory.html>
Administrative contact: Kelly Mullally
(301) 295- 3168
kelly.mullally@usuhs.edu

Admission Requirements

Applicants must be selected for long-term civilian education by the Surgeon General of the Army and must be acceptable for follow-on assignment to the U.S. Army Academy of the Health Sciences as an instructor. The USU Graduate Education faculty retains admission authority. The Graduate Record Examination is required. All academic transcripts, a copy of the Officer's Record Brief, copies of all efficiency reports and three letters of recommendation are required. The applicant must be a graduate of the AMEDD Officer's Advanced Course and graduation from the Combined Arms and Services Staff School is preferable. The program is limited to one student per year.

Program Outline

The Program will teach research methods and analysis, provide a specific knowledge base, and document that the graduate is capable of using the methods to extend the knowledge base. The 12- month program includes:

- Completion of a USU program of study to include a minimum of 48 quarter hours of graduate credit. This will include an overview of United States history, military history and medical history, with particular emphasis on the history of military medicine as well as on methods of historical research and teaching. The core courses require intensive reading and tutorial work, attendance at local seminars and national meetings, and the independent preparation of lectures and seminars. At least two graduate history seminars will be taken at the Department of History, the American University, Washington, DC.
- Presentation of original research in an area of U.S. military medical history in such a way as to establish the student's capacity to function as a military medical history instructor and field military medical historian.

Preventive Medicine and Biometrics

Graduate Programs in Public Health are offered at the master's and doctoral levels. The Master of Public Health (MPH), Master of Tropical Medicine and Hygiene (MTM&H), Master of Health Administration and Policy (MHAP), and the Master of Science in Public Health (MSPH) programs are designed for students with at least three years of experience in a health-related field. 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 militarily relevant exposure assessment.

The mission of these Programs 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 Preventive Medicine and Biometrics faculty is committed to providing the highest level of education in public health and preventive health services. The department is the largest within the School of Medicine and includes 85 faculty organized into six administrative divisions (Epidemiology and Biostatistics, Global Health, Health Services Administration, Occupational and Environmental Health Sciences, Social and Behavioral Sciences, and Tropical Public Health).

Masters Programs

The MPH degree program provides a broad didactic experience in public health and preventive medicine. This rigorous curriculum has a quantitative focus and is designed to be completed within 12 months. MPH graduate students represent a diverse group of health professionals including physicians in General Preventive Medicine (GPM) and Occupational and Environmental Medicine (OEM) residency programs or medical fellowships programs, veterinarians, dentists, sanitary engineers, microbiologists, entomologists, environmental scientists, nurses, and pharmacists, and other uniformed military officers. Uniformed services members with education or experience in a health-related discipline are given priority as candidates for admission.

The MPH degree requires core courses, including epidemiology, biostatistics, environmental health, health services administration, and social and behavioral sciences. The satisfactory completion of an independent project and a practicum experience is required. In addition to completing the core courses, each MPH student selects an area of concentration from among the following: biostatistics and epidemiology, environmental and occupational health, health services administration, global health, tropical public health, and public health generalist.

Graduates acquire 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 social behavioral factors to solve public health problems. Graduates also understand the components, operations, and financing of health delivery services, particularly those in the public sector, and have the administrative skills to plan, analyze, manage, and improve public health programs.

Preventive Medicine and Biometrics Contact Information

Website:	http://www.usuhs.edu/pmb/
Administrative contact:	Tina Thompson (301) 295-1977 celestine.vaughn-thompson@usuhs.edu
Program Director:	Dr. David Cruess (301) 295-3465 david.cruess@usuhs.edu
Doctoral Program Director:	Dr. Cara Olsen 301-295-9468 cara.olsen@usuhs.edu

The Preventive Medicine and Biometrics program also offers the MTM&H degree for physicians preparing for assignment to tropical medicine clinical, research and teaching positions. The MTM&H student completes additional required courses in tropical medicine and tropical public health. A practicum experience is spent at an affiliated overseas facility and involves clinical diagnosis and treatment as well as field study of diseases endemic to tropical regions. The MTM&H program provides a physician with the necessary academic background to practice as a competent public health officer and tropical disease expert in one of the uniformed services.

The MSPH is a two-year thesis-based program providing students with basic knowledge and skills in the core public health disciplines and focused academic preparation in either environmental health sciences, or medical entomology. The MSPH requires (1) a foundation in core public health concepts and principles, (2) a total of 67 credit hours of concentration-specific courses and directed research, (3) at least 23 credit hours of electives for a minimum total of 120 quarter credit hours of academic preparation, (4) participation in journal clubs, (5) specific field or practical experience, and (6) completion of a written and defended thesis. Graduates will gain competency in the recognition, evaluation, and control of a variety of public health problems in their specialty areas and will have the ability to develop policy initiatives in response to these issues. Prior academic preparation and experience in the biological or physical sciences or in a health-related field is required for admission.

The Master of Health Administration and Policy (MHAP) Program, which began in 2010, develops health systems leaders with sophisticated administrative and policy experience. It is a two-year program with the first year comprised of didactic courses and the second year devoted to practicums and research projects.

Doctoral Programs

The Department offers three doctoral programs: a Dr.P.H., and Ph.D.'s in Environmental Health Sciences and Medical Zoology. The doctoral programs require a minimum of three years of full-time study consisting of the following components: (1) basic academic foundation consisting of the MPH curriculum, (2) additional required advanced electives, (3) critical thinking seminar series and journal clubs, (4) written and oral qualifying examinations to advance to candidacy, (5) minimum of one teaching assistant assignment per year, and (6) a dissertation. Students must meaningfully participate in all aspects of original research: proposal submission, data collection, data analysis and interpretation, and dissertation preparation and defense.

Preferential admission to the Dr.P.H. or Ph.D. programs will be offered to active duty officers in the uniformed services serving in a field related to their desired degree program. At a minimum, applicants must have a Master's degree with an outstanding academic record and documented successful completion of rigorous coursework related to their desired area of graduate study. In addition, applicants to the Preventive Medicine and Biometrics doctoral programs must identify a faculty sponsor prior to submitting their application. Civilian applicants will be considered on a space-available basis, with preference given to health professionals sponsored by other U.S. government agencies.

Facilities

These Graduate Programs are housed in facilities on the USU campus. Well-equipped modern laboratories support the tropical medicine and environmental health programs. The affiliated overseas laboratories include the United States Army and Navy biomedical research laboratories in Bangkok, Thailand; Nairobi, Kenya; Cairo, Egypt; Jakarta, Indonesia; and Lima, Peru. The University is affiliated with the Ministry of Health Laboratory in Belize City, Belize. A formal affiliation with the U.S. Army Public Health Command provides additional opportunities for students.

The Physician–Scientist (M.D./Ph.D.) Program

The M.D./Ph.D. Program at USU was established to train outstanding, dedicated military officers as

independent physician–scientists to carry out both clinical investigations and biomedical research in the basic sciences. The Program combines a rigorous basic science graduate curriculum with outstanding clinical training and special, integrated M.D./Ph.D. activities that qualify students for careers in academic medicine, biomedical and clinical research, as well as clinical practice. Matriculants to the M.D./Ph.D. Program must maintain all requirements necessary to be commissioned into the United States military during the Ph.D. portion of his or her training.

Financial Support and Military Service

Students admitted to M.D./Ph.D. Program receive a graduate stipend from the School of Medicine Graduate Program for the first three years. In most cases, the M.D./Ph.D. student is commissioned in the United States military as an O-1 after completing the Ph.D. portion of the Program. Commissioning marks the beginning of the student’s military service.

Application and Admission Procedures

The M.D./Ph.D. Program at USU is a select program that seeks highly motivated students with outstanding research and academic potential. Applicants interested in the program will first apply directly to the F. Edward Hébert School of Medicine using the Association of American Medical Colleges Application Services (AMCAS) and indicating interest in the M.D./Ph.D. Program. Applicants must take the Medical College Admission Test (MCAT) and provide scores from tests taken within three years of desired matriculation. When an applicant’s information is received from AMCAS, the Office of Admissions will send the applicant the link to the USU secondary website. Instructions for the M.D./Ph.D. Program are listed on the website.

The Physician-Scientist (M.D./Ph.D.) Training Program Contact Information	
Website:	http://www.usuhs.edu/graded/doctoral.html
Administrative contacts:	Office of Graduate Education 1-800-772-1747 graduateprogram@usuhs.edu
	Office of Medical School Admissions 1-800-772-1743 admissions@usuhs.edu
Program Director:	Dr. Gregory Mueller (301) 295-9474 gregory.mueller@usuhs.edu

The Admissions Committee for the Medical Program at USU initially will review the application and, if the applicant is deemed acceptable for admission, the applicant’s file will be forwarded to the Graduate Education Office for evaluation. The Admissions Committee of the appropriate Graduate Program will review the application and determine whether the applicant should be interviewed. A memorandum of the Graduate Program’s decision will be placed in the applicant’s admission file in both the Graduate Education Office and the Medical Program Admissions Office. Applicants who meet the initial criteria for acceptance will be invited for interviews. The interview process for the M.D./Ph.D. applicants will span two days. On the first day, the applicant will be interviewed with other applicants to the M.D. Program. On the second day, the applicant will spend half the day interviewing with faculty and graduate students and, in addition, will tour the research facilities and labs. The applicant will be notified of the final decision.

Curriculum

The curriculum combines and integrates requirements for both the M.D. and Ph.D degrees. The M.D./Ph.D. Program consists of several phases to be completed in seven to eight years. The final phase of the M.D./Ph.D. Program is the clinical phase completed over the last two years. The student begins full participation in the medical school curriculum and completes all required clinical rotations and clerkships.