UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

SUBJECT: Employee Development and Training Program Instruction 1401

(CHR)

DATE: MAY 27 1993

ABSTRACT

The training of government employees, regardless of the funding source, is regulated by the Government Employees Training Act. The Office of Personnel Management has established regulations based on this legislation for all Federal agencies. The Department of Defense has interpreted and applied these regulations to Defense agencies.

This Instruction establishes policies, assigns responsibilities, and defines operational procedures at USUHS.

A. REISSUANCE AND PURPOSE.

This reissues USUHS Instruction 1401[a], and establishes policies, responsibilities, and procedures for implementing the USUHS training and development program required by DoD 1400.25-M[b], and FPM Chapter 410[c].

B. REFERENCES. References used in this Instruction are in Enclosure 1.

C. APPLICABILITY. This Instruction applies to civilian employees of USUHS. It applies to all training requests from civilian employees, regardless of the source of the funds used to pay for the training. Some local procedures, as noted, also include military personnel.

D. DEFINITIONS. Terms used in this Instruction are defined in Enclosure 1.

E. POLICY.

1. Employee training and development are essential functions of USUHS management. The USUHS mission demands the continual upgrading of employee knowledge, skills, and abilities in order that USUHS personnel can be fully competent in meeting future performance requirements. It is the USUHS policy to encourage employee development at all levels and in all occupational fields. This development can include, consistent with work requirements and priorities: attendance at formal courses during both duty and non-duty hours; participation in appropriate workshops and seminars; and involvement in both informal and formal on-the-job training experiences.

2. Training and development programs must focus on specific identified needs and specific desired results. USUHS employee development and training programs are designed to:

a. Improve employee performance of current duties.

b. Provide a means of systematically developing employee skills in order to meet current and future manpower skill needs.

c. Provide opportunities for development of high potential employees.

d. Provide employees with the ability to meet changes in organizational policy, mission, technology, structure, or equipment.

e. Maintain state-of-the-art specialized proficiencies.

f. Encourage and facilitate a structured program of upward mobility for lower-level employees.

F. RESPONSIBILITIES.

1. The President will establish the basic policy for training to meet the needs of individual components of the USUHS.

2. The Civilian Human Resource Management Directorate (CHR) will:

a. Coordinate, implement, and provide general supervision of the training program for civilian USUHS employees.

b. Approve training requests and certify compliance with regulatory requirements.

c. Assist operating officials, when necessary, in an annual survey of training needs.

d. Develop an annual training plan and annual budget.

e. Advise managers on the applications of regulatory requirements to requested training programs and courses.

f. Process administrative details related to enrolling employees into in-house courses.

g. Develop and implement evaluation procedures for employees attending all courses.

h. Incorporate grade reports and records of training into the official personnel files of each employee enrolled and participating in an identifiable training event.

i. Prepare training reports.

3. Managers are responsible and accountable for ensuring that their subordinates are competent in performing their duties efficiently and effectively. Supervisors are responsible for: assessing the training needs of each subordinate employee; making resources available for training; providing reasonable opportunity for their employees to attend required and approved training; ensuring that they attend the training courses and subsequently utilize the skills they obtain; counseling their subordinates in career development and productivity improvement; and making recommendations for training that would enhance employee performance.

4. The employee is responsible for submitting a properly completed DD Form 1556 to his/her immediate supervisor for signature and to the Department Chairperson/Activity Head for an authorizing signature. This should be done so that each training application arrives at the USUHS CHR at least three weeks before the registration deadline for the course. Failure to obtain advance approval of training may be the basis for denial of payment by USUHS. The civilian employees shall demonstrate initiative in meeting their training and development needs, and shall expend the time and effort necessary to achieve career objectives consistent with USUHS and Department of Defense goals. Employees shall provide information on self-development activities to the training officer in the CHR office for record keeping purposes.

5. The Training Officer is responsible to the Director, CHR for the overall management, implementation, and evaluation of the USUHS Employee Development and Training Program. The Training Officer shall plan, program, and manage adequate financial and staff resources to meet the USUHS training needs. The Training Officer shall establish and work with an appropriate USUHS Training Committee to develop training policies and investment strategies; develop and administer recommended training programs; provide professional advice and counseling to employees and management officials; ensure that all required training is conducted in a professional and timely manner; and evaluate the effectiveness of completed training.

6. Training program committees may be established to improve specific portions of the USUHS training program. These committees shall provide the training officer with advice and recommendations and assist in implementing specific programs.

G. PROCEDURES. Procedures that implement the Employee Development and Training Program are in Enclosure 2.

H. EFFECTIVE DATE. This Instruction is effective immediately.

James A. Zimble, M.D.
President, USUHS

Enclosures
1. References
2. Definitions
3. Procedures

REFERENCES

(a) USUHS Instruction 1401 CPO, December 6, 1983 (hereby cancelled)

(b) DoD 1400.25-M, September 6, 1985, issuing CPM Chapter 410

(c) FPM Chapter 410, Training

(d) OPS SOP No. FMG 307, Accounting for Training Costs, May 17, 1989

DEFINITIONS

1. Training. A planned, prepared, and coordinated program, course, curriculum, or routine of instruction or education. It has specific objectives, a structured program of study, determined milestones with established time-frames, a method of evaluation, and provisions for recognizing satisfactory completion. Training is an episode where academic credit may be given, tuition charged, and an instructor-student relationship usually exists. Attendance at certain seminars and symposia may be considered training if the primary purpose for attending is acquiring new knowledge which has direct application to the attendee's position at USUHS.

2. Government Training. All training conducted by a training resource of the Federal Government, regardless of where the training takes place.

3. Non-government Training. All training conducted by a training resource that is not part of the Federal Government.

4. Interagency Training. All training conducted by a non-DOD training resource of the Federal Government.

5. Academic Credit Course. Any course which is provided by a university, college, high school, or other accredited school (including the U.S. Department of Agriculture Graduate School and similar organizations) as part of its regular academic calendar, and through which credit toward completion of a formal program at the school is earned.

6. Short Course. Any course other than academic credit courses scheduled as part of a school's regular academic calendar, as well as those offered by government (e.g., OPM, GSA) or non-government trainers regardless of the title of the course. Short courses may be held inside or outside the local area of the USUHS and vary in length from less than a day to several weeks. (Short courses should not be confused with conferences or meetings).

7. In-House Courses. A course held on-site at USUHS. Courses which meet general needs throughout USUHS and are sponsored and paid for by training monies from the Civilian Human Resources Management budget; or courses which meet individual organizational needs and are paid for by the appropriate organizational component specifically requesting the training course.

8. Conference/Meeting/Symposium. These developmental incidents differ from formal training in that they are usually short in duration, may require fees (not tuition), are normally not highly structured, have a number of speakers or leaders rather than one teacher with an instructor-student relationship, and seldom provide academic credit or require formal evaluation. They may be sponsored by government or nongovernment

facilities through professional societies, trade associations, special interest groups, or similar organizations. A DD Form 1556 (Request, Authorization, Agreement, Certification of Training and Reimbursement) is used only when it is determined that the conference/meeting/symposium is of a "training nature," i.e., it is primarily to train the individual to meet a job-related need. If the conference/meeting/symposium does not meet that test but is rather a coming together of professionals for other than training purposes, then the proper forms are DD1610 (regular travel) and AF 674 (if the event is local).

9. Correspondence Course. A course conducted primarily through the mail system and involving exchanges between the student and an instructor at the school. The material is sent by the training resource directly to the student. The course may be credit or non-credit; government or nongovernment.

10. Directed Study. A videotape, Computer Assisted Instruction (CAI), or other self-paced program.

11. Official Duties. Agency-authorized duties which an employee is currently performing or could reasonably be expected to perform in the foreseeable future. In most instances, these duties are documented in the position description (PD).

12. Training Priority. The degree of need for training can be separated into three categories:

a. Priority one - Essential: Training that must be accomplished during the immediate training cycle or it will have an adverse mission effect; training needed to ensure attainment of performance objectives or to correct serious performance deficiencies; and training required by law, regulation, or higher authority.

b. Priority two - Needed: Training required for systematic replacement of skilled employees through career management or other work force development programs. Deferment will have an adverse mission effect over an indeterminate period.

c. Priority three - Useful: Training that generally broadens an individual and enhances the overall performance levels of employees already considered to be competent. Deferment would have little immediate adverse mission impact but would preclude or delay improving present mission accomplishment.

PROCEDURES

1. Eligibility. All USUHS employees are eligible to participate in training activities at government expense. However, managers requesting training for part-time/temporary employees may be asked to document the necessity and cost-effectiveness of the requested training.

a. Correct performance deficiencies associated with the execution of official duties in the current position.

b. Acquire knowledge, skills, and abilities which are part of individual and formal career progression programs.

c. Acquire competence necessary to perform in the present position where change is occurring due to organizational restructure, policy revision, mission modification, technological innovations, or new equipment.

d. Meet requirements associated with the overall training and development of activity staff members (e.g., team training and organizational development).

e. Fulfill retraining requirements for employees displaced through reduction-in-force; or for employees affected by changes in the organization, reemphasis of the mission, or modified work assignments.

f. Fulfill retraining requirements for employees who become disabled and cannot perform the duties of their current position.

2. Merit Promotion.

a. Merit promotion procedures must be followed in selecting career and career-conditional employees for the following three types of training:

(1) Training that is part of an authorized training agreement that provides qualifications for a different occupational series.

(2) Training that is part of a promotion program, even though the promotion may not follow training immediately (e.g., upward mobility, intern, apprentice, and competitively selected long-term training).

(3) Training that is required before an employee may be considered qualified for a position.

b. Merit promotion procedures for a selection for training do not apply when the training is associated with a promotion not covered by the agency's Merit Promotion procedures (e.g., an accretion of duties promotion).

3. Identification of Training Needs.

a. Individual Needs. Individual training needs shall be determined annually, in conjunction with the applicable performance appraisal system cycle.

Formal Individual Development Plans (IDPs) are normally required only for probationary supervisors, Senior Executive Service (SES) members, upward mobility program participants, Veterans Readjustment Act (VRA) program members, long-term trainees, persons in cooperative education programs, and other employees under special training agreements. Nevertheless, the use of the IDP is encouraged as an effective tool to accurately identify and meet employees' training needs.

b. Activity Needs.

(1) Supervisors, in consultation with their subordinate employees, shall determine and approve individual needs and objectives for each subordinate employee in conjunction with the annual performance appraisal process.

(2) Management officials at each succeeding level of the activity shall review, consolidate, and endorse requirements identified for funding support by subordinate officials. They shall add major or organizational training requirements which are not addressed through the individual needs determination process or which are omitted in the annual training survey reviews by subordinate supervisory and management officials. Careful judgment must be exercised to assign priorities to all sources of need such as individual employee needs, overall workforce skill requirements, and formalized career management programs.

4. General Training Prohibitions. Expenditures for training shall not be authorized for the following:

a. Training which is primarily for the employee's personal benefit and which would only incidentally increase his/her competence and usefulness to USUHS.

b. In most cases training or payment of expenses for the sole purpose of obtaining an academic degree, or for qualifying for appointment to a position for which a degree is a basic requirement. Regarding payment of dissertation research fees, requests for funding must be made via the individual's supervisory chain and must explain the direct relationship between the dissertation research subject and the employee's position. If an employee receives a degree from training courses which are primarily intended to improve work performance, the degree is considered an incidental by-product of the training.

NOTE: Recent legislation allows flexibility in exceptions to this prohibition if there is a question of hiring a person into or keeping a person in an identified hard-to-fill position. CHR should be consulted on the application of the new legislation in specific instances at the USUHS. This consultation should precede the submission of any training requests for the purpose of obtaining a degree.

c. Training in facilities which discriminate in the admission or subsequent treatment of students on the basis of race, sex, age, religion, or national origin.

5. Use of Government Time to Attend Courses.

a. Employees may attend courses

wholly on official working time if management judges that their participation would increase their value to USUHS.

b. Courses which the employee desires to attend primarily for his/her personal benefit, and which only indirectly or slightly increase his/her value to USUHS, must be taken on his/her own time and at his/her own expense.

6. Training Records.

a. A record of all authorized training received by each employee while employed at USUHS is maintained by the CHR office. It is recommended that each employee ensure the completeness and accuracy of his/her own training record by periodically reviewing his/her Official Personnel Folder (OPF) or computer printout of training.

b. Employees who take job-related or career-oriented training courses on their own time and at no expense to USUHS, may have the courses recorded in their training records by submitting a DD Form 1556 along with verification by the training resource (e.g., school, college) to the CHR Training Officer (completing only blocks 1, 3, 19a and b, 23a and b). Forms submitted for this purpose require neither justification nor approval.

7. Evaluation of Training. Employee training and development represent a substantial annual expense to USUHS in time and money. Management expects the results of training to be commensurate with its expenditure of resources. Consequently, the available training resources, the cost involved, and the results of the training must be evaluated continually.

a. Trainees are asked to evaluate the courses they attend and to forward these evaluations through the approving authority to the CHR Training Officer. If grades are awarded, the individual training incident is not completed until a trainee submits an evaluation and grade.

b. The CHR Training Officer shall review the trainee's evaluation, and, as necessary, seek the advice of other employees and managers, regarding the effectiveness of specific courses.

c. Supervisors and managers who certify training for USUHS, must evaluate the results of the training. The evaluations are used to determine the extent to which the training has improved the employee's knowledge, skills, attitude, and performance; to ensure that training resources are used economically and effectively in the areas of greatest need; and to establish training priorities and plans for future training. When training results in a substantial monetary savings, or, conversely, is judged inadequate, the CHR Training Officer should be advised.

8. Types of Training Available to USUHS Employees.

a. Undergraduate and Graduate Level Courses. Employees must meet all the academic requirements of the training institution before enrolling in an academic course.

(1) At DOD installations in the Washington area, there are after-

hours courses sponsored by local colleges and universities. Information concerning course offerings is available from the CHR Training Officer.

(2) USUHS employees may, with prior approval, attend academic credit courses given on campus at colleges and universities. Ordinarily, only one course per semester is allowed. USUHS payments usually cover costs of tuition and books.

b. Short Courses. USUHS occasionally offers short courses in certain program areas. These courses are taught during working hours and provide for the needs of USUHS employees. In certain cases supervisors, managers, and employees may request a special course to be brought on-site at USUHS. When enrollment for an in-house course is available USUHS-wide, "no-shows" and late cancellations may be charged to a Department on a per capita rate for the expense incurred by the CHR in providing the course. Employees desiring training may request, or be assigned to take, short courses at non-government facilities.

c. Interagency Training. There are a variety of interagency courses in management, personnel, finance, supervisory development, computers, clerical skills, and other areas. Publications, bulletins, and brochures will be available from the CHR Training Officer.

d. Supervisor/Manager Training. Basic supervisor and manager training courses are advertised, and in some cases, offered at USUHS periodically in order that:

(1) New supervisors and managers can meet the mandatory 40 hours of supervisory training and;

(2) Experienced supervisors may receive appropriate up-dates and refresher training.

9. Training through Nongovernment Facilities.

a. Limitations.

(1) Employees who occupy permanent career, career conditional or excepted positions, and temporary employees (under certain conditions) who are expected to utilize the training in performance of job responsibilities, are eligible to attend training in nongovernment facilities.

(2) An employee's total training may not exceed 1 year during the first 10-year or any subsequent 10-year period of his/her continuous or noncontinuous service in the government following the date of initial entry into the civil service (time spent in a non-pay status counts toward the 10-year period.) If an employee receives less than 1 year of training in any decade, there is no carryover or accumulation of eligibility to the next decade.

(3) The following are not counted against the 1 year in 10 limitation:

(a) Short courses, seminars, or other training that do not exceed 40 hours within a single program.

(b) Training provided by manufacturers as part of the normal service incident to the purchase or lease of their products under procurement contracts.

(c) Training through correspondence courses.

(4) The USUHS President may waive this 1 year in 10 limitation for an employee when all the following conditions are met:

(a) The employee is serving under a career or career-conditional appointment or under an appointment without time limitations in the excepted service.

(b) The training, when added to the amount of previous training through nongovernment facilities, would not exceed 2 years in the current 10-year period of service.

(c) A record of the authority used in making the waiver is inserted into the employee's OPF, showing description of training, amount of training applied toward limitation, time period for which waiver is required, description of major duties to which training applies, beginning of next decade of service, and statement of reasons why limitation or postponement of training would be contrary to the public interest.

(5) A USUHS employee having less than 1 year of current, continuous civil service is not eligible for training in a nongovernment facility unless the approving official determines that postponement of the training would be contrary to the public interest, and so certifies on the training request. The approving supervisor must attach a written justification to the DD 1556 attesting to the fact that the expenditure of training funds is beneficial. Examples of such training include:

(a) Training which does not exceed 40 hours within a single program, semester, or quarter.

(b) Training provided by manufacturers as part of the normal service incident to the initial purchase or lease of their products under procurement contracts.

(c) Training through correspondence courses.

(d) Training essential to law enforcement activities.

(e) Training essential to the protection of life, safety, or property.

(f) Training which employees can take at little or no cost to their agencies, other than salary expenses.

(g) Training which is part of a formal apprentice training program for a skilled trade.

(h) Training which is relatively short, highly specialized, very closely job-related, and of immediate application.

(i) Training which is an integral part of a formal, entry-level, developmental program.

(j) Training in a nongovernment facility will not be authorized if the training need can reasonably be met through available government resources.

(6) University courses for intermittent and part-time employees must be justified fully on the basis of value to the government, as well as on reasonable expectation of continued employment at USUHS upon completion of the courses. Only in exceptional cases will approval be granted to these employees for more than one course per semester. When such an exception is granted, the training shall not be accomplished on government time and written justification by the supervisor shall be required.

b. Agreements to Continue in Service.

(1) Requirements. Before employees are assigned to nongovernment training exceeding 80 hours, they must sign an Employee's Agreement to Continue in Service (section 38 of the DD Form 1556) stating that they will continue as a USUHS employee for an appropriate period of time. Should they voluntarily leave USUHS before this obligated service ends, they will reimburse USUHS for the expenses incurred by USUHS in connection with the training.

(2) Exceptions from the Continued Service Agreement. The employee's agreement to continued service is not required when the training:

(a) Involves no expense to the government other than the employee's salary.

(b) Is provided by manufacturers as a normal service incident to initial purchase or lease of their products under procurement contracts.

(c) Does not exceed 80 hours within a single program, quarter, or semester.

(d) Is provided through correspondence courses.

(3) Transfer to Another Government Agency. If an employee transfers to another agency or department in the same, or any other branch of the government, and has time remaining on a continued service agreement, the remaining service obligation will be transferred to the other agency.

(4) Computing Length of Continued Service.

(a) 1 for 1. For training in a nongovernment facility exceeding 80 hours in a single program, semester, or quarter; taken on the employee's time; and for which some or all of the expenses are paid by USUHS, the obligated period is equal to the number of hours that the employee is in training or one month, whichever is greater.

(b) 3 for 1. For training in a nongovernment facility exceeding 80 hours in a single program, semester,

or quarter; taken on government time and for which some or all of the expenses are paid by USUHS, the obligated period is three times the number of hours that the employee is in training.

(5) Recovery of Funds. Employees who complete long-term training in a nongovernment facility and plan to leave government service prior to fulfilling a service agreement, must reimburse USUHS for training expenses in an amount proportionate to the remaining service obligation. The employee or his/her supervisor is requested to notify the CHR Director in writing at least 21 calendar days prior to departure. An employee who has reimbursed the government for an unfulfilled service obligation upon voluntary separation is not entitled to a refund if later reemployed with the government. Repayment will not be required in any one of the following circumstances:

(a) Ten percent or less of the service obligation remains.

(b) The employee is transferring to another government agency.

(c) The employee enters on active military duty with restoration rights under CFR 353.

(d) A waiver has been granted by the USUHS President.

(e) An appeal of denial of waiver has resulted in the granting of a waiver.

(6) Waiver of Payment.

(a) Employees may request in writing a waiver of repayment to the USUHS President who is authorized to waive in writing (in whole or in part) the obligation to repay training expenses under a continued service agreement in the following circumstances:

1 The employee has completed most, but not all, of the required service period.

2 An employee resigns due to personal illness or to a serious illness in the immediate family.

3 An employee is unable to make the required payment because of severe financial hardship.

(b) An employee may appeal a denial of waiver of repayment obligation to the President, USUHS. The employee must submit a written appeal via the CHR Director within 14 days after receiving notification of the right of appeal. The appeal must include:

1 Summary of reasons requesting the review.

2 Copies of the original DD 1556 with the signed Continued Service Agreement and the original request for waiver.

3 Other supporting documents which the employee wishes to have considered.

10. Funding and Payment of Training Expenses

USUHS OPS SOP NO. FMG 307[d] describes accounting procedures for training costs. For a majority of cases, course costs are charged against Area/Organization 30361, CHR. However, travel costs and registration fees for meetings, conferences, and symposiums which do not qualify as training incidents, are charged to individual department cost center codes. Requests for prepayment should be made through a memo submitted with the DD 1556. Reimbursement to the trainee during training may be done in some instances. The trainee should contact CHR. Payment after completion is generally done when the vendor submits an invoice to CHR, stating that the training has been delivered.

NOTE: Only in rare cases will USUHS reimburse an employee for training taken or begun without authorization. The President, USUHS, must provide a waiver before payment shall be authorized.The USUHS Training Officer must be consulted before a request for reimbursement is submitted in these instances.

11. Procedures for Requesting Training Activities.

a. Forms Required.

(1) DD 1556 (Request, Authorization, Agreement, Certification of Training and Reimbursement) is used to request all government or non-government training. A separate DD 1556 is completed for each training incident. Note that although this form is intended for use by civilian employees, military personnel at USUHS may use it if the requested training is related to the requirements of positions held at USUHS.

(2) In-House Registration Form. An in-house registration form will be used in place of the DD 1556 when an employee registers for on-site USUHS courses. The CHR will pay for the course through the DD Form 1556 process.

(3) College Registration Forms. The CHR Directorate will not process forms from an academic institution.

(4) Division Request for On-Site Training Support. Each USUHS organizational component requesting a specific course presentation for their employees will complete a Division Request Form and submit it to the CHR Training Officer. Division Request Forms are available from the CHR.

b. Processing DD Form 1556.

(1) All requests for training must be approved by CHR and certified by the Finance Division prior to enrolling in, or making any commitment to, training. Upon approval, employees should personally pre-register in nongovernment off-site short courses. This registration will be confirmed by the forwarding of a DD Form 1556 by the CHR Training Officer. Requests should be processed in sufficient time to reach the CHR Training Officer at least 3 weeks prior to registration.

(2) Training requests will be routed to the CHR Training Officer via

the employee's supervisory chain, the administrative officer, and the authorizing official.

(3) The employee will complete a separate in-house registration form or a DD 1556 for each course, using the detailed instructions on the reverse side of the form's face-sheet. Handicapped employees will alert the CHR Training Officer about any special requirements that he or she will need to participate in the course.

(4) In the event of a course cancellation or other such evolving circumstances that prevent an employee from attending a scheduled course, the employee must immediately notify the CHR Training Officer, the employee's own management chain-of-command, and if appropriate, the training facility about the situation.

(5) Employees shall certify satisfactory course completion via a course evaluation form sent by the CHR Training Officer. The evaluation form should be returned within 10 days of receipt. Subsequent training requests will not be processed until the certification is received by the CHR Training Officer.

(6) Employees who receive a failing grade, or who fail to complete or attend the designated training, will be required to reimburse USUHS except in cases of personal illness, emergency leave due to death in the family, or workload requirements verified in advance by the supervisor.

(7) The supervisor will sign and date the DD Form 1556 or In-House Course Registration Form, indicating his/her concurrence and verify that the training is related to the employee's current position and official duties as outlined in his/her position description.

(8) When an employee has not previously completed training satisfactorily, a justification typed in memorandum form and attached to the DD Form 1556 is required for subsequent training. Approval for an employee to repeat a course will generally not be given.

(9) Authorizing Official. The authorizing official will approve the training by signing and dating the DD Form 1556 in the appropriate entry box. Authority to approve all courses is delegated by the USUHS President to the directors of each division. In the absence of these officials, those who are officially acting for them may sign as approving official.

(10) CHR Training Officer. The CHR Training Officer will review training requests for conformity to regulations and will certify before processing that the training is job-related and that the employee is eligible. Questions regarding disapprovals will be resolved by the CHR Training Officer, the employee, the employee's supervisor, and the authorizing official.

(11) Payment procedures. Upon receipt of an invoice from the school or other training source, the CHR Training Section will certify the invoice and forward it with a copy of the approved training request to the Finance Division to initiate payment. Advance

payments may be arranged under special circumstances. A memo requesting advance payments must be attached to the DD 1556 when it is submitted to CHR Training Section.

(12) Limitation. When a training course exceeds $25,000 in cost or requires development in order to meet a specific requirement that cannot be addressed through an off-the-shelf training source, the USUHS Contracting Division must contract for the course. The CHR Training Officer will provide the Contracting Division with the following information:

(a) Complete description of the required training.

(b) Recommended sources, if possible.

(c) Technical evaluation criteria for selecting the final contractor.

MISSION STATEMENT, VALUES, GOALS, AND OBJECTIVES OF THE GRADUATE PROGRAMS IN PUBLIC HEALTH

Department Of Preventive Medicine And Biometrics
F. Edward Hébert School of Medicine
Uniformed Services University of the Health Sciences

CONTENTS:

			Page
1.	The Graduate Program Mission Statement		3
2.	Values		3
3.	Goals		4
	a.	Instruction Goal	5
	b.	Training Goal	6
	c.	Research	7
	d.	Service	8
4.	Core Learning Objectives—MPH, MTM&H, and MSPH Degree Programs		
	a.	Biostatistics	9
	b.	Epidemiology	10
	c.	Social and Behavioral Sciences	11
	d.	Environmental Health	12
	e.	Health Services Administration	13
	f.	Military Public Health	13
5.	Track Specific Objectives		
	a.	Aerospace Physiology	15
	b.	Environmental Health	15
	c.	Epidemiology/Biostatistics	16
	d.	Health Services Administration	17
	e.	International Health Specialist	19
	f.	Occupational Ergonomics	20
	g.	Tropical Public Health	21
6.	Core Learning Objectives - Specific to MTM&H Degree Program		23
7.	Core Learning Objectives - Specific to MSPH Degree Program		24
	a.	Environmental and Occupational Health (track)	25
	b.	Health Physics (track)	27
	c.	Medical Entomology (track)	28

8. Core Learning Objectives — Doctor of Public Health Degree Program 29

a. Biostatistics 29
b. Epidemiology 30
c. Behavioral 32
d. Environmental Health 33
e. Health Services Administration 34
f. General Public Health 36

9. Core Learning Objectives — Ph.D. in Medical Zoology (Vector Biology) Degree Program

a. Tropical Public Health 38
b. Biostatistics 40
c. Epidemiology 41
d. Environmental Health 43
e. General Public Health 44

10. Core Learning Objectives — Ph.D. in Environmental Health Science Degree Program

a. Environmental Health 45
b. Biostatistics 46
c. Epidemiology 48
d. General Public Health 49

The Graduate Program Mission

To produce knowledgeable and highly skilled public health professionals in support of the health and global mission of the uniformed services.

Values

The Graduate Program within the Department of Preventive Medicine and Biometrics is committed to the guiding principles of the Uniformed Services University of the Health Sciences and reflects the values and missions of each of the uniformed services. Our evidence-based and results-oriented approach focuses on:

Students
We value a close interaction between students and faculty which supports individualized learning.

Health and Fitness
We value the fundamental role of disease and injury prevention and health promotion in optimizing military readiness.

Military Relationship
We value innovative responsiveness to the changing needs of the uniformed services.

Research
We value research that is integral to the learning environment, mission-focused, scientifically sound, and public health oriented.

Academic Excellence
We value high quality faculty and staff who promote a scholarly learning environment embodied by quantitative, analytical, critical and innovative thinking and who reflect an appropriate balance in research, service, and teaching activities.

Public Service
We value service, including humanitarian and military, in support of public health.

Ethics
We value the principles of ethics from three traditions: medicine, the military and academia. These principles include service to others, honor, loyalty, truthfulness and integrity.

Goals

Instruction: To provide excellence in graduate education to enhance the knowledge, skills, and practice of uniformed and civilian public health professionals.

Training: Through individual and collaborative efforts, to create and support programs such as residencies and fellowships to meet the needs of the Uniformed Services.

Research: To improve the knowledge and practice of preventive medicine and public health through research, especially in fields relevant to the Uniformed Services.

Service: To provide support to our university and our local, national and international communities through consultative services, continuing education, training, and volunteerism.

Instruction Goal

To provide excellence in graduate education to enhance the knowledge, skills, and practice of uniformed and civilian public health professionals.

Objective 1a: Sustain a high quality Master of Public Health degree program that graduates individuals who will function as highly effective public health professionals in the Uniformed Services.

Core Learning Objectives

Supplemental Learning Objectives, Epidemiology and Biostatistics Track

Supplemental Learning Objectives, Environmental and Occupational Health Track

Supplemental Learning Objectives, Health Services Administration Track

Supplemental Learning Objectives, Tropical Public Health Track

Supplemental Learning Objectives, General Preventive Medicine and Public Health Track

Objective 1b: Sustain a high quality Master of Tropical Medicine and Hygiene program for physicians that graduates field-experienced specialists in tropical public health.

Objective 1c: Sustain a high quality Master of Science in Public Health program that graduates specialists in environmental health, industrial hygiene, health physics, and medical entomology.

Objective 1d: Sustain a high quality doctoral program (Ph.D.) in medical zoology that graduates individuals qualified to function as field oriented parasitologists and vector biologists.

Objective 1e: Sustain a high quality doctoral program (Ph.D.) in environmental health sciences that graduates individuals with the ability to critically assess and resolve complex problems as specialists in environmental and occupational health or health physics.

Core Learning Objectives

Additional Learning Objectives, Vector Biology

Objective 1f: Sustain a high quality Doctor of Public Health program that graduates individuals qualified to take leadership roles in research, education, administration, and policy development.

Core Learning Objectives

Training Goal

Through individual and collaborative efforts, to create and support programs such as residencies and fellowships to meet the needs of the Uniformed Services.

Objectives:

1. Develop and support the academic curriculum needed to meet the requirements of organizations (i.e., Accreditation Council on Graduate Medical Education and American College of Laboratory Animal Medicine) accrediting residencies and fellowships.

2. Recruit and appoint faculty with the necessary education and experience to direct post-graduate training programs.

3. Work with the Department of Defense and other government agencies in evaluating the need for specific training programs and develop necessary programs to train individuals in public health.

4. Provide postgraduate program trainees with opportunities for teaching and research.

5. Develop and teach specialty programs in areas such as parasitology and tropical medicine to support the uniformed services and other government agencies.

Research Goal

To improve the knowledge and practice of preventive medicine and public health through research, especially in fields relevant to the Uniformed Services.

Objectives:

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

2. Plan, develop and evaluate research programs in such a way as to assure sensitivity to the perceptions and needs of its students, research experience opportunities for students, and applicability to the practice of public health.

3. Provide an organizational setting conducive to research, facilitate interdisciplinary communication, cooperation and collaboration, and foster the development of professional public health values, concepts and ethics.

4. Assure the availability of resources adequate to fulfill the Department research objectives, including financial resources, personnel, library facilities and holdings, laboratories, computer facilities, field experience sites, and other community resources which facilitate partnerships with communities to conduct research.

5. Provide an environment that is conducive to individual creativity, research and scholarly inquiry by all faculty. Faculty endeavors may involve basic and applied topics and include various forms of scholarship aimed at improving the practice of public health.

6. Recruit, appoint, and promote faculty that by virtue of its research competence is able to fully support the program's mission, goals and objectives.

Service Goal

To be a positive influence on the communities we support, while enriching the academic and personal lives of the faculty and students.

Objectives -- Service in Local, Regional, National, and International Settings

Every faculty member will be encouraged and have the opportunity to:

1. Involve themselves in agency consultations, external committee and board memberships, and editorial board and journal review activities.

2. Participate in leadership positions in professional associations/societies.

3. Instruct in courses outside of the university.

4. Participate in continuing medical education programs.

5. Participate in community service activities relating to the field of public health.

Every student will be encouraged and have the opportunity to:

1. Participate in professional associations/societies to the extent that time is available in their educational program.

2. Participate as equal members on appropriate committees supporting the university's graduate programs.

3. Instruct in the classroom if it is part of their curriculum and mentor junior students who request help and guidance.

4. Participate in community service activities relating to the field of public health.

MPH/MTM&H

Core Learning Objectives - Biostatistics

Upon completion of the MPH/MTM&H/MSPH, every student will be able to:

1. Describe and interpret public health data using simple descriptive and graphical statistical methods, including exploratory data analysis (EDA) methods.

2. Apply the concept of probability to statistical inference.

3. Use the conditional probabilities of sensitivity, specificity, and predictive value to evaluate diagnostic and screening tests.

4. Understand and appropriately apply major statistical probability distributions (binomial, Poisson, normal, Chi-square, Student's t, and F).

5. Describe the appropriate use of sampling techniques, and the concept of the sampling distribution and its role in statistical inference.

6. State the Central Limit Theorem and describe its use in statistics.

7. Compute and interpret point and confidence interval estimates, based upon a given sample (or samples), for univariate and bivariate parametric and non-parametric situations.

8. Compute and interpret hypothesis tests, based upon a given sample (or samples), for univariate and bivariate parametric and non-parametric situations.

9. Determine the simple random sample size needed for a biomedical study by the confidence interval and hypothesis testing approaches.

10. Apply and interpret the analysis of contingency tables.

11. Describe and interpret the linear association between two continuous variables using linear regression and correlation.

12. Understand and apply basic principles of experimental design, including randomization, pairing, blocking, blinding, nesting, and replication.

13. Extend the analysis of the difference between two population means to more than two means via analysis of variance and covariance.

14. Use and interpret multiple regression to predict a dependent variable as the function of many independent predictors.

15. Explain and apply appropriate statistical methods to the analysis of survival data.

Core Learning Objectives - Epidemiology

Upon completion of the MPH/MTM&H/MSPH, every student will be able to:

1. Define epidemiology and appropriately use the language of epidemiology.

2. Understand the differences, advantages, and limitations of each of the following analytic and descriptive study designs: case series, ecologic, cross-sectional, case-control, cohort, and clinical trials.

3. Select the best study design to answer a specific question.

4. Formulate clear case definitions and precise exposure measures in epidemiologic studies.

5. Calculate and interpret statistical measures of association, including rate ratios/relative risks, odds ratios, and attributable risks.

6. Evaluate and explain the impact that chance, bias, confounding, and effect modification, as well as statistical power, sampling methods, and sample size, have on epidemiologic findings and generalizability.

7. Interpret and critically evaluate the scientific literature.

8. Explain how to use epidemiological evidence to judge causal relationships among possible factors and health outcomes.

9. Design and conduct a basic outbreak investigation, including data collection and analysis, interpretation of findings, and formulation of intervention recommendations.

10. Calculate, graphically display, and interpret basic epidemiologic measures of disease frequency (epidemic curves, frequency counts, proportions, prevalence, attack rates, incidence, mortality, case fatality, and confidence intervals).

11. Characterize disease patterns and trends within a population by describing “agent-host-environment” and “person-place-time” variables.

12. Interpret sensitivity, specificity, predictive values, validity, and reliability for screening and confirmatory diagnostic tests.

13. Design and evaluate a basic survey instrument.

14. Manipulate, merge, analyze, and interpret electronic data sets using spread sheets, databases, and other software in common use in epidemiology and public health.

15. Design, establish, and evaluate basic medical surveillance systems.

16. Use epidemiology as a tool for the implementation and evaluation of preventive medicine and public health interventions.

17. Identify sources of national, international, and military epidemiologic data.

18. List the components of a proposal to conduct an epidemiological study, including specific aims, sample size consideration, and human subjects.

19. Evaluate the ethical implications of epidemiologic and other scientific studies.

Core Learning Objectives - Behavioral Science

Upon completion of the MPH/MTM&H every student will be able to:

1. Describe how behavior contributes to national patterns of morbidity and mortality.

2. Discuss means of reducing risk behaviors, and promoting health behaviors, which have received empirical support in the scientific literature.

3. Identify challenges inherent in measuring risk behavior and how to increase the validity of such measurement.

4. Explain the importance of assessing a target audience's knowledge, attitudes and practices prior to attempting to influence their health-related behaviors.

5. Cite cognitive factors, other than knowledge, which influence health-related behaviors.

6. Discuss how social determinants such as socioeconomic status, culture, and social support can influence health.

7. Analyze a health behavior problem from a sound theoretical perspective.

8. Perform analyses that reflect an appreciation for the ways in which intrapersonal, interpersonal, organizational and societal influences act together to threaten or promote health.

Core Learning Objectives - Environmental Health

Upon completion of the MPH/MTM&H/MSPH, every student will be able to:

1. Define environmental epidemiology, and discuss major regional and global environmental health problems in the context of their scientific, social, political and economic aspects.

2. Discuss basic toxicological principles as they apply to environmental health, including routes of exposure, factors that influence human effects, endpoints for toxicologic evaluation, and the establishment of human exposure limits.

3. Discuss significant workplace environmental health issues, including the leading causes of workplace-related disease and injury, basic exposure control mechanisms, and workplace monitoring.

4. Discuss the impact of air quality on human health, and describe the major sources of air pollutants, general means of reducing air pollution, and trade-offs associated with any control measure.

5. Discuss the principal environmental health issues related to food, including food service facility inspections, types of contamination, major food borne illnesses, the essential components of food sanitation, and regulatory mechanisms to protect the safety of food supplies.

6. Discuss the principal environmental health issues related to drinking water, including selection of sources, treatment and disinfection processes, alternative treatment methods, bacteriological monitoring, and regulatory mechanisms to insure appropriate water quality.

7. Discuss the principal environmental health issues related to wastewater treatment, handling, disinfection, and disposal, describe the treatment processes in a wastewater plant, and discuss the public health aspects of sludge disposal options.

8. Discuss the principal environmental health issues related to solid waste, including major approaches to treatment, disposal, and recycling, regulatory requirements for hazardous and non-hazardous wastes, and incorporation of community input in site selection for waste disposal sites.

9. Discuss the public health impact of principal disease vectors and hosts, and integrated pest management techniques.

10. Discuss the leading causes of death and injury for adults and children in the U.S., and outline basic control mechanisms including industrial safety methods, analysis of accidents and injury control policies.

11. Discuss the impact of major environmental health legislation on control of hazardous and toxic wastes and substances, the protection and regulation of air, water, food and drugs, and occupational safety and health.

12. Discuss the basic methods, limitations, and applications of environmental risk assessment, risk management and risk communication.

13. Describe the common sources of ionizing and non-ionizing radiation, quantification of dosage, basic biological effects, and methods for limiting human exposure.

14. Discuss the health impact of global environmental issues such as ozone depletion, acid rain, global warming, deforestation, loss of biodiversity, topsoil erosion, wetland destruction, and land use changes associated with rapid development.

Core Learning Objectives - Health Services Administration

Upon completion of the MPH/MSPH, every student will be able to:

1. Discuss the evolution of the current U.S. health care system, including the military health care system, and explain the effect of medical, fiscal, administrative, legal, social, and political issues on major transitions.

2. Identify the macroeconomic factors that influence the need, demand, and cost of medical care and discuss how these factors have led to rapid growth in U.S. health care expenditures.

3. Describe the mechanisms for financing healthcare organizations, to include reimbursement of professionals and institutions by third-party payers, and assess their relationship to cost containment

4. Describe the organization of health care services in the U.S., addressing types of facilities (hospitals, outpatient clinics, hospital emergency departments, community health centers, surgicenters, urgent care centers) and levels of care (acute, convalescent, extended care, home care).

5. Describe the dimensions of health care quality assessment.

6. Describe the legislative process and how laws are enacted that affect the U. S. health care system.

7. Describe the concept of outcomes measurement in medical care and its application to management of the health care organization.

8. Describe available government and non-governmental programs for financing, delivering, and assessing health care in America.

9. Discuss the impact of advancing medical technology on the delivery of health care services.

10. Compare international health service systems, and describe the essential differences between the health services systems in industrialized versus developing countries.

Core Learning Objectives – Military Public Health

Upon completion of the MPH/MTM&H/MSPH, every student will be able to:

1. Discuss military public health roles and responsibilities in humanitarian relief operations in response to natural and man-made disasters.

2. Discuss the immediate and long-term disaster- related public health concerns and measures, and develop a general plan to intervene following a major disaster.

3. Discuss the relationship between the military and Federal agencies and national and international organizations that oversee and coordinate disaster response.

4. Describe the mission and structure of international agencies, such as WHO, PAHO, USAID, UNICEF and the World Bank, as they relate to international health.

5. Characterize, in general, the infectious disease processes, epidemiology, public health and military impact, and control of the following:

    a. vector-borne diseases

b. foodborne and waterborne diseases
c. respiratory acquired diseases
d. sexually transmitted diseases
e. emerging diseases

6. Describe the basic principles of immunization for disease prevention.

7. Characterize, in general, the threats and counter measures associated with nuclear, chemical, and biological warfare agents.

8. Communicate effectively, both in writing and orally, programmatic or scientific information to professional or lay audiences.

9. Work in interdisciplinary groups to address specific public health issues.

Track Specific Objectives

Track Learning Objectives --- Aerospace Physiology

In addition to meeting the objectives described in the core curriculum, every student completing the Aerospace Physiology Track will be able to:

1. Discuss the physiologic implications of the environmental pressure continuum.
2. Discuss the human factors principles important in the aerospace arena.
3. Apply human factors analysis to aerospace physiologic problems.
4. Apply human factors analysis to anthropometric problems.
5. Discuss and apply the principles of mishap investigation.
6. Recognize the relative value of the information found in the literature.
7. Interpret data collected in a research, an operational, and/or a mishap setting.
8. Communicate coherently and logically in both the oral and written format.

Track Specific Objectives - Environmental Health

Upon completion of the Environmental Health track, in addition to meeting the core curriculum objectives, graduates should be able to:

1. Discuss pertinent issues associated with preventive medicine joint operations and be able to function as a staff officer in preventive medicine planning for joint operations.

2. Discuss the general principles and basic concepts of toxicology including: disposition of toxins, mechanisms of toxicity, toxicokinetics, toxicity testing, mutagenesis and carcinogenesis, organ system toxicology, as well the toxic effects of selected substances and chemical classes.

3. Apply the basic concepts of industrial hygiene to estimate exposure and recommend corrective actions for hazardous work conditions.

4. Understand and apply the methods used in conducting epidemiological studies of environmental and occupational exposures.

5. Apply the principles of environmental health risk assessment, especially as it pertains to environmental restoration at military installations.

6. Interpret appropriate regulations and assess compliance of programs with these regulations.

- Epidemiology/Biostatistics

Upon completion of the Epidemiology/Biostatistics track, in addition to meeting the objectives described in the core curriculum, students will be able to:

1. Demonstrate understanding of how study design influences or determines the use of specific analytic techniques.

2. Understand the natural history and risk factors for important infectious and/or non-infectious conditions and diseases.

3. Understand strategies to prevent or reduce the incidence and/or consequence of important infectious and/or non-infectious conditions and diseases.

4. Understand the principles of, and able to perform, a systematic review and meta analysis

5. Discuss fully the intricacies of various epidemiologic study designs including their strengths, weakness, and appropriateness to address specific research hypotheses

6. Describe in detail the influence of bias and confounding and how they may affect the inferences that can be made in epidemiologic studies.

7. Understand the ways in which the investigator anticipates and accounts for likely sources of bias (selection, observation, and confounding) in a specific epidemiologic study

8. Understand in detail the theory and application of important epidemiologic analytic tools, including stratification, linear regression, logistic regression, Poisson regression, and Cox proportional hazards regression

9. Describe in detail the principle of interaction/effect modification and how to evaluate its' presence using univariate and multivariate analyses

10. Understand how to evaluate if data meet the assumptions of a particular regression model

11. Understand how to evaluate the adequacy and goodness of fit of a particular regression model

Track Specific Objectives - Health Services Administration

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

1. Analyze the evolution of the current U.S. health care system and the effect of medical, fiscal, administrative, legal, social, and political issues on major transitions.

2. Assess financing mechanisms for health care services in the U.S.

3. Characterize types of health maintenance organizations (HMO).

4. Compare and contrast cost control measures under managed care and traditional medical care systems.

5. Formulate health services policy, including the collection and summarization of data relevant to an issue; statement of policy options; and determination of the feasibility and expected outcomes of the policy options.

6. Manage a health program under an enrollment-based capitation plan, including human and fiscal resources.

7. Apply the concept of outcomes assessment to health services management.

8. Develop quantitative models that describe program functioning to support decision-making.

9. Develop and implement a program evaluation plan.

10. Develop, implement, and monitor a plan for a deployed force to interact with and support the local health care infrastructure of the host country.

11. Conduct cost-benefit analyses of programmatic interventions and impact analysis of programmatic changes.

12. Conduct legislative program impact analysis.

13. Describe the Federal annual budget process and its impact on the DoD health services system.

14. Develop and present program budget plans.

15. Develop and implement a continuous quality improvement plan for a particular process of care, health care service, or medical treatment facility.

16. Implement and evaluate a clinical guidelines program, the JCAHO Oryx program, or the NCQA HEDIS program.

17. Describe the major management theories that pertain to health services administration.

18. Discuss the major issues involved in personnel management within the health care industry.

19. Identify the medical information management needs of a health care organization.

20. Define the major legal concepts that pertain to medical care (e.g. standard of care; informed consent; medical records; confidentiality; licensing, credentialing, and privileging; litigation)

21. Identify important legal issues that could potentially impact health care delivery (e.g. liability of health care providers, administrative law for health care organizations; rights of patients; federal, state, and local government regulations).

22. Describe the various statutes governing the U.S. civilian health care system and the DoD health care system.

23. Discuss ethical considerations as they pertain to current and emerging topics of public health importance (e.g. reproduction issues, maternal and fetal rights, experimental treatments, organ transplantation, death, health care rationing).

24. Use a framework to characterize the health care system of a particular nation or geographic region or to compare the health services systems of different countries.

25. Describe the major differences between health care services in developed and developing nations.

26. Identify major international assistance programs within the health care sector and the important cultural issues that may impact program effectiveness.

Track Specific Objectives – International Health Specialist: The USU/IH program's mission is to prepare globally focused military professionals for positions in support of complex contingencies and medical crises around the world, in wartime and peacetime. The program emphasizes interoperability in military-military and military-civilian activities. The roles of health organizations, both public and private are addressed. International Health is defined and the scope of the field is explored. Political, economic and sociocultural factors of population health are considered especially within the context of developing countries. Healthcare delivery systems are examined looking at resources, access, policies, current challenges, potential solutions and opportunities for reform.

In addition to the MPH program goals the IH student upon completion of additional IH specific requirements will:

1. Have a basic knowledge of major international health issues, ethical and cultural considerations and their influence in a global context
2. Understand the role that the US military and other organizations/agencies play in addressing issues
3. Be able to apply public health principles toward assessing international health needs and in planning, conducting, and evaluating international health-related activities and projects

Track Specific Objectives—Occupational Ergonomics

Upon completion of the Occupational Ergonomics track, in addition to meeting the core curriculum objectives, students will be able to:

1. Describe the interactions among worker, workplace and work tasks and discuss how these interactions impact work, health and functional outcomes.

2. Identify sources of ergonomic exposures in workplace, tasks, tools and equipment design.

3. Utilize various ergonomic assessment tools for analyzing task demands and human performance and apply this knowledge to various military work situations and environments.

4. Describe various strategies for preventing, mitigating and controlling ergonomic-related musculoskeletal risk factors in the workplace.

5. Describe regulations, polices and standards within the Department of Defense (DoD) and Federal agencies, involved in ergonomics and workplace safety.

6. Conduct qualitative and quantitative analyses of systems, operations and activities to identify workplace hazards associated with risk of injury.

7. Identify physical, cognitive, perceptual, cognitive and behavioral factors to be addressed in system design.

8. Discuss theoretical and conceptual bases for various ergonomic analysis techniques.

9. Integrate theoretical and applied aspects of ergonomics in developing solutions for commonly observed situations in the workplace.

10. Develop and write a protocol for an ergonomics program that can be implemented in a military work setting.

11. Communicate effectively, both in writing and orally, current issues related to ergonomics.

12. Work in interdisciplinary groups to address specific issues related to ergonomics within military and DoD workplace environments.

Track Learning Objectives – Tropical Public Health

In addition to the Core Learning Objectives for the MPH student, upon completion of the MPH, every student in the TPH track will be able to:

1. Characterize the epidemiology, pathogenesis, public health impact and control of the 10 most common infectious diseases of the developing world, including malaria, HIV, tuberculosis, diarrhea, sexually transmitted diseases, and emerging diseases.

2. Discuss the epidemiology, diagnosis, and treatment of important protozoal diseases, such as malaria, leishmaniasis, and trypanosomiasis.

3. Discuss the epidemiology, diagnosis, and treatment of important viral diseases, such as dengue, HIV, hepatitis, influenza, and yellow fever.

4. Discuss the epidemiology, diagnosis, and treatment of important bacterial diseases, such as tuberculosis, meningitis, and gonorrhea.

5. Apply epidemiological principles and investigative procedures to identify and analyze emerging disease outbreaks.

6. Describe the medical infrastructure of major regions of the tropics, including local health operations, foreign government institutions and non-government organizations.

7. Develop a practical and comprehensive prevention and control program for common tropical public health problems.

8. Explain the impact of local culture, religion, family structure, and alternative medical customs in major regions of the tropics.

9. List the major environmental hazards of the tropics, including plants and animals, extremes of temperature and altitude, and toxic chemicals.

10. Describe environmental variables involved in the maintenance of vector populations and disease transmission.

11. Characterize the behavioral and ecological conditions that contribute to efficient transmission of vector-borne diseases to humans (conditions that favor human and vector contact).

12. Discuss the principles of disease nidality and vector incrimination.

13. Define biological and mechanical transmission and be able to discuss characteristics of major arthropod-borne diseases by type of biological transmission.

14. Know and understand the categories, and the major morphological and physiological characteristics of arthropods, with emphasis on those characteristics that distinguish and define insect and arachnid vectors of human disease.

15. Describe the epidemiology, diagnosis, treatment, prevention, and control of various parasite zoonoses that affect humans.

16. Use various laboratory techniques to establish the diagnosis of zoonotic parasitic diseases and the four human-infection plasmodia in humans.

17. Describe the morphology and life cycle of the malaria parasite(s) in humans and mosquitoes.

18. List different anti-malarials, describe their mode(s) of action, and discuss their worldwide use in drug prophylaxis and treatment.

19. Describe the life stages of anopheline mosquitoes and their general morphology, physiology, behavior, and habits, as related to malaria transmission, surveillance, prevention, and control.

20. Explain the major biological and environmental factors affecting malaria transmission in different ecological situations.

21. Explain the history, principles, successes and failures of malaria control versus malaria eradication and how they apply to current programs and to the future; to include consideration of new technologies (e.g., remote sensing/GIS programs).

Core Learning Objectives – Specific to MTM&H Degree Program

In addition to the Core Learning Objectives and the TPH track objectives for the MPH program, upon completion of the MTM&H, every student will be able to:

1. Recognize common clinical syndromes in the tropical setting and develop a reasoned diagnostic and treatment approach using local resources.

2. Identify tropical disease symptoms in travelers and develop a reasoned and cost-effective diagnostic and treatment approach using the United States healthcare system.

3. Understand the epidemiologic, immunologic and pathophysiologic basis of disease processes common in the tropics.

4. Prepare a traveler to avoid or prevent disease or, in the event of illness, obtain appropriate medical support while traveling in all regions of the tropics for any period of time.

Core Learning Objectives – Specific to MSPH Degree Program

In addition to the core learning objectives for the MPH student, upon completion of the MSPH, every student will be able to:

1. Critically evaluate technical journal articles and comment on analytical techniques, methodology and conclusions.

2. Attain a working knowledge (other than their primary track) of one or more of the areas of study in the MSPH.

3. Perform directed research utilizing the majority of skills acquired during the Masters program.

4. Give lectures, lead seminars, supervise laboratory exercises, prepare and grade exams, review homework and tutor students.

MSPH Environmental and Occupational Health Track Objectives

In addition to the Environmental Health Core Objectives, MSPH students in the Industrial Hygiene track will be able to:

1. Anticipate and recognize workplace hazards using appropriate information resources.

2. Evaluate exposures to physical, biological, and chemical agents of concern to environmental and occupational health professionals.

3. Discuss principles of toxicology and how they relate to exposures.

4. Describe exposure standards for environmental and occupational hazards.

5. Design, implement, and evaluate engineering control measures for specific hazards.

6. Prioritize hazard abatement and select appropriate control methods, considering overall effectiveness and cost.

7. Perform an environmental health risk assessment according to US EPA guidelines.

8. Perform standard environmental chemical analyses and understand the capabilities and limitations of the test procedures.

9. Explain the complex issues associated with environmental exposure surveillance during deployments, function as a staff officer or field scientist during a military deployment, and develop and implement environmental exposure surveillance.

10 Pass comprehensive Board Examinations.

MSPH Industrial Hygiene Track Objectives

In addition to the Environmental Health Core Objectives, MSPH students in the Industrial Hygiene track will be able to:

1. Recognize and characterize workplace hazards using appropriate information resources.

2. Evaluate exposures to physical, biological, and chemical agents of concern to occupational health professionals.

3. Discuss principles of toxicology and how they relate to exposures.

4. Describe occupational health standards for environmental and workplace exposures.

5. Design, implement, and evaluate engineering control measures for specific hazards.

6. Prioritize hazard abatement, and select appropriate control methods considering overall effectiveness and cost.

MSPH Health Physics Track Objectives

In addition to the Environmental Health Core Objectives, MSPH students in the Health Physics Track will be able to:

1. Design shielding for ionizing radiation sources which meets federal and DoD guidelines for radiation exposure.

2. Determine the nominal ocular hazard distance (NOHD) and nominal ocular hazard zone (NOHZ) for continuous wave (cw), multi-pulse and single pulse lasers.

3. Discuss the protective equipment required for the use of each class of laser including calculation of optical density.

4. Design ventilation systems for use with gaseous or volatile radionuclides, which meet DoD and Federal guidelines for radiation exposure.

5. Describe the principal biological effects expected from human exposure to ionizing and non-ionizing radiation.

MSPH Medical Entomology Track Objectives

In addition to the Environmental Health Core Objectives, MSPH students in the Medical Entomology Track will:

1. Know and understand the distinguishing morphological and physiological characteristics of the various arthropod classes and describe the morphology, classification, and biology of the major orders of insects, as well as major families and/or genera of aquatic invertebrates.

2. Characterize the epidemiology, public health impact and control of significant vector-borne anthroponotic and zoonotic diseases and describe the environmental, ecological and behavioral factors that contribute to efficient transmission in humans.

3. Describe the basic criteria for incrimination of a vector, the modes of transmission by vectors, and the categories of arthropods involved in transmission of human diseases.

4. Identify the four human plasmodia through differential diagnosis and describe the general clinical course, pathology, and epidemiology of human malaria, including the life cycles of the malaria parasite(s) in humans and mosquitoes and major biological and environmental factors affecting malaria transmission in different ecological situations.

5. Explain the history, principles, successes, and failures of malaria control versus malaria eradication and how they apply to current programs and to the future, including consideration of new technologies (e.g., remote sensing/GIS programs).

6. Develop practical surveillance, prevention and control programs for common vector-borne tropical public health problems.

Doctor of Public Health (DrPH)

Core Learning Objectives - Biostatistics

Upon completion of the DrPH program, every student will be able to:

1. Describe and interpret public health data using simple descriptive and graphical statistical methods, including exploratory data analysis (EDA) methods.

2. Apply the concept of probability to statistical inference.

3. Use the conditional probabilities of sensitivity, specificity, and predictive value to evaluate diagnostic and screening tests.

4. Understand and appropriately apply major statistical probability distributions (binomial, Poisson, normal, Chi-square, Student's t, and F).

5. Use appropriate sampling techniques and explain the concept of the sampling distribution and its role in statistical inference.

6. State the Central Limit Theorem and describe its use in statistics.

7. Compute and interpret point and confidence interval estimates, based upon a given sample (or samples), for univariate and bivariate parametric and non-parametric situations.

8. Compute and interpret hypothesis tests, based upon a given sample (or samples), for univariate and bivariate parametric and non-parametric situations.

9. Justify the sampling procedure and calculate the size needed for a biomedical study by the confidence interval and hypothesis testing approaches.

10. Apply and interpret the analysis of contingency tables.

11. Understand and apply principles of experimental design, including randomization, pairing, blocking, blinding, nesting, and replication.

12. Build appropriate statistical models (the generalized linear model, the linear regression model, the logistic regression model, and the Cox regression model), assess the fit of the model, detect collinearity, outliers and influences, and refine the model.

13. Analyze biomedical data and interpret the results using the generalized linear model, the linear regression model, the logistic regression model, and the Cox regression model.

Core Learning Objectives - Epidemiology

Upon completion of the Dr.P.H. program, every student will be able to:

1. Define epidemiology and appropriately use the language of epidemiology.

2. Formulate clear case definitions and precise exposure measures in epidemiologic studies.

3. Calculate and interpret statistical measures of association, including rate ratios/relative risks, odds ratios, and attributable risks.

4. Calculate, graphically display, and interpret basic epidemiologic measures of disease frequency (epidemic curves, frequency counts, proportions, prevalence, attack rates, incidence, mortality, case fatality).

5. Characterize disease patterns and trends within a population by describing “agent-host-environment” and “person-place-time” variables.

6. Interpret sensitivity, specificity, predictive values, validity, and reliability for screening and confirmatory diagnostic tests.

7. Design, establish, and evaluate medical surveillance systems.

8. Identify and use sources of national, international, and military epidemiologic data.

9. Evaluate the ethical implications of epidemiologic and other scientific studies.

10. Acquire a population/denominator-based, quantitative, medical perspective with the goal of appropriately evaluating and/or conducting applied epidemiological research and advancing health through quality scientific investigation.

11. Discuss ways in which original hypotheses are developed, develop these hypotheses, apply them to current research in preventive medicine and public health, and judge causality.

12. Explain how to use epidemiological evidence to judge causal relationships among possible factors and health outcomes.

13. Discuss in depth the advantages and disadvantages of the different epidemiologic study designs (case series, ecologic, cross-sectional, case control, cohort and clinical trial), and, when given a research question and the necessary background information, design the appropriate study.

14. Evaluate and explain the impact that chance, bias, confounding, and effect modification, as well as statistical power, sampling methods, and sample size, have on epidemiologic findings and generalizability, and apply appropriate measures to deal with these issues in designing and analyzing epidemiologic studies.

15. Design and conduct an outbreak investigation, including data collection and analysis, interpretation of findings, and formulation of intervention recommendations.

16. Develop and write a protocol in standard scientific format (NIH-like) to conduct an epidemiologic study.

17. Design, pilot test, and validate a survey instrument to collect information from study subjects.

18. Write a report of an epidemiologic study for publication.

19. Critically review, discuss, and present an evaluation of manuscripts published in the epidemiologic scientific literature

Core Learning Objectives - Behavioral Science

Upon completion of the Dr.P.H. program every student will be able to:

1. Describe how human behaviors contribute to premature mortality in the United States.

2. Discuss means of reducing risk behaviors, and promoting health behaviors, which have received empirical support in the scientific literature.

3. Identify challenges inherent in measuring risk behavior, and research methods, which maximize the accuracy of such measurement.

4. Choose an appropriate method to assess a target audience's existing knowledge, attitudes and practices prior to attempting to influence their health-related behaviors.

5. Cite cognitive factors, other than knowledge, which influence health-related behaviors.

6. Discuss how social factors such as socioeconomic status, culture, and social support can influence health.

7. Demonstrate their ability to analyze a health behavior problem from a sound theoretical perspective.

8. Perform analyses that reflect an appreciation for the ways in which intrapersonal, interpersonal, organizational and societal influences act together to threaten or promote health.

9. Describe qualitative research methods, and explain their appropriate use.

Core Learning Objectives - Environmental Health
Upon completion of the Dr.P.H. program, every student will be able to critically evaluate and discuss in depth the following:

1. Environmental epidemiology and major regional and global environmental health problems in the context of their scientific, social, political and economic aspects.

2. Basic toxicological principles as they apply to environmental health, including routes of exposure, factors that influence human effects, endpoints for toxicologic evaluation, and the establishment of human exposure limits.

3. Significant workplace environmental health issues, including the leading causes of workplace-related disease and injury, basic exposure control mechanisms, and workplace monitoring.

4. The impact of air quality on human health, and describe the major sources of air pollutants, general means of reducing air pollution, and trade-offs associated with any control measure.

5. The principal environmental health issues related to food safety.

6. The principal environmental health issues related to drinking water and regulatory mechanisms to insure appropriate water quality.

7. The principal environmental health issues related to waste treatment and the public health aspects of waste disposal options.

8. The principal environmental health issues related to solid waste, including major approaches to treatment, disposal, and recycling, regulatory requirements, and incorporation of community input on waste disposal sites.

9. The public health impact of principal diseases and disease management techniques.

10. The leading causes of death and injury for adults and children in the U.S., and outline basic control mechanisms including industrial safety methods, analysis of accidents and injury control policies.

11. The impact of major environmental health legislation on control of wastes and substances, the protection and regulation of air, water, food and drugs, and occupational safety and health.

12. The basic methods, limitations, and applications of environmental risk assessment, risk management and risk communication.

13. The common sources of ionizing and non-ionizing radiation, quantification of dosage, basic biological effects, and methods for limiting human exposure.

14. The health impact of global environmental issues associated with rapid development.

Core Learning Objectives - Health Services Administration

Upon completion of the Dr.P.H. program, every student will be able to:

1. Analyze the evolution of the current U.S. health care system and the effect of medical, fiscal, technological, administrative, legal, social, and political issues on major transitions.

2. Evaluate health care delivery in the U.S., addressing the structure, staffing and functional components of the different types of facilities (hospitals, outpatient clinics, hospital emergency departments, community health centers, surgicenters, urgent care centers) providing varying levels of care (acute, convalescent, extended care, home care).

3. Critically evaluate the structure, eligibility, financing and interrelationships of U.S. Federal health care systems and the major issues relative to these systems.

4. Describe factors that influence health policy development and the impact of policy changes on the U.S. health care system. Formulate health services policy, including the collection and summarization of data relevant to an issue; statement of policy options; and determination of the feasibility and expected outcomes of the policy options.

5. Describe the Federal budget process and its impact on the DoD health services system.

6. Identify the macroeconomic factors that influence the need, demand, and cost of medical care and discuss how these factors have led to rapid growth in U.S. health care expenditures.

7. Describe the mechanisms for financing healthcare organizations, to include reimbursement of professionals and institutions by third-party payers, and assess their relationship to cost containment

8. Evaluate quality assurance programs and discuss the role of organizations engaged in monitoring health care delivery and outcomes.

9. Explain the role and impact of national and international health-related agencies and non-governmental organizations (NGO's) and private voluntary organizations (PVO's) in health care policy, international assistance and humanitarian and disaster relief.

10. Compare international health service systems, and describe the essential differences between the health services systems in industrialized versus developing countries.

11. Discuss the immediate and long-term disaster- related public health concerns and measures, and develop a general plan to intervene following a major disaster.

12. Compare alternative methods of developing and applying practice guidelines.

13. Characterize types of managed care organizations and compare and contrast cost control measures under managed care and traditional medical care systems.

14. Describe various modeling techniques and other research methods (e.g. cost-benefit analysis, regression analysis, statistical modeling), and explain how they apply to the study of health services.

15. Develop quantitative models to support decision-making, and identify relevant data sources and apply appropriate decision tools and statistical methods to address problems pertaining to the delivery of health care services.

16. Describe the concept of outcomes measurement in medical care and its application to management of a health care organization.

17. Develop and implement a continuous quality improvement plan for a particular process of care, health care service, or medical treatment facility.

18. Discuss the relationship between leadership and management styles, to include situational leadership, motivational theory and negotiation techniques, and effectively use the appropriate management style.

19. Define the major legal issues that pertain to health care delivery (e.g. standard of care; informed consent; medical records; confidentiality; licensing, credentialing, and privileging; litigation, liability of health care providers, administrative law for health care organizations; rights of patients; federal, state, and local government regulations)

20. Discuss in depth the ethical rationale for and implications of policy recommendations or other public health actions (e.g. reproduction issues, maternal and fetal rights, experimental treatments, organ transplantation, death, health care rationing). “In depth” implies the ability to meaningfully discuss appropriate principles of ethics and justice.

Core Learning Objectives – General Public Health

Upon completion of the Dr.P.H. program, every student will be able to:

1. Work in interdisciplinary groups to address specific public health issues.

2. Synthesize ideas and apply principles from different public health disciplines.

3. Apply theoretical knowledge from academic courses to practical situations.

4. Communicate effectively and appropriately for the audience, and to express themselves clearly and persuasively, both orally and in writing, on issues relating to public health.

5. Serve as a competent and effective instructor in a university level course having mastered the skills of designing and giving lectures, constructing instructional objectives and lesson plans, developing examination questions, conducting seminars, and helping students with problems.

6. Demonstrate familiarity with the current medical and public health literature.

7. Discuss the strengths and weaknesses of medical histories, physical examinations, X-rays and laboratory tests in assigning a diagnostic category to a patient.

8. Discuss how clinicians integrate the information they collect, emphasizing some items and rejecting others to arrive at their final diagnosis.

9. Use the vocabulary and knowledge of basic clinical and pathological concepts to be able to participate in, and contribute to, a discussion with physicians on diseases of public health importance.

10. Demonstrate knowledge of specific non-infectious diseases of public health importance to include distribution, risk factors, morbidity, mortality, available screening tests, diagnostic criteria and tests, symptoms, signs, natural history, basic pathophysiology , prevention and control strategies and treatment strategies. This knowledge should be based on the level of material covered in the latest edition of a standard textbook of public health, such as Maxcy-Rosenau-Last. The diseases covered should come from at least the following categories: cardiovascular (coronary heart disease, hypertension, stroke); cancers (lung, colon, prostate, breast, and cervix); diabetes; common mental health issues (depression, substance abuse); nutritional pathologies; and injuries and violence.

11. Demonstrate knowledge of specific infectious diseases of public health importance to include distribution, infectious agent, reservoir, mode of transmission including vector relationships, incubation period, period of communicability, risk factors, morbidity, mortality, available screening tests, diagnostic criteria and tests, symptoms,

signs, natural history, prevention and control strategies and treatment strategies. This knowledge should be based on material covered in the latest edition of a standard textbook of public health such as Maxcy-Rosenau-Last and the Control of Communicable Diseases Manual. The diseases covered should include at least the following categories: vaccine-preventable infections (measles, influenza, hepatitis, meningococcal disease), STD's (chlamydia, syphilis and gonorrhea), common global infections (trachoma, tuberculosis, hookworm, diarrheal disease, dengue, malaria, schistosomiasis), and HIV/AIDS.

12. Explain the history, principles, successes, and failures of malaria control versus malaria eradication and how they apply to current programs and to the future, including consideration of new technologies (e.g., remote sensing/GIS programs).

13. Develop practical surveillance, prevention and control programs for common vector-borne tropical public health problems.

14. Describe the basic principles of immunization for disease prevention.

15. Publish original and innovative findings in peer-reviewed journals.

Ph.D. in Medical Zoology (Vector Biology)

Core Learning Objectives – Tropical Public Health

Upon completion of the Ph.D. program in Medical Zoology, every student will be able to:

1. Characterize the epidemiology, pathogenesis, public health impact and control of the 10 most common infectious diseases of the developing world, including malaria, HIV, tuberculosis, diarrhea, sexually transmitted diseases, and emerging diseases.

2. Discuss the diagnosis and treatment of important protozoal diseases such as malaria, leishmaniasis, and trypanosomiasis.

3. Discuss the epidemiology, diagnosis, treatment, prevention and control of important arboviral diseases such as dengue, yellow fever, and tick-borne encephalitis.

4. Apply epidemiological principles and investigative procedures needed to identify and analyze emerging disease outbreaks.

5. Describe the medical infrastructure of major regions of the tropics, including local health operations, foreign government institutions, non-government organizations, and international agencies (e.g., USAID, WHO, PAHO, and UNICEF).

6. Develop a practical and comprehensive prevention and control program for common tropical public health problems.

7. Explain the impact of local culture, religion, family structure and alternative medical customs in major regions of the tropics.

8. List the environmental hazards of the tropics, including plants and animals, extremes of temperature and altitude, and toxic chemicals.

9. Describe environmental variables involved in the maintenance of vector populations and disease transmission.

10. Characterize the behavioral and ecological conditions that contribute to efficient transmission of vector-borne diseases to humans (conditions that favor human and vector contact).

11. Discuss the principles of disease nidality and vector incrimination.

12. Define biological and mechanical transmission and be able to discuss characteristics of major arthropod-borne diseases by type of biological transmission.

13. Know and understand the categories, major morphological, and physiological characteristics of arthropods, with emphasis on those characteristics that distinguish and define insect and arachnid vectors of human disease.

14. Describe the epidemiology, diagnosis, treatment, prevention, and control of various parasite zoonoses that affect humans.

15. Use various laboratory techniques to establish the diagnosis of zoonotic parasitic diseases and the four human-infecting plasmodia in humans.

16. Describe the treatment, prevention, and control of zoonotic parasitic diseases of humans.

17. Describe the morphology and life cycle of the malaria parasite(s) in humans and mosquitoes.

18. List different anti-malarials, describe their mode(s) of action, and discuss their worldwide use in drug prophylaxis and treatment.

19. Describe the life stages of arthropods of medical importance and their detailed morphology, physiology, behavior, and habits; as related to human disease transmission, surveillance, prevention, and control.

20. Apply appropriate biosystematic methods (e.g., classical, cladistic, and molecular) to determine various species of medically important arthropods.

21. Explain the major biological and environmental factors affecting arthropod-borne disease transmission in different ecological situations.

22. Explain the history, principles, successes, and failures of malaria control versus malaria eradication and how they apply to current programs and to the future; to include consideration of new technologies (e.g., remote sensing/GIS programs).

23. Describe the basic principles of immunization for disease prevention.

24. Apply various immunological and molecular biological techniques in the study of arthropod-borne human diseases.

25. Design and conduct an intensive, unique field/laboratory research project on an arthropod vector and/or vertebrate reservoir of a human disease such as malaria.

Core Learning Objectives - Biostatistics

Upon completion of the Ph.D. program in Medical Zoology, every student will be able to:

1. Describe and interpret public health data using simple descriptive and graphical statistical methods, including exploratory data analysis (EDA) methods.

2. Apply the concept of probability to statistical inference.

3. Use the conditional probabilities of sensitivity, specificity, and predictive value to evaluate diagnostic and screening tests.

4. Understand and appropriately apply major statistical probability distributions (binomial, Poisson, normal, Chi-square, Student's t, and F).

5. Describe the appropriate use of sampling techniques, and the concept of the sampling distribution and its role in statistical inference.

6. State the Central Limit Theorem and describe its use in statistics.

7. Compute and interpret point and confidence interval estimates, based upon a given sample (or samples), for univariate and bivariate parametric and non-parametric situations.

8. Compute and interpret hypothesis tests, based upon a given sample (or samples), for univariate and bivariate parametric and non-parametric situations.

9. Determine the simple random sample size needed for a biomedical study by the confidence interval and hypothesis testing approaches.

10. Apply and interpret the analysis of contingency tables.

11. Understand and apply basic principles of experimental design, including randomization, pairing, blocking, blinding, nesting, and replication.

12. Build appropriate statistical models (the generalized linear model, the linear regression model, the logistic regression model, and the Cox regression model), assess the fit of the model, detect collinearity, outliers and influences, and refine the model.

13. Analyze biomedical data and interpret the results using the following models: generalized linear, linear regression, logistic regression, and Cox regression.

14. Build a relational database and use cluster analysis or probit analysis to interpret arthropod vector and environmental data.

Core Learning Objectives - Epidemiology

Upon completion of the Ph.D. program in Medical Zoology, every student will be able to:

1. Define epidemiology and appropriately use the language of epidemiology.

2 Formulate clear case definitions and precise exposure measures in epidemiologic studies.

3. Calculate and interpret statistical measures of association, including rate ratios/relative risks, odds ratios, and attributable risks.

4. Calculate, graphically display, and interpret basic epidemiologic measures of disease frequency (epidemic curves, frequency counts, proportions, prevalence, attack rates, incidence, mortality, case fatality).

5. Characterize disease patterns and trends within a population by describing “agent-host-environment” and “person-place-time” variables.

6. Interpret sensitivity, specificity, predictive values, validity, and reliability for screening and confirmatory diagnostic tests.

7. Design, establish, and evaluate basic medical surveillance systems.

8. Identify and use sources of national, international, and military epidemiologic data.

9. Evaluate the ethical implications of epidemiologic and other scientific studies.

10. Acquire a population/denominator-based, quantitative, medical perspective with the goal of appropriately evaluating and/or conducting applied epidemiological research and advancing health through quality scientific investigation.

11. Discuss ways in which original hypotheses are developed, develop these hypotheses, apply them to current research in preventive medicine and public health, and judge causality.

12. Explain how to use epidemiological evidence to judge causal relationships among possible factors and health outcomes.

13. Discuss in depth the advantages and disadvantages of the different epidemiologic study designs (case series, ecologic, cross-sectional, case control, cohort and clinical trial), and, when given a research question and the necessary background information, design the appropriate study.

14. Evaluate and explain the impact that chance, bias, confounding, and effect modification, as well as statistical power, sampling methods, and sample size, have on epidemiologic findings and generalizability, and apply appropriate measures to deal with these issues in designing and analyzing epidemiologic studies.

15. Design and conduct an outbreak investigation, including data collection and analysis, interpretation of findings, and formulation of intervention recommendations.

16. Use remote sensing (RS) and geographical information system (GIS) methodologies to determine some of the main environmental parameters important in the ecology of various arthropod-borne diseases.

Core Learning Objectives - Environmental Health

Upon completion of the Ph.D. program in Medical Zoology, every student will be able to:

Discuss basic toxicological principles as they apply to environmental health, including routes of exposure, factors that influence human effects, endpoints for toxicologic evaluation, and the establishment of human exposure limits.

Discuss the principal environmental health issues related to food, including food service facility inspections, types of contamination, major food borne illnesses, the essential components of food sanitation, and regulatory mechanisms to protect the safety of food supplies.

Discuss the principal environmental health issues related to drinking water, including selection of sources, treatment and disinfection processes, alternative treatment methods, bacteriological monitoring, and regulatory mechanisms to insure appropriate water quality.

4. Discuss the principal environmental health issues related to wastewater treatment, handling, disinfection, and disposal, describe the treatment processes in a wastewater plant, and discuss the public health aspects of sludge disposal options.

5. Discuss the principal environmental health issues related to solid waste, including major approaches to treatment, disposal, and recycling, regulatory requirements for hazardous and non-hazardous wastes, and incorporation of community input in site selection for waste disposal sites.

6. List the primary pesticides used to prevent or control public health problems (e.g., malaria, louse infestations) and describe their general classification and chemical structure, toxicological properties in mammals, and mode of action in arthropods.

7. Compare the environmental health implications of pesticide use in agriculture versus public health and explain the value of pesticide use for public health.

8. Discuss the impact of major environmental health legislation on control of hazardous and toxic wastes and substances, the protection and regulation of air, water, food and drugs, and occupational safety and health.

9. Discuss the basic methods, limitations, and applications of environmental risk assessment, risk management and risk communication.

10. Discuss the health impact of global environmental issues such as ozone depletion, acid rain, global warming, deforestation, loss of biodiversity, topsoil erosion, wetland destruction, and land use changes associated with rapid development.

Core Learning Objectives – General Public Health

Upon completion of the Ph.D. program in Medical Zoology, every student will be able to:

1. Work in interdisciplinary groups to address specific public health and scientific issues in the field of medical zoology.

2. Synthesize ideas and apply principles from different public health and scientific disciplines.

3. Apply theoretical knowledge from academic courses to practical situations in medical zoology and public health.

4. Communicate effectively and appropriately for the audience, and to express themselves clearly and persuasively, both orally and in writing, on issues relating to public health and medical zoology.

5. Serve as a competent and effective instructor in a graduate level course having mastered designing and giving lectures, constructing instructional objectives, lesson plans and examination questions, and helping students with problems.

6. Critically review, discuss, and present an evaluation of manuscripts published in the scientific literature in tropical public health and medical zoology.

7. Publish in peer-reviewed journals on original and innovative scientific findings in the fields of tropical public health and medical zoology.

Ph.D. in Environmental Health Science

Core Learning Objectives - Environmental Health

Upon completion of the Ph.D. program in Environmental Health Science, every student will be able to critically evaluate and discuss in depth the following:

1. The anticipation, and recognition of environmental and workplace hazards

2. The evaluation of physical, biological and chemical exposures.

3. Environmental, occupational and military exposure standards as appropriate to the population.

4. Sampling and analytical methods for qualitative and quantitative analysis of unknown chemicals in laboratory and field settings.

5. The complex issues associated with environmental risk assessment and exposure monitoring during military deployments.

6. Environmental epidemiology and major regional and global environmental health problems in the context of their scientific, social, political and economic aspects.

7. Basic toxicological principles as they apply to environmental health, including routes of exposure, factors that influence human effects, endpoints for toxicologic evaluation, and the establishment of human exposure limits.

8. Significant workplace environmental health issues, including the leading causes of workplace-related disease and injury, basic exposure control mechanisms, and workplace monitoring.

9. The impact of air quality on human health, and describe the major sources of air pollutants, general means of reducing air pollution, and trade-offs associated with any control measure.

10. The principal environmental health issues related to food, and regulatory mechanisms to protect the safety of food supplies.

11. The principal environmental health issues related to drinking water, and regulatory mechanisms to insure appropriate water quality.

12. The principal environmental health issues related to waste treatment and the public health aspects of sludge disposal options.

13. The principal environmental health issues related to solid waste, including major approaches to treatment, disposal, and recycling, regulatory requirements for wastes, and incorporation of community input.

14. The public health impact of principal disease vectors and hosts.

15. The leading causes of death and injury for adults and children in the U.S. and basic control mechanisms, including industrial safety methods, analysis of accidents and injury control policies.

16. The impact of major environmental health legislation on control of hazardous and toxic wastes and substances, the protection and regulation of air, water, food and drugs, and occupational safety and health.

17. The basic methods, limitations, and applications of environmental risk assessment, risk management and risk communication.

18. The common sources of ionizing and non-ionizing radiation, quantification of dosage, basic biological effects, and methods for limiting human exposure.

19. The health impact of global environmental issues.

Core Learning Objectives - Biostatistics

Upon completion of the Ph.D. program in Environmental Health Science, every student will be able to:

1. Describe and interpret public health data using simple descriptive and graphical statistical methods, including exploratory data analysis (EDA) methods.

2. Apply the concept of probability to statistical inference.

3. Use the conditional probabilities of sensitivity, specificity, and predictive value to evaluate diagnostic and screening tests.

4. Understand and appropriately apply major statistical probability distributions (binomial, Poisson, normal, Chi-square, Student's t, and F).

5. Describe the appropriate use of sampling techniques, and the concept of the sampling distribution and its role in statistical inference.

6. State the Central Limit Theorem and describe its use in statistics.

7. Compute and interpret point and confidence interval estimates, based upon a given sample (or samples), for univariate and bivariate parametric and non-parametric situations.

8. Compute and interpret hypothesis tests, based upon a given sample (or samples), for univariate and bivariate parametric and non-parametric situations.

9. Determine the simple random sample size needed for a biomedical study by the confidence interval and hypothesis testing approaches.

10. Apply and interpret the analysis of contingency tables.

11. Understand and apply basic principles of experimental design, including randomization, pairing, blocking, blinding, nesting, and replication.

12. Build appropriate statistical models (the generalized linear model, the linear regression model, the logistic regression model, and the Cox regression model), assess the fit of the model, detect collinearity, outliers and influences, and refine the model.

13. Analyze biomedical data and interpret the results using the following models: generalized linear, linear regression, logistic regression, and Cox regression.

14. Build a relational database and use cluster analysis or probit analysis to interpret environmental data.

Core Learning Objectives - Epidemiology

Upon completion of the Ph.D. program in Environmental Health Science, every student will be able to:

1. Define epidemiology and appropriately use the language of epidemiology.

2 Formulate clear case definitions and precise exposure measures in epidemiologic studies.

3. Calculate and interpret statistical measures of association, including rate ratios/relative risks, odds ratios, and attributable risks.

4. Calculate, graphically display, and interpret basic epidemiologic measures of disease frequency (epidemic curves, frequency counts, proportions, prevalence, attack rates, incidence, mortality, case fatality).

5. Characterize disease patterns and trends within a population by describing “agent-host-environment” and “person-place-time” variables.

6. Interpret sensitivity, specificity, predictive values, validity, and reliability for screening and confirmatory diagnostic tests.

7. Design, establish, and evaluate basic medical surveillance systems.

8. Identify and use sources of national, international, and military epidemiologic data.

9. Evaluate the ethical implications of epidemiologic and other scientific studies.

10. Acquire a population/denominator-based, quantitative, medical perspective with the goal of appropriately evaluating and/or conducting applied epidemiological research and advancing health through quality scientific investigation.

11. Discuss ways in which original hypotheses are developed, develop these hypotheses, apply them to current research in preventive medicine and public health, and judge causality.

12. Explain how to use epidemiological evidence to judge causal relationships among possible factors and health outcomes.

13. Discuss in depth the advantages and disadvantages of the different epidemiologic study designs (case series, ecologic, cross-sectional, case control, cohort and clinical trial), and, when given a research question and the necessary background information, design the appropriate study.

14. Evaluate and explain the impact that chance, bias, confounding, and effect modification, as well as statistical power, sampling methods, and sample size, have on epidemiologic findings and generalizability, and apply appropriate measures to deal with these issues in designing and analyzing epidemiologic studies.

15. Design and conduct an outbreak investigation, including data collection and analysis, interpretation of findings, and formulation of intervention recommendations.

Core Learning Objectives – General Public Health

Upon completion of the Ph.D. program in Environmental Health Science, every student will be able to:

1. Work in interdisciplinary groups to address specific public health and scientific issues in the field of environmental health science.

2. Synthesize ideas and apply principles from different public health and scientific disciplines.

3. Apply theoretical knowledge from academic courses to practical situations in environmental health science and public health.

4. Communicate effectively and appropriately for the audience, and to express themselves clearly and persuasively, both orally and in writing, on issues relating to environmental health science and public health.

5. Serve as a competent and effective instructor in a graduate level course having mastered designing and giving lectures, constructing instructional objectives, lesson plans and examination questions, and helping students with problems.

6. Critically review, discuss, and present an evaluation of manuscripts published in the scientific literature in environmental health science.

7. Publish in peer-reviewed journals on original and innovative scientific findings in the field of environmental health science.

Annual Report

1 October 2003 – 30 September 2004

Centers for

Preventive Medicine and Public Health

Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Science

Kenneth E. Kinnamon, DVM, PhD

Director

CENTERS FOR PREVENTIVE MEDICINE

AND PUBLIC HEALTH

DEPARTMENT OF PREVENTIVE MEDICINE AND BIOMETRICS

GERALD V. QUINNAN, Jr., MD, CAPT, USPHS
CHAIRMAN

F. EDWARD HEBERT SCHOOL OF MEDICINE
UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

TABLE OF CONTENTS

Uniformed Services University of the Health Sciences ……7

Department of Preventive Medicine and Biometrics ……...15

Centers for Preventive Medicine and Public Health ……19

Year Activities Summary ……23

Center for Application of Remote Sensing and GIS Public Health (Landscape Epidemiology) …….25

Center for Environmental and Occupational Health ……. 28

Center for Ergonomics and Workplace Health ……..43

Center for Force Health Protection Studies ……...55

Center for International Health ……..76

Center for Oral Health Studies ……...78

Center for Population Health …….82

UNIFORMED SERVICES UNIVERSITY

OF

THE HEALTH SCIENCES

UNIFORMED SERVICES UNIVERSITY
OF THE HEALTH SCIENCES

MISSION

The Uniformed Services University of the Health Sciences is the Nation's federal health science university and is committed to excellence in military medicine and public health during peace and war. We provide the Nation with health professionals dedicated to career service in the Department of Defense and the United States Public Health Service and with scientists who serve the common good. We serve the uniformed services and the Nation as an outstanding academic health sciences center with a worldwide perspective for education, research, service, and consultation; we are unique in relating these activities to military medicine, and military medical readiness.

UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

VISION

We are the Nation's federal health sciences university, recognized as an outstanding scholarly educational center. Our component schools and institutes are dedicated to excellence and innovation in education, research, and service worldwide.

We are a university that grants degrees in health sciences at all levels. Producing outstanding scientists and health care practitioners to extreme environments.

We are a major coordinating center for consultation, support, and advocacy education and operational readiness training in the health sciences, throughout the careers of uniformed medical personnel.

We have a cooperative mutually supportive and valued interaction with DoD hospitals that enhances undergraduate education, research programs and patient care.

We have a partnership with the Henry M. Jackson Foundation for the Advancement of Military Medicine that enriches our scholarship and contributes to our fiscal stability and maximum development.

We attract a diverse population of qualified individuals and encourage their personal and professional development. Our students, faculty, and staff appreciate that they are essential to the work and success of each other and the University.

We are exemplary in providing access and opportunity for career development to people traditionally under-represented in medicine, science, academic, and government service.

We prepare and inspire our students, faculty, and staff for a lifetime of learning, leadership, and service.

Our programs, scholarly activities, faculty and graduates make outstanding contributions through out the medical and scientific communities.

To Provide the Nation with medical officers and scientists of character who Serve the common good.

DEPARTMENT

OF

PREVENTIVE MEDICINE

AND

BIOMETRICS

DEPARTMENT OF PREVENTIVE MEDICINE AND BIOMETRICS

MISSION

Teaches courses to medical students in biostatistics, epidemiological methodology, diagnostic parasitology, medical zoology, environmental and occupational medicine, and the structure and administration of health-care organizations.

Selects and teaches graduate students in the following degree programs: Master of Public Health, Master of Tropical Medicine and Hygiene, Doctor of Public Health and Doctor of Philosophy in Medical Zoology.

Conducts laboratory, clinical, and field research in the areas of seroepidemiology, epidemiology, and tropical infectious diseases.

Participates in, and consults to preventive medicine programs rum by the U.S. Army, the National Institutes of Health, the U.S. Navy, and the U.S. Air Force.

The Department of Preventive Medicine and Biometrics reports to the Dean of the School of Medicine.

CENTERS FOR PREVENTIVE MEDICINE

AND

PUBLIC HEALTH

Kenneth E. Kinnamon, DVM, PhD - Director
Lorie E. Hutton – Centers Operations Manager
Felicia Funderburk – Centers Administrative Assistant

CENTERS MISSION

The Centers for Preventive Medicine and Public Health, an entity within the Department of Preventive Medicine and Biometrics, operates under terms of a memorandum of understanding with the Henry M. Jackson Foundation for the Advancement of Military Medicine (HMJ). Combining broad expertise in research, consultation, education, training, and clinical preventive medicine and public health, we develop databases and analytic methodologies, prepare innovative curricula, and evaluate processes and outcomes in clinical practice.

The Centers serve program managers and policy makers in the Department of Defense, other federal agencies, local governments and private organizations concerned with health policies and service. We coordinate the resources of multiple separate centers of excellence to ensure that the appropriate collective expertise is applied. We enhance the stability and long-term effectiveness of our parent organization by attracting, retaining, and providing for the professional growth of outstanding faculty and staff, by providing high quality educational experiences to our students, and by promoting excellence in clinical preventive medicine and public health.

- Center for Application of Remote Sensing and GIS in Public Health (Landscape Epidemiology)
- Center for Environmental and Occupational Health
- Center for Ergonomics and Workplace Health
- Center for Force Health Protection Studies
- Center for International Health
- Center for Oral Health Studies
- Center for Population Health

YEAR

ACTIVITIES

SUMMARY

CENTER FOR APPLICATION OF REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEMS (GIS) IN PUBLIC HEALTH
(Landscape Epidemiology)

MISSION

The Center conducts basic landscape epidemiological research using remote sensing (RS), geographic information systems (GIS) and other technologies to protect the environment and improve public health. We compile satellite and earth-based data to identify relationships between environmental parameters and human health. This information is used to predict the temporal and spatial distribution of diseases, as the impact of environmental perturbations on health.

PERSONNEL

Donald R. Roberts, PhD, Tropical Public Health – Director
Penny M. Masuoka, MS, Remote Sensing and GIS Specialist – Co – Director
Richard G. Andre, PhD, Tropical Public Health – Program Manager
John Grieco, PhD, Tropical Health
George Schultz, PhD, Tropical Public Health

WORKING AGREEMENTS

NASA Goddard Space Flight Center
University of California
Ministry of Health, Belize
GeoEco Arc, Washington, D.C.

PRODUCTS

Formal courses in Applications of Remote Sensing and Geographic Information System Technologies to Public Health
Applications of Remote Sensing to Malaria Control in Belize
Applications of Remote Sensing to Studies of Bartonellosis in Peru
Applications of Remote Sensing to Studies of Malaria in Thailand

FY 04 SUMMARY

Remote sensing has an increasingly prominent role in the improvement of public health programs. Graduate students in public health are therefore seeking formal training and experience in remote sensing technology. Our previously supported NASA research and equipment provided by a special NASA grant for purchase of hardware and software have been used to establish a Center in which remote technology is applied to emerging and reemerging infectious diseases and environmental health. The Center provides faculty expertise and the software and hardware necessary for students and faulty to engage in remote sensing and GIS research projects in public health.

In addition, the Center's two courses GIS Methods in Public Health and another's on applications of remote sensing in public health. The Center also offers both credit and non-credit course cover the basic elements usually taught in remote sensing and GIS class but emphasize the area most likely to be used in the public health field; such as classification, raster GIS modeling, and integrating field maps with remotely sensed images.

DESCRIPTION OF COMPUTER FACULTY

The Center's computer laboratory was moved to a temporary location in room a 2058 to a more spacious and better-equipped lab in A 2060. The computer system consists of:

An HP 2500CP wide-format printer
A black and white laser printer
A color scanner
A Tektronix Phasar 740 Color Laser Printer
4 Dell Precision 650 Computers
A Macintosh G4 computer

Each Dell computer includes 140 gigabytes of disk space and 1 gigabyte of memory. Each Dell has a DVD / CD read/ write drive for backups and ingesting data. The wide-format plotter prints posters and maps up to 36" wide.

Software on the machines includes:

PCI's EASI/PACE
ArcGIS
Statistical packages
Microsoft Office
Adobe Photoshop and Illustrator The PCI package is the primary image processing software on the system. GIS processing is done in ArcGIS.

SUPPORT OF RESEARCH ACTIVITIES

Recently funded proposals use Center computers and equipment to perform research. A proposal funded by NIH studies the effect of human-induced change on mosquito habitats in Belize. This project uses Center computers in support of research activities. This grant is for a 5-year grant.

The Center's printers are being used to assist in the publication of research results from the Center. As the training and course work continue, we anticipate students and faculty adding new projects to the Center in both infectious disease and environmental health studies.

REMOTE SENSING AND GIS COURSE

The courses covered remote sensing, image processing, geographic information systems (GIS), and spatial analysis methods as applied to the field of public health. The goal of the courses was to give students a combination of theoretical background, example applications in the literature and hands-on experience in using hardware and software that enabled students to use the techniques discussed in class in a knowledgeable way in their research and future work in public health uses of image processing and GIS software.

The textbooks were "Remote Sensing Principals and Interpretation" by Floyd F. Sabins and "Principles of Geographical Information Systems" by Burrough and McDonnell. Students were also responsible for reading selected publications that use remote sensing and GIS techniques in the field of public health.

The students and faculty have been enthusiastic about the courses and the courses will be offered again in Fall Quarter 2005 and Winter Quarter 2005-2006. The Center has taught a course " Remote sensing and GIS methods in public health" since the fall of 1999. This year the course was taught as two courses. One was a 2-credit course "Introduction to GIS in public health" taught in the fall of 2004. The second was a 3-credit course "Remote sensing methods in public health" taught in the Winter 2004-2005.

RESEARCH PROJECTS:

The Center for Application of Remote Sensing and GIS in Public Health (Landscape Epidemiology) continued studies in Belize to apply remote sensing and geographic information systems to the national malaria control program. The Center has been working on malaria in Belize since 1995 with funding from NASA. The Center has received funding from NIH with the University of California, Davis, to continue its work in Belize. Research under the NIH with grant is focused on studying human-induced change, such as deforestation along streams and changes in marsh vegetation due to

agricultural runoff, and the effect these changing environments have on malaria. One Doctorate of Public Health student used historical malaria data collected during the earlier Belize research in her dissertation. Another PhD student contributed to the mapping of deforestation along rivers under the Belize grant and used study as part of her dissertation.

CENTER FOR ENVIRONMENTAL AND OCCUPATIONAL HEALTH

MISSION

The Center promotes excellence in programs focusing on environmental and occupational health by providing research, consultation, education, and training support to government entities and educational institutions. Areas of interest pertaining to environmental and occupational health include policy, education and training, health risk and hazard assessment standards setting, resource management, regulatory compliance, pollution prevention, and environmental restoration. One research focus is on the development and application of new analytical methodologies for field exposure assessment, such as solid phase microextraction sampling, fast gas chromatography-mass spectrometry, and the use infrared det ectors to identify the presences of chemicals. Other research interests include studying the bioavailability of chromate containing primer paints used in DoD ships and aircraft. Research is also conducted to determine skin and corneal effects of several lasers used in DoD operational systems.

PERSONNEL

Thomas A. Neal, MD, MPH, Environmental and Occupational Medicine – Director
Gary L. Hook, PhD, MPH, CIH, Environmental Health Science – Deputy Director, Principal Investigator
Robert J. Fitz Jr., MSPH, MPH, Environmental Science - Executive Director& Principal Investigator/HMJF
Thomas E. Johnson, PhD, Health Physics – Principal Investigator/USUHS
Peter T. LaPuma, PhD, PE, CIH, Environmental Engineering – Principal Investigator/USUHS
Scott A. Nemmers, PhD, Medical Physicist, USUHS
Gary Morris, PhD, Industrial Hygienist, USUHS

WORKING AGREEMENTS

U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM)U.S. Marine Corp Chemical Biological Incident Response Force (CBIRF)
Department of Defense (DoD)
U.S. Marine Corps Systems Command (MARCORPSYSCOM)
Indian Health Service (IHS)
Navy Surface Warfare Center (NSWC)
US Army PRMRP

PRODUCTS

CHPPM -	Enhancement of Army Global Preventive Medicine Program in Selected Functional Areas.
CBIRF –	Training for Field Chemical Detection;
	Field Sampling and GC-MS Methods for Detection of Chemical Warfare Agents
IHS -	Post-Graduate Fellowship in Environmental Health
NSWC	Directed Energy Bio-effects
PRMRP	Triage and Treatment of Laser Eye Injuries

FY 04 SUMMARY

This section provides a summary of FY 04 highlights for each of the research/study projects under the Center' s oversight. Curriculum Vitae for all members of the Center follow the narrative summaries. A list of publications and presentations is also provided.

1. Indian Health Service Education and Training Support Program (PI: Maj Scott Nemmers): The principle output of this program is the administration of a one year Environmental Health Post-Graduate Fellowship on behalf of the Indian Health Service of the US Public Health Service.

2. Enhancement Through Operational Research of the US Army's Global Preventive Medicine Program (PIs: Robert Fitz; COL Thomas Neal): This project is a follow-on to an original grant initiated in July 1995 that terminated on March 31, 2001. The original grant consisted of nine separate research initiatives (health risk assessment; health promotion; health hazard assessment; occupational and environmental medicine; environmental compliance and pollution prevention; medical entomology; radiation protection; preventive medicine readiness planning; and preventive medicine planning and integration), with five research tasks to be accomplished (conduct a program assessment; develop alternative program change methodologies; develop measures of merit to evaluate alternative methodologies; implement and evaluate the selected

methodology; and publish results), and a total funding level of $21.362M. A total of 52 Henry M. Jackson Foundation employees were working on the project on-site at CHPPM up until project termination the end of March 2001. Over the five and ½ year life of the original project, over 500 publications were produced, including technical reports and assessments, peer-reviewed and other publications, training session materials, studies, and professional meeting presentations.

Because of the success of the original grant project, CHPPM reinitiated a follow-on project with USUHS and HJF that began 1 April 2001 as a contract effort. Funding in the amount of $4.2M for the first year (1 April 2001 through 31 March 2002) of the follow-on project was received. The follow-on project, titled "*Enhancement through Operational Research of the US Army's Global Preventive Medicine Program*", is divided into 10 study areas: Health Risk Assessment, Health Promotion, Health Hazard Assessment, Epidemiology and Medical Surveillance, Environmental Health and Compliance, Medical Entomology, Radiation Protection, Ergonomics, Clinical Preventive Medicine, and Informatics. A total of 58 personnel were employed through the HJF for this project, most of them as carry-overs from the earlier project. At the completion of the first year as a follow-on project, the project was re-established as a new one-year contract effort on 1 April 2002, with four follow-on option years built in. Funding in the amount of $3.2 M was received for the 1st year of the new contract (1 April 2002 through 30 March 2003), and $2.8 for the second year (1 April 03 through 31 March 04). As of 30 September 2003, 31 personnel are employed through the HJF to work on the project, down from the 47 at the end of FY 02. The reduction in personnel has primarily occurred through the conversion of HJF employees to temporary Civil Service status at CHPPM.

3. Development of Environmental Organic Contaminant Sampling and Analysis Methods (MARCORPSYSCOM funded) (PI: CDR Gary Hook, PhD; LtCol Peter LaPuma): The EOH research group studying field-detection methods for military relevant chemicals has been focusing on three areas:

Field Detection Methods for Military Relevant Compounds.

Research conducted by LT Doug Parrish (PhD student) has focused on the use of a new solid phase microextraction (SPME) method called solid phase dynamic extraction (SPDE) coupled to gas chromatography-mass spectrometry (GC-MS) and a prototype photoionization, quad rupole ion trap, time-of-flight MS as a field expedient method for detection of unknown chemicals.

LCDR David Koch (MSPH student), in conjunction with the Federal Bureau of Investigation Forensic Research Laboratory and DRDC-Suffield, has initiated research utilizing a commercially available low thermal mass, resistively heated column for rapid separation of complex organic mixtures and chemical warfare agents in the field. This work has demonstrated the ability separate and identify a complex mixture of five

airborne chemical warfare agents in under three minutes. The work is continuing to look at forensics aspects of rapid field detection of airborne narcotics.

CPT Nack (MSPH student) (funded by US Army Center for Environmental Health Research) is completed research on the use of SPME/GC-MS for detection of pesticides in water.

b) Instrument development. Research is currently underway that will enhance field analytical capabilities through enhancement of existing equipment and development of a new, rapid GC-MS.

LCDR Rick Erickson (PhD student) is leading research focused on development of smaller and more portable field GC-MS systems for rapid detection of unknown chemicals in the environment. He is currently performing field evaluations of two prototype instruments for potential use by the USMC Chemical Biological Incident Response Force.

LCDR Greg Cook (PhD Student) is has recently begun collaborative research with the FBI Forensics Research Laboratory in Quantico, VA. The focus of this research is to improve performance of the ion mobility spectrometer (IMS) currently in use at airports across the nation for detection of explosives. This effort will focus on improvement of the GC portion of the instrument in order to enhance the chemical separation capability of the instrument and improve the sensitivity/reduce the false positive identifications by the instrument.

CAPT Kan (MSPH student) is collaborating with Inficon, manufacturer of the Hapsite portable GC-MS. This effort focuses on the development of a SPME injection port for the Hapsite. This instrument is currently limited to analysis of samples already in the gas phase. This will enhance the capabilities of this instrument by enabling it to analyze non-gas phase samples (i.e. aqueous samples). It will also provide the flexibility to gather SPME samples in multiple locations for later analysis while the Hapsite is in use at one location.

Capt Skinner (MSPH student) is working with Air Force and Navy elements in testing the repeatability of the inficon HAPSITE used throughout DoD as a portable GC-MS. To date, only four instruments had been tested for repeatability performance. Over 70 units will be tested in this study with 34 chemicals at various concentrations. This will allow users to understand the precision and accuracy of a system used to detect chemical warfare agents as well as toxic industrial chemicals.

Capt Bryant (MSPH student) is enhancing the capability of a field portable Infrared spectrometer called the HazMatID manufactured by Smith Systems. The system, used throughout DoD identifies compounds in liquid, solid or powder form. The current system requires a very high concentration of the chemical to be detected. This study will research various materials used to concentrate chemical so that the HazMatID can detect trace chemicals in water or in air.

Capt Newkirk (MSPH student) is evaluating the Hach 2000, which is a field portable water detection kit that uses ultraviolet and visible light to detect chemicals in water. The precision and accuracy of the system with various compounds of military interest is not well characterized. This study will challenge the instrument with various chemical concentrations to test the reliability of the system.

Training for Field Chemical Detection. The EOH research group continues to provide focused GC-MS training to military field GC-MS operators. The formal, 12-week GC-MS course developed and taught last year is being conducted again for USMC Chemical Biological Incident Response Force (CBIRF). Weekly training evolutions have continued with CBIRF throughout the year as well as faculty and student involvement in CBIRF's live agent training at DRDC-Suffield.

4. Bioavailability of Chromate Containing Primer Paints

Hexavalent chromium (Cr^{6+}) is the active ingredient used in primer paints to protect metal from corrosion. These primer paints are used on nearly all DoD aircraft and ships. Cr^{6+} is a human carcinogen and OSHA proposes to significantly lower the exposure standard making the use of Cr^{6+} containing paints prohibitive. However, lung cancer from Cr^{6+} exposure is elevated in most industries except the painting industry. One reason may be that the paint matrix hinders the release of Cr^{6+} from paint particles. An important parameter in understanding the health effects of a chemical is to determine the amount of chemical released from the inhaled particles. In this research, the fraction of Cr^{6+} released from paint particles into simulated lung fluid (SLF) will be measured. The SLF will be tested for the mass of Cr^{6+} that dissociated from the particles. The fraction of Cr^{6+} released will be correlated with particle size to determine if particle size influences the fraction of Cr^{6+} released.

5. Triage and Treatment of Laser Eye Injury on the Modern Battlefield Grant (PI: Dr. Tom Johnson, PhD).

a) List of objectives (statements of work):

Task 1 Make major equipment purchases, which include high-energy laser sources operating in the 1.3 to 2.0 µm spectral region and supporting equipment such as optics, detectors, and analysis equipment. We will also hire a full time postdoctoral fellow and laboratory technicians that will dedicate their time 100% to the successful accomplishment of this task. (Months 1 – 4).

Task 2 Determine *in vitro* and *in vivo* thresholds for injury at 1.3, 1.5 and 2.0 ÿm wavelengths. This information will be used to determine:

A. correlations between gross appearance of lesions following *in vivo* and *in vitro* exposures (Months 4 – 18)

B. correlations of biomarker expression between *in vivo* and *in vitro* exposures (Months 6 – 20)

C. theoretical and predictive models of the biophysical damage mechanisms to tissue from these wavelengths (Months 6 – 24)

Task 3 Utilize histomorphometric and biomarker data and other information from Task 2 to develop battlefield treatment techniques for thermal injuries (linear phenomena) at or near the threshold for injury. Battlefield treatments will focus on using supplies/pharmaceuticals already carried by a field medic. Special emphasis will be made on contraindicated battlefield treatments (Months 12 – 24).

Task 4 Determine thresholds for non-linear phenomena in the cornea. These non-linear effects are expected to be mechanically more disruptive to tissue, causing damage that is consistent with tearing and ripping of tissue rather than the thermal damage expected in Task 2. This information will be used to determine:
extent and permanency of tissue damage through *in vivo* and *in vitro* exposures (Months 24 – 36)
biomarker correlation between *in vivo* and *in vitro* exposures from the more severe, non-linear effects induced injuries (Months 26 – 40)
theoretical and predictive models of the biophysical damage mechanisms to tissue from non-linear effects (Months 24 - 40)

Task 5 Utilize histomorphometric and biomarker data and other information from Task 4 to develop battlefield treatment techniques for non-linear injuries significantly above the ED_{50} threshold for injury. Battlefield treatments will focus on using supplies/pharmaceuticals already carried by a field medic. Special emphasis will be made on contraindicated battlefield treatments (Months 36-48)

Our goal is to return the warrior to the fight!

b) Accomplishments/New Findings

Highlights: *Hired personnel and purchased lasers to begin testing. Funding was accomplished in March of FY03.*

c) Personnel:

One person is supported by the grant, and T. Eurell, University of Illinois, investigating use of ex-vivo tissue as a replacement model for in-vivo corneal laser exposures and the use of corneal equivalent tissue for in-vitro modeling of laser cornea exposure. We have added a doctoral student to the work and have exposed several artificial tissues and ex-vivo eyes. The 24-hour healing of tissue is under investigation, including proteomic expression.

5. "Health Effects of the 3800 nm Laser", Tom Johnson, PI

This project has yielded a multitude of information in three main areas; Artificial skin, pigskin and human skin reactions.

Artificial skin: Studies performed with artificial skin were performed in conjunction with the University of Illinois. Exposures are complete and a manuscript is in preparation.

Pig Skin: Ten pigs total have been exposed and currently three manuscripts are in preparation regarding the data collected on skin injury thresholds and thoracic injury. This information in conjunction with the artificial skin will be utilized to help set new standards for skin exposure in the ANSI Z136.1 "Safe Use of Lasers" standard.

Human Skin: The thresholds for human skin sensation of this laser, in order to determine if aversion response is possible, has been partly completed and is being prepared for submission as a manuscript.

FACULTY

ROBERT J. FITZ, JR., MSPH, MPH
Assistant Professor & Executive Director

Henry M. Jackson Foundation, Research Associate Professor
Center for Environmental and Occupational Health, Executive Director
Division of Environmental and Occupational Health, Assistant Professor
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

Member, American Academy of Sanitarians
Professional Sanitarian, Texas
Registered Sanitarian, National Environmental Health Association
Registered Sanitarian, Maryland

TEACHING

Graduate School, USUHS

Joint Medical Operations and Humanitarian Assistance (Course Director)
Analytical Instrumentation Methodologies in Environmental Health
(Course Director)
Case Studies in Environmental and Occupational Health (Course Director)
Introduction to Environmental Health (Course Director)
Industrial Hygiene I and Lab (Noise and Conservation of Hearing)
MPH/MSPH Student Advisor for Directed Studies & Research

Medical School Curriculum, USUHS

MS IV Preventive Medicine (Field Drinking Water; Operation Bold Eagle Lab)

CONSULTATION

Henry M. Jackson Foundation for the Advancement of Military Medicine

RESEARCH

Summary

Principal Investigator, "*Risk, Hazard, and Information Management of Health Promotion, Occupational Health, and Environmental Health Programs*," a five and 1/2 year grant for U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM), August 1995 to March 2001.

Principal Investigator, *"Enhancement Through Operational Research of the US Army's Global Preventive Medicine Program*," a six-year follow-on research project for the CHPPM, April 2001 to March 2007.

Funding

US Army Center for Health Promotion and Preventive Medicine
Henry M. Jackson Foundation for Advancement of Military Medicine

GARY L. HOOK, PhD, MPH, CIH, CDR, MSC, USN
Assistant Professor

Division of Environmental and Occupational Health
Department of Preventive Medicine and Biometrics
Uniformed Service University of the Health Sciences

Board Certified – American Board of Industrial Hygiene
Member, American Industrial Hygiene Association
Member, American Industrial Hygiene Association Gas and Vapor Detection Committee
Member, USMC Chemical Biological Incident Response Force, Technical Review Board

TEACHING

Graduate School, USUHS

Industrial Hygiene I (selected topics)
Industrial Hygiene 2 emphasis in NBC Detection (Co-director)

Industrial Hygiene Field Studies (Course Director)

Environmental Chemistry (Course Director)
Analytical Instrumentation Methods in Environmental Health (Course Director)
Environmental Health (selected topics)

Other

American Industrial Hygiene Conference, Professional Development Course: Direct Reading Detection Technology for Chemical, Biological and Radiological Agents

RESEARCH

Summary
Development of field friendly sampling methods for gas chromatography-mass spectrometry analysis (GC-MS).
Development of small footprint GC-MS instrumentation for rapid field analysis of complex mixtures of unknown chemicals

Funding
MARCORPSYSCOM

CONSULTATION

USMC Chemical Biological Incident Response Force
US Postal Service Capital Hill Mail Task Force
DoD Field Portable Analytical Equipment Working Group

THOMAS E. JOHNSON, PHD
Assistant Professor

Division of Environmental and Occupational Health
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, MD

Board Certified Health Physicist
Board Certified Radiation Protection Technologist
Certified Laser Safety Officer
Fellow, American College of Forensic Examiners
President, Baltimore Washington Chapter HPS
Secretariat, Health Physics Society History Committee
Member, ANSI Z136.1 Revision Committee
Member, Laser Institute of America
Member, American Industrial Hygiene Association

Member, American Academy of Health Physics
Member, Radiation Research Society
Member, Health Physics Society Member, American Nuclear Society

TEACHING

Graduate School, USUHS

Introduction to Health Physics (Course Director)
Environmental Health Physics (Course Director)
Non-Ionizing Radiation (Instructor)
Medical Effects of Ionizing and Non-ionizing Radiation (Instructor)
Criticality and Shielding (Instructor)
Toxicology (Instructor)
Environmental Chemistry (Instructor)

Other Courses

Health Physics Certification Review Course
Radiation Basics, USAF School of Aerospace Medicine

RESEARCH

Summary

Biological effects of lasers and physics of laser tissue interaction.
Biological effects of ionizing radiation
Depleted Uranium

Funding

Primary Investigator, Triage and Treatment of Laser Eye injuries on the Modern Battlefield, Protocol #G187QR, (March 2003 to March 2007) ($1.6M)

Primary Investigator, Bioeffects of the Pulsed Energy Projectile, Protocol #G187RD, (Dec 2002 to present) ($260K)

Primary Investigator, Examination of occupational exposure to lasers in the Air Force and DoD, Protocol #G187PH, (Nov 2001 to Nov 2003) ($100K)

PETER T. LAPUMA, PhD, PE, CIH, BSC, LTCOL, USAF
Assistant Professor

Division of Environmental and Occupational Health, Assistant Professor

Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

Professional Engineer, Ohio
Board Certified Industrial Hygienist
Member of American Conference of industrial Hygiene
Member of Tau Beta Pi, Engineering Fraternity

TEACHING

Graduate School, USUHS

Industrial Hygiene 1 with Lab (Course Director)
Industrial Hygiene 2 emphasis in NBC Detection (Course Director)
Fundamentals of Human Physiology (Course Director)
Environmental Health Risk Assessment (Course Director)
Environmental Health (Course Director)
Essentials of Toxicology (Risk Assessment)
Advanced Environemntal Health (Air Pollution)
Environmental Chemistry (Air Science and metals)

CONSULTATION

US Air Force Pollution Prevention Centers Working Group
DoD Field Equipment Working Group

RESEARCH

Summary

Optimization of Field Detection Portable Equipment
Bioavailability of Chromate containing primer paint

Funding

$72K through the Defense University Research Instrumentation Program for the purchase of an Inductively Coupled Plasma Optical Emission Spectrometer to detect metals

$50K through the Air Force Pollution Prevention Office to research chromate dissociation in simulated lung fluid

GARY A. MORRIS, PhD, CSP, LCDR, MSC, USN
Assistant Professor

Division of Environmental and Occupational Health
Department of Preventive Medicine and Biometrics
Uniformed Service University of the Health Sciences

Board Certified – American Society of Safety Engineers
Member, American Society of Safety Engineers

TEACHING

Graduate School, USUHS

Industrial Ventilation
MSPH Journal Club
Environmental Health (selected topics)

RESEARCH

"Safety's Effect on Success: A study to examine if doing well on the NAVOSH section of a ship's INSURV Material Inspection increases the ship's odds of doing well on the other sections of the inspection.

Application of the Traditional Epidemiological Model to Predict Occupational Injury Rates in Manufacturing Industries.

SCOTT A. NEMMERS, PhD, DABR(D), Maj, USAF, BSC
Assistant Professor

Division of Environmental and Occupational Health
Department of Preventive Medicine and Biometrics
Uniformed Service University of the Health Sciences

Board Certified – American Board of Radiology, Diagnostic Medical Physics

TEACHING

Graduate School, USUHS

Medical Physics (Course Co-director)
Reactors, Criticality and Shielding (Course Director)
Radiological Military Operations (Course Director)
Instrumentation for Health Physics (Course Director)
Health Effects of Ionizing and Non-ionizing Radiation (Course Director)

RESEARCH

No current research projects at this time.

THOMAS A. NEAL, MD, MPH, COLONEL, USAF, MC, SFS
Assistant Professor & Director, Division of Environmental and Occupational Health

Director, Center for Environmental and Occupational Health
Division of Environmental and Occupational Health, Assistant Professor
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

Member, American College of Occupational and Environmental Medicine
Member, American Society for Laser Medicine and Surgery

TEACHING

Graduate School, USUHS

Essentials of Toxicology (Course Director)
Human Physiology (Course Director)Safety Engineering (Course Director)
Environmental Health (Lecturer)
MPH/MSPH Student Advisor for Directed Studies & Research

RESEARCH

Summary

Principal Investigator, *"Enhancement Through Operational Research of the US Army's Global Preventive Medicine Program*," a five-year follow-on research project for the CHPPM, April 2001 to March 2006.

Funding

US Army Center for Health Promotion and Preventive Medicine
Henry M. Jackson Foundation for Advancement of Military Medicine

Publications

B. Ketzenberger, T. E. Johnson, Y. A. Van Gessel, S. P. Wild, W. P. Roach, "A Study of Corneal Lesions in the Dutch Belted Rabbit (Oryctolagus cuniculus) Induced by 1318 nm Laser Radiation Pulses." Comparative Medicine, Vol. 52, No. 6, p. 513-517, December, 2002

T.F. Clarke, T.E. Johnson, B. Ketzenberger, W.P. Roach, "Corneal Injury Threshold And Public Health Implications Of The 1540 nm Laser (Infrared Laser Eye Injury)" Aviation, Space, and Environmental Medicine, Vol. 73, No. 8, p. 787-790, August 2002.

T.E. Johnson, N. Keeler, J.E. Dennis, C.L. Figueroa, H.A. Press, R. J. Rockwell Jr., B.E. Stuck, W.P. Roach, A.L. Wartick, "Investigation of Laser Injuries" Proceedings of SPIE, Vol. 4961, January 2003.

T. E. Johnson, G.C.H. Winston, W.L. Greene, "A Comparison of Yucatan mini-pig and Yorkshire pig skin response to 1318 nm laser pulses," Proceedings of SPIE, Vol. 4961, January 2003.

T.E. Johnson, N. Keeler, A. Wartick, "Laser Eye Injuries Among US Military Personnel," Proceedings of SPIE, Vol. 4953, January 2003.

T. E. Eurell, T. E. Johnson, W. P. Roach, "Histomorphometric and proteomic analysis of the acute corneal tissue response following in vitro exposure to 1540 nm laser light," Proceedings of SPIE, Vol. 4953, January 2003.

T.E. Johnson, G.C.H. Winston, M. Burton, W.L. Greene, "Porcine Dermal Lesions Produced by 1.3 micron Laser Pulses," Proceedings of SPIE, Vol. 4961, January 2003.

G.C.H. Winston, W.L. Greene, T.E. Johnson, "Utilizing Yucatan Mini-pigs for 1318 nm Skin Exposure ED50 Determination," Proceedings of SPIE, Vol. 4961, January 2003.

T.E. Johnson, W.P. Roach, "Solution to question 9 from the American Board of Health Physics Exam," Health Physics Society Newsletter, November 2002.

W.P Roach, T.E. Johnson, Ultrashort Laser Pulse Bioeffects, Milestones in Science Series, International Society for Optical Engineering Press, Bellingham, WA (ISBN 0-8194-4747-1), 678 pages (Jan 2003)

T. Johnson, Editor, Electro Med 2003 Symposium Record Abstracts, (May 2003)

LaPuma P. T. and Rhodes B. S. "Chromate Content Versus Particle Size For Aircraft Paints" Regulatory Toxicology and Pharm. Journal, 36: 318-324 (December 2002)

LaPuma P. T., Schilke, R.A. Kauth D., Morgan T. "Chromate Dissociation From Three Types of Paint Particles" Regulatory Toxicology and Pharmacology Journal, 36: 325-330 (December 2002)*****

LaPuma, P. T. "Chromate Concentration Bias In Various Sized Primer Paint Particles" Air and Waste Management Conference Paper, Baltimore, MD (June 2002)

Contributed Talks At Conferences

Krystyn Clark, T.E. Johnson, "Trends in Laser Injury Reporting, " Joint International Laser Conference, keynote speaker, September 22, 2003.

T.E. Johnson, Ardith L. Wartick, "Laser Injuries and Deaths," International Laser Safety Conference, Pub. 219, Vol. 5, March 2003.

T.E. Johnson, G.C.H. Winston, M. Burton, W.L. Greene, "Porcine Dermal Lesions Produced by 1.3 micron Laser Pulses," OE/BIOS, San Jose CA, January 2003.

T.E. Johnson, N. Keeler, J.E. Dennis, C.L. Figueroa, H.A. Press, R. J. Rockwell Jr., B.E. Stuck, W.P. Roach, A.L. Wartick, "Investigation of Laser Injuries" OE/BIOS, San Jose CA, January 2003.

T.E. Johnson, G.C.H. Winston, W.L. Greene, "A Comparison of Yucatan mini-pig and Yorkshire pig skin response to 1318 nm laser pulses," OE/BIOS, San Jose CA, January 2003.

T.E. Johnson, N. Keeler, A. Wartick, "Laser Eye Injuries Among US Military Personnel," OE/BIOS, San Jose CA, January 2003.

Hook GL, Jackson-Lepage C, Miller SI, and Smith PA: Dynamic solid phase microextraction for sampling of airborne sarin with gas chromatography/mass spectrometry for rapid field detection and quantification. *J. Sep. Sci.* 27(2004) 1017

Smith PA, Jackson-Lepage C, Koch D, Wyatt H, Hook GL, Betsinger G, Erickson RP, Eckenrode BA: Detection of gas phase chemical warfare agents using field-portable gas chromatography-mass spectrometry systems: Instruments and sampling strategy considerations. *Trends Anal. Chem.* 23 (2004) 296.

Smith PA, Sng MT, Eckenrode BA, Leow SY, Koch D, Erickson RP, Jackson Lepage CR, Hook GL: Towards Smaller and Faster Gas Chromatography-Mass Spectrometry Systems for Field Chemical Detection. *J. Chromatogr. A.* (accepted).

PRESENTATIONS

"Lasers and the Skin," Dermatology Department, Malcolm Grow USAF Medical Center, Andrews AFB, MD, 4 Jun 2003

"An Introduction to Lasers in Cutaneous Surgery," Surgery Department, Malcolm Grow USAF Medical Center, Andrews AFB, MD, 10 Apr 2003

"Air Force Surgeon General Response Team: 911, NYC Lessons Learned," National Security Agency, Ft Meade, MD, 20 Jun 2002

"Current Air Force Fuels Personal Protective Equipment Selection Methodology," American College of Occupational and Environmental Medicine, American Occupational Health Conference, Chicago, IL, 13-18 Apr 2002

"The Washington View," International Jet Fuels Conference on JP-8, San Antonio, TX, 7-10 Aug 2001

"Safety's Effect on Success: A study to examine if doing well on the NAVOSH section of a ship's INSURV Material Inspection increases the ship's odds of doing well on the other sections of the inspection, *Navy Environmental Health Conference, March 2002.*

"INSURV Navy Occupational Safety, Health, and Environmental Inspection," *Navy Environmental Health Conference, Virginia Beach, VA, March 23, 2004.*

Afloat Respiratory Protection: Protection or Neglect," Navy Environmental Health Conference, Virginia Beach, VA, 23 Mar 2004.

CENTER FOR ERGONOMICS AND WORKPLACE HEALTH

MISSION

The Center focuses on an integrated approach to ergonomics and occupational health targeting both the civilian and military workplace. Research in the Center is directed at understanding the interactive roles of medical, biomechanical, organizational, workplace and individual psychosocial factors in the etiology, prevention and management of prevalent occupational health problems. Currently, the Center conducts research on the mechanisms and management of workplace musculoskeletal disorders and is also involved in education, public policy, and consultation. The Center is a joint effort between the Departments of Preventive Medicine and Biometrics and Medical and Clinical Psychology.

PERSONNEL

Michael Feuerstein, Ph.D., MPH (Medical/Clinical Psychology; Preventive Medicine/Biometrics) – Director
Col Mary S. Lopez, Ph.D., CPE, OTR (Ergonomics; Occupational Therapy) – Co-Director
Grant D. Huang, MPH, Ph.D. (Adjunct Assistant Professor, Medical/Clinical Psychology) – Research Associate
Andrew E. Lincoln, Sc.D. (Injury Epidemiology) – Consulting Research Associate
Glenn S. Pransky, M.D., M.OccH. (Occupational Medicine) – Consulting Research Associate
Capt. Rena Nicholas, M.S. (Medical/Clinical Psychology) – Graduate Student Associate
ENS William Johnson (Medical/Clinical Psychology) – Graduate Student Associate
Maj. Drew Widing, P.T. EdM (Work Environment) – Graduate Student Associate
Heather Rogers, M.A. (Medical/Clinical Psychology) – Graduate Student Associate
Cherise Baldwin (Medical/Clinical Psychology) – Graduate Student Associate
Lisseth Calvio (Medical/Clinical Psychology) – Graduate Student Associate

WORKING AGREEMENTS

U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM)
Office Ergonomics Research Committee (OERC)
Johns Hopkins NIOSH Education and Research Center
Department of Defense
CNA Insurance Company, Chicago, IL

FY 04 SUMMARY

1. *Patient Satisfaction, cost and treatment guidelines: Musculoskeletal disorders. (PI: Michael Feuerstein):*

The premise for developing treatment guidelines is to improve healthcare outcomes and costs for the disease, injury, or disorder that is addressed using existing standards of care. The Department of Defense (DOD) and Veterans Administration (VA) have developed treatment guidelines for a number of health problems. Among the existing treatment

guidelines are standards for treating low back pain, however, no DOD/VA guideline exists for the treatment of upper extremity pain at this time. It is currently unclear what effect the existence and implementation of these guidelines, as well as compliance with these guidelines, have on patient satisfaction, functional outcomes, perceived health and healthcare costs.

This study has two aims: 1) to determine trends in provider compliance with these guidelines both across years and within an episode of care and 2) to compare the patient satisfaction and perceived health outcomes from the Health Care Survey of DOD beneficiaries and the administrative data on functional outcome and healthcare costs for active duty personal, retirees and dependents with low back pain diagnoses (disorders for which there is an existing treatment guideline) in contrast to those with upper extremity diagnoses (not addressed with a treatment guideline at this time). These comparisons will examine the role of guideline compliance and highlight any benefits gained from the existence and implementation of treatment standards.

This study is funded by the Epidemiology Health Program Analysis and Evaluation branch of the TriCare Management Activity (Department of Defense and Veterans Administration).

2. *Prospectively Identifying Patterns of Ergonomic and Work Organization Risk Factors for Musculoskeletal Disorders (PI: Grant Huang, Co-PIs: Michael Feuerstein, Rena Nicholas):*

In the U.S. Marine Corps, Huang and colleagues have identified back and upper extremity disorders to be major sources of lost time and clinic visits. While there have been an increasing number of studies that have identified risk factors for work-related musculoskeletal disorders, no prospective studies have examined combinations of ergonomic and specific work organization factors related to time pressure, cognitive demands, interpersonal demands, and participatory management. The aims of the present study are to: 1) determine the incidence of diagnosed low back and upper extremity disorders among enlisted U.S. Marines and 2) delineate ergonomics and specific work organization risk factors for such musculoskeletal outcomes at 6 and 12 months post baseline questionnaire. Follow-up data on ICD-9 musculoskeletal-related diagnoses recorded at clinic visits will be obtained from a medical administrative database.
This investigation represents a key next step in a series of studies designed to develop an innovative secondary prevention program for work-related low back and upper extremity-related disorders. In particular, findings may shed light on those ergonomic factors and specific dimensions of work organization to be targeted in prevention efforts. Furthermore, the prospective nature of this research can potentially provide insights into mechanisms for musculoskeletal outcomes and assist in reducing burdens associated with health care utilization, financial costs, and lost productivity.

This study is funded by the Johns Hopkins NIOSH Education Research Center.

3. *Work style Intervention for the Prevention of Work-Related Upper Extremity Problems (PI: Rena Nichols, Co-PI: Michael Feuerstein):*

Work-related upper extremity disorders (WRUEDs) are a considerable source of distress and disability in the modern workforce. Research has identified that physical risk factors (i.e., workplace ergonomic design and biomechanical motions required by the task, etc.), psychosocial risk factors (i.e., workplace stress, workload, etc.), and personal risk factors (i.e., individual coping style, appraisal style, medical history/status, etc.) all play a role in the development, exacerbation, and maintenance of WRUEDs. However, prevention methods often focus on the modification of only one of these risk factors (i.e., ergonomic redesign only or individual stress management only). Recent investigations using combined approaches (i.e., ergonomic redesign and individual stress management) show promise for increasing the effectiveness and durability of intervention benefits. Work style is a description of how people perform their work and is proposed as a mechanism by which ergonomic and psychosocial stressors in the workplace interact with the individual's response style to place a worker at risk for the development and/or exacerbation of WRUEDs. Inclusion of work style-related interventions into workplace WRUED prevention (primary and secondary) programs may result in better overall treatment gains.

This study is a randomized controlled trial of workplace intervention for secondary prevention of work-related upper extremity symptoms and functional limitations. Symptomatic workers will be assigned to one four-treatment conditions: ergonomics-only (current standard practice), only-only (investigation of cognitive-behavioral modification of how individuals perform work), work style and ergonomics combined condition, and wait-list control. Measures of ergonomic risk, psychosocial stress, work style response, and symptom status were collected at baseline, post-treatment, at 3-months, and will be collected at the12-month follow-up period. This aim of this study is to determine if the addition of related-related interventions result in positive outcomes. The findings may enhance the development of effective workplace programs to prevent WRUEDs. Findings at three months indicate nonspecific effects have lead to improvements over time for all groups with no significant differences across treatment modalities. Findings at 12 months will be reported later this year.

This project is funded by the Office Ergonomics Research Committee and will be conducted in collaboration with CNA Insurance Company in Chicago, Illinois.

4. *Work Productivity in Cancer Survivors: Brain and Breast Cancer (PI: Michael Feuerstein, co-PI: Jennifer Hansen)*

Consistent with the mission of the center, we are examining cancer survivorship and work. The survival rates of many types of cancer are increasing and there is now a greater focus on optimizing long-term function. While the management of cancer is primarily directed at lowering patient mortality, problems often remain as a result of the long term neurotoxic consequences of some of the cancer treatments, especially in those living longer. Return to work and productivity measures while at work could, in part, be affected by these neurotoxic effects. There is a need for studies that investigate the multiple factors that may be associated with return to work and work productivity in cancer survivors. This type of investigation can not only lead to a better understanding of the role of such factors as neuro-cognitive limitations, fatigue, and mood, but can also help to implement effective accommodations that can more precisely assist cancer survivors. The present study is an investigation of cancer survivors' return to work, lost work time, and work productivity. More specifically, it is designed to delineate the impact of cognitive limitations on work outcomes while controlling for disease, treatment type, health behaviors, fatigue, quality of life, mood, cognitive limitations and problem solving. This research will help guide future intervention efforts to improve work reintegration in cancer survivors.

5. Work-Related Upper Extremity Disorders in Sign Language Interpreters: A Qualitative Analysis (Michael Feuerstein, William Johnson)

This study provides a qualitative content analysis of sign language interpreters (n=1092) across the country (National Register of Interpreters) in relation to the development of work-related upper extremity symptoms and their management (medical, health care in general and work-related).

Future Plans:

We are coordinating an International Conference on Biobehavioral Interactions in Upper Extremity Disorders. This project has been approved and is scheduled for Spring, 2005.

We are currently discussing the results of the clinical practice guidelines study with Col. Stacey Young-McCaughan, BAMC and COL Leo Bennett, MEDCOM. We plan to brief the Assistant Secretary of Defense for Health Affairs and determine the policy implications of our work in this area.

FACULTY

MICHAEL FEUERSTEIN, PhD, MPH
Professor and Director

Professor, Department of Medical and Clinical Psychology and Preventive Medicine and Biometrics (PMB), USUHS
Director, Clinical Psychology PhD Program, USUHS
Director, Center for Ergonomics and Workplace Health

Member, National Academy of Sciences and Institute of Medicine, Panel on Musculoskeletal Disorders and the Workplace, Advisor for the Committee on The Consequences of Uninsurance
Consultant, Kluver/Academic Press/Plenum Publishing Corporation, New York, N. Y.
Fellow, Academy of Behavioral Medicine Research
Fellow, American Psychological Association
Fellow, Society of Behavioral Medicine
Member, Human Factors and Ergonomics Society
Member, Association for Advancement of Behavior Therapy
Member, International Association for the Study of Pain
Licensed Clinical Psychologist: Maryland, District of Columbia

Editorial Board

Journal of Occupational Rehabilitation, Founder and Editor-in-Chief

Editorial Consultant

Journal of Occupational Medicine and Environmental Medicine
American Journal of Industrial Medicine
Journal of the American Medical Association
Journal of Clinical Epidemiology
Journal of Occupational and Environmental Medicine
American Journal of Industrial Medicine
Pain
Health Psychology
Journal of Behavioral Medicine
Biological Psychology

TEACHING

Provide instruction on ergonomics, prevention and rehabilitation to students in PMB program, supervised research project of MPH student, presented lectures in various PMB courses, taught within and directed the USUHS PhD Clinical Psychology courses related to program development and evaluation and behavioral medicine. Taught USUHS medical students in the area of pain.

RESEARCH

Funding

Office Ergonomics Research Committee
"Work style Intervention for the Prevention of Work-Related Upper Extremity Problems." co-PI, 2003-2004

Epidemiology Health Program Analysis and Evaluation branch of the TriCare Management Activity (Department of Defense and Veterans Administration)
"Patient Satisfaction, cost and treatment guidelines: Musculoskeletal disorders." PI, 2003-2004

Johns Hopkins NIOSH Education Research Center
"Prospectively Identifying Patterns of Ergonomic & Work Organization Risk Factors for Musculoskeletal Disorders." Co-PI, 2003-2004

MARY SULLIVAN LOPEZ, COL AMSC
Co-Director

Manager, Ergonomics Program, Directorate of Occupational Health Sciences
U.S. Army Center for Health Promotion and Preventive Medicine
Aberdeen Proving Ground, MD
Adjunct Assistant Professor, Department of Preventive Medicine and Biometrics, USUHS
Adjunct Assistant Professor, Johns Hopkins School of Public Health
Chairperson, Department of Defense Ergonomics Working Group
Member, Human Factors and Ergonomics Society
Certified Professional Ergonomist
Licensed Occupational Therapist

TEACHING

Occupational Ergonomics
Safety Engineering

GRANT D. HUANG, MPH, Ph.D.
Research Associate

Assistant Director – Cooperative Studies Program, Office of Research and Development, U.S. Department of Veterans Affairs
Adjunct Assistant Professor, Department of Medical and Clinical Psychology and Preventive Medicine and Biometrics, USUHS

Member, Department of Defense Ergonomics Working Group
American Psychological Association
Society of Behavioral Medicine
American Public Health Association
Human Factors and Ergonomics Society

Editorial Board

Journal of Occupational Rehabilitation, Assistant Editor

Editorial Consultant

American Journal of Industrial Medicine, Clinical Journal of Pain

TEACHING

Occupational Ergonomics
Safety Engineering

RESEARCH

Funding

Johns Hopkins NIOSH Education Research Center "Prospectively Identifying Patterns of Ergonomic & Work Organization Risk Factors for Musculoskeletal Disorders" PI, 2003-2004

ANDREW LINCOLN, Sc.D., M.S.
Consulting Research Associate

Research Health Scientist, U.S. Department of Veterans Affairs
Adjunct Assistant Professor, Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health
Adjunct Assistant Professor, Department of Preventive Medicine and Biometrics

Member, American Public Health Association, Section Councilor, Injury Control and Emergency Health Services Section

Editorial Consultant

Lancet
International Journal of Epidemiology
Injury Prevention
American Journal of Preventive Medicine
American Journal of Industrial Medicine
Occupational and Environmental Medicine
American Industrial Hygiene Association Journal

TEACHING

Provide instruction on occupational injury prevention and safety practice at Johns Hopkins University. Mentor students in the USUHS MPH program and Johns Hopkins MHS Health Education program.

GLENN S. PRANSKY, M.D., M.OCC.H.
Consulting Research Associate

Director, Center for Disability Research, Liberty Mutual Research Institute for Safety, Hopkinton, MA
Associate Professor, Department of Family Medicine and Community Health and Department of Medicine, University of Massachusetts Medical School, Worcester, MA
Adjunct Associate Professor, Department of Epidemiology, University of Massachusetts, School of Public Health, Amherst, MA
Adjunct Assistant Professor, Harvard School of Public Health, Department of Occupational and Environmental Health, Boston, MA

Physician Health Program Advisory Committee, Mass. Medical Society (Board of Directors, 1996-2004)
Member, ACOEM Committee for Promotion of Occupational Medical Education and Work Fitness and Risk Section
Member, Institute for Health and Productivity Management
Member, Research Advisory Board, Institute for Work and Health, Toronto, Ontario
American Public Health Association, Occupational Health Section
Massachusetts Medical Society
American College of Occupational and Environmental Medicine
International Commission on Occupational Health

Licensed Physician: Massachusetts

Editorial Consultant

American Journal of Industrial Medicine
Journal of Family Practice
Journal of Occupational and Environmental Medicine
Journal of Occupational Rehabilitation
American Journal of Public Health
AMA Guides Newsletter

RENA A. NICHOLAS, M.S.
Graduate Student Associate

Predoctoral student in Clinical Psychology, Department of Medical and Clinical Psychology, USUHS
Clinical Psychology Resident, Wilford Hall Medical Center, Lackland AFB, TX

Member, American Psychological Association (APA)
Member, APA Division 19, Military Psychology

RESEARCH

Funding

Office of Ergonomics Research Committee
"Work style Intervention for the Prevention of Work-Related Upper Extremity Problems", PI, 2004-2005

DREW WIDING, M.S., P.T.
Graduate Student Associate

Deputy Chief, Biomechanics Branch, Biosciences and Protection Division, Human Effectiveness Directorate, Air Force Research Lab, Wright-Patterson Air Force base, OH
Member, American Physical Therapy Association
Member, DoD Human Factors Engineering Technical Advisory Group (HFE-TAG)
Member, DoD Ergonomics Working Group

RESEARCH

"Prospective Identifying Risk Factors for Musculoskeletal-Related clinic Visits in High-Risk Workers"

HEATHER L. ROGERS, M.A.
Graduate Student Associate

Predoctoral student in Medical Psychology, Department of Medical and Clinical Psychology, USUHS

Member, Society of Behavior Medicine

JENNIFER A. HANSEN, B.S.
Graduate Student Associate

Masters student in Psychology, American University, supervised by Michael Feuerstein, USUHS

Member, American Psychological Association Graduate Student Association
Member, American Association of Behavior Therapy

CHERISE D. BALDWIN, B.A.
Graduate Student Associate

Predoctoral student in Medical Psychology, Department of Medical and Clinical Psychology, USUHS

Member, Society of Behavior Medicine
Member, American Psychological Association Graduate Student Association

ENS LISSETH C. CALVIO, B.A.
Graduate Student Associate

Predoctoral student in Medical Psychology, Department of Medical and Clinical Psychology, USUHS

PUBLICATIONS

Feuerstein, M., Marcus, S.C. and Huang, G. D. National trends in outpatient treatment of non-specific back pain. The Spine Journal, 2004, 4, 56-63.

Feuerstein, M., Shaw, W.S., Nicholas, R. A. and Huang, G.D. From confounders to suspected risk factors: Psychosocial factors and work-related upper extremity disorders. Journal of Electromyography and Kinesiology, 2004, 14, 171-178.

Huang, G.D. and Feuerstein, M. Identifying work organization targets for a work-related musculoskeletal symptom prevention program. Journal of Occupational Rehabilitation, 2004, 14, 13-30.

Beattie, P.F. , Dowda, M. and Feuerstein, M. Differentiating Sensory and Affective-Sensory Pain Descriptions from Patients Undergoing Magnetic Resonance Imaging for Persistent Low Back Pain, Pain, 2004, 110, 189-196.

Rogers, H. L. and Feuerstein, M. Stress and pain. In R.F. Schmidt and W.D. Willis Eds. Encylopedic reference of pain. Berlin: Springer-Verlag, in press.

Feuerstein, M. Functional assessment for persons with musculoskeletal pain and impairment. Journal of Occupational Rehabilitation, 2004, 14, 163-164.

Shaw, W.S. and Feuerstein, M. Generating workplace accommodations: Lessons learned from the Integrated Case Management. Journal of Occupational Rehabilitation. 2004, 14, 207-216.

Feuerstein, M., Nicholas, R., Huang, G., Dimberg, L., Ali, D., and Rogers, H. Job stress management and ergonomic intervention for work-related upper extremity symptoms. Applied Ergonomics, 2004, 35, 565-574.

Presentations

Feuerstein, M. Health behaviors and health psychology. Institute of Medicine, Washington, D.C. September, 2003.

Feuerstein, M. and Rogers, H.L. Multidisciplinary perspective on work-related musculoskeletal disorders. Musculoskeletal and Neurovascular Disorders – The State of Research Regarding Workplace Etiology and Prevention, Washington, D.C. January, 2004.

Feuerstein, M., Haufler, A.J., and Huang, G.D. Job stress and repeated physician visit for low back pain in a primary care setting. 25th Society for Behavioral Medicine Annual Meeting, Baltimore, MD. March 2004.

Feuerstein, M., Nicholas, R.A., Huang, G.D., Rogers, H.L., Dimberg, L., and Ali, D. Ergonomic intervention and stress management for secondary prevention of work-related upper extremity symptoms. 25th Society for Behavioral Medicine Annual Meeting, Baltimore, MD. March 2004.

Widing, D., Huang, G.D., Feuerstein, M., and Nicholas, R.A. Prospectively identifying risk factors for musculoskeletal-related clinic visits in high risk workers. Johns Hopkins-NIOSH Stirring Solutions to Improve Workplace Health Conference, Baltimore, MD. April 2004.

Feuerstein, M. and Rogers, H. Clinical Practice Guideline Compliance: Back Pain Care in a Major Managed Health Care System. The 12th Congress of the ICOH Scientific Committee - Health Service Research and Evaluation in Occupational Health - Towards a Multidimensional Approach in Occupational Health Service: Scientific Evidence, Social Consensus, And Human Values. Modena, Italy. October, 2004.

Feuerstein, M. Applications of new biobehavioral concepts for prevention and intervention: Opportunities and challenges. 2nd Arm, Neck, and Shoulders Congress. Ede, Netherlands. October, 2004.

Annual Report FY2004

CENTER FOR FORCE HEALTH PROTECTION STUDIES

MISSION

The Center conducts a broad-based research program on the short- and long-term health outcomes associated with military operational environments, in particular, the conditions and experiences associated with training, deployment, combat, and humanitarian/disaster relief operations. For example, current efforts are underway to distill the findings of research across disciplines on the health outcomes associated with service in the 1991 Gulf War. We promote the use of a systematic process to evaluate disease and non-battle injuries in our military and veteran populations to guide health policy development. Our goal is to enhance the scientific knowledge base for military deployment health issues and to develop recommendations for preventive health interventions. Our research focus is on studies that collect, manage, and integrate health-related data for purposes of risk assessment and risk communication to protect individuals who serve our nation during peacetime and during war. We develop databases, analytic methodologies, and models for predicting health outcomes, as well as identify and evaluate or design specific interventions to prevent injury and illness. We also disseminate information to promote force health protection and participate in interagency research and development programs. Finally, we serve as consultants to health professionals, researchers, program managers and executives in the health-related components of the Department of Defense (DoD), the Department of Veterans Affairs (VA), other federal agencies, state and local governments, and private organizations.

PERSONNEL

Tomoko I. Hooper, MD, MPH—*Center Director* (Director, Graduate Research & Practicum Programs, PMB Dept)

Gary D. Gackstetter, DVM, MPH, PhD, Col, USAF, BSC—*Principal Investigator and Consultant* (Director, Graduate Programs)

David R. Cruess, PhD—*Senior Scientist and Consultant* (Vice Chair for Biometrics & Program Development)

David H. Trump, MD, MPH, CAPT, MC, USN—*Senior Scientist and Consultant* (Director, Medical Student Education Programs)

Richard J. Thomas, MD, MPH—*Senior Scientist and Consultant* (Director, Occupational & Environmental Medicine Residency Program)

Robert J. Lipnick, ScD, COL, MS, USA—*Senior Scientist and Consultant* (Director, Division of Epidemiology & Biostatistics)

Tzu-Cheg Kao, PhD—*Senior Scientist and Consultant* (Professor, Biostatistics)

Samar DeBakey, MD, MPH—*Senior Epidemiologist and Principal*, Health Research and Analysis, LLC (HRA)

Kimberly Bellis, MS—*Research Associate*, HRA

Valerie Pair-Biggs—*Project Coordinator*, HRA

Barbara Nagaraj—*Senior Analyst*, HRA

WORKING AGREEMENTS

Department of Defense Center for Deployment Health Research, Naval Health Research Center (NHRC), San Diego, CA

U.S. Army Medical Research Acquisition Activity, Fort Detrick, MD

U.S. Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Grounds, MD

Centers for Disease Control and Prevention (CDC), Atlanta, GA

Environmental Epidemiology Service and War-Related Illness and Injury Study Center, Department of Veterans Affairs, Washington, D.C.

Office of the Assistant Secretary of Defense—Health Affairs

National Highway Traffic Safety Commission

National Institute for Occupational Safety and Health

PRODUCTS

Database of Health Events Among Submariners for 236 deployments from January 1, 1997, to September 30, 2000

A Method for Monitoring the Health of U.S. Navy Submarine Crew Members During Periods Underway

Accidents and Injuries Among U.S. Navy Crewmembers During Extended Submarine Patrols,
1997-1999
Health Experience of 122 Submarine Crewmembers During a 101-Day Submergence
Database of Post-Gulf War Hospitalization Experience of Saudi Arabian National Guard Soldiers Who Fought at Al Khafji and a Comparison Group at Riyadh, Saudi Arabia
Assessing the Potential Impact of the Gulf War on Saudi Arabian National Guard Soldiers
Saudi–US Collaboration in Health Research: Lessons Learned
The Post-War Hospitalization Experience Among Gulf War Veterans Exposed to Kuwaiti Oil
Well Fires
Occupational and Other Factors Influencing Participation in U.S. Gulf War Health Registries
The Post-War Hospitalization Experience of Gulf War Veterans Participating in Combined DoD-
VA Health Registries
The Millennium Cohort Study: Panel 1 (77,000 study participants)
Leveraging Existing Databases to Study Vehicle Crashes in a Combat Occupational Cohort:
Epidemiological Methods
Motor Vehicle Fatalities Among Gulf War Era Veterans: Circumstances, Attributes, and Behavioral Characteristics
Aeromedical Evacuations from Operation Iraqi Freedom: A Descriptive Study

FY 04 SUMMARY

During this reporting period, our long association with the DoD Center for Deployment Health Research at the Naval Health Research Center (NHRC) in San Diego, dating back to 1996, ended in February 2004. Although our fiscal and administrative involvement with NHRC has been phased out, Drs. Gackstetter and Hooper continue to collaborate with the researchers at NHRC under an ongoing inter-institutional Memorandum of Understanding, notably as co-investigators and members of the Executive Committee on the highly visible le Millennium Cohort Study and several other projects. The Millennium Cohort Study, with its overall goal of assessing the health risks of military deployment, military occupations, and military service in general, serves as an excellent platform for continued planning and conduct of studies relevant to the mission of this Center in collaboration with researchers from NHRC as well as other organizations within DoD, the VA, and other federal agencies.

The focus of this Center on studies related to force health protection continues to be reflected in the various ongoing and planned collaborative research activities within this Center. As part of our continued interest in the area of motor vehicle crash morbidity and mortality, we established new working agreements with the National Highway Traffic Safety Administration and the National Institute for Occupational Safety and Health. In addition, we serve as consultants to Defense Safety Oversight Council efforts to reduce

deaths from privately owned vehicle crashes, including data standardization initiatives. Ongoing research within our Center provides opportunities for PMB graduate students to work on independent projects. The involvement of these graduate students, as well as continued activities related to planning, review, and conduct of militarily-relevant epidemiological studies is expected to remain robust over the foreseeable future.

Our Center has experienced growth in the area of establishing a core team of research support personnel on-site. Dr. Helen Santiago, who assisted with the administrative and fiscal activities for the large number of sub-projects falling under the USU-NHRC cooperative agreement left her position in December 2004. However, we now have a team of individuals from Health Research and Analysis, LLC (HRA), supporting the Center 's projects under the direction of senior epidemiologist and HRA principal, Dr. Samar DeBakey.

Epidemiological Support of Health-Related Research Pertaining to Military, Veteran and Dependent Populations (NHRC), Interagency Agreement #97-0B-01
(Co-Principal Investigators: GD Gackstetter and TI Hooper)

The grant entitled Epidemiologic Support of Health-Related Research Pertaining to Military, Veteran and Dependent Populations (HMJF#600-192-0000-00-10027; USU#G187HJK-01) was officially closed, as was the interim cooperative agreement, Epidemiologic Support of Health-Related Research (HMJF#600-192-00000-00-102648; USU#G187RG-01). Cumulative funding totaled nearly $20M. A final report has been submitted to REA including the status of the 28 sub-projects that were monitored as part of this collaborative research program. The DoD Center for Deployment Health Research continues to provide opportunities for residents in General Preventive Medicine or Occupational and Environmental Medicine to participate in practicum rotations. Our colleagues at NHRC, who hold adjunct faculty appointments in the PMB Department, also serve as guest lecturers in PMB graduate courses and specialty training programs.

The Millennium Cohort Study
(Principal Investigator: MAK Ryan, NHRC; Co- Investigators: GD Gackstetter and TI Hooper

Panel 1 (baseline cohort) of the Millennium Cohort Study consists of approximately 77,000 participants. In July 2004, enrollment for Panel 2 began, in addition to resurvey of Panel 1 participants. Several manuscripts comprising the foundation for this longitudinal study are under preparation or have been submitted for publication. Exciting opportunities exist for studies using this rich source of data. These studies promise to add to the scientific knowledge base on a wide range of public health-related topics, including epidemiologic methodology for population-based studies, reproductive outcomes, vaccination policy, as well as the health effects of exposures and experiences associated with military service.

A Nested Case-Control Study of Fatal Motor Vehicle Crashes Among Gulf War Era Veterans

(Co-Principal Investigator: GD Gackstetter and TI Hooper)

As a result of the American Institute of Biological Sciences (AIBS) review of Congressionally-directed studies related to deployment health in February 2003, analyses specifically evaluating possible interaction between military unique variables and traditional risk factors for MVC are underway. A protocol amendment was approved and funded ($281,950 awarded August 2003) by the US Army Medical Research and Materiel Command (cumulative total ~$786K). A new analytic data set is under construction to include data on pre-deployment hospitalization, potential exposure to the demolition plume at Kamisiyah, and separation from military service, including reason(s) for separation. Because of major delays in establishing contracts with research collaborators, we received a no-cost extension on the period of performance through August 2005. We have submitted two manuscripts to peer-reviewed journals: "Leveraging Existing Databases to Study Vehicle Crashes in a Combat Occupational Cohort: Epidemiologic Methods" was submitted to *American Journal of Industrial Medicine,* and "Motor Vehicle Fatalities Among Gulf War Era Veterans: Circumstances, Attributes, and Behavioral Characteristics" was submitted to *Accidents, Analysis, and Prevention.* A third manuscript on the results of multivariate analyses of potential risk factors, including the impact of deployment, is being drafted. Plans include continuing discussion with statistical consultants on the application of factor or cluster analysis to construct risk profiles for fatal MVC.

Assessing the Potential Health Impact of the Gulf War on Saudi Arabian National Guard (SANG) Members and their Dependents
(Principal Investigator: GD Gackstetter; Co-Investigators: DF Cruess and TI Hooper)

This multi-agency international collaboration involving investigators from the CDC, the Office of the Special Assistant for Gulf War Illness (OSAGWI), the King Fahad National Guard Hospital (Riyadh, Saudi Arabia), NHRC, and USU, is continuing under a no-cost extension ending September 2005. The data provided by the Saudi collaborators resulted in an analyzable data set and was the deliverable for Contract Task Order 1. Under Task Order 2, investigators assessed health outcomes using hospitalization data for two groups of Saudi Arabian National Guard personnel following the 1991 Gulf War. Analyses were completed and two manuscripts were submitted to *International Journal of Epidemiology.* "Assessing the Potential Health Impact of the 1991 Gulf War on Saudi Arabian National Guard Soldiers" is under revision. The article on the challenges of international collaboration is being reformatted for submission to *American Journal of Infection Control*.

In response to a request from our funding source, we have submitted a protocol amendment in order to assess longitudinally health outcomes in U.S. military personnel who remained on active duty following the 1991 Gulf War.
Descriptive Analysis of Injuries and Illnesses in U.S. Military Members During Operation Iraqi Freedom
(Co-Principal Investigators: GD Gackstetter and TI Hooper)

This Health Affairs-directed and funded ($300,000) study of in-theater injuries and illnesses got off to a slow start due to problems with the MIPR and IRB approval at USU. The competitive bidding process was recently completed and the contract award went to HRA for research support services. We have new personnel on board and are ready to tackle this important study over the next year. As a first step in assessing available health information in-theater, Drs. Gackstetter and Hooper worked with a graduate student, LCDR Dale Harman, on data collected to track aeromedical evacuations from OIF. Dr. Harman is currently preparing a manuscript to be submitted for publication entitled, "Aeromedical Evacuations from Operation Iraqi Freedom: A Descriptive Study."

Medical Events During Periods of Isolation: The U.S. Navy Submarine Force Experience
(Co-Investigator: TI Hooper)

The Profile of Mood States survey (POMS) was administered at the beginning, midpoint and end of the underway period for one submarine as part of this larger study of medical events among submarine crewmembers. These data were reanalyzed, and preparation of a manuscript entitled "Transient Moods States of Submarine Crewmembers during Prolonged Submergence" is still pending.

Military Deployment and Self-Assessed Health Status (R087PW)
(Principal Investigator: DH Trump)

The primary analytic work is complete and a manuscript is near completion to report on self-reported health status and health care utilization following deployment for 22,229 Army and Air Force men who returned from deployments to Europe or Southwest Asia in 2000. The Defense Medical Surveillance System (DMSS) had provided person-level data from DD Form 2795 Pre-Deployment Health Assessment, DD Form 2796 Post-Deployment Health Assessment, military personnel systems, and military inpatient and outpatient data reports. After adjustment using Cox proportional hazard models, military men reporting fair or poor self-rated health were 1.6 times more likely to be hospitalized (95% CI 1.0, 2.7) and 1.7 times more likely to separate from active service (95% CI 1.4, 2.1) than those reporting excellent or very good health. The risk of illness-related outpatient visits was 1.8 times higher (95% CI 1.6, 2.1) for those reporting fair or poor health and 1.3 times higher (95% CI 1.2, 1.3) for those reporting good health in comparison to those reporting excellent or very good health. The risks of hospitalization, separation, and outpatient visits were significantly higher if there was an affirmative response to the other questions (both to individual questions and if there were two or more affirmative responses) regarding health problems or concerns on the post-deployment health assessment. The associations between self-rated health and health care utilization for women who had deployed will be examined and reported separately.

In collaboration with MAJ John Completo, MC, USA, a resident in preventive medicine at Walter Reed Army Institute of Research, Drs. Trump and Kao are finalizing a manuscript for submission for publication. MAJ Completo as part of his MPH degree requirements had examined associations between self-reported health status and history

of deployment using responses from 17,264 military members who completed anonymous questionnaires for the 1998 Department of Defense Survey of Health Related Behaviors among Military Personnel.

The article "Self-rated health and subsequent health care use among military personnel returning from international deployments" was published in the February 2004 issue of *Military Medicine*. This is the final product of CAPT Trump's intramural grant project (R087NW) in collaboration with LCDR Jeff Brady, MC, USN, (previously with the DoD Medical Surveillance System (DMSS) and Ms. Cara Olsen, a PMB faculty member and affiliated with the USU Biostatistical Consulting Center.

Toxicological Assay Methods and Chemical Exposures among Marines in the Gulf War (other)

Work continues on this Naval Medical Research Center/Centers for Disease Control and Prevention study to analyze pre- and post-deployment sera collected from a cohort of U.S. Marines during the Gulf War for selected toxic chemicals and mixtures. CAPT Trump is a co-investigator on this project, which is funded by the U.S. Army Medical Research and Materiel Command.

FACULTY

TOMOKO I. HOOPER, MD, MPH
Assistant Professor

Director, Graduate Research and Practicum Programs
Deputy Director, Graduate Programs
Department of Preventive Medicine and Biometrics
Secondary
Uniformed Services University of the Health Sciences
Bethesda, Maryland

Secondary faculty appointment, Emerging Infectious Diseases
Licensed to practice medicine in California
Diplomate, American Board of Preventive Medicine, General Preventive Medicine/Public Health
Fellow, American College of Preventive Medicine
Member, Association of Teachers of Preventive Medicine
Member, American Medical Association
Member, American Public Health Association
Member, American College of Epidemiology Member
Society for Epidemiologic Research
Lifetime Member, UCSF Alumni-Faculty Association

AWARDS

Delta Omega, Psi Chapter, honorary public health society, June 2003
Certificate of Recognition for "dedication and commitment to excellence" from MPH/MTM&H Class of 2003
The Beacon Award "in recognition of outstanding teaching, commitment and guidance to the Master of Public Health Class of 2001"

TEACHING

Graduate Courses, USUHS

PM0671—Introduction to the MPH Project & Practicum (Co-Course Director)
PM0672—MPH Project/Practicum Design & Development (Co-Course Director)
PM0673—MPH Project / Practicum Implementation & Evaluation (Co-Course Director)
PM0670—Public Health Practicum (Course Director)
PMO674—MPH Independent Project (Course Director)

Medical School Curriculum, USUHS

PM01001—MS1 Fundamentals of Epidemiology & Biostatistics, (Lab Instructor)
IDO2002—MS2 Ethical, Legal and Social Aspects of Medical Care (Discussion Group Facilitator)
Evidence-Based Medicine—MS3 Pediatric Clerkship (Instructor)

RESEARCH

Summary

Current research activities include manuscript preparation related to the nested case-control study of fatal motor vehicle crashes among Gulf War era veterans, 1991-1995, and the post-war hospitalization experience of Saudi Arabian National Guard soldiers; continued ongoing collaboration with NHRC investigators on epidemiologic studies of active duty military and veteran populations, particularly The Millennium Cohort Study; development of research collaboration with NIOSH related to study of motor vehicle crashes; grant preparation (PTSD and MVC); technical and management activities related to the SANG, MVC, and OIF studies. Other areas of interest include clinical decision analysis, evidence-based medicine (applications in clinical practice and

integration into undergraduate and graduate medical education), and outcome-based educational program evaluation.

Funding

Office of the Assistant Secretary of Defense/Health Affairs, #H187UN, "Descriptive Analysis of Injuries and Illnesses in U.S. Military Members During Operation Iraqi Freedom" (Co-PI and COTR)

U.S. Army Medical Research and Materiel Command, #G187LC-01, "A Nested Case-Control Study of Fatal Motor Vehicle Crashes among Gulf War Era Veterans" (Co-PI); supplemental funding of $282K awarded in FY03 for protocol amendment; cumulative total $785.7K

Dean, School of Medicine, USU, Special Projects Funding, #250-087-00000-00-102035, "Outcome-Based Evaluation of Graduate Programs" (PI); $20K

GARY DEAN GACKSTETTER, DVM, MPH, PhD
Colonel, USAF, BSC

Associate Professor

Vice Chair, Graduate Programs
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

Current and active licenses to practice veterinary medicine: Virginia, Texas, and Colorado
Elected to Board of Directors, D.C. Academy of Veterinary Medicine
Board specialty certification by the American College of Veterinary Preventive Medicine
Vice-Chair, Consultant Advisory Board, National Veterinary Examination Committee, NY
Consultant, Advisory Board, National Veterinary Examination Committee, NY
Member, Executive Committee, American College of Veterinary Preventive Medicine
Head, Epidemiology and Biostatistics Section, Executive Planning Committee, Department of Defense Military Cancer Institute

AWARDS

Delta Omega, Psi Chapter, honorary public health society, June 2003
Certificate of Recognition for "dedication and commitment to excellence" from MPH/MTM&H Class of 2003
The Beacon Award "in recognition of outstanding teaching, commitment and guidance to

the Master of Public Health Class of 2001"
Defense Superior Service Medal, 1997
James A. McCallam National Award (outstanding epidemiologist in field of medicine and public health), 1996
Organizational Badge, Office of the Secretary of Defense, 1995
Air Force Meritorious Service Medal, Second Oak Leaf Cluster, 1994
University of Minnesota Presidential Leadership and Service Award, 1991
Air Force Meritorious Service Medal, First Oak Leaf Cluster, 1989
Department of Biology Teacher of the Year Award, The USAF Academy, 1989
The USAF Academy Outstanding Military Educator Award, 1988
Air Force Achievement Medal, 1986 Air Force Meritorious Service Medal, 1986

TEACHING

Graduate Courses, USUHS
PM0514 – Epidemiology and Control of Infectious Diseases, Course Director
PM0671 – Introduction to the MPH Project and Practicum, Co-Course Director
PM0672 – MPH Project/Practicum Design and Development, Co-Course Director
PM0673 – MPH Project/Practicum Implementation and Evaluation, Co-Course Director
PM0971 – Doctoral Student Journal Club, Course Director

Medical School Courses, USUHS
PM01001 – MS-I Fundamentals of Epidemiology and Biostatistics, Lab Instructor
IDO2002 – MS-II Ethical, Legal and Social Aspects of Medical Care, Group Discussion Leader

RESEARCH

Summary
Primary research interests involve epidemiologic studies in the following areas: military deployment-related illness; injury epidemiology and prevention; emerging infectious disease; agent, host, and environmental factors contributing to the transmission of infectious diseases; risk factors associated with host susceptibility; and the use of spatial analyses as an epidemiologic tool.

Funding
Office of the Assistant Secretary of Defense/Health Affairs, #H187UN, "Descriptive Analysis of Injuries and Illnesses in U.S. Military Members During Operation Iraqi Freedom" (Co-PI)

Office of the Special Assistant for Gulf War Illnesses, #G187KR, "Assessing the Potential Impact of the Gulf War on Saudi Arabian National Guard Members and Their Dependents" (PI); total funding $1.2M

U.S. Army Medical Research and Materiel Command, #G187LC-01, "A Nested Case-Control Study of Fatal Motor Vehicle Crashes among Gulf War Era Veterans" (Co-PI); supplemental funding of $282K awarded in FY03 for protocol amendment; cumulative total $785.7K

DAVID F. CRUESS, PhD

Professor

Director, Biostatistical Consulting Center
Vice Chair for Biometrics and Program Development
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

Member, American Statistical Association
Member, Biometric Society
Member, Society for Epidemiologic Research
Member, American College of Epidemiology, Fellow (elected 1984)

AWARDS/RECOGNITION

Elected President, USUHS Faculty Senate, 2003-4

"Outstanding Educator Award," 2000-01 Academic Year
Elected to Delta Omega, the public health honorary society, 2000
"Outstanding Instructor in Biostatistics" award for Medical School, 2000
"Outstanding Educator Award," 1992-93 Academic Year
"Certificate of Outstanding Performance,"1979-2002
USU DoD Distinguished Service Medal, 1995
"Outstanding Educator Award," 1985-86 Academic Year
Elected to Faculty Senate four consecutive terms,1978-1982

TEACHING

Graduate School
Graduate courses developed and taught at USUHS:
Introduction to Biometrics
Experimental Statistics
Experimental Design

Advanced Biometrics Tutorial
Data Processing for the Scientific Researcher
Biostatistics I, II (With J.J. Schlesselman)
Computer Science I, II (With J.J. Schlesselman)
Multivariate Statistics in Research
Microcomputer Applications

Medical School
Biostatistics Course Director for "Epidemiology and Biometrics,"
MS-I Course in Preventive Medicine/Biometrics
Teach selected laboratories and present lectures in the three Preventive Medicine/Biometrics Courses: MS-I, MS-II, and MS-IV

RESEARCH

Research Interests: Biostatistical methodology, especially as it applies to clinical trials, complex surveys, and large data sets. Current studies are in kidney transplantation, prostate cancer, and telemedicine.

Teaching Interests: Biostatistics and computer science

DAVID HASKELL TRUMP, MD, MPH
Captain, Medical Corps, United States Navy
Associate Professor

Division of Epidemiology and Biostatistics
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

Licensed to practice medicine in Pennsylvania and Virginia
Certified by American Board of Preventive Medicine (General Preventive Medicine)
Certified by American Board of Family Practice
Fellow, American College of Preventive Medicine
Member, Association of Teachers of Preventive Medicine (Chair (2004) and Vice Chair (2003), Annual Meeting Program Planning Committee)
Member, American Academy of Family Physicians
Member, Association of Military Surgeons of the United States
Ex-Officio Member, Advisory Committee for Immunization Practices, 1997-2000

EDUCATION

B.S. - Albright College, Reading, PA
M.D. - Jefferson Medical College, Thomas Jefferson University, Philadelphia
M.P.H. - Johns Hopkins University School of Hygiene and Public Health, Baltimore

Resident in Family Practice, 1978-1981, Polyclinic Medical Center, Harrisburg, PA
Resident in Preventive Medicine, 1984-1986, Johns Hopkins University School of Hygiene and Public Health, Baltimore

AWARDS

Defense Superior Service Medal, 2000
Legion of Merit, 1994
Meritorious Service Medal, 1988, 1997
Navy Commendation Medal, 1984, 1991
Secretary's Award for Distinguished Service, 2000 (Group Recognition) Department of Health and Human Services
Albert Leary Gihon Award for Excellence in Navy Preventive Medicine, 1997
Delta Omega Society, Alpha Chapter, 1985
E. Harold Hinman Memorial Prize in Community Health and Preventive Medicine, Jefferson Medical College, 1978

TEACHING

Graduate Courses, USUHS
Classic Studies in Epidemiology (Course Director, 2001-present)
Health Promotion (Course Director, 2000)
Microcomputer Fundamentals (Lecturer/Lab Instructor, 2001-present)
Introduction to Epidemiology I (Lecturer/Lab Instructor, 2001-2002)
Introduction to Epidemiology II (Lab Instructor, 2001-2002)

Medical School Curriculum, USUHS
Director, Medical Student Education Programs, PMB
MS-I Introduction to Epidemiology/Biostatistics (Co-Course Director, 2001-2004)
MS-II Preventive Medicine (Course Director, 2002-present)
Member, Executive Committee for Curriculum

RESEARCH

Interests

Health of military service members after deployments and military service
Health status research using Defense Medical Surveillance System
Military immunization programs

Funding

USUHS Grant R087NW. "Does self-assessment of post-deployment health predict health outcomes?" February 2001-February 2002, $1,200.

USUHS Grant R087PW. "What is the relationship between military deployment and self-assessed health status?" April 2002-September 2004, $13,030.

RICHARD JOSEPH THOMAS, MD, MPH
Captain, Medical Corps, United States Navy

Assistant Professor

Director, Occupational Medicine Residency
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

Former Director, Center for Military Medical Analysis and Projection
Former Director, Division of Epidemiology and Biostatistics
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

Licensed to practice medicine in Virginia and Maryland
Certified by American Board of Preventive Medicine (Occupational Medicine)
Certified by American Board of Preventive Medicine (General Preventive Medicine)
Fellow, American College of Occupational and Environmental Medicine
Member, American College of Preventive Medicine
Member, Association of Military Surgeons of the United States
Member, Johns Hopkins Medical and Surgical House staff Association
Member, United States Naval Institute
Member, Virginia Occupational Medical Association (Serving as Secretary-Treasurer) 1997-2001

EDUCATION

B.S. 1975 United States Naval Academy, Annapolis
M.D. 1979 Georgetown University School of Medicine, Washington
M.P.H. 1984 Johns Hopkins University School of Hygiene & Public Health, Baltimore, MD

Internship (rotating), 1979-1980, U.S. Navy Regional Medical Center, Oakland, CA

Resident in Occupational Medicine, 1983-1985, Johns Hopkins University School of Hygiene and Public Health, Baltimore

Resident in Preventive Medicine, 1985-1986, Walter Reed Army Institute of Research, Washington, D.C.

AWARDS

Fellow, American College of Occupational and Environmental Medicine, 1992
Defense Meritorious Service Medal, 2001
Military Outstanding Volunteer Service Medal, 1995
Fleet Marine Force Ribbon, 1992
Meritorious Service Medal, 1989, 1992, 1998
Navy Unit Commendation, 1992
Army Superior Unit Emblem, 1987
Philippine Presidential Unit Citation, 1987
Meritorious Unit Commendation, 1987, 1993, 2000
Sea Service and Arctic Service Ribbons, 1987
Delta Omega, National Public Health Honor Society, 1984
Navy Achievement Medal, 1983
Navy Commendation Medal, 1981
Polaris Submarine Deterrent Patrol Pin, 1974
National Defense Medal, 1971, 1991

TEACHING

Graduate Courses, USUHS

Introduction to Epidemiology I (Lecturer; Course Director 1999))
Introduction to Epidemiology II (Lecturer)
Classic Studies in Epidemiology (Course Director 2000)
Epidemiology and Control of Non-Infectious Diseases (Course Director 1999, 2000)

Microcomputer Fundamentals (Co-Course Director, 2000)
Occupational and Environmental Epidemiology (Course Director 2002 to present)
Introduction to Occupational Health (Course Director 2004 to present)
Fundamentals of Military Occupational Health (Course Director 2004 to present)
Selected Topics in Environmental/Occupational Health

Clinical Occupational and Environmental Medicine

Medical School Curriculum, USUHS

MS-I Fundamentals of Epidemiology and Biometrics (Co-Course Director)
MS-II Preventive Medicine (Lecturer)
MS-IV Preventive Medicine (Lecturer/Group Leader)

American College of Preventive Medicine
Annual Board Review Course, Environmental Medicine and Health (Lecturer, annually 1998-present)

RESEARCH

Interests

Occupational and preventive medicine issues in operational military units
Asbestos medical surveillance
Health effects of riot control agents in military populations
Sexually Transmitted Diseases Control

Funding

USUHS Grant R087KZ. Assessment of field exposure to CS gas (ortho-chlorobenzalamalonitrile) in US Marine Amphibious Reconnaissance training. May 1999-April 2000, $13,200.

ROBERT J. LIPNICK, ScD, MS
Colonel, Medical Service Corps, United States Army
Assistant Professor

Director, Division of Epidemiology and Biostatistics
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

EDUCATION

B.A (Natural Science) 1976 The Johns Hopkins University, Baltimore, MD
M.S (Epidemiology) 1980 University of Massachusetts, Division of Public Health, Amherst, MA Sc.D. (Epidemiology) 1983 Harvard University School of Public Health, Boston. MA
Master of Strategic Studies 2001
U.S. Army War College, Carlisle, PA

AWARDS

Joint Chiefs of Staff Identification Badge	Jul 1997
Chief Defense Force (Australia) Commendation Medal	Jul 1995
Defense Meritorious Service Medal	Jul 1997

Meritorious Service Medal (4 OLC)	June 2001, Mar 1999, Jul 1995, June 1993, June 1990
Joint Service Commendation Medal	Apr 1996
Army Commendation Medal (2 OLC)	Feb 1990, Dec 1986, May1985
Joint Service Achievement Medal	May 1997
Army Achievement Medal	Jan 1992
National Defense Service Medal (2nd Award)	June 1991, June 1976
Armed Forces Expeditionary Medal	Feb 1990
Armed Forces Reserve Medal	July 1993
Overseas Service Ribbon (3rd Award)	Jan 1999, Jul 1995, Feb1990
Army Service Ribbon	June 1976
Surgeon General's "A" Proficiency Designator	Aug 2000
Outstanding Educator Award, USUHS	Jun 2002, Jun 2003

TEACHING

Graduate Courses, USUHS

Introduction to Epidemiology, Course Director, 2003
Epidemiologic Methods, Course Director, 2003
Occupational and Environmental Epidemiology, Lecturer

Medical School Curriculum, USUHS

MS-I Introduction to Epidemiology and Biometrics, Lecturer/Lab Instructor
MS-II, Preventive Medicine, Lecturer/Lab Instructor

RESEARCH

Interests

Joint Comprehensive Military Medical Surveillance Program
Operational Military Preventive Medicine

TZU-CHEG KAO, Ph.D.
Professor

Division of Epidemiology and Biostatistics
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

Fellow, American College of Epidemiology

Member, American Statistical Association, Biometric Society, International Chinese Statistical
Association
Institute of Mathematical Statistics, Mathematical Association of America

EDUCATION

Ph.D. 1982 Statistics, Purdue University, West Lafayette, Indiana
M.S. 1975 Mathematics, National Tsing Hua University, Taiwan
B.S. 1973 Mathematics, National Kaohsiung Teachers' College, Taiwan

ACADEMIC APPOINTMENTS

Department of Preventive Medicine and Biometrics,
Uniformed Services University of the Health Sciences, Bethesda, MD
Professor (2000-present)
Associate Professor (1992-2000)
Assistant Professor (1988-1992)
Biostatistics Center, George Washington University, Rockville, Maryland
Visiting Scholar (2001)
Department of Mathematics, University of Wisconsin, Oshkosh, Wisconsin
Assistant Professor (1985-1988)
Lecturer (1984-1985)
Department of Mathematics, Indiana University-Purdue University, Indianapolis, Indiana
Visiting Assistant Professor (1982-1983)
Department of Mathematics, Chinese Naval Academy, Kaohsiung, Taiwan
Instructor (1975-1977)

AWARDS/RECOGNITION

Reviewer, Preventive Medicine and Public Health Fellowship Program, Association of Teachers of Preventive Medicine (2004)
Editor, *The Statistical Consultant*, a periodic newsletter of the Section on Statistical Consulting, American Statistical Association, 2003—present
President-elect, Toastmasters Club, USUHS, 2003 - present
Invited paper, "Microthrombectomy Reduces Post-sclerotherapy Pigmentation: A Multi-center, Randomized Trial", by AH Scultetus, JL Villavicencio, et al., presented at The Society for Vascular Surgery and the American Association for Vascular Surgery Annual Meeting, June 8-11, Chicago, Illinois, 2003
Recognition on the paper "Microthrombectomy Reduces Post-sclerotherapy Pigmentation: A Multi-center, Randomized Trial," Scultetus, Villavicencio, et al., as one of best three papers selected among all papers presented at 15th Annual Meeting of the American Venous Forum, Cancun, Mexico, February 20-23, 2003

Bronze Award, Society for Pediatric Radiology, for research on comparison of enhanced MR imaging with renal cortical scintigraphy in the diagnosis of childhood pyelonephritis, G Lonergan, et al., May 15-18, 1997

Peer review panel, U.S. Army Medical Research and Material Command, Breast Cancer Research Program, 1997

Certificate of Recognition for ongoing contributions to research in the Department of Surgery, 1994

TEACHING ACTIVITIES

Graduate Courses, USUHS

Biostatistics I
Biostatistics II
Biostatistics III
Advanced Epidemiologic Methods
Logistic Regression
Microcomputer Fundamentals
Statistical Computing
Introduction to SAS
Microcomputer Applications
Advanced Biometrics Tutorial on Mathematical Statistics
Advanced Biometrics Tutorial on Statistical Computing
Advanced Biometrics Tutorial on Survival Analysis
Advanced Biometrics Tutorial on Advanced Statistical Methods

RESEARCH

Interests

Statistical inference and modeling
Mixed-effects models
Discrimination analysis
Logistic regression
Statistical applications in biomedical research

Funding

Principal Investigator: Assessing consistency and reliability across three and more evaluators." USUHS intramural grant, 2004-2006.

Co-Investigator: "What is the relationship between military deployment and self-assessed health status?" USUHS intramural grant, 2002—present.

Statistical Consultant: Functional neuroimaging of acute stress disorder & PTSD." National Institute of Mental Health grant (PI: Elizabeth A. Osuch, MD, Assistant Professor, Department of Psychiatry, USUHS).

Publications:

FY04 INPUT FROM CENTER PERSONNEL:

DAVE CRUESS

Early renal insufficiency and late venous thromboembolism after renal transplantation in the United States. Abbott KC, Cruess DF, Agodoa LY, Sawyer ES, and Tveit DP. American Journal of Kidney Diseases 43(1):120-130, 2004

Body mass index, dialysis modality, and survival: Analysis of the United States Renal data System Dialysis Morbidity and Mortality Wave II Study. Abbott KC, Glanton CW, Trespalacios FC, Oliver DK, Ortoz MI, Agodoa LY, Cruess DF, and Kimmel PL. Kidney International 65:597-605, 2004

Military Deployment Human Exposure Assessment: Urine total and isotopic uranium sampling results. May LM; Heller J; Kalasinsky, V, Ejnik J; Cordero S; Oberbroekling KJ; Luong TT; Meakim KC; Cruess DF; and Lee AP. Journal of Toxicology and Environmental Health Part A (JTEH A) 67(8-10):697-714, 2004

Variables associated with attrition for Uniformed Services University of the Health Sciences Medical School. JE Stetto, GD Gackstetter, DF Cruess, and TI Hooper. Military Medicine 169(2):102-7, 2004.

Military Deployment Human Exposure Assessment: Blood volatile organic compound sampling results. May LM; Heller J; Kalasinsky, V, Ashley DL; Blount BC; Trump DH; Roy M; Weese C; Cruess DF; and Lee AP. (accepted for publication in Journal of Occupational and Environmental Medicine)

[HOOPER]

Morin NM, Dye BA, Hooper TI. The influence of cigarette smoking on the overall perception of dental health among adults in the United States, 1988-94. Accepted at *Public Health Reports.*

Smith TC, Jimenez DL, Smith B, Gray GC, Hooper TI, Gackstetter GD, Heller JM, Dalager NA, Kang KK, Hyams KC, Ryan MAK. The postwar hospitalization experience

of Gulf War veterans participating in U.S. health registries. *J Occ & Environ Med.* Apr 2004;46(4)386-97.

[GACKSTETTER]

Gray GC, Gackstetter GD, Kang HK, Graham JT, Scott KC. After more than 10 years of Gulf War veteran medical evaluation, what have we learned? Am J Prev Med. 2004 Jun;26(5):443-52.

Stetto JE, Gackstetter GD, Cruess DF, Hooper TI. Variables associated with attrition from Uniformed Services University of the Health Sciences Medical School. Mil Med. 2004 Feb;169(2):102-7.

Hoe NP, Fullerton KE, Liu M, Peters JE, Gackstetter GD, Adams GJ, Musser JM. Molecular genetic analysis of 675 group A streptococcus isolates collected in a carrier study at Lackland Air Force Base, San Antonio, Texas. J Infect Dis. 2003 Sep 15;188(6):818-27.

[KAO]
Taylor JA, Kao T-C, and Shabsigh R. ``Inherent Variables Within Bicycle Riding and their Relationship to the Development of Erectile Dysfunction." The Journal of Urology, accepted.

Lynch JP, Hanson K, and Kao T-C} (2004), ``Health Related Behaviors in Young Military Smokers: Evidence from the 1998 DoD Survey of Health Related Behaviors Among Military Personnel." Military Medicine, 169(3): 230-5.

Scultetus AH, Villavicencio JL, Kao T-C, Ketron GD, Gillespie DL, Iafrati MD, Diaz MH, Rothstein JH,

Eifert S, Norman M. Rich NM (2003), ``Microthromebctomy reduces post-sclerotherapy pigmentation: A multi-center, randomized trial." Journal of Vascular Surgery, 38(3): 896-903.

[LIPNICK]
None submitted.

[THOMAS]
Thomas RJ, Smith PA, "Riot Control Agents" book chapter in Bioterrorist Agents: A Primer for Physicians. ML Roy editor publication date 11-2003

Parrish D, Olsen C, and Thomas RJ, "Aircraft Carrier Personnel Mishap And Injury Rates During Deployment" Accepted for publication by Military Medicine May 2004

DAVE TRUMP
May LM, Weese C, Ashley DL, Trump DH, Bowling CM, Lee AP. The recommended role of exposure biomarkers for the surveillance of environmental and occupational chemical exposures in military deployments. Milit Med 2004:169(10):761-767.

Trump DH, Brady PJ, Olsen CH. Self-rated health and subsequent health care use among military personnel returning from international deployments. Milit Med 2004:169(2):128-133.

Abstracts/Presentations:
[THOMAS]
Thomas, RJ. Invited speaker: "Environmental Medicine," American College of Preventive Medicine, 14th Annual Board Examination Review Course, Arlington, VA, August 2003.

Thomas RJ. Invited speaker: "Waterborne Disease, Water Pollution, and Water Terrorism: What Every Physician Needs to Know; Waterborne Diseases from Recreational Water Exposure; and Waterborne Nosocomial Infections in Healthcare Facilities. American College of Occupational and Environmental Medicine State of the Art Conference, Toronto, Canada, 12 October 2003.

Thomas RJ. Invited speaker: "Waterborne Disease, Water Pollution, and Water Terrorism: What Every Physician Needs to Know; Waterborne Diseases from Recreational Water
Exposure; and Waterborne Nosocomial Infections in Healthcare Facilities." American Occupational Health Conference, Millennium Lecture Series, Kansas City, MO. 3 May 2004.

CENTER FOR INTERNATIONAL HEALTH
MISSION

A memorandum of understanding was signed between the Air Force Office of the Surgeon General and the Uniformed Services University of Health Sciences (USUHS) in Oct/Nov 2001, to design, test, and implement an educational and academic curriculum for the International Health Specialist Program. This Memorandum of Understanding is under revision. (Reference: MOU AFSG/USUHS Oct/Nov 2001 and AFI 44-162, Air Force International Health Specialist Program)

"The AFSG established a new competency focus for selected uniformed healthcare providers entitled "International Health Specialists" in response to operational requirements. The Int'l Health Specialist program's purpose is to prepare regionally-focused military medical experts who can help prepare uniformed forces for operational contingencies and response to medical crises around the world, in wartime and peacetime. The Air Force Medical Service (AFMS) members may be selected for specialized career track in full time IHS assignments in support of CoCom Theater Engagement Plans. Individuals selected for the positions will be prepared with short courses and rotations as well as degree programs, e.g. MPH with a regional, humanitarian assistance, disaster response, or international health focus".

These students are enrolled in the MPH program, which gives them a broad didactic experience in public health and preventive medicine. In addition to MPH requirements, these students are required to take additional courses plus electives and an additional AFIT-sponsored second year to perform rotations and projects with various organizations involved in international health.

Funding: AFSG

Updates on International Health Center's Activities:

Graduated FOUR students in June 2004 with THREE participating in the second year practicum
Nurse
Veterinarian
Physician's Assistant
Healthcare Administrator

The Distance Learning Course titled Public Health In The International Environment will be pilot tested in March/April 05.

The IH classes are as follows:
International Health I (PMO 528), offered in the in the Fall
Seminar in Historical Perspectives of International Health (PMO 538), offered in the Fall
International Health II (PMO 539), offered in the Winter
Medical Anthropology (PMO 534), offered in the Winter
Ethics in Public Health (PMO 991), offered in the Winter

Staff Activities:
TSgt T. Forrest Kays graduated from the McGuire NCO Academy on 12 Feb 04
Colonel Martha Turner participated in the Multinational Experiment (MNE3) exercise in Suffolk, Virginia (2 Feb- 20 Feb 04)
Col Turner and Lt Col Schlick have participated in several activities supporting global health educational initiatives.

Among them, participation in the Law of Armed Conflict (LOAC) course in Spiez, Switzerland
Participation and presentation of posters and papers at the 35th International Congress of Military Medicine (ICMM)
Consultation on MPH education programs in India
Scientific review panel
Faculty development/education series
Presentation at the centers for preventive medicine directors' meeting and Faculty Development series
Coordination of International Health I & II, Medical Anthropology, Seminar in Historical Perspectives in International Health, and Ethics in Public Health
Hosting of military and civilian educators from American, European and Central Asian States universities.

Second Year Students Activities:
Participated in humanitarian assistance missions in Thailand, Kenya and Ethiopia
Practicum work at various governmental and non-governmental organizations
Capt Cogswell went on a two-month internship at the Asian Disaster Preparedness Center in Bangkok, Thailand
Major Selent interned at the Pentagon at the Special Operations Low Intensity Conflict (SOLIC) Office under the mentorship of CAPT Ken Schor;
Assisted the Response Medical Team (RMT) at the Office of Foreign Disaster Assistance (OFDA) following the Tsunami Disaster under the
Mentorship of CAPT Ken Schor and Mr. Steve Caitlin; and scheduled to complete her internship at OFDA in March 05.
French Language training (Major Selent) at the National Institutes of Health, USDA, and the Diplomatic Language Services in Washington D.C.
Thai Enhancement Course (Capt Cogswell) at the Diplomatic Language Services in Washington D.C.
Attended several courses at the National Foreign Affairs Training Center, the Joint Special Operations University (JSOU), Hurlburt, Florida and Brooks City-Base and Sheppard AFB Training sites
Successfully passed the French Defense Language Proficiency Test and received a 2+/2 score (the maximum is 3/3) in Feb 05 (Major Selent)

Assignments:
Major Keith Wilson to McDill AFB as Chief, Medical Plans and Exercises of Special Operations Command, CENTCOM
Major Brian Moore to CENTCOM in November 04 as Chief, Horn of Africa Medical Programs, HQ USCENTCOM, Office of the Command Surgeon's (CCSG)
Capt Brad Cogswell to 8th MDOS as Group Practice Manager (Kunsan, Republic of South Korea) then to PACOM
Major Monica Selent to the USAFE IHS Team at Ramstein AFB in April 05

MARTHA TURNER, Col, USAF, NC
Program Director, International Health

CENTER FOR ORAL HEALTH STUDIES

MISSION

The Center is chartered by the Tri-Service Dental Corps Chiefs Council to provide research and data collection services relating to the provision of dental care to all beneficiaries in the Department of Defense. We gather, synthesize, and distribute management information needed to develop oral health care polices and programs necessary to optimize the oral health of DoD beneficiaries and the operational dental readiness of service members. The Center provides consultative services to students and other faculty in the Uniformed Services University regarding oral health research topics, general dental and oral health subjects, and data sources relating to dental care in the military.

PERSONNEL

Andrew K. York, DMD, MPH (Navy) - Director
David L. Moss, DDS, MPH (Army)
Susan W. Mongeau, DDS, MPH (Air Force)
SSGT Scott Beauchamp, NCOIC (Air Force)

PRODUCTS

DoD Dental Patient Satisfaction Survey Program, providing 250 clinic reports per quarter
Automated Data Collection Tools for Current and Future Oral Health Survey Activities
Assessment of Reading Level and Content Adequacy of Oral Cancer Educational Materials from USAF Dental Clinics
The Military Oral Health Care System As A Model For Eliminating Disparities In O ral Health
Assessment of the 2001 Navy Dental Professional Staff Satisfaction Questionnaire

Development of a Staff Satisfaction Survey Instrument for Navy Dentistry
The Influence of Post Doctoral Training Programs for General Dentists on Complexity of Dental Care Provided in the Navy Dental Corps
Dental Treatment Needs of Active Duty Military Personnel 1994 and 2003
Oral Health Status and Treatment Needs of Army Reserve Component Soldiers
Oral Health Status and Treatment Needs of Navy and Marine Corps Reserve Components
Oral Health Status and Treatment Needs of the Air Force Reserve Component
Enrollment and Effect of the TRICARE Dental Plan Among the Military Reserve Component
Oral Health Status and Treatment Needs of Personnel Supported by the Pentagon Dental Clinic
Dental Emergencies During Stabilization Force 8 in Bosnia
Changes in Dental Classification Profile Over Time
Navy Dental Corps Staff Satisfaction Report
2000 Tri-Service Recruit Oral Health Survey Program
Dental Health Section of the Joint Health Service Support: 2010 Health and Fit Force
DoD Directive for Fluoridation of Military Base Water Supplies
1994 Tri-Service Comprehensive Oral Health Survey, Active Duty
1994 Tri-Service Comprehensive Oral Health Survey, Recruit
Distribution of DoD Dental Classification, Air Force, Army, Navy

FY 04 SUMMARY

Our TMA funded DoD Dental Patient Satisfaction Program continued to be the military's sole source for assessing the satisfaction of patients with military dental care. We received, compiled, and analyzed over 12,000 patient satisfaction survey forms each month, from military dental clinics worldwide. We developed and disseminated over 250 individual dental clinic reports each fiscal quarter. These quarterly reports allow clinic directors to identify specific areas for improvement leading to better service and patient satisfaction across the system. The DoD Dental Patient Satisfaction Program continues to be an integral part of the overall Military Health System (MHS) performance assessment.

A new, dynamic, web-based reporting system for the DoD Dental Patient Satisfaction Program is currently under development. It will replace our current reporting system beginning the first quarter of FY05. The system will enhance end-users ability to identify areas of dissatisfaction among their patients. Since the reports are based on a representative sample of patient visits to each dental treatment facility, information regarding patient demographics and patient reported access to care are also provided.

In conjunction with members of the USAF Surgeon General's dental staff, we developed the "Dental Corps Optimization Manning Model". It is currently being used to redistribute Air Force dental manpower based on the results of the Center' s 2003 Dental Treatment Needs Survey.

We collected and analyzed patient encounter data collected by Air Force dental personnel while deployed in support of Operation Iraqi Freedom. Types of treatment required and the demographics of those patients requiring battlefield care were provided to the Office of the Air Force Surgeon General.

The Center continues to play a key role in the development of the reporting system and metrics for the dental module of military medicines Composite Health Care System II. This future electronic dental record is slated to replace the paper dental records currently used across military medicine and will fully integrate dental and medical patient information.

We were tasked by the Army Surgeon General's dental staff, to conduct the "Army Dental Officer Retention Survey". Our questionnaire addresses issues of intent to leave active duty or remain, and possible reasons which drive this decision. Data analysis and reporting are underway.

During FY04 the Center provided mentorship to two dentists completing their residency in Dental Public Health at the National Institute for Dental and Craniofacial Research. We also provided mentorship and data analysis/reporting support for one resident at the Naval Postgraduate Dental School.

The Center's staff played key roles in corporate military dentistry, during FY04. As the primary source of military dentistry health services information we are members of many Integrated Product Teams (IPT) associated with military dentistry including the following:

TMA Dental Health Standard (65% Health) IPT
TMA MHS Survey Workgroup
TMA Reserve Dental Readiness IPT
TMA CHCS II Dental Metrics IPT
Naval Postgraduate Dental School Validation IPT
Air Force Personnel Reliability Program IPT
Sponsored and organized the military session of the annual meeting of the American Association of Public Health Dentistry (AAPHD)

FACULTY

ANDREW K. YORK, DMD, MPH, CAPT, DC, USN
Assistant Professor

Center for Oral Health Studies, Director
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

License to practice dentistry – Kentucky, Virginia
Diplomate, American Board of Dental Public Health
Member, American Dental Association
Member, American Association of Public Health Dentistry

DAVID L. MOSS, DDS, MPH, LTC, DC, USA
Assistant Professor

Center for Oral Health Studies
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

Licensed to practice dentistry – Iowa
Diplomate, American Board of Dental Public Health
Member, American Association of Public Health Dentistry

SUSAN W. MONGEAU, DDS, MPH, LtCol, USAF, DC
Assistant Professor

Center for Oral Health Studies
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, Maryland

Licensed to practice dentistry – Georgia
Member, American Association of Public Health Dentistry (AAPHD)
Member, American Association of Dental Research (AADR)
Member, American Dental Association (ADA)

FY04 PUBLICATIONS

Moss D, York A, Martin G. "Changes in dental classification during the first 4 years of military service". Military Medicine. 2004 Jan: 169(1):38-40.

Mongeau S, Horowitz A. "Assessment of reading level and content adequacy of oral cancer educational materials from USAF dental clinics". Journal of Cancer Education. 2004 Spring; 19(1):29-36.

Hyman J, Mongeau S, York A. "The Military Oral Health Care System as a Model for Eliminating Disparities in Oral Health". Journal of the American Dental Association. (submitted for publication).

York A, Mongeau S, Moss D. "Dental Treatment Needs of Active Duty Military Personnel 1994 and 2003". TRICARE Management Activity Report, September 2004.

S. Matis, B. Feighner, A. York, et. al. "Predictors of Patient Satisfaction in Naval Dental Treatment Facilities". Journal of Dental Research 83 (Spec Iss A): abstract number 1984.

THE CENTER FOR POPULATION HEALTH
Annual Report - 2004

MISSION

The Center is an integral part of the research, service and educational activities of the Division of Health Services Administration. The Center provides expertise and experience in assessing quality of care for populations, analyzing large databases to determine trends in population health and the efficiency and effectiveness of care delivery and the relationship of practice patterns to outcomes. We also develop innovative educational curricula and provide training to federal health care executives and managers to create, manage and improve high quality systems. Using the skills and expertise of Center personnel, we also provide consultation and assistance in health care quality assessment, performance improvement and policy analysis.

PERSONNEL

Galen Barbour, MD – Professor and Director
Beverly Thompson, MSHA – Assistant Professor for Research & Administrative Director
Raymond S. Crawford, MD – Assistant Professor and Medical & Research Director

Mark Munson, MS Ed, MS FM – Assistant Professor
Lillian Shepherd, MS – Assistant Professor
Sandra Elliott – Program Analyst
John Guevara, BA – Program Manager
Varol Saatcioglu, BSCS – Web Designer

WORKING AGREEMENTS

DoD Medical Executive Training
Joint Medical Executive Skills Institute
HRSA
TRICARE Management Activity
Agency for Healthcare Research and Quality
Agency for Healthcare Research and Quality
Veterans Health Administration, Department of Veterans Affairs
State of California Health Department, Tobacco Control Section

PRODUCTS

Executive Medicine Courses – developed an interactive case study
Medical Executive Skills Distance Learning Program
California Active Duty Tobacco Study – completed
Case Study for HSA Track MPH Students
New Courses in the HSA MPH Track:
PMO 576: Human Resources for Healthcare Executives
PMO 523: Fundamentals of U.S. Healthcare Policy
New On-Line Course Proposed for MSPH students, giving an overview of Health Systems

FY 04 SUMMARY

We have added three modules to the MedXellence Distance Learning Program: Patient Feedback, Executive Management of Clinical Investigation Programs, and HIPAA. We added an additional session this past year, presenting at five sites throughout CONUS, and the Atlantic and Pacific theaters. Modules in financial management and modeling, as well as family centered care, have been added to the MedXellence on-site classes.

Preliminary results of the national epidemiological study of cancer for the USMCI have been obtained and are driving re-extraction of some data elements and new analysis activities.

We completed the California Active Duty Tobacco Use Study in August 2004, and reported the results to the Department of Health Services (DHS) for the State of California. Our results showed, among other things, that, compared to similar California subpopulations, active duty males ages 18-34 reported smoking twice as much, and that

active duty females over the age of 45 smoke only 2/3 as much. Active duty personnel are very aware of the dangers of tobacco use, and report smoke free environments at home and at work more often than their civilian counterparts. Based on these and other findings, we made recommendations concerning smoking cessation efforts that DHS could use to reach the military stationed in California.

Final data analysis on three chronic disease cohorts from the Medicare database has been completed and a manuscript is in preparation. In addition, data analysis is proceeding for three surgical procedures.

HRSA has asked us to evaluate exemplary practices in pediatric preparedness, as part of our Bioterrorism grant. First, we have been asked to compile a set of exemplary practices in pediatric preparedness and to write a report on these efforts, using a case study approach. The report will be completed by December 1, 2004, and made available at a conference for HRSA awardees. In addition, we have been asked to evaluate to what extent these initiatives are put into place in other states or localities by summer 2005. We are working with an advisory panel of experts in pediatric bioterrorism preparedness to identify, conduct a site visit, and prepare the report. Secondly, working with the same advisory panel, we will construct a guidebook for pediatric bioterrorism preparedness that is planned to be distributed nationwide to assist states and health care organizations in their efforts.

Center personnel are mentoring or advising one MPH student project; this project will involve addressing the MHS database through existing Center data use agreements within the MHS.

CURRENT PLANS FOR FY 2005

On October 1, 2004, we submitted a grant proposal for NIH/AHRQ on colorectal cancer surveillance in the MHS. We will be using data from the MHS and the VA to determine best practices in cancer surveillance and to determine he proportion of MHS cases also receiving care in the VA.

We are working with an outside vendor to produce a short video on family centered care in the Military Health System. This will be added to our MedXellence course.

Ongoing activities for FY 05 include seeking secure infrastructure funding for the Center from several different sources including (but limited to): petitioning TMA through the Program Oriented Management (POM) approach and considering a grant proposal for infrastructure support to outside agencies such as the Ford Foundation.

Ongoing research activities include the variability in chronic disease and acute surgical care in the CMS database, studying the readiness of the nation's healthcare infrastructure for bio-terrorism, submitting for publication manuscripts on bioterrorism preparedness,

cancer care in the direct care and purchased care of the MHS, and additional questions identified in the CATS study.

MedXellence programs will continue to be offered 5 times a year and the class interaction with the Case Study will be proposed as an educational research study.

FACULTY

GALEN BARBOUR, MD
Professor

Director, Division of Health Services Administration
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, MD

MEMBERSHIPS

American Federation for Clinical Research
Fellow, American College of Physicians
American Heart Association
American Society of Nephrology
American Society for Artificial Internal Organs
Society of the Sigma Xi
Alpha Omega Alpha
American Institute of Nutrition
American Society for Clinical Nutrition
Fellow, American College of Healthcare Executives

AWARDS

Commendation Medal, USAF
Outstanding Career Award, Department of Veterans Affairs

TEACHING

Graduate Courses, USUHS

Quality Assessment/Improvement in Health Care
Health Care Administration Directed Research
Medical Executive Skills Training Program

Medical School Curriculum

Preventive Medicine Course for M-II

Graduate Courses, McDonough School of Business (Georgetown University)

Health Care Performance Improvement

RESEARCH

National Studies of Small Area Analysis of Practice Patterns
RAYMOND S. CRAWFORD, MD

Assistant Professor

Medical Director and Research Program Manager,
Center for Population Health
Division of Health Services Administration
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, MD

MEMBERSHIPS

American Medical Association
American College of Surgeons
American College of Physician Executives
American College of Medical Quality
Society of Critical Care Medicine
Medical Society of Virginia
International Society for Quality in Health Care
National Association of Managed Care Physicians

TEACHING

Graduate Courses, USUHS
Quality Assessment and Improvement
Decision Making

Medial Executive Skills Training Program

RESEARCH

Use of large databases to study patterns of health care delivery

MARK R. MUNSON, MSEd, MSFM
Assistant Professor

Assistant Professor
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, MD

MEMBERSHIPS

Diplomate, American College of Healthcare Executives

AWARDS

Meritorious Service Medal (2)
Navy Commendation Medal (3)
Navy/Marine Corps Achievement Medal (2)
Military Outstanding Volunteer Service Medal

TEACHING

Graduate Courses, USUHS

Lecturer, Health Systems
Fundamentals of U.S. Healthcare Policy

Medical Executive Skills Course
RESEARCH

Research interests include resource issues and financing healthcare in the MHS.
LILLIAN M. SHEPHERD, MS
ASSISTANT PROFESSOR

Assistant Professor
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
Bethesda, MD

MEMBERSHIPS

American Academy of Medical Administrators

AWARDS

Navy and Marine Corps Commendation Medal with one star
Navy and Marine Corps Achievement Medal with two stars
Navy Meritorious Unit Commendation
Good Conduct Medal

TEACHING

Graduate Courses, USUHS

Lecturer, PMO 527: Healthcare Management

RESEARCH

BEVERLY THOMPSON, MHSA, CHE
ASSISTANT PROFESSOR FOR RESEARCH

Assistant Professor for Research
Department of Preventive Medicine and Biometrics
Administrative director, Center for Population Health
Uniformed Services University of the Health Sciences
Bethesda, MD

MEMBERSHIPS: DIPLOMATE, AMERICAN COLLEGE OF HEALTHCARE EXECUTIVES
MEMBER, NATIONAL CAPITAL HEALTHCARE EXECUTIVES

Member, American Speech-Language-Hearing Association

AWARDS: COMMENDATION, DEPARTMENT OF VETERANS AFFAIRS
TEACHING:

Lecturer, PMO 526 – Health Systems
Lecturer, PMO 527 – Healthcare Management

CENTER PUBLICATIONS

Barbour AL, Olsen C, Barbour GL. Visit Rates for Diabetes: Variation across Metropolitan Statistical Areas. (Submitted *Medical Care*)

Austin-Lane, Joy, Girasek, D and Barbour, GL. A Qualitative Study of Influences on State Tobacco Control Funding. *Health Promotion Practice.* 2004 Jul; 5(3 Suppl): 46S – 56S.

UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

The Uniformed Services University of the Health Sciences (USUHS) 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 on the grounds of the National Naval Medical Center in Bethesda, Maryland, it ihas proximity to resources at the National Institutes of Health, the Walter Reed Army Medical Center, the Armed Forces Institute of Pathology, the Armed Forces Radiobiology Research Institute (AFRRI), the National Library of Medicine, as well as the National Naval Medical Center.

GRADUATE MEDICAL AND PUBLIC HEALTH PROGRAMS IN THE DEPARTMENT OF PREVENTIVE MEDICINE AND BIOMETRICS

Within the F. Edward Hébert School of Medicine, the Department of Preventive Medicine and Biometrics 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. The Graduate Programs in the Department of Preventive Medicine and Biometrics are located on the campus of the Uniformed Services University and the adjacent AFRRI building. Well-equipped modern laboratories support the tropical medicine and environmental health programs. Up-to-date 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 Army Medical Center, the National Naval Medical Center, and the Malcolm Grow Air Force Medical Center. 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. In addition, the University currently has an affiliation with the Ministry of Health Laboratory in Belize City, Belize. These and other standing agreements, for example, with the US Army Center for Health Promotion and Preventive Medicine, provide abundant opportunities for our students.

The Graduate Programs at USUHS 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 Biometrics are accredited by the Council on Education for Public Health, the national accrediting organization for programs and Schools of Public Health. In 1998, our MPH program received full accreditation for the maximum seven-year term and in 2003, and succeeding years, was ranked among the top 6 programs in the country by *US News and World Reports*.

> ***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 Department of Preventive Medicine and Biometrics 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), 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 35.

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

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, or 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.

The goal of the MPH program is to provide each student with the necessary academic background to practice as a competent public health or preventive medicine officer in one of the Uniformed Services. 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 health 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, graduates will complete a "concentration" of 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.

In response to a service-specific requirement for formal training in health services administration as a screening prerequisite for military health facility command positions, the PMB Department offers a Master of Public Health degree with a concentration in Health Services Administration (HAS). This concentration requires students to have a designated faculty advisor (or co-advisor) from the HSA Division), to complete an HSA-related project and practicum experience, and to earn a grade of "B" or better in required HSA courses.

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 and be able to assess the health needs of communities and to investigate the impact of biological, environmental, and behavioral factors on community health. They will also be able to compare and contrast the wide variety of health delivery systems in other countries with those in the United States. Graduates will acquire an in-depth knowledge of the agents of tropical diseases, medical parasitology, and vector biology and will have the opportunity for hands-on experience with the epidemiology, pathology, diagnosis, management, treatment, prevention 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 programseach consist of a minimum of 60 quarter credit hours. The MPH degree requires 34 credit hours in core courses in the Department of Preventive Medicine and Biometrics, 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 average load is 16-18. The satisfactory completion of an independent project and a practicum is required, and the courses related to these requirements are part of the core curriculum. The independent project is the capstone of the MPH/MTM&H programs and should represent the synthesis, integration, and application of core public health concepts and principles to solve a public health problem. The requirements for the MPH 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 required courses in tropical medicine and tropical public health. One clinical rotation of at least six weeks is spent at an affiliated overseas facility and involves diagnosis and treatment of patients, as well as field study of diseases endemic to tropical regions. This overseas rotation satisfies the requirement for a practicum experience. Associated travel and per diem expenses are the responsibility of the applicant or applicant's sponsoring institution or Service. This curriculum offers less opportunity for elective courses than the MPH degree program and typically adds at least six weeks to the timeline for degree completion.

The American Society of Tropical Medicine and Hygiene (ASTMH) has certified a 12-week course, "Training in Clinical Tropical Medicine and Travelers' Health," directed by the Division of Tropical Public Health. This training is offered in the Spring Quarter and fulfills the eligibility requirements for physicians to take the ASTMH Certificate of Knowledge Examination. This comprehensive lecture, seminar, laboratory, and case-based curriculum incorporates courses that are a part of the MPH/MTM&H program. See the ASTMH website for additional information (http://www.astmh.org/certification/index.cfm).

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 environmental health sciences, industrial hygiene, health physics, or medical entomology.

Graduates of this program will acquire basic knowledge and skills in the five core disciplines of public health, plus in-depth knowledge in a selected area of concentration. The graduate will gain competence in the recognition, evaluation, and control of a variety of environmental 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 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 course 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 health care systems of the United States, and (3) explain the behavioral and economic foundations for health promotion and disease prevention strategies in the United States. Health care professionals 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.

MPH AREAS OF CONCENTRATION

In addition to completing the core courses, each MPH student will select an area of concentration from among the following: aerospace physiology, biostatistics and epidemiology, environmental and occupational health, general preventive medicine and public health, health services administration, international health, tropical public health, and occupational ergonomics. Each of the concentrations builds upon the foundation of the core MPH curriculum with additional required and elective courses. A brief description of the areas of concentration, including learning objectives and course requirements, follows. The General Preventive Medicine and Public Health area of concentration offers a broad-based educational experience.

AEROSPACE PHYSIOLOGY: This concentration will prepare students for eligibility to take the Aerospace Physiology Certification examination administered by the Aerospace Physiologist Society of the Aerospace Medical Association. Students will be able describe the physiology of aviation, to identify and evaluate the effect of human factors on performance in military operational settings, and will gain fundamental knowledge of the major issues involved in aviation mishap investigation. In addition, students have the opportunity to gain in-depth familiarity with the principles of Aerospace Medicine.

Required courses are PMO841-Aerospace Physiology I, PMO842-Aerospace Physiology II, PMO845-Human Factors in Aviation, PMO846-Aerospace Exercise Physiology, and PMO848-Special Topics in Aerospace Medicine (Principles and Practice of Hyperbaric Medicine). A total of six (6) courses are required to fulfill the concentration in Aerospace Physiology, the five required courses and at least one elective. Electives include, but are not limited to, PMO847-Aerospace Performance and Health, PMO849- Aerospace Medicine in the Modern Age, PMO548-Joint Medical Operations and Humanitarian Assistance, PMO549-Principles of Toxicology, PMO554-Health Effects of Ionizing/Non-Ionizing Radiation, PMO606- Non-Ionizing Radiation, and PMO599-Introduction to Risk Communication (*very strongly recommended)*. Other courses outside the PMB Department may also be considered, for example, Neurophysiology, Pulmonary Physiology, Advanced Cardiovascular Physiology, among others.

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 epidemiologic and biostatistical methods in planning and carrying out epidemiologic investigations.

Required courses include PMO512-Epidemiologic Methods and PMO513-Advanced Epidemiologic Methods. Students must select at least four additional electives from among the following: PMO514-Epidemiology and Control of Infectious Diseases, PMO515-Epidemiology and Control of Non-Infectious Diseases, PMO522-Meta-Analysis, PMO519-Occupational and Environmental Epidemiology, PMO611-Classic Studies in Epidemiology, and PMO508-Biostatistics III.

OCCUPATIONAL AND ENVIRONMENTAL MEDICINE: This concentration is primarily designed for residents in Occupational and Environmental Medicine and provides students with the fundamental concepts and principles of environmental and occupational health, including a foundation in epidemiology and biostatistics, health service administration, behavioral health, and industrial hygiene. In addition, students will gain advanced knowledge in toxicology, occupational ergonomics, occupational and environmental injuries and illnesses, clinical occupational and environmental medicine, and military unique threats including chemical, nuclear, and biological warfare agents.

In addition to the core requirements, this concentration requires Principles of Toxicology PMO 559, Industrial Hygiene I and Laboratory PMO 550, Introduction to Military Occupational Health-PMO 557, Fundamentals of Clinical Occupational, Environmental, and Preventive Medicine- PMO 558, Occupational Ergonomics-PMO 652, GPM and OEM Journal Club-PMO 973, Selected Topics in Environmental and Occupational Health- PMO 546, Occupational and Environmental Epidemiology- PMO 519, and Clinical Occupational and Environmental Medicine-PMO 542.

Students should select a minimum of four of the five courses from the following electives: Environmental/Occupational Health Directed Studies, PMO 940. Industrial Hygiene Field Studies-PMO 553, Current Problems and Practice in Preventive Medicine-PMO 681, Current Injury Prevention Issues and Initiatives PMO 655, Joint Medical Operations and Humanitarian Assistance-PMO 548.

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

In addition to the core requirements, this concentration requires PMO549-Principles of Toxicology and PMO550-Industrial Hygiene I and Laboratory. Students are also required to choose five electives from among the courses offered by the Division of Environmental and Occupational Health or a course from another Division closely related to this field.

GENERAL PREVENTIVE MEDICINE AND PUBLIC HEALTH: This generalist pathway will enable students to 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.

A minimum of six courses are to be selected from among the following electives: PMO514-Epidemiology and Control of Infectious Diseases, PMO515-Epidemiology and Control of Non-infectious Diseases, PMO531-Program Planning & Development, PMO548-Joint Medical Operations and Humanitarian Assistance, PMO630-Environmental Health Policy, and any other course that has been identified as a requirement for the other core areas of concentration.

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

Required courses include PMO526-Health Systems, PMO527-Principles of Health Care Management, PMO528-International Health I, PMO529-Health Care Financial Management, PMO532-Quality Assessment and Improvement in Health Care, PMO533-Decision Making in Health Services, PMO535-The Law of Health Care, PMO591 Marketing and Strategic Issue and PMO991 Ethics in Public Health. The Division of Health Services Administration offers other electives.

INTERNATIONAL HEALTH SPECIALIST: The USU/IH program's mission is to prepare globally focused military

professionals for positions in support of complex contingencies and medical crises around the world, in wartime and peacetime. The program emphasizes interoperability in military-military and military-civilian activities. The roles of health organizations, both public and private are addressed. International Health is defined and the scope of the field is explored. Political, economic and sociocultural factors of population health are considered especially within the context of developing countries. Healthcare delivery systems are examined looking at resources, access, policies, current challenges, potential solutions and opportunities for reform.

In addition to the MPH program goal, the IH student upon completion of concentration-specific requirements will:

a. have a basic knowledge of major international health issues, ethical and cultural considerations and their influence in the global context

b. understand the role that the US military and other organizations and agencies play in addressing global health issues

c. be able to apply public health principles toward assessing international health needs and in planning, conducting, and evaluating international health-related activities and projects

Additional requirements for the students enrolled in the IH program are: PMO528-International Health I; PMO539-International Health II; PMO534-Medical Anthropology; PMO548-Joint Medical Operations and Humanitarian Assistance; PMO613-Public Health Issues in Disasters; PMO512-Introduction to Epidemiology II; and PMO991-Ethics.

Students must also select two additional electives from the following courses: PMO531-Program Planning & Development; PMO527-Principles of Healthcare Management; PMO533-Decision Making in Health Services; PMO560-Principles and Practice of Tropical Medicine; PMO569-Malaria Epidemiology and Control; PMO990-Travel Medicine Practicum.

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 of the program will be able to apply the basic concepts and principles of tropical medicine, medical parasitology, and vector biology to the epidemiology, diagnosis, treatment, prevention, and control of tropical diseases.

Required courses are PMO565-Vector Biology, PMO504-Biostatistics II, PMO512-Epidemiologic Methods, PMO560-Principles and Practice of Tropical Medicine, PMO561-Medical Parasitology, PMO569-Malaria Epidemiology and Control. In addition, two additional electives must be chosen from any of the following: PMO539-International Health II, PMO514-Epidemiology and Control of Infectious Diseases, or any course offered by the Division of Tropical Public Health.

OCCUPATIONAL ERGONOMICS: This concentration focuses on public health concerns raised by workplace injuries and their associated costs. Students will acquire additional knowledge and skills in technical human factors engineering and occupational ergonomics to have competency in the assessment, prevention, control, and management of work-related musculoskeletal disorders, disease non-battle injuries, and garrison, field, and training injuries in military and civilian settings. This area of concentration within the MPH curriculum is the first part of a two-year training program, which is followed by a year-long practicum phase conducted and supervised by the U.S. Army Center for Health Promotion and Preventive Medicine.

Required courses for this concentration are PMO615-Human Factors Engineering, PMO652-Occupational Ergonomics; PMO653-Work Analysis Methods, PMO654-Safety Engineering, and PMO655-Current Injury Prevention Issues and Initiatives (Seminar).

DEPARTMENT OF PMB
MPH/MTM&H CURRICULUM*

PRE-FALL REQUIRED CORE COURSES

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

PRE-FALL ELECTIVE COURSES *

PMO558 Fund Clinical Occ, Environ/Preventive Medicine (1)

FALL REQUIRED CORE COURSES

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

ADDITIONAL REQUIRED COURSES FOR MTM&H

PMO528 International Health I (3)
PMO565 Vector Biology (2)

FALL ELECTIVECOURSES *

PMO528 International Health I (3)
PMO546 Selected Topics in EOH (2)
PMO548 Joint Med Ops & Humanitarian Assistance (3)
PMO565 Vector Biology (2)
PMO567 Chg Patterns of Arthropod-borne Dis (4)
PMO577 Introduction to GIS Methods in PH (2)
PMO584 Introduction to Health Physics (3)
PMO587 Nuclear Reactors Criticality & Shielding (3)
PMO600 Fundamentals of Human Physiology (2)
PMO606 Non-ionizing Radiation (3)
PMO651 Human Factors Engineering (3)
PMO652 Occupational Ergonomics (3)
PMO683 Critical Reading Seminar (2)
PMO684 Clinical Research Seminar (1)
PMO688 Info Gathering in Clin Med (2-12)
PMO701 Advanced Biometrics Tutorial (1-12)
PMO841 Aerospace Physiology I (3)
PMO971 Doctoral Student Journal Club (1)

WINTER REQUIRED CORE COURSES

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

ADDITIONAL REQUIRED COURSES FOR MTM&H

PMO512 Epidemiology II (4)
PMO539 International Health II (3)

WINTER ELECTIVE COURSES *

PMO502 Intro to SAS (1)
PMO512 Introduction to Epidemiology II (4)
PMO514 Epi and Control of Infectious Diseases (2)
PMO527 Principles of Healthcare Management (2)
PMO531 Program Planning & Development (3)
PMO534 Medical Anthropology (2)
PMO535 The Law of Health Care (2)
PMO539 International Health II (3)
PMO546 Selected Topics in EOH (2)
PMO550 Industrial Hygiene I & Lab (4)
PMO554 Hlth Effects of Ionizing & Non-Ionizing Rad (3)
PMO555 Industrial Ventilation (3)
PMO566 Phys Params of Vector Competence (4)
PMO571 Biosystematics in Med Zool (2)
PMO578 Remote Sensing Methods in PH (4)
PMO581 Radiation Dosimetry (3)
PMO585 Environmental Health Physics (3)
PMO588 Instrumentation of Ionizing Radiation (3)
PMO601 Environmental Health Risk Assessment (2)
PMO611 Classic Studies in Epi (2)
PMO615 Sand Flies and Disease (3)
PMO654 Safety Engineering (3)
PMO661 Medical Zoology Seminar (1)
PMO683 Critical Reading Seminar (2)
PMO684 Clinical Research Seminar (1)
PMO701 Advanced Biometrics Tutorial (1-12)
PMO842 Aerospace Physiology II (3)
PMO971 PMB Doctoral Student Journal Club (1)
PMO972 Seminar in Critical Thinking (4)
PMO991 Ethics in Public Health (3)
PMOMC Managed Care and Health Insurance (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)

SPRING REQUIRED CORE COURSES

PM0673 MPH Proj/Practicum Implementation & Eval (1)

ADDITIONAL REQUIRED COURSES FOR MTM&H

PMO560 Principles & Practice of Tropical Medicine (6)
PMO561 Medical Parasitology (2)
PMO564 Epi & Control of Arboviruses (Lec-2)
PMO569 Malaria Epidemiology and Control (3)

SPRING ELECTIVE COURSES *

PMO508 Biostatistics III (5)
PMO513 Advanced Epidemiologic Methods (4)
PMO515 Epi & Control of Non-Infectious Diseases (2)
PMO519 Occupational & Environmental Epidemiology (2)
PMO520 Molecular Epidemiology (2)
PMO521 Concepts in Molecular Biology & Immunology (2)
PMO522 Meta Analysis (1)
PMO523 Fundamentals of US Healthcare Policy (2)
PMO524 Health Care Performance Improvement (2)
PMO529 Health Care Financial Management (2)
PMO532 Qual Assessment & Improvement in Health Care (2)
PMO533 Decision Making in Health Services (2)
PMO537 Clinical Decision Making (1)
PMO542 Clin Occ & Environ Medicine (4)
PMO549 Principles of Toxicology (4)
PMO552 Industrial Hygiene II & Lab (4)
PMO557 Introduction to Military Occupational Health (1)
PMO560 Principles & Practice of Tropical Medicine (6)
PMO561 Medical Parasitology (2)
PMO564 Epidemiology and Control of Arboviruses (Lec-2)
PMO569 Malaria Epidemiology and Control (3)
PMO576 Human Resources for Healthcare Executive (2)
PMO582 Radiation Biology (2)
PMO591 Marketing and Strategic Issues (2)
PMO599 Intro to Health Risk Communication (2)
PMO602 Solid & Hazardous Wastes (3)
PMO605 Analytical Instr Meth in Envtl Health (3)
PMO613 Public Health Issues in Disasters (4)
PMO614 Tropical Medicine Rounds (2)
PMO630 Environmental Health Policy (3)
PMO631 MSPH Journal Club: (1 credit over 3 quarters)
PMO635 Military Radiological Operations in Peacetime (1)
PMO636 Military Radiological Operations in Conflict (1)
PMO637 Military/CivilianRadiologicalOperationsand Interactions (1)
PMO653 Work Analysis Methods (3)
PMO682 History of Preventive Medicine (2-4)
PMO683 Critical Reading Seminar (2)
PMO684 Clinical Research Seminar (1)
PMO845 Human Factors in Aviation (3)
PMO846 Aerospace Exercise Physiology (3)
PMO990 Travel Medicine (2)
PMO971 PMB Doctoral Student Journal Club (1)

SUMMER REQUIRED CORE COURSES

REQUIRED COURSES FOR MPH

PMO670 Public Health Practicum (3)
PMO674 MPH Independent Project (3)
PMO681 Current Probs & Prac of Prev Med & PH (1)

ADDITIONAL REQUIRED COURSES FOR MTM&H

PMO563 Clinical Tropical Medicine (1-12); overseas rotation (in lieu of PMO670)

SUMMER ELECTIVE COURSES *

PMO553 Ind Hygiene Field Studies (1)
PMO562 Selected Diseases of the Tropics (4)
PMO564 Epi & Control of Arboviruses (Lab-4)
PMO568 Medical Acarology (4)
PMO570 Mod Tech & Vector-borne Dis (4)
PMO572 Intro to Medical Malacology (3))
PMO582 Radiation Biology (2)
PMO630 Environmental Health Policy (3)
PMO5TA Healthcare Technology Assessment (2)

MASTER OF SCIENCE IN PUBLIC HEALTH (MSPH)

The MSPH degree program is a two-year, 120 credit-hour program requiring at least 60 credit hours of coursework (non-research hours). The 60 credit hours of coursework will include a practicum experience and at least 2 credit hours of journal club. The coursework hours may also include electives and independent studies. The courses in the MSPH curriculum (listed below) are required for each respective specialty track. Waivers 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 also 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.

Practicum Experience. The MSPH degree program requires a specific field or practicum experience. This requirement is identical to that required for the MPH degree, which is briefly described in the PMB Department's *Clinical and Graduate Programs Information Handbook* (PMB "Handbook") published each year in July. In lieu of PMO670 *Public Health Practicum*, for MPH students, MSPH students enroll in PMO942, *Environmental/Occupational Health Directed Rotations*, during the third or fourth quarter of Year One or any quarter of Year Two, with the approval of their Research Advisor (Academic Advisor may be substituted if a Research Advisor has not yet been selected).

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. The student's Research Advisor must have an academic appointment in the PMB Department. Credit for research is received by enrolling in PMO941, *Environmental Occupational Health Directed Research*, during Years One and Two, with the approval of the student's Academic Advisor. The EOH Directed Research hours will be assigned a grade by the Research Advisor for each quarter corresponding to the credit hours taken in that quarter.

Thesis Defense. The Thesis Examination Committee will be composed of at least three members: the Research Advisor, who serves as the committee chairman, and two other members. 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 Division for the specialty track in which the student is enrolled. In order for MSPH students to participate in the USUHS graduation exercise held annually in May, the Thesis Examination Committee must approve the thesis defense in writing by April 10 of the year of graduation.

MSPH SPECIALTY TRACKS

There are three Specialty Tracks within the MSPH degree program: Environmental and Occupational Health (EOH), Health Physics (HP), and Medical Entomology (ME). Students are expected to select one specialty track and may take elective courses from other tracks. 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 and have a basic understanding of the other specialty areas.

ENVIRONMENTAL AND OCCUPATIONAL HEALTH: The EOH Specialty Track is guided by a Joint Steering Committee whose membership includes related specialty leaders from Air Force, Army and Navy Service branches. The EOH specialty track will cover industrial hygiene, environmental chemistry, health physics, environmental health risk assessment, analytical instrumentation, environmental surveillance, and toxicology.

HEALTH PHYSICS: The Health Physics Specialty Track is an interdepartmental effort with the Department of Radiology and Radiological Sciences, NNMC, and the Armed Forces Radiobiology and Research Institute. Students will gain the knowledge and skills necessary to function as a Health Physicist. Studies include ionizing and non-ionizing radiation, radiation dosimetry, biological effects of radiation, radiation instrumentation, industrial hygiene, ventilation, toxicology, environmental or occupational regulatory issues, laboratory analytical methodologies, and principles of medical physics. Upon completion of this curriculum, the student will be eligible to take the American Board of Health Physics examination.

MEDICAL ENTOMOLOGY: Students will gain knowledge and understanding of vector biology and how arthropods affect human health; how to conduct vector-borne disease risk assessments; and how to plan, coordinate, and implement vector control operations.

MSPH CURRICULUM

YEAR ONE

PRE-FALL CORE/REQUIRED

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

FALL CORE/REQUIRED

PMO503 Biostatistics I (4)
PMO511 Introduction to Epidemiology I (4)
PMO590 Introduction to the U.S. Health Care Industry (2)

Add for EOH Specialty Track
PMO584 Introduction to Health Physics (3)
PMO671 Intro to MPH Project and Practicum (1)
PMO600 Fundamentals of Human Physiology (2)

Add for HP Specialty Track
PMO584 Introduction to Health Physics (3)
PMO600 Fundamentals of Human Physiology (2)
PMO671 Intro to MPH Project and Practicum (1)

Add for ME Specialty Track
PMO671 Intro to MPH Project and Practicum
PMO567 Changing Patterns of Arthropod-Borne Diseases (4)
PMO577 Introduction to GIS Methods in PH (2)

WINTER CORE/REQUIRED

PMO504 Biostatistics II (4)

Add for EOH Specialty Track
PMO549 Principles of Toxicology (4)
PMO550 Industrial Hygiene I & Lab (4)
PMO607 Environmental Chemistry (3)
PMO601 Environmental Health Risk Assessment (2)
PMO631 EOH Journal Club (1)

Add for HP Specialty Track
PMO581 Radiation Dosimetry (3)
PMO550 Industrial Hygiene I & Lab (4)
PMO941 EOH Directed Research (1-15)
PMO631 EOH Journal Club (1)

Add for ME Specialty Track
PMO672 MPH Project/Practicum Design & Dev (1)
PMO512 Epidemiological Methods
PMO571 Biosystematics in Medical Zoology (2)
PMO566 Physiological Parameters of Vector Competence (4)
PMO578 Remote Sensing Methods in Public Health (3)

SPRING CORE/REQUIRED

Add for EOH Specialty Track
PMO549 Principles of Toxicology (4)
PMO605 Analytical Instr Meth in Envir Health (3)
PMO555 Industrial Ventilation (4)
PMO552 Industrial Hygiene 2 (CBRNE Detection) (4)
PMO631 EOH Journal Club (1)

Add for HP Specialty Track
PMO549 Principles of Toxicology (4)
PMO582 Radiation Biology (3)
PMO589 Intro to Medical Physics (3)
PMO0631 EOH Journal Club (1)
PMO941 EOH Directed Research (1-15)

Add for ME Specialty Track
PMO673 MPH Project/Practicum Implementation & Eval (1)
PMO564 Epidemiology and Control of Arboviruses Lec (2)
PMO569 Malaria Epidemiology and Control (3)
PMO661 Medical Zoology Seminar (1)

SUMMER CORE/REQUIRED

Add for EOH and HP Specialty Tracks
PMO941 EOH Directed Research (1-15)
PMO681 Current Probs & Prac in Prev Med & PH (1)
PMO942 MSPH Directed Rotation (3)

* Electives are listed in the "Course Descriptions" section of this handbook.

YEAR TWO

PRE-FALL

None

FALL CORE/REQUIRED

None

Add for EOH Specialty Track
PMO941 EOH Directed Research (1-15)
EOH Journal Club *

Add for HP Specialty Track
PMO587 Nuclear Reactors, Criticality and Shielding (3)
PMO606 Non-ionizing Radiation (3)
PMO941 EOH Directed Research (1-15)
EOH Journal Club **

Add for ME Specialty Track
PMO964 Research in Medical Zoology (8)

WINTER CORE/REQUIRED

None

Add for EOH Specialty Track
PMO941 EOH Directed Research (1-15)
EOH Journal Club **

Add for HP Specialty Track
PMO585 Environmental Health Physics (3)
PMO588 Instrumentation of Ionizing Radiation (3)
PMO941 EOH Directed Research (1-15)
EOH Journal Club *

Add for ME Specialty Track
PMO964 Research in Medical Zoology (4)

SPRING CORE/REQUIRED

None

Add for EOH and HP Specialty Tracks
PMO941 EOH Directed Research (1-15)
PMO631 EOH Journal Club (1)

Add for ME Specialty Track
PMO964 Research in Medical Zoology (4)

SUMMER CORE/REQUIRED

Add for EOH and HP Specialty Tracks
PMO941 EOH Directed Research (1-15)

Add for ME Specialty Track
PMO964 Research in Medical Zoology (4)

** EOH Journal Club continues monthly through fall, winter and spring quarters but students only register for PM0631 in the Spring Quarter of each year for 1 credit

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 as the goal of the project.

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. 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 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 (USUHS 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 USUHS faculty member, the student is encouraged to recruit a Co-Project Mentor from among the USUHS faculty.

Once an independent project topic has been selected, a brief description of the proposed project (the pre-proposal) 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 and the necessary forms to submit for institutional assurances and/or approvals (e.g., research involving human participants or animal care and use), and students will be given timely feedback. Students and their Project Mentors should meet regularly to develop the protocol, discuss human participants in research issues, 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 USUHS 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 USUHS Office of Research (REA) for a determination of whether or not the research activity falls under an exempt category or is covered by federal regulations prior to beginning work on the study. Some studies may receive an expedited review. The University is held accountable for reviewing all human-use protocols prior to the conduct of the study, as well as on at least a yearly basis thereafter, if the study continues for more than one year.

Once all necessary assurances and/or 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 all 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 standard 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. The following 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):

PMO701	Advance Biometrics Tutorial
PMO760	Tropical Medicine Research Tutorial
PMO811	Independent Study in Epidemiology
PMO830	Independent Study in Social and Behavioral Science
PMO881	Military Preventive Medicine Study Topics
PMO911	Research in Epidemiology
PMO926	Health Services Administration Directed Research
PMO940	Environmental/Occupational Health Directed Studies
PMO941	Environmental/Occupational Health Directed Research
PMO960	Directed Laboratory Research
PMO962	Directed Clinical Research
PMO963	Directed Field Research
PMO964	Research in Medical Zoology
PMO970	Directed 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 consultants (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 assurances and/or approvals) so that work on the project itself can begin ideally no later than the beginning of the Spring Quarter. This will be very important for those students doing primary data collection 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 calculations, 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 (approximately 15 minutes in length) 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 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 USUHS MPH program. It represents an opportunity for students to enhance their classroom learning by participating in a variety of public health activities at local, regional, and national organizations, military and civilian, within the National Capitol area and, possibly, more distant sites. The opportunities are many 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 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, 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 generally be submitted by the beginning of the Spring 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, generally 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.

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: thooper@usuhs.mil).

DOCTOR OF PUBLIC HEALTH

The DrPH degree program is designed to provide rigorous, advanced training for graduate students who plan to assume leadership roles in research, teaching, or the policy arena. DrPH students build on a firm foundation of core public health concepts and principles with additional coursework in research methodology, critical thinking skills, and teaching methods. They then apply this knowledge to the design, development, and execution of an original research project culminating in a doctoral dissertation. 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 objective of the DrPH program is to produce scholarly health professionals who are knowledgeable in the diverse fields relevant to public health and who have expertise in at least one of these fields, for example, epidemiologic research, health policy development, environmental risk assessment and management, disaster and emergency preparedness, or tropical public health.

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. Applicants without a graduate degree in a health-related field may also be considered for admission; however, the minimum requirements include a Master's degree with an outstanding academic record, some health-related work or volunteer experience, and a demonstrated interest in pursuing a public health career. Students without a strong educational background in the biomedical sciences would be required to take additional courses to introduce them to clinical concepts, including pathophysiology and disease transmission. Civilian applicants will be considered for admission on a space-available basis, with preference given to physicians and other health professionals sponsored by U.S. government agencies.

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

- Basic academic foundation consisting of the MPH curriculum
- Additional required advanced electives
- Critical thinking seminar series and journal clubs
- Minimum of one teaching assistant assignment per year
- A dissertation

Students must meaningfully participate in all aspects of original research: proposal submission, data collection, data analysis and interpretation, and dissertation preparation and submission.

Students transferring into the DrPH program from other institutions may apply up to 24 academic credits of comparable graduate courses to meet the MPH and DrPH requirements, with the approval of the Director of Graduate Programs, the PMB Doctoral Committee, and the Associate Dean for Graduate Education. However, 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. All DrPH students/candidates are required to complete the following core courses.

Core Courses:		Quarter Credit Hours
PMO503	Biostatistics I*	4
PMO504	Biostatistics II*	4
PMO508	Biostatistics III	5
PMO505	Microcomputer Applications*	1
PMO502	Introduction to SAS	1
PMO511	Intro to Epidemiology *	4
PMO512	Epidemiologic Methods	4
PMO513	Advanced Epidemiologic Methods	4
PMO526	Health Systems*	3
PMO527	Principles of Healthcare Management	2
PMO530	Behavioral & Social Sciences Applied to Public Health*	4
PMO533	Decision Making in Health Services	2
PMO540	Environmental Health*	4
PMO560	Principles and Practice of Tropical Medicine	6
PMO680	Introduction to Public Health*	1
PMO681	Current Problems & Practice of Prev Med & Public Health*	1

*core courses for the MPH degree

Students without a professional degree in a biomedical science or health-related field must take the additional courses listed below:

PMO692	Clinical Concepts for Doctoral Students - Part 1	1-2
PMO693	Clinical Concepts for Doctoral Students - Part 2	1-2
PMO688	Information Gathering in Clinical Medicine	2-12

Required seminars and journal club

PMO971	PMB Doctoral Student Journal Club (Fall, Winter, Spring - required until successful thesis defense)	variable (1/qtr)
PMO972	Seminar in Critical Thinking	4

Required additional course work in major area of study 20

Required University courses:

IDO704	Ethics and the Responsible Conduct of Research	1
IDO511	Educational Methods	3

Electives: See MPH course offerings

Teaching Assistant Assignments: DrPH students are required to serve as teaching assistants (TA) at least once each academic year, beginning in the second year of the doctoral degree program. Priority will be given to MPH core courses for TA support, but DrPH students are encouraged to serve as TAs in more than one course per year. For each TA assignment, doctoral students/candidates are expected to make significant and measurable contributions to the courses in which they participate, sharing responsibility with the Course Director. Since each course is unique, the contributions of a TA may vary. The following are examples of the ways in which TAs may contribute to teaching and learning:

Preview/pretest lectures, lecture notes, tests, laboratory sessions
Prepare and present lectures; lead labs or small group discussions
Prepare and grade quizzes and examinations
Assist students who need extra instruction
Provide feedback to the Course Director to improve the course

Each TA assignment should provide an excellent learning experience, allowing TAs to polish their knowledge and skills. After demonstrating competence in the subject as students, the TA experience allows doctoral students/candidates to develop and demonstrate mastery of the subject material, including theoretical background and application, and to acquire and practice various teaching skills and techniques. Course Directors are responsible for developing specific learning objectives for the TA and for articulating the responsibilities of the TA.

Academic Advisor, Advisory Committee, Dissertation Advisor, and Dissertation Committee: The Director, Graduate Programs, will appoint an Academic Advisor and an Advisory Committee for eachDrPH student. After passing the written qualifying examination, a Dissertation Advisor and a Dissertation Committee will be constructed and appointed by the Director of Graduate Programs (with the advice and consent of the PMB Doctoral Committee).

Qualifying Examination: To achieve candidate status within the DrPH program requires satisfactory performance on both the written and oral portions of a Qualifying Examination. The written examination is comprehensive and is designed to test the student's knowledge and understanding in the core areas of public health. The oral examination, conducted by the Dissertation Committee, is also comprehensive, and the questions are usually in the context of the student's thesis proposal.

Thesis Requirement: All doctoral candidates must submit a thesis proposal to their Dissertation Committee for approval. The final thesis must be presented and defended before the candidate's Dissertation Committee, followed by a public defense. It must be based on original research, be worthy of publication, and be acceptable to University Graduate Education Office and the University Board of Regents.

An alternative to the traditional thesis pathway is a manuscript-based thesis, which in many ways differs little from the more traditional framework. The standard of quality, the content, and much of the format remains the same. In particular, both require an extensive, unifying introduction, background, and discussion sections, in which the student places his/her work in context. The dissimilarity applies to the materials and methods section and the results section, which in the manuscript-based framework consists of completed manuscripts suitable for peer-reviewed publication. These manuscripts would take the place of the traditional chapters approved for the thesis. The elements of the thesis must still result in a unified product representing the original, independent work of the student.

All major changes to the proposal must be submitted to the Advisory or Dissertation Committee (depending on the phase of research) for approval. **The candidate will begin research activities only after obtaining the appropriate institutional approvals and assurances**. Prior approval for research by another institution does not automatically constitute approval for this research to be done as a dissertation project at USUHS. The thesis format is selected after the student successfully completes both portions of the Qualifying Examination, and the decision should be made jointly by the student and his/her Dissertation Committee. Since the manuscript-based thesis is considered to be an acceptable alternative to the more traditional thesis format, and in no way represents any change in either content or quality, the student and his/her Dissertation Committee can select either format.

Defense of Thesis: The Dissertation Committee consists of at least five members and includes the student's Dissertation Advisor and four other faculty members at the rank of Assistant Professor or above. At least three members must be full-time faculty members with a primary appointment in the PMB Department, and at least one member must be from another USUHS Department (without a secondary PMB appointment). Additional members may hold either a USUHS faculty appointment or have an appointment at another accredited college or university. Committee appointments will be recommended by the Director of Graduate Programs and approved by the Department Chair. The majority of the Committee members must be full-time PMB faculty.

DOCTOR OF PHILOSOPHY IN ENVIRONMENTAL HEALTH SCIENCES

The PhD degree program in environmental health sciences (EHS) offers 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 specific needs of each graduate 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.

Our curriculum provides students with the necessary knowledge and skills to manage a wide range of environmental health issues. The overall program is rigorous, and the focus is to teach the ability to critically assess and solve complex problems in the field of environmental health sciences, especially as they relate to exposure assessment. The program culminates in the successful completion of a doctoral dissertation that reflects the practice and mastery of both fundamental and advanced concepts in environmental health sciences. The academic foundation includes required core and selected elective coursework, which prepares doctoral candidates for focused efforts in the use of the scientific method to ask appropriate questions and solve problems related to the field.

This doctoral program is open only to members of the Uniformed Services, and applicants will only be accepted as full-time students with a maximum of three years of study in residence. The requirements for satisfactory academic standing are the same as those for the DrPH program. Each PhD candidate must demonstrate sustained excellence in completing independent research to satisfy the thesis requirement. Graduates are expected to be well-versed in both theory and practice, as well as confident and tested in their abilities to apply knowledge, implement policies, and communicate research findings.

Advisory Committee: An Advisory Committee is selected by the PMB Director of Graduate Programs for each PhD student within his/her first year of study. The Advisory Committee consists of at least four faculty members (including a chairperson, an advisor, and two others). The purpose of the Committee is to oversee and direct the student's program. The members of this committee, in concert with the student, prepare a program of study, which is subsequently submitted for approval, through the Director of Graduate Programs, to the Chair of the PMB Department and the Associate Dean for Graduate Education. Any proposed changes are made in full consultation with the student and his/her Advisory Committee and incorporated into the Advisory Committee Report, which is regarded as the official statement of the student's program.

Course of Study: All students/candidates must complete a minimum of 144 credit hours, of which 48 credit hours must be devoted to formal coursework. The 48 hours of formal coursework is regarded as the minimum number of required classroom hours to acquire the knowledge base necessary to support the research phase. This reflects our philosophy that each doctoral student must work closely with his/her Advisory Committee to plan both the overall course of study and the thesis research. Candidates who are active duty military members have the ability to tailor their research to meet the specific needs of their sponsoring Uniformed Service.

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. As a minimum, each PhD candidate will serve as a teaching assistant in one course per year, starting in the second year of his/her program.

Core Courses: The required courses are presented below:

Biostatistics I and II	8
EOH Journal Club (first year)	1/qtr
Environmental Chemistry	3
Environmental Health	4
Epidemiology I and II	8
PMB Doctoral Journal Club (second and third years)	1/qtr
Principles of Toxicology	4
Introduction to Health Physics	3
Occupational and Environmental Epidemiology	2
Introduction to Risk Communication	2
Scientific Ethics and the Responsible Conduct of Research	1
Grant Writing	2
Total credits	39

Elective Courses: In addition to the courses offered by our Department, several other courses offered by other USUHS Departments, including the interdisciplinary Emerging Infectious Diseases program, may be suitable as electives for students in the EHS program, . 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.

Qualifying Examination for Advancement to Candidacy: The Qualifying Examination in EHS consists of two parts: a written examination followed by an oral examination. The written portion is comprehensive and tests 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. 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 USUHS Department, or faculty from outside the University. The Qualifying Examination Committee is appointed by the PMB Director of Graduate Programs.

Thesis Requirements: The 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, the candidate develops a research hypothesis and a formal research proposal, approved by the student's Advisory Committee. The process is a rigorous one, with the candidate presenting the proposal 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 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.

Both the Advisory Committee and the Dissertation Committee support the student's independent research through mentoring, guidance, and feedback, especially during the early phases. The Dissertation Committee is composed of at least four faculty members with doctoral degrees, three of whom must have a primary appointment in the PMB Department at the rank of Assistant Professor or above. The fourth member of this Committee must be from another USUHS Department, without a secondary appointment in the PMB Department. The PMB Director of Graduate Programs recommends outside committee member(s) with the approval of the PMB Department Chair. Completion of the dissertation is the sole responsibility of the student. The thesis must be defended before the Dissertation Committee in a closed meeting. The members of the Committee critically examine the student's efforts to design and develop, implement, and complete his/her original research. The Committee makes one of three recommendations following the thesis defense: 1) dissertation acceptable, requiring no more than minor changes; 2) dissertation potentially acceptable, but major revisions required; and 3) dissertation unacceptable. After satisfactory completion and submission of required revisions, the Dissertation Committee recommends acceptance of the dissertation. Successful private defense is followed by presentation of the dissertation in a public forum.

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 Graduate Programs 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 Graduate Programs, 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 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 USUHS Departments and from the National Institutes of Health. A list of core and elective courses is presented below:

Core Courses:

Biostatistics I, II, and III	13
Changing Patterns of Arthropod-Borne Diseases	4
Environmental Health	4
Epidemiology I	4
Malaria Epidemiology and Control	3
Medical Parasitology	2
Principles and Practice of Tropical Medicine	6
Ethics and the Responsible Conduct of Research	1
Scientific Writing	1
Total credits	40

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 Biometrics

- Biosystematics in Medical Zoology
- Epidemiology and Control of Arboviruses
- Epidemiology and Control of Infectious Diseases
- Principles of Toxicology
- History of Preventive Medicine
- Immunoparasitology Tutorial
- International Health I and II
- Joint Medical Operations and Humanitarian Assistance
- Malaria Epidemiology and Control
- Medical Acarology
- Men, Molluscs and Medicine: An Introduction to Medical Malacology
- Microcomputer Applications
- Modern Technology and Vector-Borne Diseases
- Physiological Parameters of Vector Competence

Remote Sensing and GIS 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 first-year medical students and/or in other PMB Department courses.

Qualifying Examination: The Qualifying Examination in Medical Zoology 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 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 USUHS Department, or have an appointment outside of USUHS. Additional members, if desired, may be USUHS faculty or affiliated with an outside institution. The majority of the Committee will be full-time faculty members of the PMB Department.

Thesis 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 Thesis: The Dissertation Examination Committee will be composed of at least four persons with doctoral degrees. At least three of these must be USUHS faculty members at the rank of Assistant Professor or above with a primary appointment in the Department of Preventive Medicine and Biometrics. A fourth member of this Committee will be from another Department at USUHS. Additional members may either hold a faculty position at USUHS or have an appointment outside of USUHS. Outside appointments will be recommended by the Director of Graduate Programs and approved by the PMB Department Chairperson. The majority of the Committee must be full-time faculty of the PMB Department.

APPLICATION PROCEDURES

COMPLETE APPLICATION PACKAGES ARE DUE AT THE OFFICE OF GRADUATE EDUCATION BY JANUARY 15th EACH YEAR FOR ALL GRADUATE PROGRAMS IN THE DEPARTMENT OF PREVENTIVE MEDICINE AND BIOMETRICS (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 USUHS web site: http://www.usuhs.mil/geo/Application.pdf

In addition to the USUHS 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 of career objectives. The number used to identify USUHS 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. The completed application form and supporting documents must be submitted to the Associate Dean for Graduate Education by January 15th 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. 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. 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.

Early, complete application packages from uniformed applicants will be reviewed and the applicant notified as to acceptance or non-acceptance usually within 6-8 weeks; early civilian applicants will also be notified of provisional acceptance or non-acceptance. Confirmation of provisional acceptance will be made later in the spring, depending on space availability. 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 USUSH 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 Biometrics
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. Civilians accepted as MPH students are not eligible for a stipend, and there are no USUHS sources of financial aid.

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 the required overseas experience and for verifying the applicant's professional credentials and unrestricted privilege to practice medicine. Civilians 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

As in all PMB Graduate Programs, preference for admission will be given to military personnel on active duty in one of the preventive medicine 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. Civilian applicants will 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.

DrPH Program

Admission to this program will be preferentially offered to medical, dental and veterinary officers on active duty in the Uniformed Services and to other Uniformed Services officers with doctoral degrees in health-related fields. Civilians and uniformed officers with less than a doctoral degree in a health-related field may also be considered for admission. To be competitive, these applicants would be expected to have at least a Master's degree with an outstanding academic record, some public health experience, and demonstrated interest in pursuing a career in public health. Most students in the DrPH program will be salaried employees of the U.S. government. Civilian doctoral students are eligible for USUHS graduate student stipends if they meet the University eligibility criteria.

PhD Programs

Preferential admission 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 (undergraduate transcript, GRE scores) and documented successful completion of rigorous coursework related to their desired area of graduate study. Civilian applicants will be considered on a space-available basis, with preference given to health professionals sponsored by other U.S. government agencies. 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.

FOREIGN APPLICANTS

Foreign applicants must submit recent scores from both the Graduate Record Examination and the Test of English as a Foreign Language (TOEFL) in addition to all other required documents. Foreign **civilian** applicants sponsored by any organization with a specific bilateral agreement with USUHS for research and training may apply directly to the University for entry into a graduate education program. Foreign **military** applicants or civilians employed by their country's Ministry of Defense should also have their military organization contact the American Embassy for information pertaining to funding through the Foreign Military Sales Act of 1949 or the International Military Education and Training grant program. Other foreign civilian applicants need to contact the American Embassy in their home country for information on entering the U.S. for educational purposes.

HEALTH INSURANCE COVERAGE FOR GRADUATE STUDENTS

All civilian students admitted for graduate study must provide proof of health insurance coverage prior to matriculation. Civilian students are ineligible for care through the military health care system, including the USUHS student health clinic, except in emergencies.

OFFICER STUDENT STATUS

USUHS graduate students who are members of the Armed Forces are detailed/attached to the University for purposes of graduate study only. Army graduate students are assigned to the Student Detachment located at Fort Sam Houston, Texas; 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 USUHS.

While a graduate student at USUHS, 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 USUHS. 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.

STUDENT EVALUATION

Grading: Student performance in all formal courses taken for credit, whether at USUHS 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 USUHS 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.

ACADEMIC HONESTY

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

It states, in part:

E. 2. 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 USUHS 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 Biometrics, or the Associate Dean for Graduate Education.

UNIVERSITY POLICY ON GRADUATE STUDENT GRADING, PROMOTION, AND DISMISSAL PROCEDURES

Standards of performance and procedures regarding academic status for graduate students are contained in USUHS 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 Biometrics 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.

DEPARTMENT OF PREVENTIVE MEDICINE AND BIOMETRICS ACADEMIC PROMOTION, PROBATION, AND TERMINATION PROCESS FOR THE MPH/MTM&H/MSPH PROGRAMS

The current policy for satisfactory academic standing is defined in USUHS 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) within the Department of Preventive Medicine and Biometrics (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 multi-year programs. Accordingly, in addition to the stated policy in USUHS 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 USUHS Graduate Education Committee for the process of review and possible dismissal from the program.

INCLEMENT WEATHER POLICY

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."

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

In summary, if the Federal Government is closed due to extreme weather conditions (such as heavy snow or ice on the roads), then the University is closed and all classes for that day are canceled. Otherwise, classes are held as scheduled.

GRADUATE MEDICAL EDUCATION PROGRAMS (RESIDENCIES)

National Capital Consortium (NCC)/Uniformed Services University (USUHS)
Occupational and Environmental Medicine (OEM) Residency

Mission:
The mission of the OEM residency is to produce highly competent occupational and environmental medicine specialists who pass the certification examination of the American Board of Preventive Medicine (ABPM). 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 conus based clinical settings, world class biomedical research facilities, and in policy positions at the highest policy-making levels of each service and 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/USUHS OEM Residency is a 2-year program for Medical Corps officers sponsored by their parent Service, including Air Force, Army, Navy, and the Canadian Forces. Commissioned Corps Officers of the US Public Health Service have completed in the residency in the past and are eligible to apply with Public Health Service sponsorship.

The NCC/USUHS OEM Residency is co-located and shares resources with the NCC/USUHS General Preventive Medicine Residency (GPM) Residency that trains residents primarily from the Air Force, Navy and Canadian Forces. Thus, between the two companion residencies all three Services, the Uniformed Public Health Service, and on a space available basis, Canadian military residents are represented.

A new US Army initiative will allow for sequential training in General Preventive Medicine with PGY2 training either at USUHS or Johns Hopkins University Bloomberg School of Pubic Health, a General Preventive Medicine PGY-3 practicum year at the Walter Reed Army Institute of Research, Silver Spring, MD, and a PGY-4 practicum year in the USUHS OEM program. This will allow the resident to sit for board certification by the American Board of Preventive Medicine in the two specialty areas of Public Health & General Preventive Medicine and Occupational and Environmental Medicine. This will allow a whole new dimension of flexibility of assignments and career opportunities for these Army Medical Officers.

The NCC/USUHS GPM and OEM Residencies are the only DoD-sponsored training programs leading to ABPM certification accredited by the Accreditation Council for Graduate Medical Education (ACGME) as two-year programs rather than a one-year PGY3 only program. The collocation of the PGY2 Academic and PGY3 Practicum years allows for optimal continuity and coordination throughout both training years.

PGY2 Academic Year

The USUHS Academic Year is twelve months in duration, beginning the first week in July and ending 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 the requirements for an MPH degree and earn a minimum of 60 course credits. For the purposes of board certification in Occupational and Environmental Medicine, the ABPM requires a PGY2 Academic Year consisting of courses in epidemiology, biostatistics, health services administration, environmental health, and behavioral health.

In addition to the core requirements, OEM residents must actively participate in the Weekly Resident Meeting. They must enroll in the GPM and OEM Journal Club-PMO 973. Residents must take Epidemiology II and Biostatistics II. Further, residents must complete the OEM concentration that includes: Principles of Toxicology PMO 559, Industrial Hygiene I and Laboratory PMO 550, Introduction to Military Occupational Health-PMO 557, Fundamentals of Clinical Occupational, Environmental and Preventive Medicine- PMO 558, Occupational Ergonomics-PMO 652, Selected Topics in Environmental and Occupational Health- PMO 546, Occupational and Environmental Epidemiology- PMO 519, and Clinical Occupational and Environmental Medicine-PMO 542. Further, students should select a minimum of four of the five courses from the following electives: Environmental/Occupational Health Directed Studies, PMO 940. Industrial Hygiene Field Studies-PMO 553, Current Problems and Practice in Preventive Medicine-PMO 681, Current Injury Prevention Issues and Initiatives PMO 655, Joint Medical Operations and Humanitarian Assistance-PMO 548. This academic training culminates with the awarding of a Master of Public Health (MPH) degree.

In order to obtain an MPH, an individual research project is required in addition to the above course work. Each resident must choose a project mentor from the USUHS or residency faculty. It is expected that residents will complete their independent projects during the academic year in order to satisfy MPH requirements.

All MPH candidates must spend 108 hours at a MPH practicum site. It is possible (but not necessary) for the MPH practicum site and the independent project to be linked. For example, a resident could do an MPH practicum at the NIH and use data from that institution obtained during the practicum as the basis for their independent project.

Some residents have entered training already in possession of an MPH degree. In these cases, transcripts are carefully reviewed by the program director for content, currency of knowledge is assessed, and individual needs are determined. These residents may complete a second MPH, do research, complete coursework specified in an individualized plan or do a combination of research and coursework.

PGY3 Practicum Year

The practicum year begins immediately after completion of the academic year. Residents must spend a minimum of 48 weeks (equivalent of 12 months) in practicum year rotations, except for two weeks of leave if they elect to use it. Residents are advised not to schedule more than two weeks of leave initially, to allow latitude for on-time graduation if convalescent leave or permissive TDY for house-hunting are needed during the training year.

The object of the practicum year is to complete the training of the occupational medicine officer by giving him/her a variety of opportunities to apply the 'book knowledge' of the academic year 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, economics, and other confounders.

The practicum year is structured as a series of rotations, typically lasting 8 weeks each. Each rotation is built around 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. Usually, in addition to dealing with the day-to-day work at the rotation site, the preceptor will assign a specific project or series of projects for the resident to complete.

Because of the unique circumstances of the USUHS 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 practicum 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 practicum 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.

In addition to their rotations, practicum year residents continue to participate in residency meetings and journal club. They are expected to take a more active leadership role in these activities. They are expected to serve as mentors for the MPH year residents, advising them on their courses and teaching them about the practicum year. The resident must present the results of their research projects at a professional meeting and submit an abstract for publication.

Core Rotations

Currently, there are "core" rotations, each of which is typically 4-8 weeks in duration. They are designed to cover a wide spectrum preventive and occupational medicine practice, from front-line military and civilian public health agencies, including the policy level. The core rotations are required. The philosophy of the residency is that every resident needs to get experience with front line civilian and military occupational and environmental medicine. They should also get 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 could be waived.

Of note, per the residency program requirements, each resident must complete four months of clinical rotations in their practicum year. The core required Occupational & Environmental Medicine Rotations include:

<u>Administrative Rotations</u>
1. Two months at the Federal Occupational Health and Safety Administration,
Office of Occupational Medicine, Washington DC
2. Two month service specific administrative rotation:
Army: Two months at the US Army Center for Health Promotion and
Preventive Medicine, Edgewood Arsenal, MD . (includes US Army Inspector General Surety Inspection)
Navy: One-two Months at the Bureau of Medicine and Surgery, Washington,

DC, which can be combined with a month at the Navy Environmental Health Center, Portsmouth, VA. The NEHC rotation includes clinical experience at Norfolk Naval Shipyard, Portsmouth, VA.
Air Force: Two months at Air Force Medical Support Agency, Bolling AFB, Washington, DC.
Canadian Forces: One of the service-specific rotations listed above.

Four Months Minimum in Clinical Rotations

National Naval Medical Center, Occupational Health Service, Bethesda, MD
(Includes clinical experience in Dermatology, Ophthalmology, and Travel Medicine Clinics)
Walter Reed Army Medical Center, Occupational Health Service, Washington, DC
Dewitt Army Community Hospital Sports Medicine Service, Alexandria, VA
Walter Reed Army Medical Center, Sports Medicine Clinic
National Security Agency, Occupational Health Service, Fort Meade, MD
National Naval Medical Center Branch Medical Clinic, Indian Head, MD
Walter Reed Army Medical Center, Physical medicine & Rehabilitation Service, Washington, DC

Industrial Hygiene Rotations (One Month)
One month at the US Coast Guard Shipyard, Curtis Bay, MD or the
Army Center for Health Promotion and Preventive Medicine, Edgewood Arsenal, MD (March)

Other Elective Rotations

There are a number of keys to a successful rotation. One is a good learning environment with a strong and enthusiastic preceptor who actively mentors the resident and provides regular feedback. Another is a sound educational plan for the rotation based on achieving certain specified competencies. Motivated, aggressive, self-starting residents who take advantage of these training opportunities will get the most out of their training. Residents should select practicum site rotations that have significant positive experiences with OEM residents.

Policy Rotations

The Joint Staff Medical Readiness Division (requires TS security clearance)
Office of the Assistant Secretary of Defense for Health Affairs, Falls Church, VA
International Association of Fire Fighters, Washington, DC

Research Rotations

Naval Medical Research Center, Bethesda, MD
Walter Reed Army Institute of Research, Washington DC
Naval Health Research Center, San Diego, CA
USUHS Department of Preventive Medicine and Biometrics

Application Process

The NCC/USUHS 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/USUHS 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 USUHS MPH is done separately after acceptance to the NCC/USUHS Preventive Medicine residency program through the JGMESB. Information on application to the USUHS graduate school is available at http://cim.usuhs.mil/geo/application.htm. The deadline for application to the MPH or MTM&H program is 15 January.

Applicants must have, at a minimum, completed an internship of which at least 6 months are clinical. Fulfilling this requirement allows the internship to count as the PGY1 year for ABPM certification eligibility. Applicants may apply immediately after internship.
It is helpful to complete at least an initial tour as a general medical officer (GMO), 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 (USUHS)
General Preventive Medicine (GPM) Residency

Mission
To produce highly competent preventive medicine specialists who will be certified by the American Board of Preventive Medicine (ABPM). Graduates will be capable of serving in a wide variety of military settings, from the direct support of operational forces to the highest policy-making levels, research, and the clinical arena. Graduates will also possess preventive medicine skills and competency to enable practice in a broad range of civilian and international settings.

Background and Overall Residency Structure
The NCC/USUHS GPM Residency is a 2 year graduate medical education training program for Medical Corps officers sponsored by the uniformed Services of the United States, which includes any of the active duty military Services (Air Force, Army, and Navy) and the Uniformed Public Health Service. This program trains primarily Air Force and Navy physicians since the Army operates two GPM residency programs of its own -one at Walter Reed Army Institute of Research and the other at Madigan Army Medical Center.

The NCC/USUHS GPM Residency is co-located and shares resources with the NCC/USUHS Occupational and Environmental Medicine (OEM) Residency. The OEM program at USUHS historically has trained residents primarily from the Army and Navy and less frequently, the Air Force. Both programs are also able to train sponsored foreign military and Public Health Service physicians on a space-available basis.

The NCC/USUHS GPM and OEM Residencies are the only DoD-sponsored training programs leading to ABPM certification accredited by the Accreditation Council for Graduate Medical Education (ACGME) in which the second post-graduate year (PGY2) academic training and following PGY3 practicum year are at the same institution. Currently, in all other DoD sponsored ABPM residencies the training is separate. The collocation of the PGY2 academic and PGY3 practicum years allows for optimal continuity and coordination throughout both training years.

PGY2 Academic Year
The USUHS Academic 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 General Preventive Medicine and Public Health, the ABPM requires a PGY2 Academic Year consisting of foundational courses in epidemiology, biostatistics, health services administration, environmental health, and behavioral health. This academic training culminates in either the Master of Public Health (MPH) or Master of Tropical Medicine and Hygiene (MTM&H) degree, both of which are available at USUHS.

Within the USUHS MPH degree program, there are eight “Concentration Areas” from which PGY2 GPM residents can select one of the following five concentrations: Epidemiology and Biostatistics, General Preventive Medicine and Public Health, Health Services Administration, International Health, and Tropical Public Health.

Some residents have entered training already in possession of an MPH degree. In these cases, the program director carefully reviews previous transcripts for content that meets at a minimum the ABPM foundational course requirements, currency is assessed, and individual needs relative to the adequacy of board preparation are determined. Upon the advice of residency program director these residents may elect to complete a second MPH, obtain an MTM&H degree, or pursue leveling coursework specified in an individualized plan.

PGY3 Practicum Year
Following the academic year, at least 12 months (minimum 48 “work weeks”) of practicum “on the job” training is required by the ABPM. The current NCC/USUHS GPM core rotations include:

1. A county public health department rotation, usually Montgomery County Department of Health and Human Services

2. A policy rotation at either the Navy Bureau of Medicine (BUMED) or Headquarters Marine Corps (HQMC) for Navy residents or the Air Force Medical Support Agency (AFMSA)for Air Force residents. For USPHS or foreign military residents, similar policy rotations can be arranged that meet their Service needs.

3. A health services/clinical preventive services rotation, typically either the Agency for Healthcare Research and Quality (AHRQ), or the National Committee for Quality Assurance (NCQA).

4. Navy residents are also required to rotate at one of the Navy Environmental Preventive Medicine Units (NEPMUs).

Most of these rotations, except for the NEPMUs, are readily available in the National Capital Area. Core required rotations are generally two months duration.

Elective rotations
Elective rotations are varied and with adequate notice new rotations may be established as needed. Residents who have an interest in infectious disease epidemiology may take advantage of electives available at one of the Navy or Army overseas research activities through funding provided in part by DoD Global Emerging Infections Surveillance and Response System (GEIS, http://141.236.12.246/). Residents in the past have traveled as far away as Jakarta, Thailand, Kenya, Cairo and Peru. An excellent rotation is available at the Naval Health Research Center (http://www.nhrc.navy.mil/geis/), which is a GEIS Navy "hub". Other possibilities include rotations with the Armed Forces Medical Intelligence Center (AFMIC) (requires Top Secret security clearance), the Military Vaccine (MILVAX) Agency, the Vaccine Healthcare Center at WRAMC, the Defense Medical Surveillance System at the Army Medical Surveillance Activity, the AF Population Health Support Division, and the AF Institute for Operational Health, as well as others.

Because of continued solid financial support from the Services, residents have great flexibility in electives and are usually able to travel for rotations if needed. Additionally, residents usually attend at least one civilian and one military public health related conference during the practicum year as well as required training in the areas of risk communication and management of chemical and biological casualties.

Application Process
The NCC/USUHS GPM 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.

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

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

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

The NCC/USUHS GPM residency program has the capacity for five 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. Foreign military for training are accommodated on a space available basis after the DoD match is completed.

Application to the USUHS MPH or MTM&H program is done separately after acceptance to the NCC/USUHS Preventive Medicine residency program through the JGMESB. Information on application to the USUHS graduate school is available at http://cim.usuhs.mil/geo/application.htm. The deadline for application to the MPH or MTM&H program is **15 January**.

Applicants must have, at a minimum, completed an internship of which at least 6 months are clinical. 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). Many past and current residents enter the GPM residency already board certified in another specialty, such as Family Practice. On a selective basis, exceptional or uniquely qualified applicants have been accepted for training immediately after internship.

Contact information
The administrator for both the GPM and OEM residency programs may be reached by phone at 301-295-3717 for further inquiry. Also, contact information for both NCC/USUHS residency program directors is updated annually and available at the ACPM website, which also has data on all similar programs. The pertinent link is http://www.acpm.org/Education/residency/ataglance.htm.

RESIDENCY APPLICATION AND ADMISSION PROCEDURES

Application to NCC GPM or OEM residencies is a two-part procedure. Military physicians must apply to NCC GPM or OEM residencies through the Joint Graduate Medical Education Selection Board (GMESB). Individuals should contact their service-specific GME offices for information and to obtain the DoD GME application form. Additionally, **each candidate must also apply directly to the USUHS Office of Graduate Education by January 15th** for acceptance to the MPH or MTM&H program (see section on admission procedures).

Officers applying to USUHS are strongly encouraged to contact the appropriate Residency Program Director by phone or e-mail to arrange an interview:

OEM Residency Program Director
PMB Department
(301) 295-3717

GPM Residency Program Director
PMB Department
(301)295-3717(Program Administrator)

ENVIRONMENTAL HEALTH POSTGRADUATE TRAINING PROGRAM

The Environmental Health Postgraduate Training (EHPT) Program is a 12-month training program, which began in 1992 as a joint effort between the U.S. Public Health Service Indian Health Service and USUHS. The EHPT program is designed to provide specialized training in the area of environmental and occupational health and safety to Masters'-trained individuals.

Applicants are eligible upon completion of a graduate degree in an environmental health or physical science, or upon approval by the Director, EHPT Program. Most trainees are graduates of the USUHS Master of Public Health degree program with a concentration in environmental health or industrial hygiene, including elective courses, directed studies, and a major project.

The postgraduate year of training is a series of practicum rotations and short courses tailored to the needs of individual students. Practicum rotations are available at the Walter Reed Army Medical Center, National Naval Medical Center, National Institutes of Health (NIH), U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM), Federal Occupational Safety and Health Administration, and other organizations. Rotations with the Environmental Protection Agency and the environmental staff of other Federal agencies can also be arranged for individuals interested in governmental procedures and policy setting. Short courses in topics of current interest or concern are offered to students needing specialized training.

For students interested in institutional environmental control, typical rotations would be at major DoD hospitals or the NIH hospital in the preventive medicine or safety departments. During hospital rotations, the student is expected to participate in all types of health and safety activities, such as industrial hygiene monitoring, radiation protection surveys, and tuberculosis control and surveillance. At CHPPM, a number of practicum options are available, such as work with the Health Care Hazards Management branch and rotations in environmental services and industrial hygiene.

ADMISSION AND APPLICATION

For specific information about the EHPT and agency funding requirements, contact:

Director, Environmental Health Postgraduate Training Program
Department of Preventive Medicine and Biometrics
Uniformed Services University of the Health Sciences
4301 Jones Bridge Road
Bethesda, MD 20814-4799
Telephone (301) 295-6970; DSN 295-6990; FAX (301) 295-9298

LIST OF COURSES

Course No.	Title	Division	Page
PMO502	Introduction to SAS (1)	EPI/BIOST	42
PMO503	Biostatistics I (4)	EPI/BIOST	42
PMO504	Biostatistics II (4)	EPI/BIOST	42
PMO505	Microcomputer Applications (1)	EPI/BIOST	42
PMO508	Biostatistics III (5)	EPI/BIOST	43
PMO511	Introduction to Epidemiology I (4)	EPI/BIOST	43
PMO512	Epidemiologic Methods (4)	EPI/BIOST	43
PMO513	Advanced Epidemiologic Methods (4)	EPI/BIOST	43
PMO514	Epidemiology and Control of Infectious Diseases (2)	EPI/BIOST	43
PMO515	Epidemiology and Control of Non-Infectious Diseases (3)	EPI/BIOST	43
PMO516	Design and Analysis of Follow-up Studies (3)	EPI/BIOST	43
PMO519	Occupational & Environmental Epidemiology (2)	EPI/BIOST	43
PMO520	Molecular Epidemiology (2)	EPI/BIOST	44
PMO521	Concepts in Molecular Biology & Immunology (2)	EPI/BIOST	44
PMO522	Meta Analysis (1)	EPI/BIOST	44
PMO523	Fundamentals of U.S. Healthcare Policy (2)	HSA	45
PMO524	Health Care Performance Improvement (2)	HSA	45
PMO526	Health Systems (4)	HSA	45
PMO527	Principles of Healthcare Management (2)	HSA	45
PMO528	International Health I (3)	HSA	45
PMO529	Health Care Financial Management (2)	HSA	46
PMO530	Behavioral and Soc Sciences Applied to Public Health (4)	SOC/BEHAV	48
PMO531	Program Planning and Development (3)	SOC/BEHAV	48
PMO532	Quality Assessment and Improvement in Health Care (2)	HSA	45
PMO533	Decision Making in Health Services (2)	HSA	46
PMO534	Medical Anthropology (2)	HSA	46
PMO535	The Law of Health Care (2)	HSA	46
PMO537	Clinical Decision Making (1)	HSA	46
PMO539	International Health II (3)	HSA	46
PMOxxx	Introduction to the U.S. Health Care Industry (2)	HSA	47
PMO591	Marketing and Strategic Issues for Health Care Organizations (2)	HSA	47
PMO5zz	Introduction to Medical Informatics (3)	HSA	47
PMO5mc	Managed Care and Health Insurance (2)	HSA	47
PMO5TA	Health Technology Assessment (2)	HSA	47
PMO540	Environmental Health (4)	EOH	36
PMO542	Clinical Occupational and Environmental Medicine (4)	EOH	36
PMO543	Introduction to Occupational Health (1)	EOH	36
PMO546	Selected Topics in Environmental/Occupational Health (2)	EOH	36
PMO548	Joint Medical Operations & Humanitarian Assistance (3)	EOH	36
PMO549	Principles of Toxicology (4)	EOH	36
PMO550	Industrial Hygiene I and Laboratory (4)	EOH	37
PMO552	Industrial Hygiene II and Laboratory (4)	EOH	37
PMO553	Industrial Hygiene Field Studies (1)	EOH	37
PMO554	Health Effects of Ionizing and Non-Ionizing Radiation (3)	EOH	37
PMO555	Industrial Ventilation (3)	EOH	37
PMO557	Introduction to Military Occupational Health (1)	DEPT	37
PMO558	Fundemental of Clinical Occ, Env and Prev Medicine	DEPT	53

PMO560	Principles & Practice of Tropical Medicine (6)	TPH	48
PMO561	Medical Parasitology (2)	TPH	48
PMO562	Selected Diseases of the Tropics (4)	TPH	48
PMO563	Clinical Tropical Medicine (1-12)	TPH	48
PMO564	Epidemiology and Control of Arboviruses (Lec-2 and Lab-4)	TPH	49
PMO565	Vector Biology (2)	TPH	49
PMO566	Physiological Parameters of Vector Competence (4)	TPH	49
PMO567	Changing Patterns of Arthropod-borne Diseases (4)	TPH	49
PMO568	Medical Acarology (4)	TPH	49
PMO569	Malaria Epidemiology and Control (3)	TPH	49
PMO570	Modern Technology and Vector-borne Disease (4)	TPH	50
PMO571	Biosystematics in Medical Zoology (2)	TPH	50
PMO572	Introduction to Medical Malacology (3)	TPH	50
PMO573	Epidemiology and Prevention of Vaccine-preventable Diseases (1-2)	TPH	50
PMO576	Human Resources for Healthcare Executive	HSA	46
PMO577	Introduction to Military Occupational (2)	TPH	50
PMO578	Introduction to Occupational Health (3)	TPH	50
PMO581	Radiation Dosimetry (3)	EOH	38
PMO582	Radiation Biology (2)	EOH	38
PMO584	Introduction to Health Physics (3)	EOH	38
PMO585	Environmental Health Physics (3)	EOH	38
PMO587	Nuclear Reactors, Criticality, and Shielding (3)	EOH	38
PMO588	Instrumentation of Ionizing Radiation (3)	EOH	38
PMO589	Introduction to Medical Physics (3)	EOH	39
PMO599	Introduction to Health Risk Communication (2)	EOH	39
PMO600	Fundamentals of Human Physiology (1)	EOH	39
PMO601	Environmental Health Risk Assessment (3)	EOH	39
PMO605	Analytical Instrumentation Methodologies in Environmental Health (3)	EOH	39
PMO606	Non-Ionizing Radiation (3)	EOH	39
PMO607	Environmental Chemistry (4)	EOH	39
PMO611	Classic Studies in Epidemiology (2)	EPI/BIOST	44
PMO612	Clinical Medicine in the Tropics (3-5)	TPH	51
PMO613	Public Health Issues of Disasters in Developing Countries (4)	TPH	51
PMO614	Tropical Medicine Rounds (2)	TPH	51
PMO615	Sand Flies and Disease (3)	TPH	51
PMO630	Environmental Health Policy (3)	EOH	40
PMO631	MSPH Journal Club: Environmental and Occupational Health Case Studies (1 credit over 3 quarters)	EOH	40
PMO635	Military Radiological Operations in Peacetime	EOH	40
PMO636	Military Radiological Operations in Conflict	EOH	40
PMO637	Military/Civilian Radiological Operations and Interactions	EOH	41
PMO651	Human Factors Engineering (3)	EOH	41
PMO652	Occupational Ergonomics (3)	EOH	41
PMO653	Work Analysis Methods (3)	EOH	41
PMO654	Safety Engineering (3)	EOH	41
PMO655	Current Injury Prevention Issues and Initiatives (2)	EOH	41
PMO670	Public Health Practicum (1-3)	DEPT	53
PMO671	Introduction to the MPH Project and Practicum (1)	DEPT	53
PMO672	MPH Project/Practicum Design and Development (1)	DEPT	53

PMO673	MPH Project/Practicum Implementation and Evaluation (1)	DEPT	53
PMO674	MPH Independent Project (3)	DEPT	53
PMO680	Introduction to Public Health (1)	DEPT	53
PMO681	Current Problems and Practice of Preventive Medicine and	DEPT	54
	Public Health (1)	DEPT	54
PMO682	History of Preventive Medicine (2-4)	DEPT	54
PMO683	Critical Reading Seminar (2)	DEPT	54
PMO684	Clinical Research Seminar (1)	DEPT	54
PMO685	Health Policy Seminar (1)	DEPT	54
PMO688	Information Gathering in Clinical Medicine (2-12)	DEPT	54
PMO691	Teaching Practicum (3)	DEPT	54
PMO692	Clinical Concepts for Doctoral Students - Part 1 (1-2)	DEPT	55
PMO693	Clinical Concepts for Doctoral Students - Part 2 (1-2)	DEPT	55
PMO701	Advanced Biometrics Tutorial (1-12)	EPI/BIOST	44
PMO760	Tropical Medicine Research Tutorial (1-12)	TPH	51
PMO761	Immunoparasitology Tutorial (3)	TPH	51
PMO763	Tutorial in Medical Zoology (1-12)	TPH	52
PMO764	Tutorial in Aquatic Biology (4)	TPH	52
PMO811	Independent Study in Epidemiology (1-12)	EPI/BIOST	44
PMO830	Independent Study in Social and Behavioral Science (1-12)	SOC/BEHAV	48
PMO841	Aerospace Operational Physiology I (3)	AEROSP	35
PMO842	Aerospace Operational Physiology II (3)	AEROSP	35
PMO845	Human Factors in Aviation (3)	AEROSP	35
PMO846	Aerospace Exercise Physiology (3)	AEROSP	35
PMO847	Aerospace Performance and Health (3)	AEROSP	35
PMO848	Special Topics in Aerospace Medicine (2-3)	AEROSP	35
PMO849	Aerospace Medicine in the Modern Age (3)	AEROSP	36
PMO861	Topics in Medical Zoology (1-12)	TPH	52
PMO881	Military Preventive Medicine Study Topics (1-12)	DEPT	55
PMO911	Research in Epidemiology (1-12)	EPI/BIOST	44
PMO926	Health Services Administration Directed Research (1-12)	HSA	47
PMO940	Environmental/Occupational Health Directed Studies (1-12)	EOH	42
PMO941	Environmental/Occupational Health Directed Research (1-12)	EOH	42
PMO942	Environmental/Occupational Health Directed Rotations (1-12)	EOH	42
PMO960	Directed Laboratory Research (1-12)	TPH	52
PMO962	Directed Clinical Research (1-12)	TPH	52
PMO963	Directed Field Research (1-12)	TPH	52
PMO964	Research in Medical Zoology (1-12)	TPH	52
PMO970	Directed Studies in Preventive Medicine (1-12)	DEPT	55
PMO971	PMB Doctoral Student Journal Club (1)	DEPT	55
PMO972	Seminar in Critical Thinking (4)	DEPT	55
PMO990	Travel Medicine (2)	TPH	52
PMO991	Ethics in Public Health (3)	Dept	56

AEROSPACE MEDICINE (AEROSP)

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 | Johanson | 3 Quarter Hours/Graded

PMO842 AEROSPACE OPERATIONAL PHYSIOLOGY II

This course continues to introduce students to aerospace physiology. It involves lectures, readings, and discussions that review the physiological problems associated with flight. Emphasis is placed on the areas of sensory physiology, acceleration physiology & biodynamics, and crash preparation. The role of associated survival equipment will be emphasized in each area. By the end of the course the student will know how to calculate the forces involved in an aircraft mishap.

Prerequisites: Concurrence of Course Director & Trigonometry
Recommended: PMO841

Winter | Johanson | 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: Concurrence of Course Director
Recommended: PMO841 & 842

Spring | Johanson | 3 Quarter Hours/Graded

PMO846 AEROSPACE EXERCISE PHYSIOLOGY

This course will introduce the student to exercise physiology as it relates to the aviation environment. The course will be comprised of lecture, seminar, and laboratory/field trip experiences. Emphasis will be placed on the role of proper physical conditioning in maintaining the healthy lifestyle necessary for optimum performance in the demanding environment of flight and flight operations. At the end of the course the student will be able to design physical conditioning programs for aviators based upon the demands of the weapon system in which they fly. The student will also be able to apply exercise physiology principles to the aviation environment.

Prerequisites: Concurrence of Course Director
Recommended: PMO841 & 842

Spring | Johanson | 3 Quarter Hours/Graded

PMO847 AEROSPACE PERFORMANCE AND HEALTH

This course will introduce the student to health related topics as they apply to performance in the air and space environments. The course will be comprised of lecture and seminar using aviation mishaps to illustrate the health/performance issues. The student will be required to research a given mishap, given the appropriate background information, and then provide a human factors analysis of the event. Topics will include such things as nutritional supplements, fatigue, fitness, body defenses, general health, dehydration, and medications. At the end of the course the student will have a broad understanding of the relationship of health to performance in the aerospace environment.

Prerequisites: Concurrence of Course Director
Recommended: PMO841 & 842

Spring | Johanson | 3 Quarter Hours/Graded

PMO848 SPECIAL TOPICS IN AEROSPACE MEDICINE

Focus is current medical issues within Aerospace Medicine. 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. Winter session is routinely dedicated to the Principles and Practice of Hyperbaric Medicine.

Prerequisites: Concurrence of Course Director

Winter& variable | Butler | 2-3 Quarter Hours/Graded

PMO849 AEROSPACE MEDICINE IN THE MODERN AGE

Focus is current medical issues affecting aircrew and passengers. Physiologic, clinical, and operational aspects of each issue will be emphasized. Eight major areas will be addressed: Incapacitation, Performance Enhancement, Performance Degradation, Medical Standards, Protective Equipment, Environment, Ergonomics, and Aeromedical Transportation. Drugs, fatigue, extended work schedules, aspects of medical standards (ie, 1% rule), training, life-support equipment, the cockpit, and air transport of the sick & Injured will be routinely addressed.

Prerequisites: Concurrence of Course Director

Spring | Butler | 3 Quarter Hours/Graded

ENVIRONMENTAL AND OCCUPATIONAL HEALTH (EOH)

PMO540 INTRODUCTION TO ENVIRONMENTAL 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 | Morris | 4 Quarter Hours/Graded

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. A required group project allows students to design and present elements of a program for occupational safety and health.

Prerequisites: Concurrence of Course Director

Spring | R. Thomas/ Mallon | 4 Quarter Hours/Graded

PMO543 INTRODUCTION TO OCCUPATIONAL HEALTH

This course is an introduction to the National Capital Consortium Residency in Occupational and Environmental Medicine (OEM) for academic-year OEM 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.

Prerequisites: Status as MPH-year NCC OEM resident

Pre-fall | R. Thomas/ Mallon | 1 Quarter Hour/Graded

PMO546 SELECTED TOPICS IN ENVIRONMENTAL/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

Winter | R. Thomas/ Mallon | 1 Quarter Hour/Graded

PMO548 JOINT MEDICAL OPERATIONS AND HUMANITARIAN ASSISTANCE

Lectures will present the student with a historical perspective on the importance of preventive medicine in controlling disease and non-battle illnesses during deployments. Using the current National Security and National Military Strategies as a starting point, an examination of those strategies in relationship to joint military deployments and the role of military medicine in international humanitarian relief will be made. The medical threat estimate and assessment processes will be studied, and a working knowledge of preventive medicine activities necessary before, during and after a deployment will be reviewed and applied to selected case studies. Current service staffing, organizations, doctrine and capabilities for medically supporting a deployed joint force will be examined in depth. Students will conduct a mock deployment planning and assessment exercise in class, as well as present (in groups) their independent assessment of an historical or recent joint military or humanitarian assistance deployment operation.

Prerequisites: Concurrence of Course Director

Fall | Schor | 3 Quarter Hours/Graded

PMO549 PRINCIPLES OF TOXICOLOGY

This course is a survey course designed to provide the student with the fundamental principles of toxicology, poisonings, and hazard interpretation. General principles of toxicology are emphasized and systemic injuries are discussed. The course emphasizes occupational and environmental toxicology and hazard interpretation. Real world examples are used to aid the students' understanding. Previous exposure to biology and organic or biochemistry is very useful.

Prerequisites: Concurrence of Course Director

Recommended: PMO600 (if limited background in biomedical sciences)

Fall | Litow

Spring Neal 4 Quarter Hours/Graded

PMO550 INDUSTRIAL HYGIENE I 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 LaPuma 4 Quarter Hours/Graded

PMO552 INDUSTRIAL HYGIENE II AND LABORATORY

IH2 will focus on industrial hygiene in a military occupation. The military occupation may be performed in any environment; indoors or outdoors; in the United States or abroad. The IH focus in this course will primarily cover recognition, evaluation and control of nuclear, biological and chemical (NBC) agents that military members may confront while under NBC attack or upon inadvertent exposure in performance of their military duties. Topics to be covered include military field detection techniques for NBC agents and protection techniques. Particular attention will focus on field detection characteristics such as limit of detection, false readings, usability etc. Familiarization with instruments will also be emphasized in this class.

Prerequisites: PMO550, Concurrence of Course Director

Spring LaPuma/Hook 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/Concurrence of Course Director

Summer Morris 1 Quarter Hour/Graded

PMO554 HEALTH EFFECTS OF IONIZING AND NON-IONIZING RADIATION

Traditional ionizing radiation topics will be covered including, but not limited to basic battlefield effects, terrorist threats, and medical imaging. The background for current medical imaging techniques along with their limitations and precautions for use in military settings will be examined. Radio Frequency, microwave, and laser shipboard, battlefield and airfield medical effects will be discussed. A significant portion of the course will cover the latest lasers used on the modern battlefield, as well as medical procedures involving state of the art laser imaging, diagnosis and treatment. The course is designed as a survey to give the student a well rounded background of ionizing and non-ionizing issues concerning the health care professional. The course assumes no prior background on the part of the student. It is set up so that students with a limited background in physics and mathematics can gain a conceptual understanding of the subject.

Prerequisites: Concurrence of Course Director

Winter Nemmers/Johnson 3 Quarter Hours/Graded

PMO555 INDUSTRIAL VENTILATION

This course is intended to give in-depth and specialized instruction in the areas of industrial ventilation systems and local exhaust hoods. The engineering design of industrial ventilation systems will be evaluated to include contaminate generation, principles of air flow, ventilation of specific contaminants, design of local exhaust hoods, layout and sizing of ducts, balancing ventilation systems, and selection of fans, collectors, and testing instruments. Upon completion of the course, the student should be able to evaluate the effectiveness of any industrial or laboratory ventilation system.

Prerequisites: PMO550, 552 and Concurrence of Course Director

Spring Morris 4 Quarter Hours/Graded

PM0557 INTRODUCTION TO MILITARY OCCUPATIONAL HEALTH

Course designed for occupational medicine residents of all military services. This course will complement PM0558 Fundamentals of Occupational Health, which will be taught in the same quarter. The course will follow the syllabus for Army Medical Department Center and School (AMEDD C&S), Fort Sam Houston, Texas Course 6H-F20. The course will involve pre-class review of 6H-F20 web-based topics with class time centered on discussion of the web materials. Area of discussion will include: 1) application of occupational health topics to military health care systems using current Army programs as a model; and 2) the advantages /disadvantages of this format of learning for residential and distance learning for students. Army graduates of this course will be eligible to apply for 6H-F20 Phase II resident course (4.5 days duration) training provided by the AMEDD C&S in Dec of each year in San Antonio, Texas.

Pre-Fall Thomas/Mallon 1 Quarter hour graded

PMO581 RADIATION DOSIMETRY

Students will be able to do internal dose calculations based on the methods used in ICRP 30 and ICRP 60, and based on the Medical Internal Radiation Dose (MIRD) method. Students will acquire a working knowledge of ICRP and NCRP reports relevant to the calculation of external and internal dosimetry calculations such as ICRP 51 "Data for Use in Protection Against External Radiation", NCRP Report No. 65 "Management of Persons Accidentally Contaminated with Radionuclides", etc. Students will acquire a working knowledge of NUREG/ CR-4884 "Interpretation of Bioassay Measurements" relevant to the calculation of internal dose. Students will learn the fundamental principles, design, and operating characteristics behind passive and active personnel dosimetry systems such as Electronic Personal Dosimeters (EPDs), Optically Stimulated Luminescent (OSL) dosimeters, EEPROM type dosimeters, Thermoluminescent Dosimeters (TLDs), Film Dosimetry, etc. Students will learn the fundamental principles, design, and operating characteristics of dosimetry area monitoring and environmental devices. Students will learn the fundamental principles of whole body, extremity, and environmental dosimetry.

Prerequisites: Concurrence of Course Director

Winter St John 3 Quarter Hours/Graded or Credit

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, recognize naturally occurring and man made radionuclides, calculate equilibrium activities and specific activities, perform basic activation calculations, understand the difference between roentgen and rad, and determine external and internal dose based on simplified scenarios.

Prerequisites: Concurrence of Course Director

Fall Johnson 3 Quarter Hours/Graded or Credit

PMO585 ENVIRONMENTAL HEALTH PHYSICS

Upon completion of this course, the student will be able to: Perform atmospheric modeling calculations using Pasquill Gifford equations for both continuous and puff sources and understand the model limitations; describe the accumulation of nuclides in a lake or pond and the doses associated with utilizing this water for drinking, fishing or swimming; determine doses from sewage effluents; understand MARSSIM and how to apply it; determine environmental sampling strategies; understand air, water, and soil sampling principals; calculate doses to personnel from various environmental pathways; and transportation of radioactive waste.

Prerequisites: PMO584 & Concurrence of Course Director

Winter Johnson 3 Quarter Hours/Graded or Credit

PMO587 NUCLEAR REACTORS, CRITICALITY, AND SHIELDING

Upon completion of this course, students will be able to explain basic atomic and nuclear physics concepts. They will be able to explain the interactions of radiation with matter. Students will learn the fundamental principles, design, and operating characteristics of several types of nuclear reactors including pressurized water reactors, boiling water reactors, heavy water reactors, liquid metal reactors, and research reactors. Students learn how to write a technical laboratory report and perform laboratory experiments in neutron activation and reactor criticality at the Armed Forces Radiobiology Radiation Institute (AFRRI). They will become familiar with and use available computer codes and programs used in radiation interactions, reactor modeling, and shielding design. Students will be able to do radiation and reactor shielding calculations. Students will be become familiar with nuclear reactor; safety, environmental, and regulatory issues.

Prerequisites: Concurrence of Course Director

Fall Nemmers 3 Quarter Hours/Graded or Credit

PMO588 INSTRUMENTATION OF IONIZING RADIATION

By the end of this course students will be able to calculate all of the statistical descriptors associated with counting; and will demonstrate a fundamental understanding of radiation detectors including (1) Particle counting instruments, (2) Dose measuring devices, and (3) Neutron detectors. Students will also be able to determine calibration characteristics for a given detector and calculate theoretical response of detectors and understand their theoretical operation.

Prerequisites: PMO584 & Concurrence of Course Director

Winter Nemmers 3 Quarter Hours/Graded or Credit

PMO589 INTRODUCTION TO MEDICAL PHYSICS

This introductory course will cover three of the core disciplines of medical physics: Diagnostic and therapeutic radiological physics, and medical nuclear physics. At the end of the course the student will demonstrate an understanding of the diagnostic applications of x-rays, gamma rays from sealed sources, radio frequency radiation, magnetic fields and ultrasonic radiation; the therapeutic applications of x-rays, gamma rays, electron and charged particle beams, neutrons and radiations from sealed radionuclide sources; the diagnostic and therapeutic applications of radionuclides (except those used in sealed sources for therapeutic purposes); the equipment associated with their production, use, measurement and evaluation; and the quality of images resulting from their production and use.

Prerequisites: PMO581 & Concurrence of Course Director

Spring | Nemmers | 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: None

Spring | Butler/Lynch | 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 principles involved in human physiology. It is assumed that the student has limited or no background in human physiology or biological sciences. The class will also benefit students who need a refresher course in physiology. It will provide a basic foundation in physiology to prepare the student for Environmental Toxicology (PMO549). The major topic areas covered are cell physiology, genetics, cancer, general toxicology concepts, liver, kidney, nervous system, immune system, endocrine system, and reproductive system.

Prerequisites: None

Fall | Neal | 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, tools used in risk analysis and ecological risk assessment. Two comprehensive projects will reinforce understanding of a risk assessment.

Prerequisites: PMO540 and Concurrence of Course Director

Winter | LaPuma | 2 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 and liquid chromatography, ELISA, PCR, radiochemistry and techniques. 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 | Hook | 3 Quarter Hours/Graded

PMO606 NON-IONIZING RADIATION

The electromagnetic spectrum, transmission and absorption, biological effects, units of exposure, protection standards, measurement and control of UV, IR, microwaves, and lasers for both military and industrial use will be examined in detail. Actual measurements will be performed in laboratories and at various local military bases.

Prerequisites: Concurrence of Course Director

Fall | Johnson | 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, 549, 1 year of organic & inorganic chemistry, Concurrence of Course Director

Spring | Hook | 3 Quarter Hours/Graded

PMO630 ENVIRONMENTAL HEALTH POLICY

Students will explore policy formulation, implementation, and evaluation for environmental health at DoD staff, DoD service (Army, Navy, Air Force), USPHS organizations, other Federal agencies, and national levels. The scope will include specific environmental health policy and current management concerns and issues. Lectures will cover risk assessment, risk management, environmental assessments, health hazard assessments, standard setting, restoring the environment, and more.

Prerequisites: PMO540, Concurrence of Course Director

Summer | EOH Staff | 3 Quarter Hours/Graded

PMO631 EOH JOURNAL CLUB: ENVIRONMENTAL AND OCCUPATIONAL HEALTH CASE STUDIES

From an in depth examination of selected case studies the class will identify policy issues from the perspective of the DOD, individual military services, and other federal agencies such as EPA, OSHA, and the US Public Health Service. The class will describe research requirements needed to address problems identified in the case studies. The class will formulate possible organizational changes and resource shifts needed to addresses issues raised by the in-depth examination, and list lessons learned from the perspective of public health/preventive medicine good practice, federal statutes and standards, DOD regulations, and service specific guidance and requirements. For the course grade, each student will independently research from the scientific literature a case study, prepare a written in-depth analysis, and provide a short oral briefing. NOTE: This course is intended for students in the two-year MSPH program. Students will be expected to attend a monthly one and-a-half hour session during the Fall, Winter, and Spring Quarters of both years of the MSPH program. Students will receive one credit for each year of attendance by registering for this course during the Spring Quarter of each year.

Prerequisites: Concurrence of Course Director

Fall, Winter, and Spring | Morris | 1 Quarter Hour/Credit

PMO635 Military Radiological Operations in Peacetime

Description: The seminar will familiarize students with the multifaceted health physics aspects of the peacetime operations of the Army, Navy and Air Force. Experts in various levels and positions will present “mini-courses” of their area of expertise. New and established reference documents, texts and modeling software will be reviewed. The course is designed to be a dynamic presentation of issues that graduates will be exposed to post graduation. The course will cover a wide range of operational topics ranging from the duties and responsibilities of a medical health physicist to casualty estimations from nuclear weapons or radiological dispersal devices, from low level environmental measurements to issues of mass hysteria caused by potential releases of biological, chemical or radiological agents. Classified material may be discussed in some of the presentation. Course Objectives to be met by the students by the end of this seminar course series include: (1) students will discuss the differences and similarity between the Navy, Army and Air Force peace time health physics/medical physics programs and operations, (2) students will grasp the peace time health physics operations of the various services and joint operations and recognize how they interact during peace time, (3) students will identify and appreciate classified and unclassified modeling software that is used to provide appropriate information to regulators, (4) students will be familiar with an assortment of electronic and written reference publications, reports, fact sheets, and regulations.

Prerequisites: PMO 584 or Concurrence of Course Director

Fall | Nemmers | 1 Quarter Hours/ Credit

PMO636 Military Radiological Operations in Conflict

The seminar will familiarize students with the multifaceted health physics aspects of the operations of the Army, Navy and Air Force during conflict. Experts in various levels and positions will present “mini-courses” of their area of expertise. New and established reference documents, texts and modeling software will be reviewed. The course is designed to be a dynamic presentation of issues that graduates will be exposed to post graduation. The course will cover a wide range of operational topics ranging from the duties and responsibilities of a medical health physicist in the field to casualty estimations from nuclear weapons or radiological dispersal devices, from low level environmental measurements to issues of mass hysteria caused by potential releases of biological, chemical or radiological agents. Classified material may be discussed in some of the presentation. Course Objectives to be met by the students by the end of this seminar course series include: (1) students will discuss the differences and similarity between the Navy, Army and Air Force health physics/medical physics operations during conflict and emergency responses, (2) students will grasp the health physics operations of the various services and joint operations, (3) students will identify and appreciate classified and unclassified modeling software that is used to provide appropriate information to war fighters, (4) students will be familiar with an assortment of electronic and written reference publications, reports, fact sheets, and regulations.

Prerequisites: PMO 584 and Concurrence of Course Director

Winter | Nemmers | 1 Quarter Hours/Credit

PMO637 Military/Civilian Radiological Operations and Interactions

The seminar will familiarize students with the multifaceted health physics aspects of the operations of the Army, Navy and Air Force and how they interact with the various civilian emergency response agencies. Experts in various levels and positions will present "mini-courses" of their area of expertise. New and established reference documents, texts and modeling software will be reviewed. The course is designed to be a dynamic presentation of issues that graduates will be exposed to post graduation. The course will cover a wide range of operational topics ranging from the duties and responsibilities of a military health physicist supporting an emergency situation to casualty estimations from nuclear weapons or radiological dispersal devices, from low level environmental measurements to issues of mass hysteria caused by potential releases of biological, chemical or radiological agents. Classified material may be discussed in some of the presentation. Course Objectives to be met by the students by the end of this seminar course series include: (1) students will discuss the capabilities and expertise of the Navy, Army and Air Force health physicist/medical physicists operations during conflict and emergency responses, (2) students will grasp the health physics operations and capabilities of the various civilian response agencies and teams, (3) students will identify and appreciate the classified and unclassified modeling software that is used to provide appropriate information in emergency situations, (4) students will be familiar with an assortment of electronic and written reference publications, reports, fact sheets, and regulations.

Prerequisites: PMO 584 and Concurrence of Course Director

Spring	Nemmers	1 Quarter Hours/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. 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	Feuerstein	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	Feuerstein	3 Quarter Hours/Graded

PMO653 WORK ANALYSIS METHODS

This course will familiarize students with ergonomic analysis techniques using traditional industrial engineering approaches such as time-motion study and work sampling in the analysis of task demands and human performance. Topics include performance measures, function allocation, general and specific task analysis techniques (OWAS, RULA, Strain Index, PATH, NIOSH Lift Equation, etc.), human reliability and economic analyses.

Prerequisites: PMO562 & Concurrence of Course Director

Winter	Feuerstein	3 Quarter Hours/Graded

PMO654 SAFETY ENGINEERING

This course covers key concepts and techniques involved in Occupational Safety Engineering and Management to provide students with considerations and tools for implementing and/or evaluating programs targeted at reducing/eliminating workplace injuries. Lectures, discussions, and assignments address topics in: legislation, regulations, and standards in workplace safety; quantitative and qualitative analyses of systems, operations, and activities associated with risk for injury; and, development and implementation of corrective actions/programs for reducing/eliminating potential hazards that may contribute to worker injury and associated costs.

Prerequisite: Concurrence of Course Director

Spring	Neal	3 Quarter Hours/Graded

PMO655 CURRENT INJURY PREVENTION ISSUES AND INITIATIVES (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

Spring	Staff	2 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 MPH, or occupational medicine and general preventive medicine residencies.

Prerequisites: Concurrence of Course Director

All	Staff	1-12 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. A written report and an oral presentation will be required.

Prerequisites: Concurrence of Course Director

All	Staff	1-12 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	1-12 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 MICROCOMPUTER APPLICATIONS in PUBLIC HEALTH

This course introduces the basic microcomputer software applications that are commonly used in the Uniformed Services University Department of Preventive Medicine and Biometrics 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	Bradshaw	1 Quarter Hour/Graded or Pass/Fail

PMO508 BIOSTATISTICS III

This course instructs students in understanding the concepts of more advanced statistical methods, and learning how to obtain and interpret results from the computer output of performing suitable statistical procedures by using statistical software, SAS and SUDAAN: basic analysis of complex surveys by using SAS-callable SUDAAN, generalized linear models, Poisson regression, advanced analysis of multiple linear regression and logistic regression, multinomial logistic regression, generalized estimating equations (GEE), Cox proportional hazards model, and extended Cox model.

Prerequisites: PMO502, 503, 504A, 504B, and Concurrence of Course Director

Spring | Kao | 5 Quarter Hours/Graded

PMO511 INTRODUCTION TO EPIDEMIOLOGY I

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 | Lipnick | 4 Quarter Hours/Graded

PMO512 EPIDEMIOLOGIC METHODS

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

Prerequisites: PMO503, 504II concurrently, 511

Winter | Lipnick | 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 methodologic problems in epidemiology.

Prerequisites: PMO503, 504A, 504B, 511, 512 and Concurrence of Course Director

Spring | Scher | 4 Quarter Hours/Graded

PMO514 EPIDEMIOLOGY 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, inapparent versus apparent infections, herd immunity, and the effects of immunization. Student participation in seminars and student presentations will constitute a major part of the course.

Prerequisites: PMO511, Concurrence of Course Director

Winter | Tribble/Lewis | 2 Quarter Hours/Graded

PMO515 EPIDEMIOLOGY AND CONTROL OF NON-INFECTIOUS DISEASES

The current strategies for the control of selected non-infectious conditions are presented in the context of their epidemiology (definition, distribution patterns, natural history and risk factors of etiologic or prognostic significance).

Prerequisites: PMO511, 512, Concurrence of Course Director

Spring | Butler | 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.

Prerequisites: PMO513, Concurrence of Course Director

Fall | TBD | 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/ Mallon	2 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, flourescence 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: PMO521, Concurrence of Course Director

Spring (Alternates with PMO521)	Quinnan	2 Quarter Hours/Graded

PMO521 CONCEPTS IN MOLECULAR BIOLOGY AND IMMUNOLOGY

This course is intended as an overview of current concepts in molecular and cell biology and immunology that will serve as a useful background for understanding the application of molecular techniques to the study of epidemiological problems. Conceptual areas reviewed include the nature, synthesis, and function of macromolecules, cellular structure, organization and function, techniques in molecular biology commonly used in epidemiology, important principles and techniques in immunology, and genetics. The concepts are presented at a level appropriate for allied health professionals, or as an update for individuals with doctoral degrees in human or animal health fields. The course is generally intended as a prerequisite for the course, "Molecular Epidemiology," although individuals who are already knowledgeable about the areas covered may have the requirement for this course waived by the course director.

Prerequisites: Concurrence of Course Director

Spring (Alternates with PMO520)	Quinnan	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.

Prerequisites: PMO503, 511 and Concurrence of Course Director

Spring/Summer	Jackson	1 Quarter Hour/Credit

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: PMO511 and Concurrence of Course Director

Winter	TBD	2 Quarter Hours/Graded

PMO701 ADVANCED BIOMETRICS TUTORIAL

Selected advanced topics in biometrics, not covered in other graduate courses, that are of interest to the student(s).

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. A proposal must be submitted to the faculty mentor for approval and credits are assigned commensurate with the complexity of the project.

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 may continue research already started or participate in research in progress at USUHS.

Prerequisites: PMO511, 512, Concurrence of Course Director

All	Staff	1-12 Quarter Hours/Credit

HEALTH SERVICES ADMINISTRATION (HSA)

PMO523 FUNDAMENTALS OF U.S. HEALTHCARE POLICY

This course examines the application of concepts and techniques of advocating for and influencing policy on behalf of organization, the community, and the health services industry. Legislative, executive and judiciary branches and their role in national and state policy will be discussed. Comparison of the roles and effects of public and private policy. The pluralist and elitist perspectives on interest groups in the policy process, including the concept of political competence at the individual and organizational level will be examined.

Prerequisites: Concurrence of Course Director

Spring | Thompson | 2 Quarter Hours/Graded

PMO524 HEALTH CARE PERFORMANCE IMPROVEMENT

This course will provide students an in-depth view of the Malcolm Baldrige National Quality Award criteria. Students will learn the scoring methods used by Baldrige examiners and will apply their skill to a standard case. Lecture and discussion periods will focus on the Core Values, applicability of the business criteria to the health profession, actual impact of the criteria set on quality and profitability in those businesses which have won the Award. This course will provide the student with an understanding of the systems approach to quality improvement and will enable students to use the Baldrige criteria for assessment of health care systems.

Prerequisites: None

Spring | Barbour | 2 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 | Gimbel | 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.

Prerequisites: None

Winter | Shepherd | 2 Quarter Hours/Graded

PMO528 INTERNATIONAL HEALTH I

This course provides a broad based introduction to the field of international health. The course provides an introduction to major global health issues beginning with trends in Disease Burden, cultural perspectives, and roles of international public and private agencies . Underlying health issues will also be discussed including reproductive health, nutrition, Infectious Diseases, HIV AIDS, Mental Health, and Chronic Diseases and Injury. By the end of the course, students will have an understanding of:

a. the major determinants, cultural considerations and methods for addressing specific global health problems.

b. political, economic and socio-cultural factors influencing assessment, intervention, and evaluation processes.

Prerequisites: Concurrence of Course Director

Fall | Turner | 3 Quarter Hours/Graded

PMO529 HEALTH CARE FINANCIAL MANAGEMENT

This course provides the student with an overview of financial management in health care organizations and the concepts influencing an organization's financial performance. The goal of the course is to familiarize students with health care resource issues and economic policy issues, and the interrelationship of business and clinical decision-making. The student will gain an understanding of how health care organizations are financed, to include sources of funding, budgeting and resource allocation. The student will also learn to conduct cost analyses and interpret financial statements.

Prerequisites: PMO526 and PMO527 or Concurrence of Course Director

Spring | Munson | 2 Quarter Hours/Graded

PMO532 QUALITY ASSESSMENT AND IMPROVEMENT IN HEALTH CARE

This course provides students with a perspective on current quality of health care with attention to the measurement of quality and the methods for making improvements in critical areas. Subject matter will include national (Federal and non-governmental) and local programs for measurement and assessment. Upon completion, students will be able to apply a variety of methods to improve delivery processes and outcomes of health care in the Military Health System.

Prerequisites: PMO526 and PMO527 or Concurrence of Course Director

Spring | Barbour | 2 Quarter Hours/Graded

PMO533 DECISION MAKING IN HEALTH SERVICES

This course is designed to acquaint students with quantitative and qualitative decision making tools needed for the assessment and continual improvement of health services activities.

Prerequisites: PMO526 and PMO527 or Concurrence of Course Director

Spring | Crawford | 2 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.

Prerequisites: Concurrence of Course Director

Winter | Primack/Turner | 2 Quarter Hour/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 the 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 | Baker | 2 Quarter Hours/Graded

PMO537 CLINICAL DECISION MAKING

This is an introductory course in the principles of medical decision making. The first part of the course deals with heuristics used by health care providers, probability assessment, and the performance characteristics of diagnostic tests. The second part of the course provides an overview of instruments used in health policy and the decision sciences, including decision trees, patient preference assessment, and cost-effectiveness analysis. For each session there are specially prepared handouts, problems, and in-class exercises based upon the Stanford medical decision making series. The seminar is interactive to encourage understanding, application, and teaching of the concepts.

Prerequisites: Concurrence of Course Director

Spring | Jackson | 1 Quarter Hour/Credit

PMO539 INTERNATIONAL HEALTH II

This course builds on the information presented in International Health I but is designed to stand alone. It will address: effects of current humanitarian emergencies on families, communities and nations, use of the media and methods of social communication in disease prevention and health promotion; economic issues in developing countries affecting health, and the structure and function of health systems in selected geographic regions. By the end of the course, students will have an understanding of major health systems and programs in place throughout the world and their influence on global health

Prerequisites: PMO528 and Concurrence of Course Director

Winter | Turner | 3 Quarter Hours/Graded

PMO576 HUMAN RESOURCES FOR HEALTHCARE EXECUTIVES

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 | Moran | 2 Quarter Hours/Credit

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).

Prerequisites: Concurrence of Course Director

All | Staff | 1-12 Quarter Hours/Graded or Credit

PMO590 INTRODUCTION TO THE U.S. HEALTH CARE INDUSTRY

Health Scientists must understand the organizations, medical staffs, employees, and communities in which they work. To be effective, they must understand context of today's healthcare industry's structure and dynamics. This course is a resource that presents information that explains health systems governance. Organizations that provide health services such as ambulatory care facilities, physician practices, hospitals, nursing homes, home health agencies, health systems and public health agencies are identified and defined. How money moves through the system, insurance, health plans, Medicare, Medicaid and HMO's are presented on an introductory level. Health care personnel types, training, and management of human resources in the health services setting are presented.

Prerequisite: None

Fall | Shepherd | 2 Quarter Hours / graded

PMO591 MARKETING AND STRATEGIC ISSUES FOR HEALTH CARE ORGANIZATIONS

This course provides an overview of health systems marketing and strategic planning while integrating key concepts and skills derived from other courses within the health services track. Select topics include measuring and understanding consumer behavior, market segmentation and strategic targeting, crafting business case analyses, forecasting demand for care, analysis of the competitive environment, governance, and leveraging your public relations assets. At the completion of this course, students will present – in small teams - a solution to the Regents Health Care System case study used throughout the health services track to a mock "board of directors" for approval.

Prerequisites: PMO 526 and 527

Spring | Gimbel | 2 Quarter hours / graded

PMO5ZZ INTRODUCTION TO MEDICAL INFORMATICS

A foundation course in medical informatics designed primarily for clinicians. The course provides a broad view of medical informatics and information technology within health systems down to application at the patients' bedside. Topics of special interest within the curriculum include electronic medical records, implications for translation of research into practice, digital libraries and acquiring rapid answers to clinical questions, telemedicine, change management and population health applications. Students are required to complete a medical informatics project during the term. The course will be cross-referenced with the Graduate School of Nursing.

Prerequisites: None

Spring | Gimbel | 3 Quarter Hours/ Graded

PMO5MC MANAGED CARE AND HEALTH INSURANCE

This course examines the various types of third party payer plans: Health maintenance organizations (HMOs), preferred provider organizations (PPOs), fee-for-service plans and health savings accounts. Formation, organization, contractual arrangements, and medical management of managed care regarding costs, utilization, quality, and access are analyzed from the perspectives of managed care organizations, employers, providers, and public policy. The relationship between health insurance and health care costs is explored.

Prerequisite: None

Winter | Thompson | 2 Quarter Hours/Graded

PMO5TA HEALTHCARE TECHNOLOGY ASSESSMENT

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

Summer | Gimbel | 2 Quarter Hours/Graded

SOCIAL AND BEHAVIORAL SCIENCES (SOC/BEHAV)

PMO530 BEHAVIORAL AND SOCIAL SCIENCES APPLIED TO PUBLIC HEALTH

This survey course exposes students to aspects of the behavioral and social sciences which are relevant to public health. It is intended to make students more sophisticated analysts of health problems by increasing their understanding of how complex the human aspects of prevention are. Major scientific theories and models of health behavior are presented early in the quarter. The remainder of the course focuses on important social factors and specific behaviors, with an emphasis on primary and secondary prevention.

	Prerequisites: None	
Pre-Fall	Palmer	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: PMO530or 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.

	Prerequisites: Concurrence of Course Director	
All	Girasek/Palmer	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, neurologic, dematologic). 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. The course is a requirement for MPH students in the Tropical Medicine track, MTM&H students, DrPH students, and those interested in qualifying to sit for the American Society of Tropical Medicine and Hygiene's certifying examination in Tropical Medicine and Travelers' Health. Graded; or Pass/Fail in limited circumstances with instructor permission.

	Prerequisites: Concurrence of Course Director	
Spring	Keep	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	Cross	3 Quarter Hours/Graded

PMO562 SELECTED DISEASES OF THE TROPICS

This course will be made up of self-contained finite blocks covering specific disease subtitles such as malaria, schistosomiasis, trypanosomiasis, arboviral diseases, etc. Instruction will be didactic and cover the epidemiology, natural history, diagnosis, pathology and medical management of the diseases. The selection of diseases to be covered will depend on the needs and interests of the student(s).

	Prerequisites: PMO560 or Concurrence of Course Director	
Summer	Keep	4 Quarter Hours/Graded

PMO563 CLINICAL TROPICAL MEDICINE

This course consists of advanced and applied training in the diagnosis and management of diseases of the tropics that present special problems. The course is clinically oriented and exposes the student to patients at selected health care facilities in Asia, Africa, Central or South America. Emphasis is placed on the infectious diseases but noninfectious tropical diseases are also reviewed, emphasizing recent advances in diagnosis and treatment.

Prerequisites: Concurrence of Course Director

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

PMO564 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(Lec)/Summer(Lab) Sardelis 2(Lec), 4(Lab) Quarter Hours/Graded or Credit

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 Roberts 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 Andre 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 Schultz 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

Summer/Fall Roberts 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 Andre 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 Andre 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 Schultz/Sardelis 2 Quarter Hours/Graded

PMO572 INTRODUCTION TO MEDICAL MALACOLOGY

This course is intended for students interested in the transmission of pathogens by invertebrates. It is designed to introduce students to those groups of mollusks which: (1) serve as passive agents for the dispersal of pathogens, including toxins; (2) actively inject neurotoxins into humans, and (3) serve as intermediate or paratenic hosts of helminthic parasites infecting humans and domestic animals. This course will cover those aspects of molluscan ecology, taxonomy, morphology, and physiology requisite to an understanding of the factors involved in the transmission of molluscan-borne diseases and the control of those mollusks. In addition, students will be introduced to techniques required for identification, collection, examination, maintenance and control of molluscan hosts.

Prerequisites: Concurrence of Course Director

Summer TBD 3 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 usingan 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 memingococcal disease. Session Four will cover hepatitis B, Hepatitis A, influenza, and pneumococcal disease (adult). For more information about this course see http://www.phppo.cdc.gov/PHTN/epv05/default.asp.

Prerequisites: Concurrence of Course Director

Summer Keep 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

PMO612 CLINICAL MEDICINE IN THE TROPICS

This course consists of advanced and applied training, at the bedside, in the diagnosis and management of diseases in the tropics. Emphasis is placed on the infectious diseases, but non-infectious tropical disease problems are also reviewed. There will be extensive use of clinical cases from wards at hospitals associated with the University's overseas research and training program in tropical infectious diseases. Training conducted at NAMRU-3.

Prerequisites: PMO650, Concurrence of Course Director

Summer	Staff	3-5 Quarter Hours/Credit

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	Gonzalez/Schor	4 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, epidemiologic 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.

Prerequisites: Concurrence of Course Director

Spring	Keep	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 life-table data through an entire colony generation.

Prerequisites: Concurrence of Course Director

Winter	Lawyer	3 Quarter Hours/Graded

PMO661 MEDICAL ZOOLOGY SEMINAR

This seminar series presents reviews of current concepts and research in Medical Parasitology and Medical Entomology. Guest speakers, faculty members, postdoctoral fellows, and enrolled graduate students present weekly seminars on selected topics.

Prerequisites: Concurrence of Course Director

Spring	Keep	1-12 Quarter Hours/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	Keep	1-12 Quarter Hours/Graded

PMO761 IMMUNOPARASITOLOGY TUTORIAL

This course covers the immune responses in hosts caused by parasites and the mechanisms of escape selected by the parasites. The student will gain knowledge in the immune responses, including non-specific mechanisms such as activated macrophages, neutrophils and eosinophils, and the humoral and cellular arms of the specific immune response to various human parasites. In addition, antigenic variation demonstrated in a number of protozoan parasites will be analyzed with reference to malaria and trypanosomiasis. The mechanisms which permit intracellular survival of Leishmania and Toxoplasma will also be assessed. The

potential for immunization against human parasites, utilizing the state-of-the-art molecular biology techniques is explored specifically with reference to malaria, trypanosomiasis, and schistosomiasis.

Prerequisites: Concurrence of Course Director

Spring	Richards	3 Quarter Hours/Credit

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	Staff	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	Roberts	4 Quarter Hours/Graded

PMO861 TOPICS IN MEDICAL ZOOLOGY

Topics of current research interest in medical parasitology or vector biology will be selected. The student will carry out a literature review and prepare an oral or a written report for presentation. The presentation may include a laboratory demonstration.

Prerequisites: Concurrence of Course Director

All	Staff	1-12 Quarter Hours/Credit

PMO960 DIRECTED LABORATORY RESEARCH

The student may elect a mini-project under the supervision of a faculty member. The aim of the directed research is to provide practical experience in laboratory methods and the acquisition of data of publishable quality. 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. This directed research may be overseas.

Prerequisites: Concurrence of Course Director

All	Staff	1-12 Quarter Hours/Graded

PMO962 DIRECTED CLINICAL RESEARCH

A project under the supervision of a specified faculty member will be undertaken to meet the requirements of this directed clinical research course. The aim will be to provide practical experience in the clinical practice of medicine as it specifically relates to the tropics and to the development of research protocols that are related to the tropical condition. 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)	Keep	1-12 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.

Prerequisites: Concurrence of Course Director

All	Staff	1-12 Quarter Hours/Credit

PMO990 TRAVEL MEDICINE

This clinically oriented lecture and clinic care course will teach and demonstrate the principles of travelers' medicine from the perspective of the tourist and, to a lesser extent, the military unit. The course will consist of lectures, a practical exercise, and evaluation of patients. The Travel Clinic at the National Naval Medical Center will be used to teach the clinical requirements for

preparing tourists and business travelers of all ages and health states to travel safely abroad. 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 via the Internet. Preventive medicine will be emphasized, including the use of vaccines, personal protective measure, and malaria chemoprophylaxis. After travel evaluation and care of ill travelers will be taught.

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

Spring; others by request	Keep	2 Quarter Hours/Credit

DEPARTMENTAL COURSES (DEPT)

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: PMO503, 511, 526, 530, 540

Pre-Fall	D. Bradshaw/Mallon	1 Quarter Hour/Graded

PMO670 PUBLIC HEALTH PRACTICUM

Students will have the opportunity for a variety of public health experiential training opportunities 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.

Prerequisites: PMO503,511,526,530,540
Concurrence of Course Director

All	Hooper	1-3 Quarter Hours/Credit

PMO671 INTRODUCTION TO THE MPH PROJECT AND PRACTICUM

This seminar course is designed to introduce students to the year-long process of the designing, developing, executing, and presenting the results of their independent projects and practicum activities. Guest speakers from various military and civilian organizations offer potential project and practicum opportunities. 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 activity and formulate a short list of possible projects or practicum activities aligned with their personal and professional goals.

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 formulating a research question, developing a pre-proposal and final proposal for their independent project. Workshops and small group exercises will afford students the opportunity for peer review and instructor feedback. Discussions will include the criteria and format for different types of projects (i.e., grant proposal, policy paper, public health problem solving, etc), the process for institutional assurances and approvals (for human subjects research and animal care and use issues), and the integration of the core public health disciplines. 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 be able to develop and critique study proposals and describe the process of institutional assurances and approvals for research studies.

Prerequisites: Concurrence of Course Director

Winter	Hooper/Gackstetter	1 Quarter Hour/Credit

PMO673 MPH PROJECT/PRACTICUM IMPLEMENTATION AND EVALUATION

In the third and last in this seminar series on the MPH independent project and practicum, students will present their projects in near final form for peer review and to receive feedback from PMB faculty, Program Directors, and/or their classmates. This course will be a forum for discussing and finding solutions to issues or problems related to project mentorship, authorship issues, funding issues, and/or study implementation, among others. Speakers will reinforce the oral and written communication skills essential for effective public health practice, including how to prepare scientific abstracts and posters. By the end of the course, students will be able to prepare proposals, briefings, written reports, policy papers, abstracts, posters, and oral presentation slides related to public health practice or research. They will be able to effectively participate in the iterative process of manuscript development and demonstrate effective oral and written communication skills when reporting research findings to various audiences.

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 to receive credit for the products of their independent project: project proposal, oral presentation, and final written report.

Prerequisites: Eligibility for graduation

Summer | Hooper | 3 Quarter Hours/Graded

PMO680 INTRODUCTION TO PUBLIC HEALTH

This course will include lectures on ethics, the history of preventive medicine, and effective oral presentations. 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 | Butler | 1 Quarter Hour/Credit

PMO681 CURRENT PROBLEMS AND PRACTICE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

This course is designed to provide students with exposure to real-world issues from a variety of public health practice settings. Guest speakers are drawn from a wide range of organizations, local or national, with a public health-related mission, from both civilian and military sectors. Speakers describe the typical public health concerns they address, as well as approaches to problem solving. The course surveys topics of current interest and public health significance and demonstrates the application of principles from the core disciplines of public health.

Prerequisites: Concurrence of Course Director

Summer | McDermott | 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 | D. Smith | 2-4 Quarter Hours/Graded

PMO683 CRITICAL READING SEMINAR

The Critical Reading Seminar is part of the USUHS/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 | Jackson | 2 Quarter Hours/Credit

PMO684 CLINICAL RESEARCH SEMINAR

The Clinical Research Seminar is part of the WRAMC/USUHS Fellowship Program in General Preventive 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 USUHS 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

Fall/Winter/Spring (2 Tues/mo) | Jackson | 1 Quarter Hour/Credit

PMO685 HEALTH POLICY SEMINAR

The Health Policy Seminar is given as a part of the USUHS/WRAMC Fellowship Program in General Internal Medicine. Selected topics in both military and civilian medicine are addressed, such as biomedical ethics, legislative issues, health care utilization and manpower, and other health policy issues. Sessions will include invited speakers, selected readings with discussion, and occasionally a congressional field trip. Students will become more aware of how policy decisions impact upon the teaching and practice of medicine.

Prerequisites: Concurrence of Course Director

Spring (2 Thurs/mo) | Jackson | 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 Dr.P.H. 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	Gackstetter	3 Quarter Hours/Credit

PMO692 CLINICAL CONCEPTS FOR DOCTORAL STUDENTS – PART 1

This course is required for all Doctor of Public Health (DrPH) candidates without a strong background in the biomedical sciences. Students will be introduced to the mainstays of clinical practice: diagnosis, treatment, prognosis, and prevention of illness or injury. An overview of the pathophysiologic basis of disease will be presented along with basic concepts of clinical decision-making. Case studies or clinical vignettes will be incorporated throughout the course to introduce students to medical terminology and to illustrate important concepts. Students will gain a sense of the "mystery and majesty of the human condition" and the complexities of the healing process as they relate to the "art and science of medicine."

Prerequisites: Doctoral Candidate Status/Concurrence of Course Director

Spring	Hooper	1-2 Quarter Hours/Graded or Credit

PMO693 CLINICAL CONCEPTS FOR DOCTORAL STUDENTS – PART 2

This required follow-up course will continue to explore the concepts introduced in Part 1 and relate them to the major public health problems addressed in the "Healthy People 2010" goals and objectives. Major conditions of public health importance will be used to illustrate how clinicians integrate basic science knowledge and clinical reasoning skills to improve the health of populations. Evidence-based medicine and clinical decision analysis will be introduced as approaches to managing the uncertainty in clinical practice. Clinical examples will be incorporated throughout the course to reinforce concepts and to foster discussion on the clinical underpinnings of the population-based practice of public health. The overarching purpose of this two-part course is for doctoral candidates with diverse backgrounds to acquire an understanding of the clinical domain in order to facilitate partnerships among health professionals who share the common goal of improving public health.

Prerequisites: PMO692 and Concurrence of Course Director

Summer	Hooper	1-2 Quarter Hours/Graded or Credit

PMO881 MILITARY PREVENTIVE MEDICINE STUDY TOPICS

The student, with the advice of the instructor, will select a topic of Military Preventive Medicine interest. It may be a current unresolved problem, an established procedure or traditional program, or a practice of the past. The topic may be approached as a program design, a program evaluation or as an historical review. The student will develop his information sources and in periodic tutorial sessions discuss with the instructor his data and the need and sources of more material. The final written report will be in military staff study format or as modified with the instructor's permission.

Prerequisites: Concurrence of Course Director

All	Staff	1-12 Quarter Hours/Graded

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	Staff	1 Quarter Hour/Credit

PMO972 SEMINAR IN CRITICAL THINKING

The course is designed to teach methods for evaluating arguments and policies; identifying and assessing alternatives; and developing reasonable, persuasive positions of one's own. Students master specific logical, rhetorical, and critical techniques that they then use to examine published works in ethics, epistemology, literature, history, science, and mathematics. Taken together, these techniques should provide the student with the verbal skills essential to oral presentation, criticism, and defense, and a reliable method for producing clear, well-structured, and persuasive written arguments. Thus, the course requirements include a series of short written essays (250 to 500 words) and a brief weekly reading assignment followed by student-directed discussion in class. The

class will meet twice a week, once to examine a family of analytic techniques and once to discuss a reading assignment related to those techniques. The course will last 24 weeks (2 hours per week.)

Prerequisites: Concurrence of Course Director

Winter-Spring	Heitman	4 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. In the introduction Jennings (2003) explains why the curriculum was created. Controversy produces and surrounds public health policy and interventions. The scientific considerations in Public Health blend with political and ethical conflicts. Central to PH practice are questions of autonomy, individual rights, coercion, justice, community, and multicultural values. The goals that guide the 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

Winter	Turner	3 Quarter Hours/Credit

DEPARTMENT OF PREVENTIVE MEDICINE AND BIOMETRICS
PRIMARY FACULTY APPOINTMENTS

Quinnan, Gerald V., Jr., M.D. (St. Louis University School of Medicine); Professor and Chair; CAPT, USPHS
Cruess, David F., Ph.D. (The Johns Hopkins University); Professor and Vice Chair for Biometrics; Director, Graduate Programs Andre, Richard G., MS.c. (North Carolina State University), Ph.D. (Iowa State University); Professor and Vice Chair for Research and Faculty Development
Butler, William P., M.D., MTM&H. (Uniformed Services University of the Health Sciences); Assistant Professor and Vice Chair; Director, Aerospace Medicine Division; Col, USAF, MC
Hooper, Tomoko I., M.D. (University of California, San Francisco), M.P.H. (Uniformed Services University of the Health Sciences); Assistant Professor and Director, Graduate Research and Practicum Programs; Deputy Director, Graduate Programs
Bradshaw, Robert Dana, M.D. (University of Texas), M.P.H. (Uniformed Services University of the Health Sciences); Assistant Professor and Director, General Preventive Medical Residency; Col, USAF, MC
Mallon, Timothy, M.D. (Syracuse) Assistant Professor and Director, Occupational and Environmental Medicine Residency; COL, MC, USA
Schor, Kenneth, D.O. (Philadelphia College of Osteopathic Medicine), M.P.H. (USUHS), Assistant Professor and Deputy Director, General Preventive Medicine Residency; CAPT, MC, USN
Turner, Martha, Ph.D. (University of Minnesota); Assistant Professor, AF International Health Program; Col, USAF, NC
Schlick, Rebecca, Assistant Professor and Deputy Director, AF International Health Program; Lt Col, USAF, NC

****

Barbour, Galen L., M.D. (University of Arkansas School of Medicine); Professor and Division Director (Health Services Administration)Carney, W. Patrick, Ph.D. (University of Montana), M.P.H. (The Johns Hopkins University School of Hygiene and Public Health); Professor
Chan, Wing T., Ph.D. (McGill University, Canada), S.M. (Harvard University School of Public Health); Visiting Scientist (Environmental and Occupational Health)
Chen, Dechang, PhD (SUNY, Buffalo); Assistant Professor (Epidemiology & Biostatistics)
Crawford, Raymond S., III, M.D. (University of Arkansas), M.B.A. (Troy State University); Assistant Professor (Health Services Administration)
Cross, John H., M.A. (Miami University), Ph.D. (University of Texas Medical Branch); Professor (Tropical Public Health)
Fitz, Robert J., Jr., M.P.H. (University of California School of Public Health, Berkeley), M.S.P.H. (University of North Carolina School of Public Health); Assistant Professor (Environmental and Occupational Health); COL (ret), MS, USA
Gackstetter, Gary D., D.V.M. (Iowa State University), M.P.H. (Boston University), Ph.D. (University of Minnesota); Associate Professor (Center for Force Health Protection); Col, USAF, BSC

Gimbel, Ronald W., Ph.D. (Suny-Albany), M.A. (Webster University); Assistant Professor (Health Services Administration); LCDR, MSC, USNR
Girasek, Deborah, C., M.P.H. (University of Michigan School of Public Health), Ph.D. (The Johns Hopkins University School of Hygiene and Public Health); Associate Professor and Division Director (Social and Behavioral Sciences)
Gonzalez-Moreno, Jesus M., M.D. (Universidad Autonoma de Madrid), M.P.H. (Universidad Autonoma Barcelona); Assistant Professor (Tropical Public Health)
Grieco, John P., Ph.D. (Uniformed Services University of the Health Sciences); Research Assistant Professor (Tropical Public Health)
Heitman, Kristin, M.A., Ph.D. (The Johns Hopkins University School of Arts and Sciences); Assistant Professor
Hickey, Thomas E, Assistant Professor, (Military Tropical Medicine Course); LCDR, MSC, USN
Huang, Grant D., M.S., M.P.H., Ph.D. (Uniformed Services University of the Health Sciences), Assistant Professor, Department of Medical and Clinical Psychology
Hook, Gary L., M.P.H. (The Johns Hopkins University School of Hygiene and Public Health), Ph.D (Uniformed Services University of the Health Sciences).; Assistant Professor (Environmental and Occupational Health); CDR, MSC, USN
Johanson, David C., Ph.D., M.S., (Drexel University); Assistant Professor (Aerospace Medicine); CAPT, MSC, USN
Johnson, Thomas E., Ph.D. (Purdue University), M.S. (Northwestern University); Assistant Professor (Environmental & Occupational Health)
Kao, Tzu-Cheg, M.S. (National Tsing Hua University, Taiwan), Ph.D. (Purdue University); Professor (Biostatistics)
Keep, Lisa W., M.D. (Unviersity of Miami), M.P.H. (Harvard University); Assistant Professor and Division Director (Tropical Public Health); LTC, MC, USA
Kinnamon, Kenneth E., D.V.M. (Texas A&M University), M.S. (University of Rochester), Ph.D. (University of Tennessee); Professor (Tropical Public Health) and Director, PMB Centers for Preventive Medicine & Public Health
LaPuma, Peter T., Ph.D. (University of Florida); Assistant Professor (Environmental and Occupational Health); LtCol, USAF, BSC
Lee, Arthur P., M. Engr. (Pennsylvania State University), Ph.D. (Pennsylvania State University); Assistant Professor (Environmental and Occupational Health); LTC (ret), MS, USA
Lipnick, Robert J., Sc.D. (Harvard University School of Public Health), M.S. (University of Massachusetts); Assistant Professor and Division Director (Epidemiology and Biostatistics); COL, MS, USA,
Lewis, Michael D., M.D. (Tulane University School of Medicine); M.P.H. (The John Hopkins University School of Hygiene and Public Health), M.B.A. (American Later Continental University); Assistant Professor (Epidemiology and Biostatistics); LTC, MC,USA

Masuoka, Penny, M.S. (University of Tennessee); Assistant Professor (Tropical Public Health), NASA/Goddard Space Flight Center
Merchant, P. Glenn, Jr., M.D. (Medical University of South Carolina), M.P.H.&T.M. (Tulane University School of Public Health and Tropical Medicine); Assistant Professor (Aerospace Medicine); CAPT, MC, USN
Michelson, Edward H., M.S. (University of Florida), Ph.D. (Harvard University); Professor Emeritus
Moss, David, D.D.S. (University of Iowa), M.P.H. (Emory University); Assistant Professor (Center for Oral Health Studies); LTC, DC, USA
Mongeau, Susan W., D.D.S. (Emory University); M.P.H. (USUHS); DC Assistant Professor (Center for Oral Health Studies); Lt Col, USAF
Nemmers, Scott A., Ph.D. (University of North Dakota), M.S. (University of North Dakota); (Environmental and Occupational Health); Maj, USAF, BSC
Olsen, Cara H., M.S. (Cornell University); Assistant Professor and Biostatistical Consultant
Palmer, Richard C., Jr. M.P.H. (San Diego State University), Dr. P.H. (University of Texas School of Public Health), Assistant Professor (Social and Behavoral Sciences)
Sardelis, Michael, M.S. (Hood College), Ph.D. (Uniformed Services University); Assistant Professor (Tropical Public Health); MAJ, MS, USA
Roberts, Donald R., M.S. (University of Missouri), Ph.D. (University of Texas School of Public Health); Professor (Tropical Public Health)
Scher, Ann I, Ph.D (The Johns Hopkins University School of Hygiene and Public Health), M.S. (University of Maryland); Assistant Professor (Epidemiology and Biostatistics)
Schinski, Vernon D., M.S. (Wayne State University), Ph.D. (University of Maryland); Assistant Professor (Tropical Public Health)
Schultz, George W., Ph.D. (Washington State University); Assistant Professor; CDR, MSC, USN
Sheperd, Lillian M., M.S. (Johns Hopkins University), M.S. (Naval Postgraduate School); Assistant Professor, LCDR, USN
Tang, Douglas B., M.S., Ph.D. (University of Minnesota), Adjunct Professor (Volunteer) (Epidemiology & Biostatistics)
Thompson, Beverly, MHSA, (George Washington University), Assistant Professor for Research (Health Services Administration)
Trump, David H., M.D. (Jefferson Medical College, Thomas Jefferson University), M.P.H. (The Johns Hopkins University School of Hygiene and Public Health); Associate Professor (Epidemiology and Biostatistics); Director, Medical Student Education Programs; CAPT, MC, USN
York, Andrew, D.D.S. (University of Kentucky); M.P.H. (Uniformed Services University of the Health Sciences); Assistant Professor (Center for Oral Health Studies); CAPT, DC, USN
Zhang, Peng Fei, Ph.D. (National Vaccine and Serum Institute, Beijing); Research Associate Professor (Tropical Public Health)

SECONDARY FACULTY APPOINTMENTS

Farr, Robert, M.D. (West Virginia University), M.P.H. (West Virginia University); Associate Professor (Tropical Public Health); CDR, Mc, USNR
Feuerstein, Michael, M.S., Ph.D. (University of Georgia); Professor, Department of Medical and Clinical Psychology
Fletcher, Douglas W., Assistant Professor; LT, MSC, USN
Jackson, Jeffrey L., M.D. (Washington University at St. Louis), M.P.H. (Uniformed Services University of the Health Sciences); Associate Professor (Health Services Administration); LTC, MC, USA; Department of Medicine
Langreth, Susan G., Ph.D. (University of Chicago); Associate Professor (Tropical Public Health); Department of Microbiology
Llewellyn, Craig H., M.D. (Yale University), M.S., M.P.H. (Harvard University); Professor (Epidemiology and Biostatistics); Professor and Chairman, Department of Military and Emergency Medicine
Mannix, Charles R., Jr., J.D. (Duquesne University), L.L.M. (Georgetown University); Assistant Professor (Health Services Administration); Office of General Counsel
Martin, Gregory J., M.D.; Assistant Professor; CAPT, MC, USN; Department of Medicine
Wilson, Cindy C., Ph.D., Associate Professor, Department of Family Medicine

ADJUNCT AND VISITING FACULTY

Almeida, Sandra A., M.D., Adjunct Assistant Professor,
Amon, Joseph J., PhD., Adjunct Assistant Professor
Baine, William B., Adjunct Assistant Professor; CAPT, USPHS
Baker, John E., J.D, LL.M.; Assistant Professor; COL, JAG, USA
Bautista, Leonelo E., M.D., Dr,P.H., Adjunct Assistant Professor
Bell, Micheal R., Adjunct Assistant Professor, Maj, MC, USA
Blakely, William F., Ph.D., M.S.; Adjunct Assistant Professor
Bradshaw, Patrick P., Adjunct Assistant Professor; Lt Col, BSC, USAF
Bradshaw, Patrick O., Assistant Professor, LtCol, BSC, USAF
Brady, Paul J., M.D., M.P.H.; Adjunct Assistant Professor; LCDR, MC, USPHS
Brundage, John F., M.D., Adjunct Assistant Professor
Bryan, Joe P., M.D., Professor
Buck, Alfred S., M.D., Adjunct Professor
Buttery, Christopher M.G., M.B.B.S., M.P.H.; Adjunct Associate Professor
Calloway, Margaret., Assistant Professor, LCDR, MC, USNR
Campbell, James R., M.S. Ph.D., M.P.H.; Adjunct Professor; CAPT, MSC, USN
Carucci, Daniel J., Adjunct Assistant Professor; CAPT, MC, USN
Chen, D.W., M.P.H., M.D.; Adjunct Assistant Professor; CDR, MC, USPHS
Ching, Wei-Mei, Ph.D., Adjunct Associate Professor
Cowan, David N., Ph.D., Adjunct Assistant Professor
Coyne, Phillip E., Jr., M.D., M.S.P.H; Adjunct Assistant Professor; LCDR, MC, USN
Crapo, Philip E, Adjunct Assistant Professor, LCDR, MSC, USN
Culpepper, Randall., Assistant Professor, CDR, MC, USN

Cunnion, Stephen., Adjunct Assistant Professor; CAPT(Ret), MC, USN
Debboun, Mustapha, M.D. Adjunct Assistant Professor; LTC, MS, USA
DeFraites, Robert, M.D., M.P.H.; Adjunct Assistant Professor; COL, MC, USA
Drifmeyer, Jeffrey E., Ph.D., Adjunct Assistant Professor
Echeverria, Peter D., M.D.; Adjunct Professor; COL, MC, USA
Erickson, Erickson L., Adjunct Assistant Professor; COL, MC, USA
Evans, Edward S., Jr., M.S., Ph.D.; Adjunct Assistant Professor
Feighner, Brian H., M.D. Associate Professor, COL, MC, USA
Feuerstein, Douglas, PH.D., Professor
Fitz, Robert, Assistant Professor
Friedman, Heidi, PH.D. Adjunct Assistant Professor
Gabriele, Edward F., D. Min, Adjunct Assistant Professor
Gardner, John W., Ph. D, Adjunct Professor; COL (Ret), MC, USA
Gaydos, Joel C., M.D., M.P.H.; Adjunct Professor
Goertz, Christine M.H., Ph.D. Adjunct Assistant Professor
Gordon, Scott W., Assistant Professor; LTC, MSC, USA
Gray, Gregory C., M.D. Adjunct Professor
Grieco, John P., Research Assistant Professor
Haffner, Marlene E., Adjunct Assistant Professor; RADM, USPHS
Halstead, Scott B., M.D., Adjunct Professor
Hanson, R. Kevin, M.D., M.P.H.; Adjunct Assistant Professor; CAPT (Ret), MC, USN
Hayunga, Eugene G., Ph.D., Adjunct Professor
Heller, Jack, Ph.D., M.S.; Adjunct Assistant Professor
Hickey, Thomas E., Assistant Professor, LCDR, 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;
Holland, Christopher S., M.D., Assistant Professor
Hook, Gary, Assistant Professor, CDR, MSC, USN
Hshieh, Paul B., Adjunct Assistant Professor
Johanson David C., Assistant Professor, CAPT, MSC, USN
Jones, Bruce H., M.D., Adjunct Assistant Professor
Jorgensen, Robert R., D.V.M., M.P.H.; Adjunct Assistant Professor
Kang, Han K., Dr.P.H., Adjunct Assistant Professor
Kark, John A., M.D., M.A.; Adjunct Assistant Professor; Howard University Hospital
Kazandjian, Vahe A., Ph.D., Adjunct Professor
Keiser, Paul B., Adjunct Assistant Professor, MAJ, MC, USA
Kelley, Patrick W., M.D., M.P.H.; Adjunct Assistant Professor; COL, MC, USA
Kluchinsky, Timothy A., Adjunct Assistant Professor; CPT, MS, USA
Krakauer, Henry, M.D., Ph.D.; Adjunct Professor; CAPT, USPHS
Krauss, Margot R., Adjunct Assistant Professor; COL(Ret), MC, USA
Lapa, Joyce A., Adjunct Assistant Professor, CAPT, MC, USN
LaPuma, Peter T., Ph.D, Assistant Professor, Col, BSC, USAF
Lawyer, Phillip G., M.A., Ph.D., Associate Professor; COL (Ret), MS, USA
Lee, Arthur P., Ph.D Adjunct Assistant Professor
Liao, Ximan, Ph.D. Research Assistant Professor
Lincoln, Andrew J., Sc.D, Adjunct Assistant Professor
Litow, Francesca K., Adjunct Assistant Professor; LCDR, MC, USNR
Lopez, Mary, M.S., Ph.D.; Adjunct Assistant Professor; LTC, MS, USA
Louis, David, M.D. Adjunct Professor, Col, USAF, MC
Lyerly, William H., Jr., Adjunct Assistant Professor
Lynch, Jennifer A., Adjunct Assistant Professor
Lynch, Earl H., M.D., Adjunct Assistant Professor
Madsen, James, M.D. Assistant Professor, COL, MC, USA
Magill, Alan J., Adjunct Assistant Professor; COL, MC, USA
Maley, Elizabeth A., Adjunct Assistant Professor, LCDR, MC, USN
Mannix, Charles R. Jr., J.D., Assistant Professor
Martin, Gregory J., Associate Professor, CAPT, MC, USN
McBride, Wayne Z.,. Adjunct Assistant Professor; CDR, MC, USN
McDermott, Glenn D., M.D. Adjunct Professor, COL, MC, USA
Meyer, Gregg S., M.D., Adjunct Associate Professor
Milhous, Wilbur K., M.S., Ph.D.; Adjunct Associate Professor; COL (Ret), MS, USA
Moran, Al W., Assistant Professor, LTC, MSC, USA
Moritsugu, Kenneth P., Adjunct Assistant Professor; RADM, USPHS
Naito, Neal A., Research Assistant Professor; CDR, MC, USN
Nicogossian, Arnauld, M.D., M.S.; Adjunct Assistant Professor
Niebuhr, David W., Adjunct Assistant Professor, LTC, MC, USA
Noah, Donald L., D.V.M., M.P.H.; Adjunct Assistant Professor; LtCol, USAF, BSC
Patterson, Redford E., M.D., M.P.H.; Adjunct Assistant Professor; Col, USAF, MC

Primack, Aron, M.A., M.D.; Adjunct Associate Professor; CDR USPHS
Rayman, Russell B., M.D., M.P.H.; Adjunct Associate Professor
Redington, Bryce C., Ph.D., Assistant Professor
Resta, John, Master of Civil Engineering, Adjunct Assistant Professor
Richards, Allen L., Ph.D., Adjunct Assistant Professor
Richie, Thomas L., Adjunct Assistant Professor, CAPT, MC, USNR
Roach, William P., Adjunct Professor; Lt Col, BSC, USAF
Roadman II, Charles H., M.D., Distinguished Professor
Robert, Leon L Jr., Adjunct Associate Professor, LTC, MS, USA
Rozmajzl, Patrick J., Adjunct Assistant Professor, LCDR, MSC, USN
Rush, Vivian C., M.D. Adjunct Assistant Professor
Russell, Kevin L., M.D., M.T.M.&H.; Adjunct Assistant Professor; CDR, MC, USN
Russell, Philip K., M.D., Adjunct Professor
Ryan, Margaret A. M.D., M.P.H.; Adjunct Assistant Professor; CDR, MC, USN
Schinski, Veron D., Ph.D, Assistant Professor
Schnepf, Glenn A., Assistant Professor, CAPT, MC, USN
Schultz, George W., Assistant Professor, CDR, MC, USN
Schutt, David C., M.D., Adjunct Assistant Professor
Sharp, Trueman W., M.D. Adjunct Professor; CAPT, MC, USN
Sjogren, Maria, M.D., Adjunct Associate Professor; COL, MC, USA
Smith, Philip A., M.P.H. Adjunct Professor, CDR, MSC, USN
Smoak, Bonnie L., M.D., Ph.D., M.P.H., Adjunct Associate Professor; COL, MC, USA
Stewart, Ann, D.V.M., Ph.D.; Adjunct Assistant Professor
Tang, Douglas B., Ph.D., Adjunct Professor
Thomas, Mason J., Ph.D., Adjunct Professor
Thomas, Richard J., Associate Professor, CAPT (Ret), MC, USN
Tinlling, Walter W., Assistant Professor
Tornberg, David N., M.D, Adjunct Assistant Professor
Tribble, David R., M.D., M.P.H; Adjunct Assistant Professor;
Trosper, James H., Ph.D., Adjunct Assistant Professor
Turell, Michael J., Ph.D, Adjunct Associate Professor
Weed, Douglas L., Ph.D., M.P.H., M.D.; Adjunct Associate Professor
Weese, Coleen B., M.D. Adjunct Assistant Professor
Weina, Peter J., Adjunct Assistant Professor; LTC, MC, USA
Whitmeyer, Antoinette, M.S. Adjunct Professor, CDR, MSC, USN
Wilkerson, Richard C., M.S., Ph.D.; Adjunct Assistant Professor;
Williams, Jackie L., Ph.D., Adjunct Assistant Professor; LTC, MSC, USA
Willis, Gordon B., Ph.D., Adjunct Assistant Professor
Wilson, Deborah E., Adjunct Assistant Professor; CAPT, USPHS
Wilson, Cindy C., Ph.D, Associate Professor
Wirtz, Robert A., M.S., Ph.D.; Adjunct Associate Professor
Wolfe, Martin S., M.D., Adjunct Professor
Wood, Owen L., Ph.D., Adjunct Assistant Professor
Wu, Shuenn-Jue L., Ph.D, Adjunct Assistant Professor
Yevich, Steven J., M.D. Adjunct Assistant Professor
York, Andrew K., Assistant Professor, CAPT, DC, USN
Yund, Alan J., Adjunct Assistant Professor; CAPT, MC, USN
Zhu, Kangmin, Ph.D, Adjunct Associate Professor
Zyzak, Michael D., Ph.D., M.S.; Adjunct Assistant Professor; LCDR, MSC, USN

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 USAF MC
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
YANEY, Sandra, M.N., MPH, CPT NC 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
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

1988
BERTSCHE, Patricia K., BSN, MPH
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

1988 (continued)
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

1991 (continued)
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

1992
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
MEO, Ahmed Bashir, MBBS, DPH, MPH, MAJ MC Pakistan AMC
OLIGNY, Christopher, BS, PA, MPH
PELEG, Jacob, BA, MA, MPH, LtCol IDF
PITTS, Michael B., MBBS, MPH
RUELL, Ellen Mary, BS, MEd, 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, LCDR USPHS
TAKASHIMA, Herbert T, MD, MPH, CAPT USPHS
TANI, Yukiko, BSN, MPH, LT USPHS
WATTENDORF, Nicole, BS, MPH
WELLS, Glen, MD, MPH, Lt Col RAAMC

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 USA
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
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

1997 (continued)
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 USA
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
BANGS, Michael J., MSPH, PhD, LCDR MSC USN
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
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
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

2000 Continued
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 USA
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
NAITO, Neal A., MD, MPH, CDR MC USN
OLLAYOS, Curtis W., MD, MPH, LCDR MC USN
ORTMAN, Brian V., DVM, MPH, Maj USAF BSC
RICO, Redro J., DVM, MPH, CPT VC USA
SCHNEIDER, Diana L., MA, DrPH
SCHWARTZ, Erica G., MD, MPH, LT MC USNR
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, Maj 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
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, BSC
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
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

2004
AHCEE, 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
BRADFORD, Lang, MPH
LAWLER, James, MD, MPH, LCDR, MC, USN
LUKE, Thomas, MD, MPH, LCDR, MC, USN
MACLARTY, Anne, MAJ, DVM, MPH, VC, USA
MCPHERSON, Nicole, MPH
MOORE, Brian, MPH, Maj, USAF, BSC
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
STRAUSS, Mark, MPH, LT, USPHS
SUNDSTROM, Julie, MPH, Capt, USAF, BSC
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, MAJ, USA, MC
EAGAN, Paul, MPH, Capt, 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
O'CONNOR, Francis, MD, MPH, COL, USA, MC
PARRISH, Douglas, PhD, LT, USN
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

GRADUATE STUDENT HANDBOOK

Graduate Education Office
Uniformed Services University
School of Medicine
2004

TABLE OF CONTENTS

Page

Preface

Message from the Associate Dean for Graduate Education 3
Background of USU Graduate Programs....4

Calendar 2004/2005 Academic Year 5

Administration

Graduate Education Office 6
Graduate Programs/Department....6
Commonly Used Offices....8

General Information

Student Identification Badges....9
E-Mail and Internet Access 9
Textbooks and Learning Resources Center 9
Graduate Student Association....10
Health Insurance 10
SEVIS requirements: International Students 10
Parking and Food Services....12
Housing....12
Recreational Facilities....12

Academic Information

Academic Advice and Review....13
- Graduate Education Office....13
- Graduate Program Directors....13
- Major Advisor 13
- Graduate Education Committee 13

Registration....14
- Course Addition/Deletion....14
- NIH/FAES Graduate Course Registration....14

Academic Integrity/Standards....15
Withdrawal/Leave of Absence 15
Grading Policy 16
Advancement to Candidacy 16
Dissertation/Thesis Advisory Committee....17
Graduation Requirements 18
Commencement 19
Graduate Student Colloquium....19

Stipend and Research Support

USU Graduate Student Stipends.....20
.....Tax Information for Stipends 20
Fellowship Support 20
Educational Assistance Loans/Deferrals.....21
Emergency Funds.....21
Doctoral Student Research Funds 21

Standards of Conduct

Leave/Absence from Campus 22
Scientific Ethics 22
Interactions with Faculty.....23
Sexual Harassment and Discrimination 23

Military Students

Reporting Procedures.....24
Leave Authorization.....24
Uniform Requirements.....24

Campus Maps

Area Map 25
Naval Grounds 26
Campus Buildings.....27

WELCOME TO GRADUATE STUDIES AT USU!

The Graduate Programs in biomedical sciences and public health in the USU School of Medicine are committed to excellence in the didactic and research training of masters and doctoral degree students. Graduate students comprise an important and integral component of the academic mission and scholarly environment of USU. Our graduates are prepared for productive and rewarding careers in many areas of the biomedical sciences and public health. USU graduates serve the nation in public service, create new knowledge, train the next generation of scientists, and contribute to the advancement of health and science in both public and private positions. We are pleased that you have chosen USU for the pursuit of your master's or doctoral degree in the biomedical sciences or public health.

This Handbook is designed as a reference for your use in finding answers to frequent, recurring questions concerning graduate study at the Uniformed Services University. Much of the information contained herein also appears on the USU Graduate Education Web site (www.usuhs.mil click on "graduate education"). The information is reproduced, consolidated and indexed annually in this Handbook in a manner that makes the information easily accessible.

The Handbook contains critical information about examination and grading policies, deadlines for registration, dropping and adding courses, graduate student research support, and general information on dissertation preparation and the oral defense/final examination. However, specific regulations imposed by individual Graduate Programs are not included in a general purpose document such as this. If a graduate student has questions about current USU thesis and dissertation preparation requirements, or other regulations, he or she should contact their Program Director or the Graduate Education Office (GEO).

Graduate studies at USU consist of a rigorous schedule of classroom, seminar, and research learning experiences. It is our desire that each student successfully complete his/her degree program. The Associate Dean will ensure that the policies of USU are uniformly and fairly applied to all graduate students. This office is always available to answer your questions regarding your academic life at USU or any other aspect of the University that pertains to your performance in the Graduate Program.

You are enrolled in an institution proud of its tradition of academic and scientific excellence, and we want you to benefit from the faculty and facilities available on this campus. The staff in the GEO wishes you success in your academic studies and is always ready to assist you in your progress towards your degree.

Cinda J. Helke, Ph.D.
Associate Dean for Graduate Education
Professor of Pharmacology and Neuroscience

BACKGROUND OF USU GRADUATE PROGRAMS

The Uniformed Services University of the Health Sciences School of Medicine was authorized by the U.S. Congress in 1972. Public Law 92-426, which established the University, authorizes the establishment of a Graduate Program in the Biomedical Sciences. The Graduate Program became operative in 1977 when the first graduate student was admitted.

The Graduate Program at USU has grown from a single graduate student in 1977 enrolled in the Ph.D. Program in Physiology to approximately 170 graduate students in 2003. USU currently offers Ph.D. degrees in the Interdisciplinary Programs in Emerging Infectious Diseases, Molecular and Cell Biology and Neuroscience, as well as departmentally-based Programs in Clinical Psychology*, Medical Psychology, Military and Emergency Medicine (Undersea Medicine)*, Pathology (Molecular Pathobiology and Comparative Pathology), and Preventive Medicine (Environmental Health Sciences, Medical Zoology, and a Doctor of Public Health). Master's degree programs are offered in Comparative Medicine, Military Medical History, Public Health, and Tropical Medicine and Hygiene, as well as Master of Science degrees in Molecular and Cell Biology*, Public Health*, Aviation Physiology*, and Undersea Medicine*. Some degree programs (indicated by *) are limited to military/uniformed students.

The University is accredited by the Middle States Commission on Higher Education, and the Medical School is accredited by the Liaison Committee on Medical Education. The Department of Defense, the USU Board of Regents, the President of USU, and the Dean of the F. Edward Hébert School of Medicine, actively support and encourage graduate education in the basic medical sciences at USU.

2004/2005 CALENDAR

Fall Quarter

Mon-Fri, 2-6 Aug, 2004, Fall Quarter Registration, Current Students
Wed-Thurs, 18-19 Aug 2004, Orientation, Incoming Graduate Students
Thurs-Fri, Aug 10-20, 2004, Registration, Incoming Graduate Students
Fri, Aug 13, 2004, Summer Quarter Grades Due
Mon, Aug 23, 2004, Fall Quarter Classes Begin
Mon, Sep 3, 2004, Last Day to Drop/Add Courses
Mon, Sep 6, 2004, Labor Day (Holiday)
Mon, Oct 11, 2004, Columbus Day (Holiday)
Mon-Fri, Oct 25-29 2004, Winter Quarter Registration
Thurs, Nov 11, 2004, Veterans' Day (Holiday)
Fri, Nov 12, 2004. Fall Quarter Ends

Winter Quarter

Mon, Nov 15, 2004, Winter Quarter Classes Begin
Fri, Nov 26, 2004, Last Day to Drop/Add Courses, Fall Quarter Grades Due
Thurs-Sun, Nov 25-28, 2004, Thanksgiving Recess
Saturday, Dec 18, 2004-Sun, Jan 2, 2005, Winter Recess
Mon, Jan 17, 2005, Martin Luther King, Jr.'s Birthday (Holiday)
Mon-Fri, 31 Jan - 4 Feb, 2005, Spring Quarter Registration
Fri, Feb 18, 2005, Winter Quarter Ends
Mon, Feb 21, 2005, President's Day (Holiday)

Spring Quarter

Tues, Feb 22, 2005, Spring Quarter Classes Begin
Mon, Mar 8, 2005, Last Day to Drop/Add Classes, Winter Quarter Grades Due
Saturday-Sun, Mar 19-27, 2005, Spring Recess
Mon-Fri, May 2-6, 2005, Summer Quarter Registration
Fri, May 20, 2005, Spring Quarter Ends
Sat, May 21, 2005, USU Graduation

Summer Quarter

Mon, May23, 2005, Summer Quarter Begins
Mon, May 30, 2005, Memorial Day (Holiday)
Mon, Jun 3, 2005, Last Day to Drop/Add Courses, Spring Quarter Grades Due
Mon, Jul 4, 2005, Independence Day (Holiday)
Mon - Fri, Jul 18-22, 2005, Fall Quarter Registration
Fri, Aug 12, 2005, Summer Quarter Ends, Academic Year End

ADMINISTRATION

Graduate Education Office (GEO)

Graduate Education Office, Building A, Room A1045
4301 Jones Bridge Road, Bethesda, MD 20814-4799
phone: 301-295-3913 or 800-772-1747 (toll free) FAX: 301-295-6772
e-mail: graduateprograms@usuhs.mil
www: http://www.usuhs.mil/ click on "graduate education"

Cinda J. Helke, Ph.D.
Associate Dean for Graduate Education
e-mail: chelke@usuhs.mil
phone: 301-295-1104

Janet Anastasi
Graduate Program Coordinator
e-mail: janastasi@usuhs.mil
phone: 301-295-9474

Heather DeLloyd
Educational Technician
e-mail: hdelloyd@usuhs.mil
phone: 301-295-3913

Interdisciplinary Graduate Programs

	Bldg/Room	Telephone
Emerging Infectious Diseases		
Eleanor Metcalf, Ph.D. (emetcal@usuhs.mil)	B4096	295-3413
Program Director		
Web address: http://www.usuhs.mil/mic/eid.html		
Administrative Contact: Pat Sinclair		295-5749
Molecular and Cell Biology		
Jeffrey M. Harmon, Ph.D. (jharmon@usuhs.mil)	C2129	295-3248
Program Director		
Web address: http://www.usuhs.mil/mcb/index.html		
Administrative Contact: NeTina Finley	C2095	295-3642
Neuroscience		
Regina Armstrong, Ph.D. (rarmstrong@usuhs.mil)	B2050	295-3205
Program Director		
Web address: http://www.usuhs.mil/nes/home.html		
Administrative Contact: NeTina Finley	C2095	295-3642
Comparative Medicine		
Dale Smith, Ph.D. (dcsmith@usuhs.mil) or CAPT Marlene Cole (mcole@usuhs.mil)		
Program Contacts		295-3168
Web address under development		
Administrative Contact: Kelly Mullally		295-3168

Basic Science Departments

Anatomy, Physiology and Genetics		
Harvey Pollard, Ph.D., Chair	B2026	295-3200
Juanita Anders, Ph.D. (janders@usuhs.mil)	B2046	295-3203

GEC Representative
Web address: http://www.usuhs.mil/ana/anatomy.shtml

Biochemistry

Paul Rick, Ph.D., Chair	B4014	295-3449
David Grahame, Ph.D. (dgrahame@usuhs.mil)	B4070	295-3592

GEC Representative
Web address: http://bio.usuhs.mil/

Medical and Clinical Psychology

David C. Krantz, Ph.D., Chair	B3050	295-3270
Tracy Sbrocco, Ph.D. (tsbrocco@usuhs.mil)	B3044	295-9674

Graduate Program Director
Web address: http://www.usuhs.mil/mps/Psychology/index.html
Administrative Contact: Corinne Simmons 295-9669

Microbiology and Immunology

Alison D. O'Brien, Ph.D., Chair	B4152	295-3419
Anthony Maurelli, Ph.D. (amaurelli@usuhs.mil)	B4093	295-3415

GEC Representative
Web address: http://www.usuhs.mil/mic/

Military and Emergency Medicine

Col Gerald Schwartz, USAF, Interim Chair	C1045	295-3720
CAPT Victoria Cassano (vcassano@usuhs.mil)	C1050	295-9562

Graduate Program Director: Aviation Physiology; Undersea Medicine
Web address: http://www.usuhs.mil/mim/gradprog.htm

Military Medical History

Dale C. Smith, Ph.D., Chair (dcsmith@usuhs.mil) 295-3168
Graduate Program Director
Web address: http://www.usuhs.mil/meh/meh.html
Administrative Contact: Kelly Mullally 295-3168

Pathology

Robert M. Friedman, M.D., Chair	B3154	295-3450
Radha Maheshwari, Ph.D. (rmaheshwari@usuhs.mil)	B3122	295-3453

Graduate Program Director
Web address: http://wwwpath.usuf2.usuhs.mil/default.html
Administrative Contact: Elaine Hill 295-3450

Pharmacology

Brian M. Cox, Ph.D., Chair	C2001	295-3223
Aviva Symes, Ph.D. (asymes@usuhs.mil)	C2126	295-3234
GEC Representative		
Web address: http://www.usuhs.mil/pha/index.html		

Preventive Medicine and Biometrics

Gerald R. Quinnan, M.D., Chair		
Gary Gackstetter, Col, USAF (ggackstetter@usuhs.mil)	A1044	295-3050
Graduate Program Director		
Tomoko Hooper, MD (thooper@usuhs.mil)	A1040G	295-1975
GEC Representative		
Web address: http://www.usuhs.mil/pmb/PMBintropage.html		
Administrative Contact: Tina Thompson		295-1979

Other Commonly Used USU Offices

	Bldg/Room	**Telephone**
Audiovisual Center	G070	295-3337
University Information Systems	G007	295-3304
Environmental Health and Occupational Safety	A2020	295-3305
Equal Employment Opportunity	UP002	295-3969
Financial Management	A1040B	295-3096
Laboratory Animal Medicine	G169	295-3315
Learning Resource Center (Library)	D1001	295-3350
Military Personnel Office	C1016	295-3086
Multidisciplinary Laboratories (MDL)	A2030	295-3301
Office of Recruitment & Diversity Affairs	A1019	295-3965
Office of Research	A1032	295-3303
Security	UP001	295-3033

GENERAL INFORMATION

Student Identification Badges

USU Identification Badges must be worn when on campus and are required for security clearance to get on the NNMC/USU campus. The University Identification Badge is essential for identifying USU graduate students to our campus security forces and provides access to other necessary areas and special functions. Student I.D.s will be issued during Orientation Week. If the ID badge is lost or stolen, notify the security office immediately and obtain a replacement.

E-mail and Internet Access

Each USU graduate student will be assigned an electronic mail and internet access account whereby the student can send or receive mail messages, check the Bulletin Board for information pertaining to USU, access the WWW, and have remote access to the LRC and its databases. Access to e-mail and the internet will be available through computers located in the individual Programs and labs, and via remote dial-in service. It is critical that students regularly check their USU e-mail account and the USU GEO web site. Most information, notices, and reminders are distributed to students only by e-mail or posted on the web site.

Textbooks

Textbooks for courses that graduate students take with medical students (i.e., medical school courses such as Medical Pharmacology) will be issued, free of charge, to the students. Acquisition of textbooks for graduate courses is generally the responsibility of the student. However, under some circumstances a Graduate Program may purchase textbooks for use by their students in a specific graduate course. The program may request the return of these books at the end of a course. If you purchase textbooks, you may do so from the vendor of your choice. The Foundation for Advanced Education in the Sciences (FAES) maintains a Bookstore on the campus of the National Institutes of Health in Bethesda. Through a cooperative arrangement, USU faculty and students are authorized to utilize this bookstore to purchase textbooks and other study materials.

Learning Resources Center (LRC)

The Learning Resources Center (LRC) is available to all graduate students at USU. During Orientation Week, or shortly after arriving on campus, you should stop by the front desk at the LRC with your USU ID card. After scanning information, this card can serve as both the USU ID card as well as the LRC (Library) card. You may also obtain an account that will permit remote access to the LRC online collection of journals, books and valuable databases.

The LRC maintains numerous computers, printers, scanners, etc. available for your use. The LRC is part of a network of medical and scientific libraries throughout the nation and can obtain reprints from most scientific journals. Questions regarding the utilization of the LRC and methods for obtaining scientific articles should be asked at the circulation desk upon entering the facility. Hours of the LRC

vary from week to week during the academic year. The hours are posted on the doors of the facility and on the USU web site (http://lrcgwf.usuf2.usuhs.mil/).

Graduate Student Association

The Graduate Student Association (GSA) aims to be the voice for and act on behalf of all USU graduate students, to promote communication among graduate students of all Programs, and to provide services beneficial to graduate students. The Association is led by the graduate student representative on the Graduate Education Committee (GEC), with assistance from student representatives from each individual department or program. Committees of graduate students assist with special projects at the University.

Current services and activities sponsored by the Association include a website (http://www.usuhs.mil/geo/gsa) and a folder on the USU bulletin board (http://www.usuhs.mil/usuhs_only/cgi-bin/configt18.pl), the initiation of a Graduate Student Education Enrichment Fund to be used to provide funds for a graduate student travel grant, and the foundation of a career development workshop held during the Graduate Student Colloquium each spring. To date, the GSA has successfully seen to the initiation of two courses for graduate student education enrichment, Education Methods, which began in the Fall of 2002, and Grant Writing for Graduate Students, which began in May of 2002. USU graduate students are automatically members of the GSA, and are encouraged to attend the bi-monthly meetings and to serve as Student Representatives of their Program, or on the various GSA or USU committees.

Health Insurance

Civilian graduate students are required to provide proof of health insurance to the GEO each fall. **Health insurance is mandatory.** Students can choose any health insurance policy available to them.

The GEO has information 2 health insurance policies. For the National Association of Graduate-Professional Students (http://www.nagps.org/) policy, students enroll in and pay the fees for the insurance directly (download forms at http://www.student-resources.net/plans/nagps/nagps_2002/485-6nrl.pdf). Health insurance plans are also available through the Foundation for Advanced Education in the Sciences (FAES) located at the National Institutes of Health. For this plan, the fees are paid through the GEO. The FAES telephone number is 301-496-8064 to make an appointment for enrollment.

SEVIS Requirements: International Students on F-1 Visas

During the past year there have been numerous regulatory changes affecting the status of international students holding F-1 visas. Many of these regulations are part of the SEVIS (Student and Exchange Visitor Information System) program. SEVIS is a federally mandated electronic system that requires institutions such as USU to provide data to the Immigration & Naturalization Service (INS, now part of the Department of Homeland Security, DHS). The intent of SEVIS is to provide assurance that international students are maintaining full time status in the U.S., to allow quicker reporting of "event changes," and to allow the INS/DHS to monitor colleges and track trends.

Although the SEVIS system is new, the INS/DHS has always required USU to keep certain information on all F-1 visa holders. SEVIS now requires that we inform the INS/DHS of certain changes in a student's status rather than simply keep this information on file at USU. **While the majority of regulations that affect an international student's stay in the U.S. have not changed, the reporting aspect of SEVIS means that the student will need to be much more aware of his/her responsibilities.**

All U.S. schools began using INS/DHS's SEVIS system for issuance of I-20s (DS-2019s) in Feb. 2003. All current and incoming USU international students have been entered into the SEVIS database and should have a SEVIS I-20.

The GEO must regularly provide the INS/DHS with reports verifying the full-time enrollment of students holding F-1 visas, and must also report "events" such as change of address, change of degree, employment authorization, termination, graduation, etc. These reports will need to be sent to the INS/DHS within 21 or 30 days of the event occurrence. A INS/DHS fact sheet of reporting requirements is available on the web page at http://www.immigration.gov/graphics/publicaffairs/factsheets/02.12FINALRU_FS.htm. The following is a list of the type of "reportable events" and additional information that you will need to familiarize yourself with in order to meet your obligations.

Change of Address, Name, Dependent Information. USU is now required to report to INS/DHS a student's change of address, name, and dependent information. **Please remember to update your information with the GEO within 10 days of changing your address, name and/or dependent information.** To do so, come to the GEO (A1045) or send an email to Janet Anastasi (janastasi@usuhs.mil). The INS/DHS requires that the "Home Address" be an address outside the United States. Indicate changes in your local residence address (where you physically reside). Failure to update this information may require the student to leave the country, and re-enter with new documents in order to return to status. SEVIS is not very forgiving!

Full Course of Study Requirement and Reporting Requirements for Exceptions. USU is required to report to INS/DHS when a student fails to enroll, to register for a quarter, or registers but drops below a full course of study (12 credit hours/ quarter). **International students must register on time for a full time course of study each quarter.** International students no longer qualify for a "grace quarter," and must remain enrolled until the degree is completed. There are certain circumstances under which GEO can approve a "drop below" a full time course of study but in all cases this approval must be obtained from the GEO before the student actually drops below. Otherwise the student will fall “out of status”, even if the “drop-below” could have been authorized. The circumstances that warrant such authorization are limited to the following: medical reasons documented by a physician; when a student is in his/her final quarter prior to graduating; and when a student has legitimate academic difficulties. The drop-below for reasons of academic difficulty can only be authorized once during a student's program of study at a particular degree level.

Laboratory Training. International students are offered admission to USU to be supported by and to work in a specific research laboratory. The DoD has approved these assignments based on the student’s application file, and on the specific USU laboratory involved. If a USU international graduate student will be working (rotation, collaboration, change of thesis advisor) in a laboratory different from that originally indicated in the letter offering admission to the student, **the GEO must be notified prior to the event**. This is necessary to ensure (and to clear through the necessary channels) that international students and USU laboratories are in compliance with the USA Patriot Act, DoD, USU and other regulations relevant to potential access to biological select agents, toxins, and radiological agents by international graduate students.

Practical Training. International students can no longer apply for post-completion practical training after they have already graduated. This training must be requested prior to completion of the course of

study. Students who have already used 12 months of practical training based on the completion of one degree level are eligible for an additional 12 months if they move to a higher degree level.

Parking

Parking at USU is on a first-come, first-served basis. Reserved parking spaces are provided for disabled individuals and Government vehicles only. Students parking their vehicles in the USU underground parking facility must register their vehicle with Security. Each student will complete USU Form 5004 containing vehicle registration information which will be kept on file in Security. A parking pass (DoD and USU decals) will be issued at that time. Questions regarding parking and/or regulations should be referred to Security (phone number 295-3033). Bicycle parking is available on the first level of Building C outside the back entrance to the student carrel/study area and the ground level of Building B near the Security Office.

Food Services

The full service USU cafeteria is located on the first floor of B Building and is open between the hours of 6:30 a.m. and 2:00 p.m. Vending machines containing soft drinks, candies, cookies and chips are available in Buildings A, B and C. William III, located in the lobby of Building C, serves gourmet coffee, muffins, cookies, and sandwiches.

Housing

USU does not provide student housing nor does it have housing facilities. Housing in the local community is readily available. Students are encouraged to contact the Navy Housing Office located in the Bethesda Naval Hospital (301-295-0798) for a list of available housing in the local area. Another source to obtain housing information is 1-800-999-RENT or 585-RENT. You can also go on-line at www.apartmentguide.com for a complete Apartment Guide. You can also advertise your housing needs or search for available housing on the USU electronic bulletin board at http://www.usuhs.mil/usuhs_only/blbrd/bulletin.html, an NIH housing resource at http://www.recgov.org/housing/housing.html, the NNMC housing office at http://nndc.bethesda.med.navy.mil/Military%20Housing.htm.

Recreational Facilities

Through an agreement between the President of USU and the Commanding Officer, National Naval Medical Center (NNMC), USU graduate students may utilize recreation facilities on this Navy Base. These facilities include a gym, fitness center, outdoor recreation facility, gear, a pool, and much more. Hours of operation are Monday - Friday, 5:00 am - 9:00 pm, Saturday and Sunday, 9:00 am - 6:00 pm. for the gym and Monday - Friday, 5:00 am - 8:00 pm and Saturday and Sunday, 11:00 am - 5:00 pm for the pool (11:00 am - 1:00 pm for active duty only). Non-military USU personnel costs are $3 daily, $50 for 6 months, and $75 for 1 year. These facilities are only a short walk from the USU campus. Your USU Identification Badge should be shown when requesting use of the Special Services facilities. Contact the Comfort Zone at 301-295-2450. In addition to the facilities at NNMC, there is a mini-gym here at USU, located on the ground floor of Building B. This gym is equipped with free weights, a stair master, treadmill, 2 stationary bikes, and 2 elliptical cross-trainers. Showers and lockers are readily accessible next to the gym.

ACADEMIC INFORMATION

Academic Advising

Graduate Education Office (GEO). The GEO should be an important point of contact for assistance required by graduate students at USU. The Associate Dean is responsible for ensuring that University requirements are adhered to and that all graduate students are treated in accordance with the stated policies and procedures of USU. Although questions on Graduate Program policy should generally be resolved at the Program level, the Associate Dean for Graduate Education and GEO staff are available for discussion should the solution be unsatisfactory to the student or questions remain unanswered.

Assistance from the GEO need not be officially scheduled in advance, but can consist of informal discussions at any time. Academic difficulties are best solved early in the course of the problem, and assistance should be sought as soon as there is an awareness of a difficulty. Please remember that the Associate Dean and the GEO staff are always available to speak with graduate students and are always interested in their progress even if no difficulties are involved. Please take the time to stop in the office occasionally and let them know how your studies are progressing!

Graduate Program Directors. Each Graduate Program, whether interdisciplinary or departmental, has a Graduate Program Director who represents their program on the GEC. The Graduate Program Director evaluates applicants, monitors grades, registration, and the progress of each graduate student in his/her Program. The interdisciplinary Program Directors work with their Executive Committees to establish program policies and initiatives. They also oversee all administrative and academic components of the Program. The Program Director is an important source of information and guidance for his/her graduate students.

Major Advisor. In doctoral programs and many masters programs, academic studies and research projects are guided by a major advisor (thesis advisor). This USU faculty member is selected (usually within the first year) by the graduate student with advice and agreement of the Program Director. During the first year at USU, either a temporary advisor is assigned by the Program, or the Graduate Program Director serves as the graduate student advisor. With the selection of a major advisor, a graduate student has established an individual directly responsible for guiding the scientific and academic progress of his/her studies at USU. The major advisor is also responsible for providing and/or arranging the research infrastructure and support needed for the student's thesis work.

Students should be certain to maintain close contact with their advisor in planning and progressing through academic studies and research projects. The student's advisor should be the first one aware of any problems. The student's advisor is his/her most valuable single contact at the University and should be constantly apprised of the students progress.

Graduate Education Committee (GEC). The USU GEC is responsible for providing advice to the Associate Dean for Graduate Education regarding the Graduate Program. Recommendations and comments from the GEC are forwarded to the Dean, F. Edward Hébert School of Medicine, via the Associate Dean for Graduate Education. The GEC addresses all aspects of graduate student life, but is primarily concerned with academic standings and curriculum development.

The GEC is composed of one faculty member appointed from each of the Basic Medical Science Departments and Interdisciplinary Programs. Two representatives from the Faculty Senate (appointed by the Dean) and a Graduate Student Representative also serve on the GEC. In addition to these voting members, the Associate Dean for Graduate Education, and the Vice President for Teaching and Research serve as nonvoting members. The GEC meets monthly.

The Graduate Student Representative to the Committee is elected by all graduate students. The student will be notified about the mechanism for election. In addition to attending the GEC meetings, the Student Representative meets with the individual Graduate Student Representatives for an exchange of information and ideas, and to plan activities.

Registration

The Graduate Education Program at USU is based on a quarter credit hour system. Full time students must be registered for 12 or more credit hours per academic quarter. Full time status must be maintained by civilian graduate students who are receiving stipend support and by international students (students with an F-1 visa).

Student must confer with his/her advisor or Program Director concerning courses to be taken each quarter. This is important to ensure that each graduate student registers for appropriate courses, acquires the number of graded and total credit hours needed for the degree, and meets the specific course requirements of his/her program. Course descriptions and schedules can be viewed and course registration completed on the web at the GEO home page (www.usuhs.mil, click on "graduate education" then click on "current students"). It is the responsibility of the student and his/her advisor to ensure that each student is registered for the required number of quarter hours and for courses that are being offered during that quarter.

USU SOM Graduate Program requirements indicate that graduate students must complete their degree requirements no later than seven years after initiating a program of graduate study at USU. Students will be formally notified one year prior to the deadline. If a student changes his/her course of graduate studies (either by changing the specific degree sought or changing programs), the 7 year limitation, timed from the initial entry into the USU Graduate Programs, remains in place.

Course Addition/Deletion. Each graduate student has 10 days after the beginning of an academic quarter or after the start date of a course in which to drop or add courses. Courses which are dropped or added must be listed on a drop/add form and submitted to the GEO via hardcopy or electronically via the online registration system within the prescribed time period. Requests for changes in registration following the drop/add deadline are normally not granted; however, when extenuating circumstances exist, a graduate student may petition the Associate Dean for Graduate Education for permission to withdraw from a course. The registration and subsequent withdrawal will be recorded on the student's transcript.

NIH/FAES Graduate Course Registration. Courses are offered at the Foundation for Advanced Education in the Sciences (FAES) Graduate School at the National Institutes of Health (NIH) located across Wisconsin Avenue from the National Naval Medical Center. USU graduate students may be permitted to enroll in FAES courses and receive academic credit at USU if the Graduate Program Director deems that one of these courses is required for a student's program and no equivalent course is taught at USU. The Graduate Program must be prepared to assume the cost of tuition for these courses.

The Graduate Program Director must send a memorandum to the Associate Dean for Graduate Education requesting student enrollment in a specific course with appropriate justification. Once approved, the student will be required to complete the NIH registration form.

Academic Standards

Satisfactory academic standing is determined both by performance in formal courses, and by the non-cognitive elements required of a scientific and/or public health professional. To remain in good academic

standing, graduate students must maintain a GPA of 3.0 or better. Failure to do so will result in Program recommendation to the GEC for academic probation with remediation, or recommendation for disenrollment from the Program. Receipt of a grade of D or F will result in an academic review by the Program, GEO, and GEC. Grades of F must be remediated. The student's Graduate Program may require the remediation of grades of C or D. Doctoral students must be in good academic standing (GPA 3.0 or better, and not on academic probation) to advance to candidacy.

Academic Integrity

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 biomedical scientist or public health specialist. These include, but are not necessarily limited to academic and scientific ethics, honesty, integrity, reliability, perception, balanced judgement, personal insight, and the ability to relate to and respect others. Students shall not use, attempt to use or copy any unauthorized material during any examination or graded exercise, knowingly present the work of someone else as their own, forge or alter any academic document, impede or interfere with the ability of others to use academic materials or complete academic work, or assist another in any of these activities. Violations of academic integrity or ethics will be brought to the attention of the Program Director, the Associate Dean for Graduate Education and the GEC. A substantiated lapse in performance and/or evidence of academic or scientific misconduct (see section below on Standards of Conduct) may result in a recommendation for disenrollment, suspension, or probation.

Withdrawal or / Leave of Absence

Circumstances, academic and/or personal, may necessitate that a student withdraw or take a leave of absence from the Graduate Program. Withdrawal or a leave of absence status indicates a voluntary ending or interruption of academic work at USU. A student wishing to withdraw or take a leave of absence must submit a request in writing to the Associate Dean for Graduate Education with approvals through his/her major advisor and Program Director. The Associate Dean for Graduate Education will notify the graduate student of final action. Withdrawal from a Program includes a formal checkout procedure. The student must formally reapply for admission if he/she wishes to return to the Program. A leave of absence may be granted for a period of up to one year (total time of leave of absence), and the student may resume his/her studies after an approved leave of absence without reapplication/readmission to the Program. Stipends will not be paid during a leave of absence. The amount of time that the student is on an approved leave of absence will not be added to the 7 year period of time permitted as the maximum time allowed for completion in USU Graduate Programs. The student must complete the degree requirements within the 7 year period timed from their matriculation into a USU Graduate Program.

Grading Policy

The policy at USU on grading and enrollment in graduate courses is contained in USU Instruction No. 1323, "Examination, Grading and Enrollment Policies for Graduate Education Programs at USU." This Instruction specifies that graduate students will receive either letter grades, or credit/non-credit grades for classes, seminars, research, and teaching when matriculated in a degree granting USU Graduate Program. Students failing to complete a course as indicated by the Program Director or Course

Director will be given an incomplete (I) grade. Unless an exception is granted by the Associate Dean for Graduate Education, a grade of "I" must be converted to an appropriate letter grade within the following two academic quarters . If not, lack of completion of the appropriate work will result in a grade of "F" for the course. Graduate courses which extend over two graduate quarters, such as medical school courses, are indicated by the letter "X" on the grade sheet and transcript until a final grade is received for the complete course. Graduate students are required to maintain a 3.0 GPA or better.

The GEO maintains a record of each student's course work. These records are utilized to monitor academic standing and the progress of each graduate student. Tthe following designations will appear on course listings and transcripts:

Grade	Explanation
A	Superior Work.
B	Required level of work for graduate students.
C	Below required level of work.
D	Unacceptable level of work; remedial work may be required.
F	Failure to perform at an adequate level; remedial work will be required.

The above grades are assigned points (e.g. A-4, B-3, C-2, D-1, and F-0) in order to calculate the grade point average (GPA).

Other Designations

AU	Audited course, no grade or credit is assigned.
I	Incomplete, requirements of a course not yet completed
P	Passing grade in a pass/fail course.
FA	Failing grade in a pass/fail course.
R	Remedial course.
X	Course continues into next academic quarter.
W	Withdrawal from a course in progress.

Graduate students may audit a course at USU with the permission of the instructor. The student must still attend class and be certified by the instructor as having attended the majority of the classes, but will receive an AU (Audit) in the quarter hours section of the transcript and 0 in the grade point section.

Advancement to Candidacy

Advancement to Candidacy for doctoral degrees (Ph.D., Dr.P.H.) at USU consists of five important requirements. When these elements have been satisfied, an official memorandum is submitted to the Associate Dean for Graduate Education for approval. After confirming that the four requirements have been met, the Associate Dean for Graduate Education formally advances graduate students to candidacy status for the Doctoral degree. The requirements for advancement are as follows:

1. Each student must have earned at least 48 course quarter credit hours in graded (e.g. A, B, C) courses prior to advancement to candidacy and completed all required courses as mandated by the specific Graduate Program.

2. Students must have a cumulative grade point average (GPA) of 3.0 or better and be in good academic standing.

3. Students advanced to candidacy must have completed a Qualifying Examination as administered under the rules and regulations of his/her Program. The successful passing of this examination must be indicated.

4. Students must form a Thesis Advisory Committee and submit a completed USU form 641 (see below) to GEO.

5. The final step in advancement to candidacy is recognition of the graduate student's potential to achieve the degree as indicated by a formal recommendation by the Program Director.

All these elements should be contained in the official memorandum that may originate with the student's advisor, but must be signed by the Program Director before being received by the Associate Dean for Graduate Education. This memorandum should contain statements acknowledging completion of the 48 formal credit hours and required courses, achievement of the 3.0 GPA, passage of the qualifying examination, completion of the language/computer science requirement (if required by Program), and a specific recommendation that the student be advanced to candidacy.

Advisory Committee

The Thesis Advisory Committee is a cornerstone for the development, progress and evaluation of the doctoral dissertation and many masters theses. At the beginning of the second academic year at USU, each doctoral graduate student should form a thesis advisory committee and complete USU Form 641, "Report of the Advisory Committee-Graduate Program". The information which the form contains represents an agreement between the graduate student and USU concerning courses which will be accepted for transfer credit and language requirements in the student's program, and what anticipated course work and research the graduate student will undertake while pursuing a degree at USU. In addition, the form aids the GEO when reviewing graduate records in ensuring that a graduate student is on schedule in pursuing his/her degree. Since this form contains the signatures of the student's Advisory Committee members, the Program Director, the Associate Dean for Graduate Education, and the graduate student, it is an important document in guiding a graduate student's academic program at USU. During the later stages of the student's program, this document is used to ensure that the graduate student has achieved his/her initial goals. The early formation of an advisory committee should encourage the student to seek the advice and critical input from the members during the development and execution of the research project.

Current minimum GEO requirements (program requirements may be more rigorous) for the doctoral dissertation advisory committee are that it be composed of at least four persons with doctoral degrees, at least 3 of whom must be USU graduate faculty members at the rank of Assistant Professor or above with an academic appointment in the Graduate Program for which the degree is to be granted. A fourth “outside” member of the Committee must be a USU faculty member with no appointment in the Graduate Program for which the degree is to be granted or in the Department in which the students laboratory resides and/or the thesis advisor holds a primary appointment. Additional members may either hold a faculty position at USU or have an appointment outside of USU. The majority of the Committee members must have full time appointments at USU and be members of the Graduate Program granting the degree.

Masters of Science (M.S.) degrees require a written thesis, to be approved by a committee composed of three members of the graduate faculty. The committee members are typically faculty in the student’s graduate program and include the student’s advisor. A Graduate Program may have additional requirements for the M.S. degree thesis. Other types of masters degrees (e.g. MPH, MTM&H, MCM,)

may have Program-based requirements for preparation and approval of a thesis or other types of reports or presentations.

Graduation Requirements

Upon completion of the academic program and research project at USU, a student begins the final steps leading to the actual awarding of the doctoral degree. These final steps represent a summary of the graduate student's work at USU and a formal recognition by the University that the student is qualified to receive a degree. For doctoral students, the first step is writing the dissertation. The formats (both traditional and manuscript-based) for the dissertation are contained in a booklet available in the GEO. This booklet should be examined for the specific requirements of the dissertation. Additional requirements of the Graduate Program should also be determined and met by the candidate.

The next step in the process for doctoral candidates is the agreement by the student's major advisor and Advisory Committee that the student has completed all the requirements for graduation. A memorandum should be sent from the major advisor via the Program Director to the Associate Dean for Graduate Education stating that the student has met all the requirements and that a formal defense of the dissertation will be scheduled. The memorandum must be submitted to the Associate Dean for Graduate Education one month prior to the anticipated formal dissertation defense. The memorandum must also contain a recommendation for the Chairperson of the Examining Committee, names of the members of the student's Advisory Committee, and the exact wording and punctuation of the title of the student's thesis.

Upon receipt of the formal recommendation, the GEO will schedule a lecture room for the public portion of the defense and a conference room for the closed examination conducted by the Examining Committee. Notices are also circulated throughout the University to ensure recognition of the student's work and to solicit attendance at the public seminar.

A successful examination is indicated by the signatures of the Examining Committee on a form supplied by the GEO. Upon conclusion of the Dissertation Defense, the Chairperson of the Examining Committee submits the signed sheet indicating pass or fail through the Program Director to the Associate Dean for Graduate Education . At the same time, the Examining Committee may also submit a second form indicating acceptance of the dissertation.

The signed sheet accepting the dissertation should be submitted with 2 printed and 2 electronic (preferred PDF format on CD ROM) copies, a copyright statement, and completed and signed UMI/Proquest forms.

When the Associate Dean for Graduate Education receives the signed approval sheet, the original and copies of the dissertation, and the indication of a successful Defense from the Program Director, a memorandum requesting conferral of the degree is prepared for submission to the USU Board of Regents. This memorandum is signed by the Dean of the School of Medicine. The memorandum, a copy of the signed approval sheet, and a copy of the abstract of the student's work are reviewed by the Board of Regents at its next regularly scheduled meeting. The Board of Regents must formally vote to grant the appropriate degree. The student may then receive the degree during the formal commencement ceremony in May or in absentia.

Commencement

Each year, the 3rd Saturday of May (Flag Day), the USU holds Commencement Exercises. The USU

Commencement Exercise is a public recognition of academic diligence and success of each individual receiving their degree. The name of each graduate is read, the student proceeds across the stage to be hooded, receive their diploma, and the congratulations of University officials. The ceremony also presents to the entire University the students who have focused their studies on obtaining a graduate degree and pursuing a career in biomedical science or public health. Thus, recognition of the Graduate Programs as well as the individual degree recipients occurs. A graduate degree recipient is chosen to present a Graduate Student Farewell address, and a graduate degree recipient is awarded the "USU Graduate Student Award" at Commencement.

Individual Graduate Programs may require that their graduates attend the ceremony, be hooded, and receive their diploma at commencement. The GEO and Program Directors strongly encourage all degree recipients of the Graduate Programs to attend Commencement, to participate in this unique and exciting event, regardless of the actual date during the academic year that the thesis and defense were approved. Only those graduating students who will be attending Commencement will be considered to present the Graduate Student Farewell address or to receive the "USU Graduate Student Award".

Graduate Student Colloquium (GSC)

Each spring, the GEC and the graduate faculty sponsor a Graduate Student Colloquium (in conjunction with USU Research Day) wherein current graduate students are given the opportunity to present the results of their research and to compete for awards. Senior students are expected to present their research work annually as either a poster presentation or as an oral (10 min) presentation. Outstanding Platform and Poster Presentations are selected by judges chosen from the graduate faculty. The recipients receive a monetary award. A plaque with the names of all participants is located in the USU library (LRC).

Those students who wish to participate in the GSC submit an abstract of their research with a request to present their work in an oral or poster presentation. Copies of selected abstracts will be printed in the Colloquium Program. A Distinguished Visiting Lecturer is selected each year to present the John W. Bullard Colloquium Lecture. Those students selected to give presentations are invited to an informal lunch with the guest speaker to discuss their work and the work of their colleagues.

STIPENDS AND RESEARCH SUPPORT

USU Graduate Student Stipends

Civilian doctoral students who are notified by the GEO of the award of a USU-supported stipend will receive monthly payments beginning September of that academic year. The stipend will be prorated over a 12 month period. Monthly payments will be made directly to the student's account in a designated financial institution. Payments will be scheduled for the third Friday of each month. Students must notify GEO and Financial & Manpower Management (FMG) of any change in address or banking information.

USU-supported stipends will be provided for a period of no more than 3 years. Stipend support or the equivalent will be provided in subsequent years from research grants, individual fellowship awards, and/or other sources to be determined by the thesis advisor and graduate student. Outside employment is prohibited for students receiving USU stipends, is discouraged for other students, and must not interfere with the course of graduate studies.

Taxes and USU stipends. For most students, a major portion (if not all) of the USU stipend will be taxable. IRS Publication 520, Scholarships and Fellowships, provides guidance on the taxable and non-taxable portions. Because those receiving USU supported stipends are full time students working toward a degree, and the stipend is given because of students status and not for services rendered, a portion of the stipend may not be taxable. Students must report any amount received as income which exceeds the cost of school expenses that are required for enrollment or attendance such as fees, books, supplies, and educational equipment. Required educational expenses do not include living expenses such as room and board. Since each individual's tax situation is different, students should check with their tax advisor for more detailed information regarding a specific situation. The GEO (upon request) will provide a letter stating that an individual is a full time student and a candidate for a degree at an accredited institution, that the individual is receiving a stipend and that the stipend is not dependent on required services, that the individual is not an employee and is not being compensated for services rendered. This letter may be helpful if asked to prove student status and whether the nature of the stipend falls under the rules of IRS publication 520.

Money for taxes (withholding) is not taken from the stipend payment made to you each month. You will be responsible for income taxes owed to the Internal Revenue Service (IRS) and/or your state of residence. It is therefore important that each student plan ahead to make sure that he/she will not face a large tax bill when the annual tax return is filed. You should consider quarterly filing of income tax payments with the IRS. If insufficient tax has been withheld during the tax year, penalties may accrue. The Defense Finance and Accounting Service (DFAS), who handles the University's accounting and payroll, will submit information for the IRS to prepare IRS Form 1099's reflecting stipend payments. DFAS will provide each student and the IRS the dollar amount of the stipend payments for the calendar year via the Form 1099 procedure.

Fellowships for Graduate Student Stipend Support

The Henry M. Jackson Foundation for the Advancement of Military Medicine (HMJ) provides support for 3 graduate fellowships. These are the "Henry M. Jackson Foundation Fellowship in Medical Sciences" (2 awards) and the "Val G. Hemming Fellowship Award". The Fellowships are awarded annually to outstanding USU civilian graduate student doctoral candidates in the USU School of Medicine. The Fellowships provide stipend support for the final year of their dissertation research and support for attendance at a scientific meeting. Selection of the awardees is determined by a number of factors, including the expectation and likelihood of completing graduate study in time for participating in that academic year commencement exercises. Advanced civilian doctoral (Ph.D., Dr.P.H.) students who have reasonable expectations of completing their degree requirements in time to allow participation in the commencement ceremonies the following May, are eligible to apply in May/June of the prior year. Applicants must provide information on their research plan and progress, and have the support of their Program Director. Selections are made during June and announced prior to 1 August of each year.

Graduate student fellowship support is also competitively available from many other sources, such as the NIH, the Howard Hughes Medical Foundation, various private foundations such as the American Heart Association, Juvenile Diabetes Foundation, etc. Check with the USU Office of Research and/or the GEO for various opportunities to compete for extramural funding.

Educational Assistance Loans/Deferrals

The GEO is authorized to defer previous academic loans. Forms from lending institutions requesting verification of academic status and enrollment should be submitted to the GEO for completion.

Emergency Fund (Mannix International Fellows Fund). The Mannix International Fellows Fund was established in 1999 in memory of Sherry A. Mannix, who died of cancer at the age of 44. It is hoped that through this living memorial, future scientists who choose to come to this University can devote their efforts to finding answers to the world's pressing medical concerns.

The Fund is devoted to assisting both U.S. and international students with emergency expenses. The Associate Dean of Graduate Education shall make available as a loan or as a grant, such funds as he/she deems appropriate to assist graduate students dealing with unexpected and unavoidable expenses. These funds are not intended for day-to-day or anticipated expenses, but true emergencies. The funds are considered for distribution only after the student has pursued all other avenues of potential funding, e.g., family, friends. Contact the Graduate Education Office for more information should a need arise.

Doctoral Student Research Funds

USU maintains a special fund to finance doctoral student research. This resource is designed to provide funds to graduate students in addition to those provided by their major advisor. Funds are available to graduate students who have completed two years of graduate study at USU or who have been advanced to candidacy and are devoting a majority of their time to their dissertation research. Graduate research funds are currently available for two academic years. Funding beyond two years is generally not available. Requests are evaluated on a case by case basis. In recent years, the maximum funds available each year to eligible graduate students has varied between $1,500 and $2,500.

Forms to apply for USU graduate research funding are available from the GEO and will be sent to those eligible students in July of each year. These applications are relatively short if the funding requested is part of an already accepted University protocol by a major professor. If the research funding represents an entirely new protocol, the normal USU research review procedures must be followed. Information on the appropriate course of action is available in the GEO. These protocols are administered by the Office of Research Administration (REA) at USU. If the funding is approved, the GEO or REA will notify the student, the advisor, and the Program Director.

STANDARDS OF CONDUCT

Vacations and Other Absences from Campus

Vacation time and other personal absences should be discussed and approved with your temporary advisor, laboratory rotation advisor or thesis advisor, as appropriate. Graduate students who will be absent from the USU campus for a period in excess of 48 hours, excluding weekends and holidays, must notify the appropriate personnel in their Program, (i.e., Advisor, Graduate Program Director, etc.). International students on F-1 visas must additionally follow the regulations mandated by SEVIS (see above) and notify GEO of absences from the University.

Scientific Ethics

The following Code on the Responsible Conduct of Science was developed by USU faculty and modified and adopted by USU Graduate Students as a part of the course on "Ethics and the Responsible Conduct of Research" (IDO704). At the welcoming ceremonies for new students in August, incoming graduate students will publically recite this Code. Your behavior as a graduate student and biomedical scientist should adhere to these principles.

> ***The Graduate Students' Code on the Responsible Conduct of Science.*** **"**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 and 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."

Ethics Course. All doctoral graduate students are required to satisfactorily complete the course "Ethics and the Responsible Conduct of Research" (IDO704) prior to advancement to candidacy. Utilizing lectures and discussions, this course provides participants with an opportunity to review the basic principles for responsible conduct of scientific research. The topics to be reviewed include the rationale for developing and practicing professional values, and the scientist's ethical responsibilities to society, their research subjects, and their peers. Issues concerning responsible practices in laboratory work, publication, handling conflicts of interest, and confidentiality will be discussed. Each topic area is supplemented by seminar-style discussion and contemporary readings. Graduate students will be expected to actively participate in the discussions. Library research will form the basis for the preparation of a short essay on a single topic of interest.

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 those 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 and/or the Associate Dean for Graduate Education.

Harassment and Discrimination

The USU and the GEO 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 students'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 he or she is 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, and/or the GEO.

MILITARY STUDENTS

Reporting Procedures

The unique position of USU as an institution of the Department of Defense provides certain advantages to active duty military students enrolled in the University's Graduate Programs. A Military Personnel Support Detachment is stationed on campus (Building C, Room C1016) to assist uniformed students and faculty with personnel, records, evaluations, and other aspects of military life. Although U.S. Army (USA) and U.S. Air Force (USAF) personnel maintain their records at their respective training detachments, U.S. Navy (USN) personnel may have orders directly to the University or to one of the Navy training compounds at Bethesda. Each newly enrolled active duty military graduate student is required to

check-in with his/her Service representative at that office. A copy of the student's orders will be kept on file there.

Leave Authorization

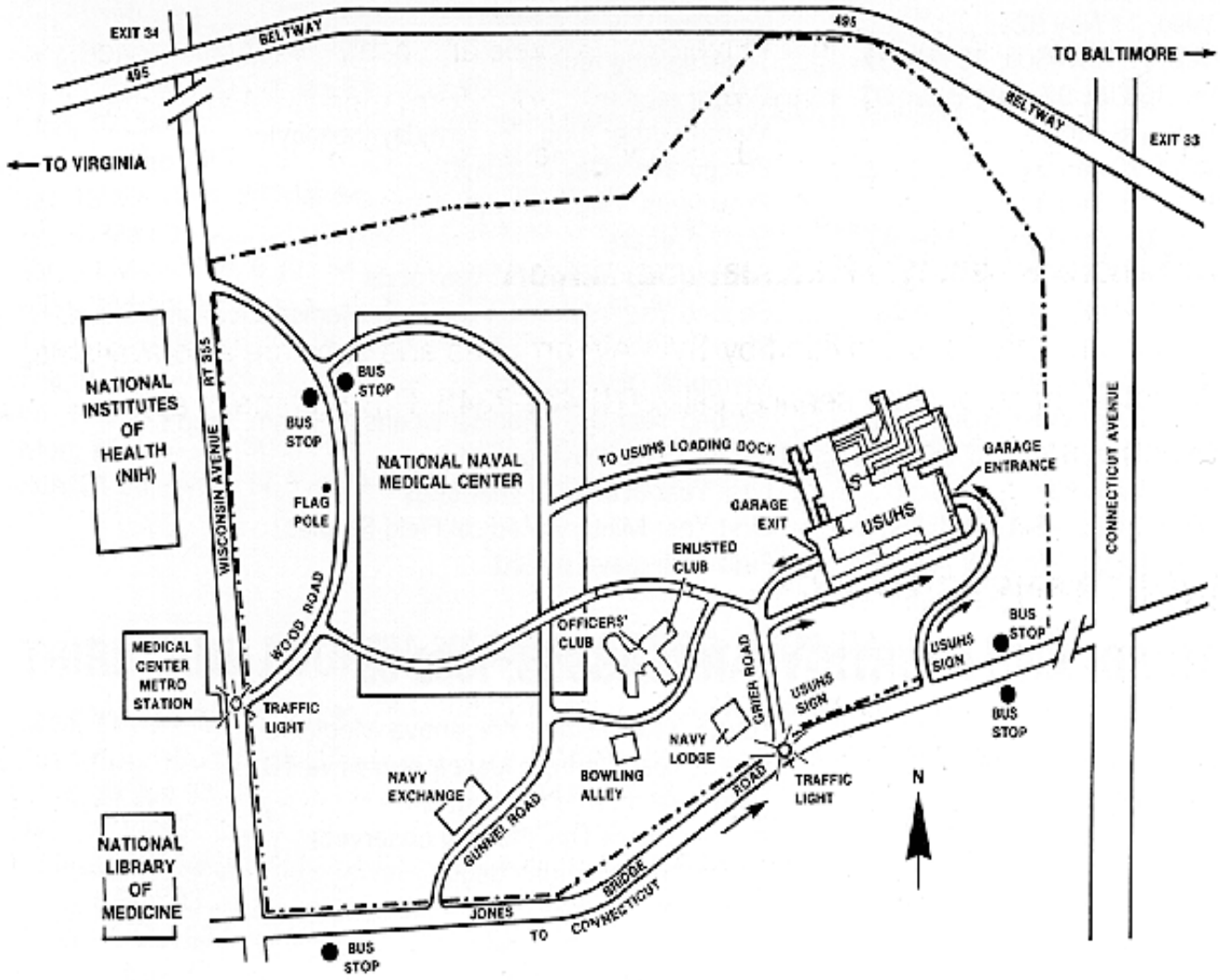
Leave authorizations for all military graduate students should be signed by the Program Director. Final authorization for leave is obtained through training detachments for USA. USN personnel and USAF personnel may apply directly through the Military Personnel Support Detachment at USU.

Uniform Requirements

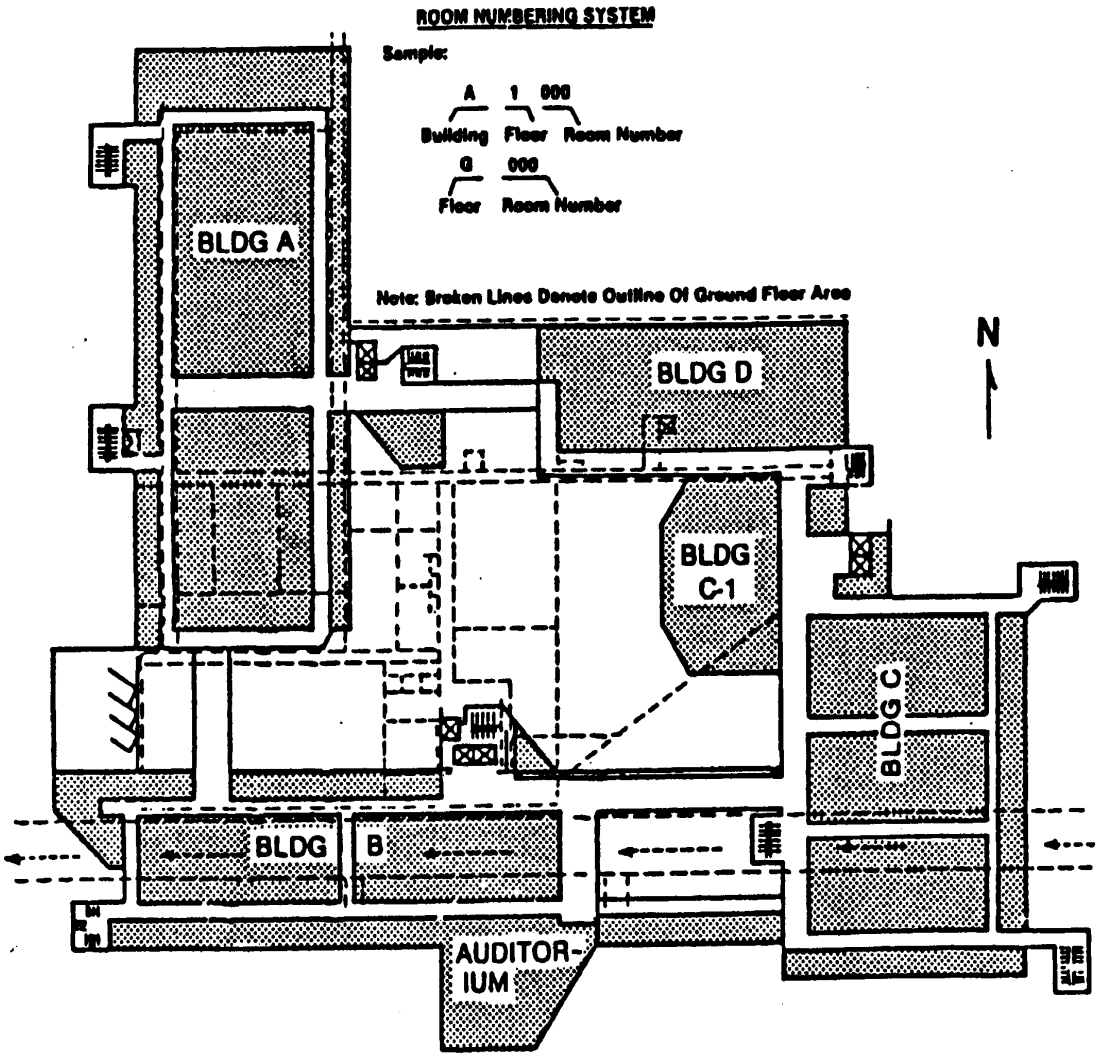
While pursuing graduate studies at USU, all active duty officers are required to wear the appropriate uniform and adhere to dress standards of their Service.

N
0 1/2 1
SCALE IN MILES
270
187
Rockville Pike
Strathmore Ave
Connecticut Ave
193
355
547
Grosvenor Metro
Exit 34
Democracy Blvd
185
495
Exit 36
191
Old Georgetown Rd
Cedar Ln
Medical Center Metro
NNMC
Bradley Blvd
Jones Bridge Rd
NIH
Battery Ln
Wisconsin Ave
190
Exit 39
Huntington Pkwy
East-West Hwy
River Rd
Wilson Ln
410
Arlington Rd
Bethesda Metro
MD
Bradley Ln
188
614
Western Ave
Goldsboro Rd
Chevy Chase Circle
Massachusetts Ave
Friendship Heights Metro
DC
396
Westmoreland Circle

LOCATION OF THE UNIFORMED SERVICES UNIVERSITY ON THE BASE OF THE NATIONAL NAVAL MEDICAL CENTER



USU Campus Buildings



Uniformed Services University of the Heath Sciences
Department of Preventive Medicine & Biometrics

PRACTICUM & INDEPENDENT PROJECT HANDBOOK

Revised July 2003

About this Handbook...

This handbook is a primer on the Master of Public Health (MPH) practicum and independent project (PIP) to meet the informational needs of students and faculty. It is also a useful reference for off-site preceptors and program support staff. This guide is structured around frequently asked questions and provides complete program information on both the independent project and the practicum requirements for the MPH degree in the Department of Preventive Medicine and Biometrics (PMB) at the Uniformed Services University of the Health Sciences (USUHS), Bethesda, Maryland. This information will enable faculty advisors to guide students through the process of developing and successfully completing a high quality, professionally relevant independent project and a value-added, competency-building practicum experience. If there are any areas that require clarification, please contact the Director of Graduate Research and Practicum Programs (referred to hereafter as PIP Program Director), Dr. Tomoko (Tonie) Hooper, at 301-295-1975 or e-mail thooper@usuhs.mil.

TABLE OF CONTENTS

	Page
What are the Practicum and Independent Project requirements for the MPH degree?	1
… a definition of the "PIP" requirements	
How do the MPH practicum and independent project requirements relate to each other?	3
… separate and distinct but can be integrated	
What would be considered an appropriate MPH independent project?	5
... a description of project requirements and examples	
How and when do I get started on my independent project?	8
... the process and timeline	
What institutional assurances and/or approvals do I need for student research projects?	11
… guidelines for human participants research, etc.	
How do I receive academic credit for extra work on my MPH project?	12
What are the final products of the independent project?	
... the oral presentation and written report	14

Page

What constitutes an appropriate MPH practicum experience, and why is it important? 19
... the essential components

How do I select an appropriate practicum site and preceptor? 21
… the process and information sources

What is the process involved in completing the MPH practicum requirement? 25
… fact finding to course credit

How does the MPH practicum differ from the second-year residency rotations? 26
… scope and purpose

What are the reporting requirements for the MPH practicum? 27
… documentation

Under what circumstances is a waiver granted for the practicum? 28
... the rare exception to the rule

What is the sequence for completion of the MPH practicum and project deliverables? 29
... a checklist

Appendices

Appendix A: Independent Project Forms and Documents
Appendix B: Practicum Forms and Documents
Appendix C: USUHS Office of Research (REA) Forms
Appendix D: Authorship Guidelines and Manuscript Clearance Form

What are the Practicum and Independent Project requirements for the Master of Public Health degree?

The Council on Education in Public Health (CEPH), one of the national organizations that accredits our Graduate Programs, states the following: "The 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."

CEPH also requires that students seeking the MPH degree complete a "culminating experience." This culminating experience may take a number of forms, for example, a comprehensive examination or a master's thesis. At USUHS, students are required to conceive, develop, and, in most cases, carry out an independent project that demonstrates their ability to synthesize, integrate, and apply the knowledge and skills acquired through coursework in the core public health disciplines, *i.e.*, biostatistics, environmental health, epidemiology, health services administration, and social and behavioral sciences. Most students will draw on their previous professional training and interests to identify a project with public health relevance that is aligned with their personal and professional goals.

Thus, the successful completion of both the practicum and independent project is a graduation requirement for all students in the MPH program. The purpose of the practicum is to enhance the didactic portion of the MPH program by providing students with opportunities to develop practical skills and competencies in various public health practice settings. The independent project, on the other hand, constitutes a capstone experience for the MPH year and demonstrates the student's ability to synthesize and integrate the new knowledge gained throughout the program of study. In many cases, this effort results in a scientific manuscript for publication or other substantial product. Students should anticipate completing the planning phase during the Fall Quarter, including a preliminary literature search and formulation of a research question. A project pre-proposal followed by the full proposal and submission of proper forms to the USUHS Office of Research (REA) should be completed during the Winter Quarter. The project is generally executed during the later half of the Winter Quarter and/or the Spring Quarter and wrapped up during the first two weeks of the Summer Session.

The MPH student body at USUHS is comprised of individuals with a substantial amount of previous military and civilian health-related experiences. Most have a professional degree and come to this program with proven ability to succeed as adult learners. We expect that students will learn a great deal from interactions with each other, as well as with the faculty. Because the MPH program at USUHS is compressed into a twelve-month period for the majority of our students, our goal is to make the process of meeting both the MPH practicum and independent project requirements time-efficient, productive, professionally relevant, and personally rewarding, with uniformly good results!

Therefore, topics related to the MPH practicum and independent project (PIP for short) are incorporated into a weekly seminar series during the Fall, Winter, and Spring Quarters to provide overall guidance to students—a roadmap for success, throughout your program of study.
The course descriptions for the PIP seminar series are provided below.

FALL

PMO671 **Introduction to the MPH Project and Practicum**

This seminar course (first in a series of three) is designed to introduce students to the requirements and to begin the process of designing, developing, executing, and reporting the results of their independent projects and practicum activities. Representatives of various military and civilian organizations offer a variety of potential project and practicum opportunities either as in-class guest speakers and/or at one or more "PIP fairs." Basic research methods will be an ongoing theme, introduced as short topics, along with Institutional Review Board issues. Students will work in small groups to formulate research questions and to discuss appropriate study designs. Goal setting, timelines, 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 activity and will submit a short list of possible projects or practicum activities aligned with their personal and professional goals that will result in building public health competencies.

WINTER

PMO672 **MPH Project/Practicum Design and Development**

As a follow-on to the introductory course in this series, students will receive guidance on developing and completing a pre-proposal and final proposal for their independent projects. Workshops and small group exercises will afford students the opportunity for peer review and instructor feedback. Discussions will include the criteria and format for different types of projects (i.e., grant proposal, policy paper, public health problem solving, etc.), the process for institutional assurances and approvals (human participants research, animal care and use issues, etc.), and the application of core public health knowledge and skills. Students are encouraged to combine the project and practicum whenever possible. By the end of the course, students will be able to develop and critique study proposals, as well as to describe the process of institutional assurances and approvals for research studies and investigator responsibilities for the ethical conduct of research.

SPRING

PMO673 **MPH Project/Practicum Implementation and Evaluation**

In the third and last in this seminar series, students are guided through the process of implementing their MPH protocols after obtaining appropriate institutional approvals. Students are expected to progress through various stages of project implementation, including primary data collection or secondary data analyses and/or preparation of early draft reports for peer-review and feedback from PMB faculty. This course will be a forum for discussing and finding solutions to issues or problems related to study execution, funding, authorship, etc. Instructors/guest speakers will reinforce effective oral and written communication skills, which are considered to be essential competencies for public health practice. Students will learn how to present data appropriately and receive guidance on preparing scientific abstracts and posters. By the end of the course, students will be able to prepare proposals, briefings, reports, policy papers, abstracts, posters, and oral presentation slides related to research or other aspects of the practice of public health. They will be able to participate productively in the iterative process of manuscript development and demonstrate effective oral and written communication skills when reporting research findings to various audiences.

How do the MPH practicum and independent project requirements relate to each other?

The distinction between the MPH practicum and independent project requirements has sometimes been a point of confusion. They are two **separate** requirements for the MPH degree, even though they are often combined or integrated operationally. The MPH project demonstrates a student's ability to synthesize and integrate the fundamental concepts and principles of the core public health disciplines in order to assess a public health problem, support decision-making, or to answer a research question. The project requires substantial effort with the end products being an oral presentation and a written report. The oral presentation consists of a formal, 15-minute podium presentation followed by a 5-minute question and answer period. The final written report is a minimum of 15 pages in length and includes an executive summary or abstract, background and significance, methods, results, discussion, conclusions, and references. A copy of the official notification of project approval from the USUHS Office of Research should be submitted with the written report.

The MPH practicum, on the other hand, is a separate requirement that involves field opportunities to apply newly acquired classroom knowledge and skills at a federal, state, or local agency, or in a community-based practice setting. It is a well-defined, directly supervised, practical experience at an off-site location, pre-arranged according to explicit learning objectives. This learning experience exposes students to various aspects of the day-to-day practice of public health while allowing them to build competencies. A three- to five-page report, activity log, and two evaluation forms are due at the end of the practicum experience. The table below summarizes the difference between the two requirements.

Distinction between the MPH Practicum and Independent Project

Practicum	**Project**
Apply knowledge or skill acquired in classroom in an operational environment	Synthesize/integrate concepts and principles from core public health disciplines to answer a research question
Required course: PMO670 3 credits, pass/fail	Required course: PMO674 3 credits, graded
Deliverables: 3-5 page report, activity log, 2 completed evaluation forms	Deliverables: project proposal, 15+ page written report, oral presentation

Due to the heavy academic load in the 12-month program at USUHS, students are strongly encouraged, but not required, to combine the practicum and project whenever possible. Some examples of well-integrated project and practicum activities are described on the following page.

PREVIOUS EXAMPLES OF PRACTICUM AND PROJECT COMBINATIONS

Project entitled "Hazard Analysis and Critical Control Points System Training Needs Assessment of Hospital Food Service Workers" combined with practicum experience at the Walter Reed Army Medical Center, Nutrition Care Directorate, to gain familiarity with public health issues related to day-to-day operations to meet the nutritional needs of a vulnerable hospital population.

Collaboration with the Bureau of Medicine and Surgery (BUMED), Occupational Medicine, and other agencies, including Naval Surface Warfare Center, Dahlgren, on the development of the MPH project, "An Evaluation of Cancer Mortality in Workers at Two U.S. Navy Research & Development Facilities," and a practicum experience at BUMED on the nature of current Occupational and Preventive Medicine issues of concern to the Navy (including special investigations) and the process of identifying, prioritizing, and evaluating health and policy issues.

Project on "Testing the Readability of Infant and Child Car Seat Installation Instructions" in conjunction with practicum experience at the School of Hygiene and Public Health, The Johns Hopkins University, to explore the current newborn discharge policies at area hospitals, gain experience with developing and field testing a survey instrument, and interact with representatives of a local Division of Consumer Affairs.

Practicum activity at Tricare Management Activity, Health Program Analysis and Evaluation, which involved an in-depth literature review of the current state of dental survey methods, and an MPH independent project focused on "CONUS versus OCONUS Measured Levels of Air Force Dental Care Satisfaction: Is There a Difference?"

Project on "Health Related Behaviors in Young Military Alcohol Drinkers: A Secondary Analysis of the 1998 Department of Defense Worldwide Survey" combined with a practicum at the Pacific Institute, a national, not-for-profit organization that studies causes of risky and antisocial behaviors and their consequences and prepares scientific reviews, policy papers, and methodological analyses.

Collaborative effort established among Head Quarters, U.S. Marine Corps (Health Services), Naval Environmental Health Center, and Centers for Disease Control and Prevention (National Center for Injury Prevention and Control) to analyze disability data from the Naval Council of Personnel Boards and resulting in a project on "The Distribution of Disabilities in the United States Marine Corps: A Descriptive Study" and presentations before the DoD Injury and Occupational Illness Prevention Committee and the Executive Safety Board of the Marine Corps as part of a practicum experience.

Practicum at the Office of the Assistant Secretary for Planning and Evaluation, Office of Policy, Department of Health and Human Services, to gain an understanding of health policy development at the federal level and to apply epidemiologic and biostatistical principles to analyze administrative data sets combined with a project entitled "Predicting Post-Acute Care Use Based on Characteristics of the Patient's Acute-Care Episode."

Practicum at the Air Force Safety Center, Kirtland Air Force Base, to observe day-to-day operations and to gain proficiency in using the ORACLE relational database for Air Force reportable injuries combined with an independent project on "Current Trends and Risk Factors in the Incidence of G-Induced Loss of Consciousness within the U.S. Air Force: An Operational View."

Practicum at the Naval Air Station, Lemoore, California, to understand the role of the Aeromedical Safety Officer within the squadron and air wing and to become familiar with the training curriculum and operations protocol of Centrifuge-Based Flight Environment Training integrated with a project entitled "Has Centrifuge-Based Environment Training Reduced the Occurrence of Gravity-Induced Loss of Consciousness in Naval Aviators?"

What would be considered an appropriate MPH independent project?

In previous years, student projects have covered a wide range of topics. Overall, they have been of impressive quality, with the *stand-outs* clearly demonstrating innovation, strong and persistent individual initiative, integration across most, if not all, the core disciplines of public health, and significant potential impact on public health. Your choice of an independent project should be based on a number of factors, including the opportunity to expand upon or reinforce specific competencies in your specialty area. The topic should be of personal interest to you and relevant to your overall professional goals. In general, students select independent projects in their area of concentration.

Independent projects are not limited to *research* in general, or to data collection and analysis in particular. Your project may involve policy formulation, survey instrument development, program evaluation, community needs assessment, or development of a grant proposal, among others. The end product of this requirement should reflect the investment of considerable time and effort. For example, if the MPH project is the development of a research proposal, considerable progress must have been made towards the eventual implementation of the study protocol, with the goal of collecting and analyzing data and producing a manuscript for publication in a peer-reviewed, scientific journal.

The overall objective of the MPH project requirement is to build public health competencies as demonstrated by a substantial product of independent study that reflects the following:

- In-depth knowledge of a problem or issue from a public health perspective
- Analysis and/or interpretation of data in support of a public health-related decision or policy
- Independent effort under supervision/mentoring by faculty
- Well-defined, focused activity completed according to a timeline
- Effective oral and written communication skills
- Appropriate responses to questions or critique by peer-reviewers

On the next page, you will find some examples of previous independent project titles. This will give you an idea of the variety of possible topics and should not be interpreted as being all-inclusive or an indication of the relative quality of these particular projects. Some generic examples of the types of activities representing appropriate MPH independent project are:

- Analysis of a data set from an ongoing research project or an existing database
- Collection and analysis of original data as part of an ongoing project
- Development and/or evaluation of a public health program, activity, or policy

Additionally, the PIP Program Director maintains an historical file of project and practicum proposals, as well as copies of project final reports, for your review. Bound copies may not be removed without permission from the immediate area outside A1040G.

SOME EXAMPLES OF PREVIOUS INDEPENDENT PROJECTS

- "Alcohol Consumption and Sexual Risk Behaviors in Active Duty Military Personnel"
- "Back and Upper Extremity Disorders in Enlisted U.S. Marine Corps Personnel: Burden and Risk Factors"
- "Combat Training Exercise Injuries among Air Force Personnel (1988-1999)"
- "Comparative Presence of *Borrelia burgdorferi* in Ticks Collected at Four Sites in Maryland and Virginia"
- "Corneal Injury Threshold and Public Health Implications of the 1540 nm Laser"
- "Credentialing Variation and Physician Accountability in the Federal Workforce: A Call for Federal Credentialing Standards"
- "The Dental Caries Experience and Restorative Treatment Needs of U.S. Navy Recruits"
- "The Department of Defense Anthrax Vaccination Education Program: Developing an Effective Evaluation Instrument"
- "Deployment Telemedicine: The Walter Reed Army Medical Center Experience"
- "Distribution of Leptospirosis Serovars in Azorean Cattle and Evaluation of a Dot-ELISA Test for Leptospira Antibodies"
- "Evaluation of the United States Marine Corps Semper Fit HIV and STD Prevention Training"
- "Descriptive Epidemiology of Dengue Fever in Iquitos, Peru"
- "Health-Related Behaviors in Young Military Smokers: Evidence from the 1998 DoD Survey of Health-Related Behaviors among Military Personnel"
- "Latex Sensitivity Among Employees of a Major U.S. Military Medical Center"
- "Malaria in Central America"
- "Mission Readiness and Alcohol Consumption Among USN Shipboard Sailors: An Ecologic Serial Survey"
- "Mortality Trends in the U.S. Air Force, 1990-1998"
- "Nutrition Services Workforce Study"
- "Periodontal Disease as a Risk Factor for Heart Attacks"
- "The Distribution of Pre-cancerous Cervical Disease Among Military Health System Beneficiaries"
- "Re-emergent Highland Malaria in Western Kenya: Clinical Spectrum in Hospitalized Adults and Children"
- "Review of Hospitalized Exertional Heat Illness, Beaufort Naval Hospital, 1979-1993"
- "Disease and Non-Battle Injury Mortality Patterns in U.S. Military Personnel"
- "Tuberculosis and U.S. Army Active Duty Personnel: A Descriptive Study of Cases, 1980-1996"
- "Treatment of Chronic Headache with Anti-Depressants: A Meta-Analysis"
- "Variation in Practice Patterns within Staff Sick Call: A Study of Resource Usage"
- "Factors Related to Infant Feeding Choices"
- "Dental Events During Periods of Isolation in the U.S. Submarine Force"
- "Osteoporosis: Risk and Management in a Primary Care Clinic"
- "The Quality of Conventional and Alternative Medicine Randomized Controlled Trials in Headache Treatment"
- "Measurement Properties of a Self-Report Index of Ergonomic Exposures"
- "Attitudes, Perceptions, and Practices in Clinical Trials: A Study of Physician Characteristics"

- "A Study of the Influence of Media on Anthrax Vaccine Adverse Event Reporting System (VAERS) Reporting Rates"
- "A Cost-Effectiveness Analysis of Hepatitis B Immunization Strategies at Recruit Accession into the U.S. Military"
- "Categorizing Constituents of Chaos After City Buildings Fall and Burn: Pareto Analysis of Types of Occupational Injuries and Illnesses Causing Emergency Responders to Seek Acute Care at the WTC, September 14-26, 2001"
- "Factors Predicting Musculoskeletal Disability in Active Duty Marines"
- "Medication Errors Associated with Serious Outcome: Five-Year Study of Post-Marketing Reporting to the Food and Drug Administration"
- "Analysis of Banked Sera for Molecular and Biochemical Changes Associated with Development of Breast Cancer"
- "The Cost-Effectiveness of the Army's Aeromedical Evaluation of Asymptomatic Left Anterior Hemi-Block: Is It a Good Screening Tool for Coronary Heart Disease?"
- "Patient Satisfaction with Integrated Case Management"
- "Correlation between Weather and *Cyclospora* Concentration Isolated from Natural Water in Hanoi's Lakes and Rivers"
- "Intratracheal *Klebsiella pneumoniae* in an Irradiated Mice Model"
- "Prevalence of Malnutrition in Rural Honduran Children"
- "Ethical Review of Biomedical Research in Latin America and the Caribbean: Comparison of PAHO and Member State Ethical Committee Practices and Decisions"
- "Characterizing Cross-Reactivity of Subtype Clade C HIV Type 1 from China with Chinese and Indian Sera Using a Neutralizing Antibody Assay"
- "Strategies to Prepare Veterinary Medicine for Opportunities and Responsibilities in the 21st Century"
- "Exploring System- and Patient-level Predictors of Adherence to Secondary Screening for Colorectal Cancer"
- "Prevalence of Obesity-Related Morbidities in Adolescents in the Military Health System from 1999-2002"
- "Federal versus Private Healthcare Delivery Systems: A Comparative Analysis of Performance Measures for Management of Diabetes"
- "Geographic Information Systems (GIS): An Underutilized Tool in Health Promotion"
- "Varicella Outbreak Investigation in Loudon County, Virginia"
- "Leading Causes of Death among Children of Military Service Members: An Exploratory Study"
- "Exploring Factors Affecting Neonatal Mortality in Nepal"
- "Survival Analysis of Recruits Entering Active Duty with a Waiver for Scoliosis"
- "Quality of Statistics in *Infection & Immunity*: A Systematic Review"
- "Improving Oral Health Surveillance in Canada"
- "Childhood Injuries from Ingestion of Consumer Products Containing N,N-dimethyl-p-toluidine and Nitroethane"
- "*In vivo* Monitoring of Intratracheal Bioluminescent *Klebsiella pneumonia* and Efficacy of Therapeutic Drugs in Gamma-Irradiated Mice"
- "Comparison of Venous Gas Emboli Production during Bipolar and Monopolar FR Ablation and Myomectomy Procedures"
- "Is Self-assessment of General Health Condition Post-Deployment Related to Post-Deployment Hospitalization?"

How and when do I get started on my independent project?

To optimize this experience and to ensure a smooth project/practicum execution phase, you will need to do some preliminary information gathering and curriculum planning as early as the Pre-Fall Session, and certainly, no later than early in the Fall Quarter. Previous students have almost uniformly felt the time crunch at the end. **The key to success is to start early!** Start with your academic advisor; then go to other PMB faculty members to discuss your area of research interest, to seek information on potential project opportunities, and to identify and select an appropriate project mentor with subject matter expertise. The PIP Program Director and the Director of Graduate Programs are additional resources and provide students with overall guidance for successful completion of both the independent project and the practicum requirements. Select a team of key faculty members for advice and consultation on a regular basis. During the Fall, Winter, and Spring Quarters, you will take the required seminar series, PMO671, PMO672, and PMO673, each one-credit, pass/fail, which are designed to *meter in* the action items to help you keep on target. Consider this project to be a tremendous opportunity for personal and professional growth and **aim high!**

Since the independent project is a culminating or capstone experience, it should generally be undertaken after the core MPH courses have been completed. However, it is never too early for preliminary fact-finding. Even though a block of time has been set-aside during the six-week Summer Session just prior to graduation, this is not enough time to complete the project if the planning and development phases are delayed until then. Your final written report will be due several weeks before graduation, and you will be scheduled to present your project findings to an audience of your peers and USUHS faculty about a week later. Anticipate spending approximately 300 hours on your project, including the time spent on the seminar courses in the Fall, Winter, and Spring Quarters.

PMB faculty members at USUHS are actively involved in a variety of formal research activities and may welcome graduate student involvement. These faculty members serve as project mentors. Additionally, in order to meet the needs of a diverse group of students, project mentors are recruited from among researchers and public health practitioners affiliated with other government agencies or civilian institutions in the greater Washington metropolitan area and beyond.

During the process of designing and developing your project, you will interact with at least four individuals:

- Course Directors for the seminar series on the MPH practicum and independent project
- Your academic advisor and your project mentor (may be the same individual)
- The practicum site preceptor, if the project and practicum are integrated, and the site preceptor serves as the primary project advisor. In this case, you must also recruit a billeted USUHS faculty member (may be your academic advisor) to serve as a co-project mentor to ensure that you understand and meet USUHS/PMB program requirements. Both the site preceptor and your USUHS faculty advisor provide feedback on your project proposal, as well as your project final report/manuscript.

TIMELINE

Complete and submit your pre-proposal using the "MPH/MTM&H Independent Project Pre-Proposal Form" (see Appendix A) around the middle of the Winter Quarter. The pre-proposal is a brief, one- to two-page description of your independent project, including its public health significance, a draft research question, and an estimated timeline for project completion. It requires the signature of your academic advisor and your project mentor (unless one and the same). The Fall Quarter seminar course, PMO671, *Introduction to the MPH Project and Practicum*, will include a timeline for intermediate practicum and project deliverables and a series of in-house and outside speakers offering a slate of potential practicum and project opportunities. It will also provide a forum for discussion of options, such as primary data collection versus secondary analysis of an existing data set or the use of a pre-existing validated survey instrument versus the development of a new instrument. By the time you turn in your pre-proposal in PMO672, *MPH Project/Practicum Design and Development*, you will have established an ongoing dialogue with your academic advisor and other USUHS faculty members, completed a preliminary literature search, and considered the feasibility of combining the practicum and project. This is also the time to contact individuals from outside organizations who may be willing to serve as project mentors and/or practicum site preceptors. The completed project pre-proposal form is required to pass PMO672.

Complete and submit your independent project proposal by the end of the Winter Quarter. The project proposal is expected to be four to five pages in length and reflect the additional time spent in preparation for the implementation phase of the project. Pay particular attention to issues such as study design, sampling methods, and sample size calculation; select an analytic approach appropriate to the research question; and anticipate the time required to obtain institutional assurances and approvals prior to conducting the study. Again, the PIP seminar series will provide guidance on proposal development as well as the process of institutional assurances and approvals. In fact, representatives from the Office of Research provide in-class briefings in both PMO671 and PMO672.

The independent project proposal is the foundation for your final report, so expect to invest some time in its preparation. You will benefit from the collective expertise of the PMB faculty by using a team of advisors to strengthen different aspects of your project proposal. Consider the services of the Biostatistical Consulting Center as a resource, and take full advantage of the workshops and other in-class exercises designed to help you make progress towards meeting project deliverables. The completed proposal should be submitted to the PIP Program Director and include the following elements: background/public health significance, research question, objectives/specific aims, methods (including analytic approach, if appropriate), timeline for project milestones (such as obtaining IRB approval), and references. See the *Format and Checklist for Independent Project Proposal* on the following page.

✓	**Elements of the proposal**	**Approximate page length***
	Background/significance: Provide a concise summary of relevant background information. What has other work shown? Why is your particular project important? This should demonstrate your familiarity with the existing scientific body of knowledge with appropriate citations. What is the public health significance of your study?	1-2
	Objectives/specific aims: State your research question. What is the broad goal/objective(s) of your project? List your specific aims to accomplish your goal. You may wish to state your null hypothesis.	½
	Methods: Briefly describe the methods you will use to conduct your project. For example, a description of your study population; study design; methods for obtaining data, defining variables, analyzing data; program development and/or evaluation; etc. This section will vary depending on the type of project and format selected.	1-2
	Timeline: Description of important milestones or interim objectives (2-3) of your project and when you intend to accomplish them. List project deliverables or study end-points and due dates, including literature search, institutional approval process, first draft report, final report, and oral presentation.	½
	References: List of all references cited in your proposal. A minimum of 10-12 references is expected.	1

*Suggested number of pages, not absolute limits

What institutional assurances and/or approvals do I need for student research projects?

All PMB graduate students are required to complete the University of Miami's on-line course, *The CITI Program in the Protection of Human Research Subjects*. A copy of the Completion Certificate should be submitted to the PIP Program Director during the Fall Quarter. The online course may be accessed at the following website:

http://www.miami.edu/CITIREG/

In order to meet the requirements for the MPH degree, all graduate students must complete USUHS Form 3202, *Student and Resident Physician Research Protocols*, and submit to the PIP Program Director for review, processing, and forwarding to REA. A copy of the MPH project protocol must be attached.

Additionally, any graduate student project meeting the definition of "research" and involving human participants must be reviewed by the USUHS Institutional Review Board (IRB) prior to initiation of the study (See REA forms in Appendix C). While many of the projects conducted by MPH students may ultimately be determined to be "exempt" studies, that determination is made by the IRB, not the investigator. Please do not assume that a study which only involves data for secondary analysis does not need IRB approval. In addition to Form 3202 mentioned above, Form 3204, *Research Involving Human Subjects*, must be submitted to REA. The turn around time has been averaging around four to six weeks, and this will need to be taken into account in your planning. You are responsible for submitting the appropriate forms for institutional assurances and approvals, and you should have received an official notice of project approval prior to conducting your study. Electronically modifiable REA forms can be downloaded from the USUHS website:

http://www.usuhs.mil/research/Homepage/index.htm

Guidelines on whether or not a project is likely to be "exempt" or "expedited" are located in Appendix C or may be downloaded from the NIH website below:

http://ohrp.osophs.dhhs.gov/humansubjects/guidance/decisioncharts.htm

These guidelines are for your information only. Again, the determination of *exempt* or *expedited* review status is made by the IRB (Director of Human Research Protections Program) not the investigator. It is important to note that in some instances, more than one institutional assurance/approval for a research study may be necessary and, thus, require additional lead-time to complete the process. Other projects may require institutional review and approval for laboratory animal care and use or the supervised use of biohazards, controlled or dangerous materials, and/or radiation or radioactive materials. Even if a pre-existing approved protocol, with the faculty advisor as the principal investigator, specifically covers the proposed student project, USUHS Form 3202 must still be submitted to the USUHS Office of Research. Documentation of mandatory safety training may also be required.

How do I receive academic credit for extra work on my MPH project?

You may register for one of the courses listed below (tutorial, independent study, or directed reading/research courses) in the Fall, Winter and/or Spring Quarters to receive the appropriate number of supplementary credits (up to three) for MPH project development or execution.

PASS/FAIL CREDIT FOR INTERIM WORK ON THE MPH PROJECT

For extra independent project credits, register for one of these courses:

PM0701	Advance Biometrics Tutorial
PM0760	Tropical Medicine Research Tutorial
PM0811	Independent Study in Epidemiology
PM0830	Independent Study in Social and Behavioral Sciences
PM0911	Research in Epidemiology
PM0926	Health Care Administration Directed Research
PM0940	Environmental/Occupational Health Directed Studies
PM0970	Directed Studies in Preventive Medicine

The project mentor, with the concurrence of the academic advisor, will determine the appropriate number of academic credits for the elective course, depending on the amount of time to be spent on the project during the Winter and Spring Quarters. A general guideline is that an average of three hours a week over a twelve-week period equals one credit hour. This option is meant for students who intend to spend a significant amount of time on project development and/or execution over and above that required to meet the interim deliverables for the Project/Practicum seminar series. The *Independent Study/Directed Research* courses and Project/Practicum courses will run in tandem. The Project/Practicum courses, PMO671, PMO672, and PMO673, will provide instruction on basic research methods, ethical issues, and presentation skills, and include workshops to make available the collective expertise of PMB faculty members to give you a solid foundation for your project, through guided protocol development.

Each of the Project/Practicum courses is one-credit, pass/fail, for a total of three credits. Students may register for a directed research course for up to three additional credits, pass/fail or graded, generally over more than one quarter, for extra hours spent on a specific aspect of the MPH project, for example, survey instrument development, data coding and entry, and/or learning to use specific statistical software packages (e.g., *Stata*®).

During the Summer Session (last six weeks of the academic year) all MPH/MTM&H students are required to enroll in PMO674, *MPH Independent Project*, to receive three credits and an overall grade for the project based on grades for the proposal, the oral presentation, and the final written report. Therefore, students receive six credits for work on the independent project, including the three credits for the PIP seminar series. The Summer Session has been set aside specifically for the completion of the practicum and independent project requirements. However, please be advised that this time interval is inadequate to complete all but the final phases of the project, especially if a full-time practicum activity is to be carried out during the Summer Session. PMO674 will have only one class meeting at the beginning of the quarter to clarify dates for project deliverables and to schedule dates and times for oral presentations. If you have any questions, consult the PIP Program Director.

What are the final products of the independent project?

ORAL PRESENTATION

The results of all your hard work and efforts will be showcased during two or three days of oral presentations in front of an audience of your peers, USUHS faculty, and invited guests near the end of the academic year (about mid-June). Each student will be scheduled to give about a fifteen-minute (maximum) podium presentation of his or her MPH project, followed by five minutes for questions and answers. The presentations will be grouped by category, as much as possible (e.g., all GPM residents). All students are expected to be present on both days (and possibly an additional day, depending on the number of presenters) to support and learn from their classmates. Treat this event as if it were a scientific meeting at which you are presenting your research results. Accordingly, presenters should be in Class A uniforms (or the equivalent) or appropriate civilian attire.

In the past, MPH project presentations have generally been of very high quality and covered a broad range of public health topics. Faculty advisors, project mentors, and practicum site preceptors, as well as other interested faculty members and guests are invited to attend these presentations. Project mentors may be asked to introduce their students (brief, one-minute introductions), depending on time availability. Members of the PMB faculty always look forward to and enjoy this end-of-year event.

The oral presentation is graded by a panel of PMB faculty members (generally five) and constitutes 35% of a student's overall project grade. Questions from the faculty panel or audience may pertain to core MPH concepts as they relate to the student's project. Written comments and constructive criticism from the reviewers will be made available for each presenter upon request. Consult your team of faculty advisors as you plan your presentation. You will need to apply what you learned about effective communication skills and the judicious use of appropriate visual aids to get your major points across to the audience within the allotted time interval. Several practice sessions with faculty and classmates is strongly recommended.

The faculty panel also evaluates and scores the final oral presentations in order to rank order finalists to be considered for the Captain Richard R. Hooper Memorial Award, a Departmental award presented annually to a graduate student for "outstanding research in public health," as well as for showing *exceptional promise in putting prevention into practice*. The CAPT Hooper Award is also presented each year to a graduating medical student for exhibiting "exceptional promise in preventive medicine." The recipient of the CAPT Hooper Award is selected from among the top MPH/MTM&H project presentations by the faculty panel, with input from the Director of Graduate Programs and PIP Program Director, as needed. The general scoring criteria for the oral presentations are listed on the following page, and a copy of the score sheet is included in Appendix A.

SCORING CRITERIA FOR CAPT HOOPER MEMORIAL AWARD

What was the quality of the following elements of the project?

- **Background/Public Health Significance**
- **Research Question/Specific Aims**
- **Methods**
- **Results (or interim findings or other study products)**
- **Conclusions/Recommendations**

How effective was the presentation in terms of the following?

- **Organization**
- **Clarity**
- **Use of A-V Aids**
- **Delivery/Presentation Skills**
- **Response to Questions**
- **Conciseness (staying within time limit)**

Does this independent project have the potential to significantly impact public health? Does it have military relevance? Does it pass the "so what" test?

To what degree was it apparent from the presentation that the student made a significant contribution to the project (including concept/design, conduct, analysis, interpretation)?

Does the project demonstrate synthesis and integration of knowledge across the core disciplines of public health?

While the oral presentation score is the primary means by which the MPH/MTM&H students will be ranked for the CAPT Richard R. Hooper Memorial Award, the following factors may also be considered in the final selection process (not necessarily listed in order of importance):

- Score for final written project report
- Military relevance of independent project
- Academic excellence (cumulative grade point average)
- Demonstration of competency in assessment, assurance, policy formulation, communication, professionalism, research ethics, among others
- Commitment to and potential for contributing significantly to public health/preventive medicine field

The recipient of the CAPT Hooper Award will be selected in time to present the award at the PMB graduation ceremony. The names of previous award winners are displayed on the perpetual plaque located outside the Division of Epidemiology and Biostatistics, A1039.

Students will independently produce a paper/manuscript to present the results of their work. Peer input and critical review are encouraged during all phases of the project, but preparation of the final report should be largely the result of independent effort. This does not mean that students should not consult their project mentors or other advisors during the iterative process of preparing the final report. If there are shared topics among students, each independent project should reflect a unique focus. The paper/manuscript must have been prepared since matriculating at USUHS as a graduate student, although it may represent an adaptation or distinct aspect of work previously submitted for course credit at USUHS.

The final written report should conform to scientific standards for the type of project or approach selected (e.g., a scientific proposal, an epidemiologic study using an existing data set, a policy paper). Guidelines for the project report format and headings are provided in Appendix A. The final report should include the following sections:

- *Cover Page* (standard template)
- *Executive Summary* or *Abstract*
- *Table of Contents*
- *Introduction/ Background* (including statement of your research question and its public health significance)
- *Methods*
- *Results*
- *Discussion* (including study strengths and limitations)
- *Conclusions* (including recommendations for future studies, as appropriate)
- *Contributors*
- *Acknowledgments*
- *References*
- *Appendices* (copy of official notice of project approval from REA must be included)

The *Introduction/Background* and *Methods* sections of your project proposal should be a good starting point for your final report. If you have created an *EndNote*® bibliographic database, this will facilitate referencing your paper. Plan on submitting a draft report to your project mentor (and/or site preceptor, if practicum and project are combined) several weeks before your paper is due for grading. This will allow adequate time for the iterative process of review and revision and ultimately result in a better product. Schedule regular meetings with your project mentor and consult other faculty members as the need arises. Finally, anticipate the fact that there will be less time available (both your time and that of faculty members) for in-depth review of draft reports as deadlines get closer.

A copy of your official notice of project approval from REA must be included in as part of your final report. If your independent project was considered to be "human participants research," you must also include a copy of the official notice from the USUHS IRB, even if your study was ultimately determined to be an "exempt" protocol. These documents should be appended to your report.

Plan on completing your final draft two to three weeks prior to the PMB graduation date. This will allow you to focus on preparing your oral presentation, which is generally scheduled a week following submission of papers for grading. Two copies of your written report should be

submitted, one to your project mentor and one to the PIP Program Director for distribution to a secondary reviewer. The secondary reviewer will be recruited from among the PMB faculty, with consideration given to selecting individual reviewers from the appropriate Division within the PMB Department. USUHS PMB adjunct faculty members may also serve as secondary reviewers. Once your paper has been approved and graded by your project mentor and secondary reviewer, make any necessary revisions and submit one clean, unbound (no staples, clips, etc.) copy to the PIP Program Director. The final paper must be submitted and graded in order for this requirement to be met.

While it is not required, all graduate students should consider ultimately preparing a manuscript to submit to a peer-reviewed journal for publication. Look for opportunities to collaborate with experienced faculty members and/or other public health professionals on a manuscript (See Appendix D for authorship guidelines). Some students from previous years have taken this step soon after graduating from the MPH program. In other cases, publication takes place a number of years post-graduation. Remember that the final step in the process of doing public health research is to disseminate the results of your study, and this is an excellent opportunity to become familiar with the publication process, including professional peer review. In addition, explore the possibility of submitting an abstract for a podium or poster presentation at a professional meeting or conference, including USUHS Research Day (usually in April). Effective oral, as well as written, communication is an essential competency for a public health practitioner, and this is another great opportunity to enhance your skills as a communicator.

Appendix A contains the format and evaluation criteria for selected types of independent projects. These examples are not all-inclusive, and the suggested weighting scheme/evaluation score sheets are provided for use by students and faculty as deemed appropriate. Additionally, the PMB Department's guidelines for authorship, as well as the Departmental manuscript clearance form are included in Appendix D. All manuscripts, including abstracts for presentation/posters at professional meetings, need to be submitted to the PMB Department Chair for clearance/approval. In some cases, University level or higher clearance(s) may be required.

GRADING

The overall grade for your independent project will be comprised of the following: proposal score, oral presentation score, and final written report score (see table below). All students must register for PMO674, *MPH Independent Project*, in the Summer Session to receive 3 graded credits for their project.

Project Deliverables	**Total Possible Points**
Proposal	15
Oral Presentation	35
Final Report*	50

*Weighted average of grades submitted by the project mentor and the secondary reviewer

The proposal grade (numeric score out of a possible 15 points) is carried forward from the Winter Quarter course, PMO672. The grade for the final written report (numeric score out of a possible 50 points) is determined by calculating a weighted average of the score submitted by the primary project mentor (weighted double) and the secondary reviewer. Graders will be provided with evaluation criteria for each of the project deliverables. These evaluation criteria are also available to students in this Handbook at Appendix A. The criteria for grading project deliverables may be subject to change, but students will be notified of any changes well in advance of due dates, along with the faculty. The panel of PMB faculty asked to rate the oral presentations will use the *Scoring Criteria for MPH Independent Project Oral Presentations* form (see Appendix A) as a basis for assigning scores to individual students. Scores are calculated out of a total possible 35 points (37 points are theoretically possible if a student's presentation is considered to be perfect and worthy of 2 bonus points for integration of knowledge across <u>all</u> <u>five</u> core public health disciplines) and averaged over the five faculty panelists.

In previous years, the PMB Department has sponsored a <u>Public</u> <u>Health</u> <u>Colloquium</u> at which outstanding graduate student projects are showcased in front of a wider audience of University officials, faculty from other USUHS Departments, and outside guests, including senior DoD officials and representatives from other federal agencies. Students selected to participate in the Colloquium will need to submit an electronic copy of their project abstract or executive summary for publication in the program. This event may be included as an end-of-year event depending on scheduling issues.

What constitutes an appropriate MPH practicum experience, and why is it important?

The objective of this requirement is to provide an opportunity for students to directly apply knowledge and skills they acquire in the classroom. The key word is opportunity. The practicum is a chance to stretch your capabilities, to see things from a different perspective (think *outside the box*), to add to your public health practitioner *little black bag* in your area of expertise, and/or to widen your professional network. In the process, students learn first-hand about the organizational framework, day-to-day operations, and special activities of selected agencies, institutions, and industries concerned with public health. You may gain insight into program and personnel management, resource allocation, regulatory compliance, public relations, legislative agendas, and/or special investigations. Participation in public health-related activities in an operational environment adds a critical dimension to the curriculum that enriches student learning. In some cases, this experience may lead to improved prospects for job placement or a *plum* assignment following completion of the program.

It is well established that a graduate level instructional program is enhanced by the addition of interactive, participatory, or experiential learning activities to the more traditional, didactic lecture format in the classroom. The MPH practicum experience serves that purpose by providing experiential learning activities. The practicum is more than shadowing practitioners as they go about their daily activities and, in fact, may encompass a broader range of experiences than those traditionally associated with clinical training programs. Functioning at the population level, a graduate student may have the opportunity to participate in multi-disciplinary, interagency collaborations for research or policy purposes; briefings to military commanders or their civilian counterparts on the findings of special investigations; Presidential Commissions or Congressional hearings on issues related to public health; evidence-based practice guideline development; planning for medical support of operational missions; or disaster preparedness and response planning or drills, among others.

MINIMUM REQUIREMENTS

- All MPH students must complete a practicum or field experience, defined as a planned, supervised, and evaluated activity at an organization, outside USUHS, with a public health or preventive medicine-related mission.
- Students are required to spend a minimum of 108 hours on the MPH practicum or field experience, either on a full-time or part-time basis. This includes time spent on planning, execution, and reporting phases.
- Students enroll in PMO670, *Public Health Practicum*, to receive three credit hours for the satisfactory completion of the practicum requirement, with the deliverables consisting of a written report, activity log, and two evaluation forms. Grading is on a pass/fail basis.
- No waivers will be granted solely on the basis of prior professional experience.

Our goal is to have a modest amount of dollars available for the purpose of funding expenses related to graduate student research or practicum activities, but this may not materialize.

Alternate sources of funding may become available, and students are encouraged to identify and

obtain funding on their own initiative, particularly for travel to sites outside the local area. In some cases, funding may be available through the sponsoring Uniformed Service. On the other hand, the use of local area practicum sites has some distinct advantages: one is the relative ease of integrating the practicum requirement into an already demanding academic schedule, especially when extended over more than one quarter; the other is the wealth of local, regional, and national organizations, military and civilian, in the National Capitol region.

Some practicum activities are easily combined with independent projects. These activities usually involve working with public health professionals at outside organizations and may involve substantial projects. Some examples are developing and pilot testing a survey instrument to collect data for an identified need, exploring the feasibility of using an existing database for surveillance purposes, or participating in a working group to develop and/or implement a practice guideline. Also see previous examples of MPH practicum and project combinations on page 4.

The advantages of combining the two requirements include both time efficiency and the higher likelihood of success in arranging a practicum when a student commits to a substantial project of importance to the organization. The site preceptor may then serve as the student's primary project mentor and be responsible for reviewing and grading the project proposal and final report/manuscript. In these cases, it is highly recommend that the student identify a practicum site preceptor with an MPH degree or equivalent public health experience. When the practicum site preceptor also serves as the primary project mentor, the student must recruit a co-project mentor from among billeted USUHS faculty (may be the student's academic advisor or another faculty member with perhaps more appropriate subject matter expertise). When the practicum and project are combined, it is important to develop a well-defined scope of work for the practicum, approved by both the practicum site preceptor and USUHS co-project mentor. The student may agree to produce additional material(s) related to the project for the sponsoring organization (for example, briefing slides) as time permits.

Students may elect to keep the practicum and project completely separate. This may be a reasonable alternative to consider, particularly for two-year students. Opportunities are limited only by the degree of individual initiative, imagination, creativity, and perseverance. Remember that this is an educational activity, and as such, the practicum experience must be designed to meet explicit learning objectives.

THE ESSENTIAL ELEMENTS OF AN MPH PRACTICUM

- ✔ **Planned, supervised, and evaluated activity**
- ✔ **Off-site public health practice setting**
- ✔ **Minimum of 108 hours**

How do I select an appropriate practicum site and preceptor?

The MPH practicum is not a *canned* activity or pre-set rotation like a clinical residency rotation. Student background and interests vary widely within the MPH class, and the time slots available for the practicum depend on individual course schedules. Therefore, each student must develop and arrange a practicum activity that will meet his or her individual needs and interests. **It is the student's responsibility to identify and select a practicum activity and a site preceptor** in consultation with his/her academic advisor and/or the PIP Program Director. To facilitate this process, various speakers will be invited to the PIP seminars during the Fall Quarter to brief students on currently available project and/or practicum opportunities at their organizations. These individuals come to USUHS because they are interested in working with USUHS graduate students, but it is up to you and the potential preceptor to decide whether a good match exists in terms of schedules, types of project or practicum activities, mutually agreed-upon time commitments, and expectations for respective roles and responsibilities. Keep in mind that the practicum may be a stand-alone activity, unrelated to the independent project, and outside the student's area of concentration. There may be opportunities not to be missed!

After you and your site preceptor decide to proceed with planning a practicum experience, discuss the preliminary arrangements with the PIP Program Director and provide contact information for the preceptor (e-mail, phone number, and mailing address). General program information and a practicum agreement form will be sent to the preceptor, along with a request for a current *curriculum vita* for our files. The informational package also includes both the practicum proposal and the student performance evaluation forms. Practicum site preceptors, representing various military and civilian organizations, must agree to directly supervise students' activities and evaluate their performance. Students and their site preceptors jointly develop learning objectives for the practicum experience. Some examples of previous practicum sites and the corresponding learning objectives for the defined activities at these sites are listed on the following two pages.

Any PMB faculty member is a potential source of information for a practicum site. They may be able to provide ideas and/or a point of contact for a practicum experience related to their area of research. The PIP Program Director approves newly identified practicum sites and preceptors to ensure that program criteria are met. The need for establishing a formal inter-institutional relationship through a memorandum of understanding (MOU) between USUHS and a practicum site will be assessed for all practicum proposals. In some instances, an MOU may already be in place. Finally, information on current practicum opportunities, as well as previous practicum reports, are available in the office of the PIP Program Director, A1040G.

SOME EXAMPLES OF PREVIOUS PRACTICUM ACTIVITIES

Practicum Site	Learning Objectives
Headquarters, U.S. Air Force Safety Center	1. Become familiar with Air Force Safety Center databases 2. Design a hypothetical study of Public health or Air Force interest 3. Perform the necessary analysis for the hypothetical study using SPSS®
National Security Administration (NSA)	1. Understand the corporate structure and major resources employed by the Occupational Health, Environmental and Safety Services (OHESS) section of the NSA 2. Describe how the Program Planning and Development section uses data and trend analysis to identify and address corporate health-related issues 3. Describe the medical surveillance process, and articulate how it has led to the development of specific hazard abatement strategies
Pentagon Defense Medical Oversight Committee (DMOC)	1. Describe the hierarchical structure of the Defense Health Program (DHP) 2. Articulate the interaction of various defense agencies that drives the policies of the DHP 3. Attend a congressional hearing on the DHP and a DMOC meeting 4. Describe the current issues and proposed legislation affecting the DHP
Food and Drug Administration (FDA) Center for Veterinary Medicine CVM)	1. Describe the basic organizational structure and function of the FDA/CVM 2. Describe the CVM mission, its National Antimicrobial Monitoring System, and day-to-day operations 3. Gain experience in analysis/interpretation of scientific/epidemiologic data or policy development
State of Maryland Department of Health & Mental Hygiene	1. Articulate the public health mission, mission, population served, funding resources, and line of authority for the Rabies and Vector-borne Diseases Branch of the Maryland DHMH 2. Describe the role of a public health practitioner within the Rabies and Vector-borne Disease Branch 3. Perform analyses of data for inclusion in the 2000 Rabies Summary for the Maryland DHMH
U.S. Consumer Product Safety Commission	1. Become familiar with the function and scope of the U.S. Consumer Product Safety Commission 2. Contribute epidemiologic analysis to ongoing injury coding project 3. Become familiar with scope of data included in the National Electronic Injury Surveillance System

Office of the Assistant Secretary of Defense (Health Affairs), Clinical and Program Policy	1. Understand how and why health policy is made at the DoD level, especially as it pertains to women's health issues 2. Learn how health policy issues are coordinated at the DoD level 3. Learn how to do a systematic evaluation of a health policy issue
White House Commission on Complementary and Alternative Medicine Policy (WHCCAMP)	1. Understand the process by which the WHCCAMP carries out the President's Executive Order 2. Understand the evolution of the WHCCAMP recommendation and the process by which expert and public testimonies are included in this recommendation 3. Attend meetings of the WHCCAMP 4. Describe the current international issues relating to Complementary and Alternative Medicine Policy
Armed Forces Pest Management Board (AFPMB) Walter Reed Army Medical Center	1. Become familiar with the AFPMB including hierarchical structure, mission, funding, and resources with emphasis on snake envenomations 2. Contribute to development of an epidemiologic hazardous snake database with regard to species, behavior, identification, habitat, country location, and venom 3. Develop manuscript of hazardous land animal envenomations applying knowledge from practicum experience as well as extensive literature review
American Association of Retired Persons (AARP) Public Policy Institute, Independent Living/Long-Term Care	1. Become familiar with function and scope of AARP 2. Describe how AARP uses data and trend analysis to identify and address public policy issues regarding people over age 50 3. Perform data analysis to contribute to AARP
National Center for Health Statistics Centers for Disease Control and Prevention	1. Learn the steps in developing a proposal for Public Health Policy 2. Understand the relationship between the different data systems within NCHS for comparison with data systems within Statistics Canada 3. Become familiar with the function and scope of the NHANES survey to be able to compare it with the Canadian Community Health Survey 4. Perform analysis of NHANES data and incorporate findings into study proposal to demonstrate instrument usefulness
Pan American Health Organization (PAHO)	1. Understand PAHO's mission, organizational structure, divisions, activities 2. Identify and understand PAHO functions relevant to the health in Latin America and the Caribbean 3. Develop high sense of awareness and understanding of research ethics in Latin America and the Caribbean 4. Gain experience in collaborative work with the arm of the World Health Organization to facilitate future PAHO-USAF interactions to achieve mutually beneficial exchanges

The CEPH requirement for a practicum experience applies only to MPH students. Other Masters degree programs (MTM&H, MSPH) have their own policies regarding a practicum requirement but may choose to participate in the MPH practicum program. MTM&H students participate in an overseas field experience at an affiliated laboratory to gain experience in the diagnosis and clinical management of diseases endemic to tropical regions. The MSPH program is completed over two years and includes opportunities for field training available at various DoD and other federal facilities through enrolling in PMO942, *Environmental/Occupational Health Directed Rotations*. Students in Masters' programs other than the MPH may still have access to established or potential MPH practicum sites or identify additional sites on their own.

What is the process involved in completing the MPH practicum requirement?

The fact-finding and selection process for the practicum experience should generally be done in tandem with planning the independent project. As with the MPH project, exploratory information gathering should be coordinated with your academic advisor. One option to consider is for students to share a practicum experience. For example, it may be feasible for more than one student to conduct focus groups and/or cognitive interviews or participate in a policy forum. For the 12-month MPH program, the practicum proposal should be submitted about the same time as the pre-proposal for the independent project, *i.e.*, about the middle of the Winter Quarter, especially if they are to be integrated. If the practicum is kept completely separate from the independent project, the last opportunity to submit a practicum proposal is the end of the Spring Quarter, with all work on the practicum commencing and ending during the Summer Session in order to graduate in June. For two-year students, the timeline is adjusted accordingly.

Submit a proposal for the practicum before you start off-site activities, using the form entitled *Record of MPH Practicum Experience* (see Appendix B). In order to meet the definition of a planned activity, you must submit a proposal and the *MPH Practicum Agreement* with the site preceptor's signature to the PIP Program Director, prior to starting the practicum. The MPH practicum proposal includes the following information: name of the practicum site and site preceptor; a brief description of the practicum activity, including a timeline for completion; at least three measurable learning objectives; and the signature of the practicum site preceptor (e-mail confirmation is acceptable). You must provide enough information in your proposal for the Program Director to determine its appropriateness.

Register for PMO670, *Public Health Practicum*, to receive academic credit for your practicum experience. This is a program requirement for the MPH degree. Students usually register for PMO670 in the Summer Session. However, students who are other than full-time may wish to enroll in PMO670 during the Fall, Winter, or Spring Quarter of their second year of study. Those individuals will need to contact the Course Director at the time of registration. PMO670 will meet twice during the Summer Session: once at the beginning to ensure that students are on target to complete their practicum on time and once at the end to give students an opportunity to share their experiences and turn in reports and evaluation forms. Students may use the last six weeks of the year to schedule all 108 hours of the practicum or spread the experience out over two or more quarters. Keep a log of your practicum activities and corresponding hours to turn in with your final report. Students who wish to receive partial credit for the practicum prior to the summer term may do so for up to two credits. To complete the practicum requirement and receive a total of three credits, pass/fail, in PMO670, students must complete all work on the practicum and submit the required documentation (practicum report and two evaluation forms) by the end of the Summer Session.

How does the MPH practicum differ from the second-year residency rotations?

Residency programs in preventive medicine/public health specialties (*e.g.*, General Preventive Medicine, Occupational and Environmental Medicine, Aerospace Medicine, and Veterinary Preventive Medicine) include an academic year leading to an MPH degree followed by a year (or more) of practicum rotations. These residency rotations are established under Memoranda of Agreement with various organizations, and they are designed to give residents operational training in their area of specialization. The MPH practicum, which is a part of the academic year at USUHS, is intended to allow students to directly apply concepts and principles that they have learned, to hone particular skills, and/or to gain a broader public health perspective in an already familiar practice area. The MPH practicum is planned by the student and preceptor and is, therefore, an individually tailored experience. It may be quite different from a residency rotation. For example, if it is spread over two quarters on a part-time basis, the student may be presented with more opportunities to participate in working groups, special projects or investigations, or meetings that do not occur on a regular basis. Students also have a greater range of activities from which to choose during the MPH year and may find opportunities outside their immediate area of specialization to be particularly enriching.

In general, residents will complete all the requirements for the MPH degree during the first year. This includes core and elective courses, the MPH practicum, and the independent project. However, in rare circumstances, a resident may need to defer completion of the MPH practicum requirement until the second year of the residency program. This should occur very infrequently. **The MPH degree will not be conferred until all the requirements have been met.**

For those students in a USUHS-based residency program who require deferral of the MPH practicum requirement until the second year, the request for deferral should be coordinated with the Residency Program Director and the Director of Graduate Research and Practicum Programs. Except in unusual circumstances, a deferral request should be submitted in writing by the middle of the Spring Quarter and must include a statement of intent to complete the residency at USUHS. To meet the MPH practicum requirement, substitute a residency rotation, or a portion of one, that is equivalent to 3 credit hours (minimum of 108 hours). Submit a practicum proposal form with appropriate signatures and at least three learning objectives *prior* to starting the rotation and enroll in PMO670 for the academic quarter in which you intend to complete the MPH practicum requirement. To receive credit, you will need to turn in the three- to five-page written report and either provide copies of equivalent residency practicum evaluation forms, or the MPH program forms (student performance evaluation and practicum site evaluation). In general, this process should be completed early in the second year of the residency in order to reduce the administrative burden at the level of the Department and the Graduate Education Office. This deferral policy is only available for residents in USUHS-based programs. For students in all other residency or fellowship programs, the MPH requirements must be met during the prescribed period of time for coursework (one or two years, depending on the program), and practicum proposals will be reviewed for appropriate content and public health relevance in the usual manner.

What are the reporting requirements for the MPH practicum?

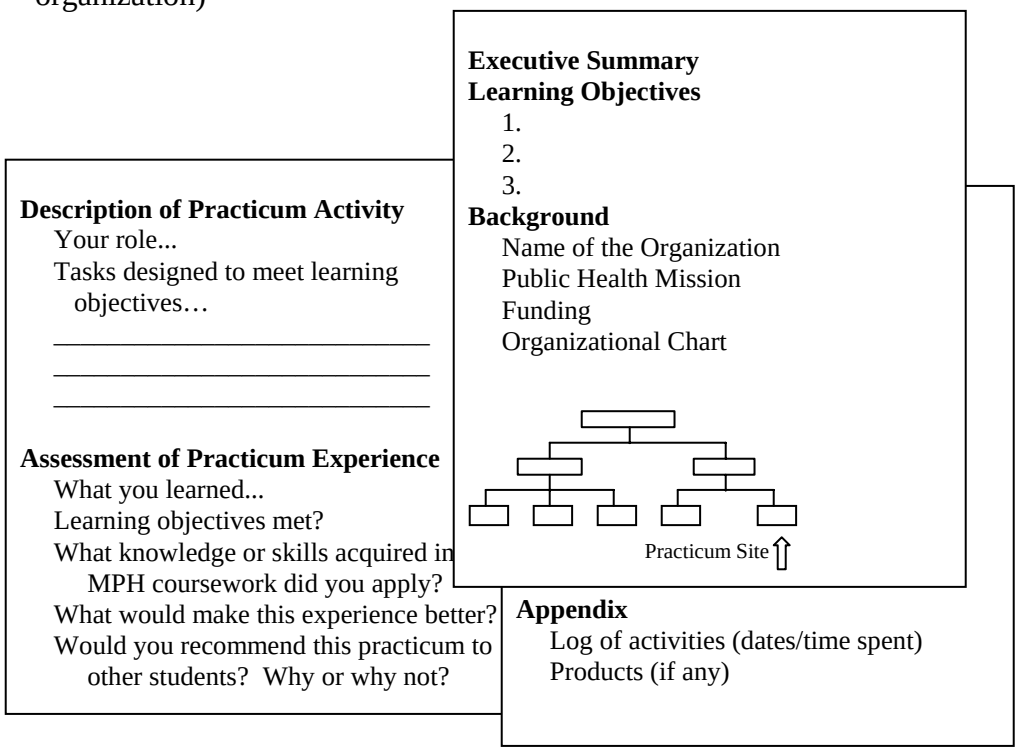
To receive credit for the MPH practicum you must submit the following documents:

- *Record of MPH Practicum Experience* Form
- Final Report on the Practicum
- *Practicum Site Evaluation* Form
- *Student Performance Evaluation* Form (request your site preceptor to complete and submit by fax or e-mail)

All forms are available electronically upon request from the PIP Program Director. Submit the completed evaluation forms (hard copy or electronic) and the final report to the Program Director during the week prior to the end of the academic year. *Both* evaluation forms (one from you and the other from the site preceptor) must be received for this requirement to be considered completed.

The **final report** on the practicum is expected to be three to five pages in length and include the following elements:

- Executive Summary
- Learning Objectives
- Background (mission, funding, organizational structure)
- Description of the Practicum Activity
- Assessment of the Practicum Experience (whether or not you met your learning objectives; what knowledge/skills from MPH coursework you were able to apply)
- Appendix (including activity log and any materials prepared for the sponsoring organization)



Under what circumstances is a waiver granted for the practicum?

Waivers are extremely uncommon and will be granted only **rarely**. We feel that the MPH practicum experience is an essential component of the Graduate Programs at USUHS. There are many practicum opportunities unique to this program of study and to this geographic area. The potential return for your efforts, particularly considering the resources available in the greater Washington metropolitan area, is enormous.

According to the Council on Education in Public Health, "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." Previous operational or clinical experience is not an automatic basis for a waiver, even if related to public health. Since the CEPH requirement states that students must be provided with opportunities to apply the knowledge and skills being acquired in MPH courses, the waiver request must be based on specific evidence of having met the intent of the MPH practicum requirement.

Under the rare circumstances in which a student in the MPH program may be eligible for a waiver of the practicum requirement, documentation should clearly indicate that the student's previous practice experience was closely aligned with the instructional objectives of the MPH core curriculum. It is the responsibility of the student to submit the waiver request, along with proper documentation, to the PIP Program Director, by the end of the Fall Quarter. An *ad hoc* Advisory Committee will review each waiver request and make a recommendation to the PIP Program Director. The student will then receive written notification of the action taken. If the petitioner wishes to appeal the decision, the appeal goes to the Director, Graduate Programs, for resolution and final disposition.

DOCUMENTATION REQUIRED FOR WAIVER REQUEST

A written request for a waiver must include a statement of the basis for the waiver request and the following documentation:

- Description of previous experience (including your specific role), inclusive dates, proportion of your time spent on practicum activities (indicating that the requirement for 108 hours has been met), location, organizational mission, public health relevance, name and title of immediate supervisor
- Statement of how the above activity used knowledge or skills taught in the core public health disciplines; the degree to which the activity was planned, supervised, and evaluated
- Performance evaluation, certificates, and/or letter(s) of support, as appropriate

What is the sequence for completion of the MPH practicum and project deliverables?

- ✓ **Project Pre-proposal** and **Practicum Proposal**—Submit by the middle of Winter Quarter
- ✓ **Project Proposal**—Due at the end of Winter Quarter
- ✓ Register for **PMO674**, *MPH Independent Project*—Summer Session
- ✓ Register for **PMO670**, *Public Health Practicum*—Summer Session or quarter in which the practicum is to be completed
- ✓ **Project Final Report**—Due in early June (Summer Session)
- ✓ **Project Oral Presentation**—Scheduled about a week following submission of final report in June (Summer Session)
- ✓ **Practicum Report**—Due about a week prior to graduation
- ✓ **Practicum Evaluation**—Two forms (student performance evaluation and practicum site evaluation) due prior to graduation
- ✓ **PMB Public Health Colloquium**—May be scheduled in conjunction with graduation and consists of selected representatives of the graduating class presenting their independent projects
- ✓ **PMB Graduation**—Scheduled for the last Friday in June

APPENDIX A

INDEPENDENT PROJECT
FORMS AND DOCUMENTS

A1 "MPH/MTM&H Independent Project Pre-Proposal Form"

A2 Guidelines for Grading Project Proposals

A3 Format and Evaluation Criteria for Selected Types of Independent Projects

- Public Health Problem Solving Framework
- Professional Publication Framework
- Research Grant Proposal Framework

A4 Guidelines for Independent Project Final Report

- Final Report Format
- Cover Page
- Report Headings

A5 **"**Scoring Criteria for MPH Independent Project Oral Presentations"

MPH/MTM&H Independent Project Pre-Proposal Form

Date_____

Name of graduate student_____
(indicate graduate degrees and, for military members, rank, corps, branch of service)

Name of academic advisor_____

Name of project mentor_____

MPH area(s) of concentration_____

If in a residency program, specify which one_____

Anticipated year of graduation_____

The research question (draft): _____

_____

_____

_____

Your project's public health significance: _____

_____

_____

_____

_____

_____

Brief description of your study / project: _____

_____

_____

_____

_____

_____

_____

_____

_____

Estimated timeline for project milestones and completion:

_____

_____

_____

_____

_____

_____

_____

_____

_____ _____

Signature of Graduate Student Date

_____ _____

Signature of Academic Advisor Date

_____ _____

Signature of Project Mentor Date

Program Director Approval_____

Initials and Date

[DATE]

MEMORANDUM FOR MPH/MTM&H PROJECT MENTORS

SUBJECT: Guidelines for Grading Project Proposals

FROM: Course Directors, Practicum & Independent Project Seminar Series

The students in the MPH and MTM&H degree programs receive overall guidance in the process of conceiving, designing, developing, and conducting an independent project, which is a program requirement. Within the framework of our one-hour seminar courses in the Fall and Winter Quarters, the students formulate research questions, submit pre-proposals for peer review and instructor feedback, and participate in small group exercises and workshops with PMB faculty to discuss various aspects of protocol development. This quarter students are required to submit both a draft and a final version of their proposal to their project mentor. The purpose of this requirement is to encourage students to use an iterative process to develop a high quality product, starting with their project proposal. We ask that you evaluate the student's work and submit a letter grade for the final project proposal. The proposal contributes to the overall grade for the independent project as indicated in the table below:

Project Deliverables	**Proportion of Grade**
Proposal	15%
Oral Presentation	35%
Final Written Report	50%

The following are general guidelines for grading the project proposal:

- Expected proposal to be approximately 4-5 pages in length
- Should include the following elements:
  - ✓ Background/public health significance
  - ✓ Research question or study objective/specific aims
  - ✓ Methods – study design, study population, sampling method/sample size estimate, data collection and management process, analytic approach, etc., as appropriate
  - ✓ Human subjects issues, if appropriate
  - ✓ Budget, if appropriate (may be limited funding available for expenses related to the independent project)
  - ✓ Timetable – study milestones and estimated timeline for completion
  - ✓ References – in general, expect 10-12 references
  - ✓ Appendices, if needed
  - ✓ Appropriate forms to be submitted to the Office of Research
- Quality of the proposal
  - ✓ Scientific merit of the research plan
    - ▪ Concise and testable research question
    - ▪ Study design & methods scientifically sound and feasible; appropriate for research question
  - ✓ Technical quality of the proposal
    - ▪ Well organized, well written, clearly presented, and free of errors

Reference textbook used for this course: Hulley SB, Cummings SR, Browner WS, *et al.* Designing Clinical Research, 2nd edition. Philadelphia: Lippincott Williams & Wilkins, 2001 (ISBN 0-7817-2218-7)

MPH/MTM&H Independent Project

"Public Health Problem Solving Framework"

PAPER FORMAT GUIDELINES

Executive Summary

One-page summary of key points
Include nature and magnitude of problem, rationale, and major recommendations

Statement of Problem

Define the problem
- Introduce issue, terminology
- Assumptions, magnitude and distribution, limitations of data

State Goals/objectives
- What is the desired result? What criteria will be used to evaluate "success"

Magnitude of the Problem

What is known about the problem, incidence, prevalence, and/or economic impact
Why is it a public health problem, and why is it important to solve?

Key Determinants

Describe risk factors and risk behaviors, natural history of disease, environmental influences, etc.

Prevention/Intervention Strategies

Discuss intervention/prevention strategies currently being used and other available options

Policy and Priority Setting

Describe the relative advantages and disadvantages of the possible intervention/ prevention strategies

Consider potential benefits and costs to individuals and to society, technical and political feasibility, ease of implementation, and potential barriers
Presentation should be balanced

Specific Recommendations

Recommend course(s) of action and rationale for selecting that strategy

Implementation and Evaluation

For the strategy selected, identify barriers to implementation, steps necessary for implementing the course of action (including buy-in by stakeholders, political issues, etc.), and the means of evaluating impact of the intervention
Relate stated goals to the recommended course of action

Public Health Problem Solving Framework
Suggested Weighting Scheme/Evaluation Score Sheet

Name of graduate student: _____ Date: _____

Title of project: _____

_____

Grading scale: 5=superior/exceptional; 4=above average; 3=average; 2=marginal; 1=revise

Demonstration of Core Area Competencies

1. Epidemiology _____
2. Biostatistics _____
3. Social and behavioral sciences _____
4. Environmental health _____
5. Health services administration _____
6. Population/public health context _____

Summary Score for Core Competencies _____ **(out of 30)**

Framework Specific Criteria

1. Executive summary _____
2. Statement of problem _____
3. Magnitude of problem _____
4. Key determinants
   Double weight (score x 2) _____
5. Prev/Interv Strategies
   Double weight (score x 2) _____
6. Policy & Priority Setting _____
7. Recommendations
   Double weight (score x 2) _____
8. Implement & Practice _____
9. Evaluation _____
10. Overall Assessment
    Double weight (score x 2) _____

Summary Score for Criteria _____ **(out of 70)**

Summary Score for Core Competencies _____ **(out of 30)**

Overall Score **Total** _____ **(out of 100)**

MPH Independent Project

Public Health Problem Solving Framework: Scoring Guidelines

1. Executive Summary	Briefly summarizes the problem or issue, key determinants, and recommended course(s) of action
2. Statement of the Problem	Was the problem clearly identified and defined? Is it relevant to public health? Is the target audience for this argument appropriate?
3. Magnitude of the Problem	Is the magnitude of the problem clearly identified? Are the strengths and limitations of the measures/estimates discussed? Does the paper make a strong case that the problem/issue is important enough to warrant assessment and action?
4. Key Determinants	Are appropriate biological, behavioral, and environmental factors taken into consideration?
5. Prevention/Intervention Strategies	Are current intervention strategies/policies summarized? Were a sufficient number of options/alternative strategies considered? Do the options follow from the key determinants discussed?
6. Policy & Priority Setting	Are the relative advantages and disadvantages of each option/strategy discussed? Are the benefits and risks of the various options compared at individual, community, and/or societal levels? Are political, economic and technical feasibility considered?
7. Recommendations	Are the recommendations consistent with the analysis of the problem?
8. Implementation & Practice	Are the likely barriers to implementation addressed? Are logistical/technical/resource concerns discussed?
9. Evaluation	Is the impact of the proposed intervention measurable? Is "success" defined? What is the metric? Are provisions made for evaluating the impact of the recommended course of action?
10. Overall Impression	Did the student present a compelling argument? Are you convinced to adopt the recommended strategy? Is the argument presented succinctly and effectively?

MPH/MTM&H Independent Project

"Professional Publication Framework"

PAPER FORMAT* GUIDELINES

Abstract

Introduction

Methods and Materials

Results

Discussion/Conclusions

References

Tables and Figures

Appendices

List of appropriate journals where this article might be published

*The format may be adapted to conform to the submission guidelines of specific journals, provided a copy of those guidelines are attached as an appendix, and the cover page indicates the intended journal. Otherwise, use the "uniform requirements" described in the following reference: International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. *Annals of Internal Medicine*. 1997;126(1):36-47.

Regardless of the format, the student must address the evaluation items associated with the professional publication framework. For those formats where the core area competencies are not easily incorporated, it is suggested that the background and/or discussion sections be expanded.

Professional Publication Framework
Suggested Weighting Scheme/Evaluation Score Sheet

Name of graduate student: _____ Date: _____

Title of project: _____

_____

Grading scale: 5=superior/exceptional; 4=above average; 3=average; 2=marginal; 1=revise

Demonstration of Core Area Competencies

1. Epidemiology _____
2. Biostatistics _____
3. Social and behavioral sciences _____
4. Environmental health _____
5. Health services administration _____
6. Population/public health context _____

Summary Score for Core Competencies _____ **(out of 30)**

Framework Specific Criteria

1. Public health importance _____
2. Organization/presentation _____
3. Abstract _____
4. Introduction _____
5. Design
   Double weight (score x 2) _____
6. Population _____
7. Analysis appropriate to answer the question _____
8. Plausibility of results _____
9. Public health implications appropriately addressed
   Double weight (score x 2) _____
10. References complete _____
11. Overall Assessment
    Double weight (score x 2) _____

Summary Score for Criteria _____ **(out of 70)**

Summary Score for Core Competencies _____ **(out of 30)**

Overall Score **Total** _____ **(out of 100)**

MPH Independent Project
Professional Publication Framework: Scoring Guidelines

1. Importance of the problem to public health	Has the magnitude of the problem been characterized? Has a strong case been made for the importance of this problem or issue?
2. Organization/Presentation	Is the paper easy to read and understand? What is the quality of the tables and figures? Is there a logical progression of ideas? Does the paper conform to guidelines of the targeted publication/standard format?
3. Abstract	Is it appropriately structured and does it adequately reflect the content of the paper?
4. Introduction	Is the current study placed in the context of existing knowledge with a discussion of where this project fits in? What is the quality/thoroughness of the literature review?
5. Design	Is the study design appropriate to answer the research question? Is there a rationale given for selecting this particular study design? Are the strengths and limitations of the design discussed (validity issues)? Are the strengths and weaknesses of measurements discussed (reliability issues)?
6. Population	Is the study population selected appropriate to answer the research question? Are considerations/advantages/ disadvantages of selection discussed?
7. Analysis	Is the analytic methodology selected appropriate to answer the research question? Are the methods described adequately? Are any limitations noted? Is the level of data collection/coding sufficient to answer the question? Are confounding/interaction/bias/design limitations addressed/accounted for? Are issues of sample size and power addressed (especially in the case of null findings)?
8. Results	Are the results clearly presented? Is the plausibility of results appropriately addressed?
9. Public health implications	Are the public health implications appropriately addressed?
10. References	Are the references complete and do they reflect the current published literature on the topic adequately?
11. Overall scientific merit	Is the study design appropriate for the stated objectives? Is the appropriate level of data used? Is there an adequate/appropriate literature review? Does this study increase our understanding of a topic or problem or does it replicate inconclusive/controversial findings?

MPH/MTM&H Independent Project

"Research Grant Proposal Framework"

PAPER FORMAT* GUIDELINES

Abstract

Specific Aims

Background

Methods
- **Design**
- **Population**
- **Sample Size**
- **Analysis**

References

Budget

Human/Animal Subjects

*The format may be modified to comply with the specific format of the intended granting agency. The student must still address the evaluation criteria pertaining to the research grant proposal framework, including demonstration of all core public health competencies. If the core area competencies are not easily incorporated into a particular format, it is suggested that the background section be expanded.

Research Grant Proposal Framework
Suggested Weighting Scheme/Evaluation Score Sheet

Name of graduate student: _____ Date: _____

Title of project: _____

_____

Grading scale: 5=superior/exceptional; 4=above average; 3=average; 2=marginal; 1=revise

Demonstration of Core Area Competencies

1. Epidemiology _____
2. Biostatistics _____
3. Social and behavioral sciences _____
4. Environmental health _____
5. Health services administration _____
6. Population/public health context _____

Summary Score for Core Competencies _____ **(out of 30)**

Framework Specific Criteria

1. Public health importance _____
2. Feasibility of proposal _____
3. Organization/presentation _____
4. Study design
   Double weight (score x 2) _____
5. Study population _____
6. Sample size
   Double weight (score x 2) _____
7. Analysis plan
   Double weight (score x 2) _____
8. Budget _____
9. Ethical issues _____
10. Overall Assessment
    Double weight (score x 2) _____

Summary Score for Criteria _____ **(out of 70)**

Summary Score for Core Competencies _____ **(out of 30)**

Overall Score **Total** _____ **(out of 100)**

MPH Independent Project
Research Grant Proposal Framework: Scoring Guidelines

1. Importance of the problem to public health	Has the magnitude of the problem been characterized? Has a strong case been made for the importance of this problem or issue?
2. Feasibility of the overall proposal	Were technical, logistical, administrative, political, and/or financial issues addressed?
3. Presentation of the written product	Is the material well organized? Is it easy to read and understand? Is there a logical progression of ideas? Are appropriate graphs/tables used? Does the paper conform to the guidelines of the intended granting agency? Does it stay within page limitations?
4. Study design	Is the design appropriate to answer the research question? Were other options considered/discussed? Was a rationale given for selecting this particular study design, including a discussion of its strengths and limitations?
5. Study population	Is the choice of study population reasonable and feasible? Are considerations/advantages/ disadvantages of selection discussed?
6. Sample size	Is the sample size appropriate to answer the research question? Are any limitations or assumptions noted?
7. Analysis plan	Is the analysis plan appropriate to answer the research question? Are the methods to be used described adequately? Are any limitations noted? Is the level of data collection/coding sufficient to answer the question? Are confounding/interaction/bias/design limitations addressed/accounted for?
8. Budget	Are the estimated costs for the study reasonable/justifiable? Are all appropriate budget categories included? Is it clearly presented?
9. Ethical issues	Are the relevant human participants or animal care and use issues appropriately addressed?
10. Overall scientific merit	Is the study design appropriate for the stated objectives? Is the appropriate level of data used? Is an appropriate literature review included? Will this study increase our understanding of a topic or problem or replicate inconclusive/controversial findings?

Format for the MPH/MTM&H Independent Project Final Report

1. The paper should be typed, double-spaced, 12-font (*Times New Roman* suggested), single sided, with one inch margins at the top, bottom, and both sides of the page. A minimum of 15 pages is expected.

2. Page numbering: Begin sequential page numbering on the first page of the body of the report.

3. Cover page: Use standard format on following page.

4. Executive Summary or Abstract: Insert as separate unnumbered page right after cover page.

5. Table of contents: Either treat as unnumbered page(s) or use small Roman numerals.

6. Body of Report: See "Headings for Independent Project Final Report." Begin page numbering within this section.

Cover Page

[TITLE OF YOUR PROJECT]

A PROJECT REPORT
SUBMITTED TO THE FACULTY OF
THE DEPARTMENT OF PREVENTIVE MEDICINE AND BIOMETRICS OF THE
UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES
BY

[YOUR NAME, DEGREE(S)]
[RANK, CORPS, SERVICE – IF MILITARY]

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
[MASTER OF PUBLIC HEALTH/ETC.]

PROJECT MENTOR:
[name, degree(s), and for military, rank, corps, service]

DATE [MONTH AND YEAR]

Headings for Independent Project Final Report

Cover Page

Executive Summary or Abstract
An executive summary is similar to an abstract, but it is used when the MPH/MTM&H independent project is part of a larger study or project or when reporting on activities. If you did a research study, use the heading "abstract." The abstract should summarize your study objectives, methods, results, and conclusions.

Table of Contents

Review of the relevant scientific literature and the potential contribution of your study
Public health significance
Research question or purpose and specific aims of your study

Methods
Description of study population
Study design,
Data sources, sampling techniques
Measures, statistical analyses, etc.

Results
Description of study findings
Appropriate tables and graphs

Discussion
Summary and interpretation of key findings
Comparison of your study results to other work on the research topic
Application of study results; the importance of your work
Strengths and limitations of your study

Conclusions
Concise summary of important findings, impact of study results, generalizability
Possible future research direction(s)

Contributors
Description of specific contributions of study co-investigators, if appropriate

Acknowledgments
Funding source(s), research teams, administrative support, etc.

References (those cited)

Appendices

A copy of your IRB approval and any other assurances must be included in your final report (first page of Appendix). If applicable, include other detailed project documentation (e.g., questionnaire, abstracting form, coding manual, mathematical formulas, etc.)

APPENDIX B

MPH PRACTICUM
FORMS AND DOCUMENTS

B1 "Record of MPH Practicum Experience" and "MPH Practicum Agreement" Forms

B2 "Practicum Site Evaluation" Form (to be completed by student)

B3 "Student Performance Evaluation" Form (to be completed by preceptor)

B4 Information Packet for Practicum Site Preceptors

B5 Guidelines for Practicum Final Report

- Final Report Format
- Cover Page
- Report Headings

Record of MPH Practicum Experience

Name of Graduate Student _____ Date _____

Practicum Site

Name of Agency/Organization _____

Address _____

_____

Specific Department, Division, Unit or Program with which the student will be associated

_____

_____

Site Preceptor (immediate supervisor for graduate student)

Name _____

Title _____

Phone # _____ Fax # _____ E-mail _____

Period of practicum experience (dates agreed upon by organization and student)

From _____ to _____

Indicate day of each week and hours scheduled for this practicum

_____

_____

BRIEF DESCRIPTION OF PRACTICUM ACTIVITIES
WITH ESTIMATED HOURS AND TIMELINE FOR COMPLETION

Description of Activities/Timeline:

Learning Objectives (minimum of 3):

Is the practicum part of your independent project? Yes _____ No _____

If yes, provide the title of your project or briefly describe:

_____

_____

_____

_____

Remember to register for PMO670, "Public Health Practicum" (3 credits), for the quarter in which you plan to complete your practicum.

The undersigned agree with the proposal for a USUHS graduate student practicum experience as outlined in this document:

_____ _____
Graduate Student Signature Date

_____ _____
Practicum Site Preceptor Signature Date

_____ _____
Academic Advisor or Project Mentor Signature Date

Certification of Completion of the Practicum Experience

Date of completion _____ Grade (Pass/Fail) _____

_____ _____
Director, Graduate Research and Practicum Programs, Signature Date

MPH Practicum Agreement

Name of Graduate Student _____ Date _____

This agreement specifies the roles and responsibilities for faculty in the Department Preventive Medicine and Biometrics (PMB), Uniformed Services University of the Health Sciences (USUHS), and for practicum site preceptors who agree to participate in this program.

The USUHS PMB faculty advisor (Director, Graduate Research and Practicum Programs, or other designated faculty member) will:

1. Serve as a facilitator and provide resources for student learning

2. Approve the student's learning objectives and plans for self-evaluation

3. In some cases, initiate discussion with individuals in the community on potential practicum opportunities

4. Take primary responsibility for the evaluation process

The practicum site preceptor will:

1. Guide the development of and approve the student's learning objectives

2. Provide student with learning experiences appropriate to student's learning objectives

3. Complete and submit a student performance evaluation at the conclusion of the practicum

4. If necessary, contact the student's faculty advisor or the Director, Graduate Research and Practicum Programs, to resolve issues or problems as they arise

5. Make recommendations to the Director, Graduate Research and Practicum Programs, for improvement in the MPH practicum program

_____ _____

Graduate Student Signature Print Name Date

_____ _____

Practicum Site Preceptor Signature Print Name Date

_____ _____

Director, Graduate Research and Practicum Programs, Signature Date

USUHS MPH PRACTICUM PROGRAM

PRACTICUM SITE EVALUATION

Graduate Student Name: _____ Date: _____

Project Mentor (if project and practicum are integrated): _____

Practicum Site Coordinator (primary point of contact): _____

Practicum Site Preceptor (primary supervisor): _____

To the Student:
Please use this form to evaluate your practicum experience. Your response will help both the Practicum Site Preceptor and the Director, Graduate Research and Practicum Programs, to monitor the quality of the practicum experience at this particular site and to assess and improve the program content in accordance with the goals of the program. Your honest evaluation is much appreciated.

On the back of this form, please add comments to clarify or support your responses.

MARKING INSTRUCTIONS: ***Using the following scale, circle the response that best represents your assessment of this practicum experience:***
1 = Disagree Strongly 2 = Disagree 3 = Agree 4 = Agree Strongly N/A = Not Applicable

1. Orientation to the agency or site was adequate.	1	2	3	4	N/A
2. The agency provided the agreed upon resources for meeting the learning objectives.	1	2	3	4	N/A
3. The preceptor and staff were knowledgeable and experienced.	1	2	3	4	N/A
4. The staff were helpful and supportive.	1	2	3	4	N/A
5. Opportunities for discussion with the preceptor and staff were adequate.	1	2	3	4	N/A
6. Appropriate supervision was provided during the practicum activity.	1	2	3	4	N/A
7. The practicum experience met my overall expectations.	1	2	3	4	N/A
8. The practicum experience met my learning objectives.	1	2	3	4	N/A
9. The tasks I was assigned were commensurate with my capabilities.	1	2	3	4	N/A
10. Opportunities were provided to apply knowledge and skills acquired from the MPH core courses.	1	2	3	4	N/A
11. The practicum was well organized, with efficient use of scheduled time.	1	2	3	4	N/A
12. I recommend that this site be considered for future practicum placements.	1	2	3	4	N/A

B2

Use this section for additional comments on items 1-12.

What was the most important thing that you learned from this practicum experience?

What did you like best about this practicum experience?

What did you like least about this practicum experience?

Describe any barriers you experienced in completing your MPH practicum.

Please provide suggestions for changes/improvements to your specific practicum activity or to the practicum program in general.

Please give the following program components an overall rating according to the following:

1=poor, 2=fair, 3=neutral, 4=good, 5=excellent

Practicum Site	1	2	3	4	5
Site Preceptor	1	2	3	4	5
USUHS Program Support	1	2	3	4	5

Thank you for your assistance in optimizing the quality of this program.

USUHS MPH PRACTICUM PROGRAM

STUDENT PERFORMANCE EVALUATION

Name of Graduate Student: _____ Date: _____

Name of Practicum Site (organization, agency, or installation):
_____

Practicum Site Preceptor (primary supervisor): _____

Other Point(s) of Contact: _____

To the Practicum Site Supervisor:

Please use this form to evaluate the performance of the above named graduate student. Your response will help the Director, Graduate Research and Practicum Programs, to assess the overall performance of USUHS graduate students placed at various practicum sites, as well as to assign pass/fail credit to individuals for the required course, "Public Health Practicum." Our goal is to optimize the learning experience for USUHS graduate students, as well as to contribute to the overall mission of host organizations by placing consummate public health professionals into those operational environments.

On the back of this form, please add comments to clarify or support your responses.

MARKING INSTRUCTIONS: ***Using the following scale, circle the response that best represents your perception of the abilities or behaviors demonstrated by the student:***

1 = Disagree Strongly *2 = Disagree* *3 = Agree* *4 = Agree Strongly* *N/A = Not Applicable*

The graduate student in the practicum program:

1. Demonstrated the ability to articulate his/her goal(s)for the practicum experience in order to develop learning objectives.	***1***	***2***	***3***	***4***	***N/A***
2. Was knowledgeable and well-prepared.	***1***	***2***	***3***	***4***	***N/A***
3. Demonstrated the ability to implement a planned course of action to meet the agreed upon learning objectives.	***1***	***2***	***3***	***4***	***N/A***
4. Demonstrated the ability to adapt to the organization's procedures and culture.	***1***	***2***	***3***	***4***	***N/A***
5. Was respectful and courteous in his/her interactions with colleagues, support staff, or the general public.	***1***	***2***	***3***	***4***	***N/A***
6. Worked effectively within groups.	***1***	***2***	***3***	***4***	***N/A***
7. Demonstrated effective time management skills.	***1***	***2***	***3***	***4***	***N/A***
8. Demonstrated effective oral communication skills.	***1***	***2***	***3***	***4***	***N/A***
9. Demonstrated effective written communication skills.	***1***	***2***	***3***	***4***	***N/A***
10. Demonstrated the ability to contribute to the assessment or understanding of a public health problem or issue.	***1***	***2***	***3***	***4***	***N/A***

11. Met the agreed upon learning objectives. ***1 2 3 4 N/A***
B3
Please use this section for additional comments on items 1-11.

Please provide any suggestions for changes/improvements to this program.

Would you be willing to be a practicum site preceptor for other MPH students from USUHS in the future?

Yes _____ No _____

_____ _____
Signature of Site Preceptor ***Date***

Thank you for your assistance in optimizing the quality of this program.

The Uniformed Services University of the Health Sciences
F. Edward Hébert School of Medicine
Department of Preventive Medicine and Biometrics
Graduate Programs in Public Health

MPH Practicum Program

INFORMATION FOR POTENTIAL PRACTICUM SITE PRECEPTORS

This document is prepared to provide program information to individuals who wish to serve as a practicum site preceptor for graduate students in the Master of Public Health (MPH) Program at the Uniformed Services University of the Health Sciences (USUHS) in Bethesda, Maryland. The completion of a practicum experience is a graduation requirement for all students in the MPH program. Students and practicum site preceptors jointly develop learning objectives and a scope of work for activities/tasks designed to meet those objectives. In the past, students have benefited greatly from the opportunity to apply what they have learned in the classroom to address public health issues in an operational environment, and preceptors have welcomed the opportunity to have graduate-level assistance with their projects.

Contact information:

Tomoko I. Hooper, MD, MPH
Director, Graduate Research and Practicum Programs
Phone: 301-295-1975
Fax: 301-295-6282
E-mail: thooper@usuhs.mil

- An opportunity for graduate students to gain practical, "in the trenches," public health experience and to apply what they learn in the classroom
- An opportunity for organizations with a public health mission to involve graduate students in some of their ongoing tasks/projects in partnership with the Department of Preventive Medicine and Biometrics at USUHS
- A stand-alone activity or integrated with a more substantial independent project requirement for the MPH degree
- A planned, supervised, and evaluated activity related to public health or preventive medicine

The student is expected to spend a minimum of 108 hours on the MPH practicum requirement; more is encouraged. This includes time spent on planning, development, execution, and reporting phases. Generally, students in the USUHS MPH program complete all coursework and their practicum and independent project requirements within a 12-month period. Core MPH courses are taught during the "Pre-Fall" (six weeks in July and August) and the Fall Quarter (late August to mid-November). Typically, students start planning their practicum activities after completing the core courses. However, some students are enrolled at USUHS other than full-time and take courses over a two-year period. These students may choose to begin their practicum at any point during their second year. A block of time has been set-aside during the Summer Session (approximately 6 weeks in May and June) for completion of the MPH practicum and project requirements. During the rest of the academic year, the time frame for practicum activities and weekly schedules will vary for each student.

The MPH practicum may form the basis for, or constitute a part of, a student's MPH independent project. The practicum and the project are two separate requirements for the MPH degree. However, they are often combined and integrated for practical reasons. When this is the case, the preceptor may serve as the student's primary project mentor. This would require a larger time commitment on the part of the site preceptor. Students are expected to spend approximately 300 hours on their MPH independent projects. The primary project mentor guides protocol development, supervises work on the project, reviews draft and final versions of the project report, and evaluates student performance (includes grading the proposal and final version of the written report). A billeted USUHS faculty member will serve as a co-project mentor.

A preceptor must have several years of experience working in a public health-related field. A graduate degree in public health is preferred but not required. The preceptor should have the requisite knowledge and skills to be able to guide and critically evaluate the student's work. If the student is an employee of the host organization, the preceptor should be other than the employee's immediate supervisor.

- Formulate a preliminary scope of work for a student project.

  Meet with a specific student to discuss a possible scope of work that is mutually acceptable

  or

  Discuss a potential project with the Director, Graduate Research and Practicum Programs, at USUHS before identifying a specific student. In this case, a brief written description may be sent by e-mail to the program director to be included in a reference file for our students. Another option is to give a 15-minute briefing in a class designed to guide students in the selection and development of their projects and practicum experiences. Finally, a relatively new venue for bringing students and potential preceptors together to establish partnerships in research, program evaluation, public health problem solving, or policy development is a "Project and Practicum Fair" in which representatives from various organizations are invited to set up informational displays at USUHS during the Fall Quarter. Contact the Director, Graduate Research and Practicum Programs for further information.

- Once the graduate student and the site preceptor have agreed to proceed with the development of a practicum activity, the next step is to discuss the learning objectives, scope of work, and a timeframe. Obtaining preliminary approval from the Director, Graduate Research and Practicum Programs, will streamline the process. This is also the time to initiate the process of establishing an inter-institutional agreement, if required by the University and/or the practicum site.

- Prior to beginning the practicum, the student must submit a written proposal using the "Record of MPH Practicum Experience" form. The proposal includes the name of the practicum site and site preceptor, contact information, a description of planned activities, a minimum of three learning objectives, and a timeline for completion of the practicum. The preceptor must sign both the "Record of MPH Practicum Experience" and the "MPH Practicum Agreement" forms. These forms are available electronically. Preceptors may either indicate concurrence by e-mail or send the signed documents by fax to the Director, Graduate Research and Practicum Programs, at (301) 295-6282.

- After the necessary paperwork has been submitted, work may begin on the practicum/project. Please direct the student to appropriate references and background materials early in the process. Meet regularly to assess progress, discuss any issues or concerns, reassess the timeline, and critique the student's performance. Please clarify both your schedule and that of your student with regard to travel, vacation, course exam dates, etc. Try to anticipate and plan for final deliverables near the end of the practicum/project period of performance.

- Please note that students are expected to include copies of reports or other materials that they produce as a part of their practicum experience in their final report. These student reports are kept on file in the PMB Department at USUHS and are available for review by other students and faculty. Therefore, you will need to inform your student of anything that you feel should not be included in the report.

- If you serve as the student's primary project mentor, you will be expected to evaluate and assign a grade for the project proposal and the project final report. Grading guidelines will be provided.

- Complete and submit the student evaluation form (attached) by fax or e-mail to the Director, Graduate Research and Practicum Programs, at the end of the practicum.

Attachments:
Record of the MPH Practicum Experience
MPH Practicum Agreement
Student Performance Evaluation Form
Practicum Site Evaluation Form

Format for the Final Report on the Practicum Experience

1. The paper should be typed, double-spaced, 12-font (*Times New Roman* suggested), single sided, with one inch margins at the top, bottom, and both sides of the page. The report is expected to be three to five pages in length, as a minimum.

2. Page numbering: Begin sequential numbering on the first page of the body of the report.

3. Cover page: Use standard format on following page.

4. Executive Summary: Insert as separate unnumbered page right after the cover page.

5. Body of Report: See "Headings for MPH Practicum Final Report." Begin page numbering in this section.

B5

Cover Page

PRACTICUM FINAL REPORT

A REPORT ON ACTIVITIES CONDUCTED AT _____[name of organization]
BETWEEN _____ AND _____ [dates]
SUBMITTED TO THE FACULTY OF
THE DEPARTMENT OF PREVENTIVE MEDICINE AND BIOMETRICS OF
THE UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES
BY

[YOUR NAME]
[RANK, CORPS, SERVICE – IF MILITARY]

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF PUBLIC HEALTH

SITE PRECEPTOR:
[name, degrees, official title, division, department, etc., and address]

PROJECT MENTOR [if applicable]:
[name, degrees, official title, division, department, etc., and address]

DATE [MONTH AND YEAR]

Headings for MPH Practicum Final Report

Executive Summary

An executive summary is similar to an abstract, but used to report activities or to summarize a project that is only a portion of a larger study. Indicate whether or not your MPH practicum was part of your independent project. Length is between one-half to one page.

Taken from your proposal and revised to reflect any changes in the scope of work

Background

Significance of this activity to public health (brief)
Literature review specific to the practicum
Background information on the organization (mission, funding, organizational structure)
Discussion of how your practicum fit into other activities and/or projects of the organization
Target population for practicum activity

Description of Practicum Activities

Discuss what was done and why. Organize around key tasks of your practicum experience. Make your points in the body of the report and refer readers to the appendices for details, if appropriate.

Discussion and Conclusions

Discuss whether or not your learning objectives were met, and if so, how. Address how knowledge/skills acquired in the classroom were applied in an operational environment. What is the significance or potential impact of your work/findings on the site where work was performed? What recommendations do you have for any related work in the future? Would you recommend this practicum site to other students? Why or why not?

References (cited in your report)

Appendices

Activity log
Include any products prepared for the site preceptor and the abstract/executive summary of your MPH project, if combined with your practicum.

APPENDIX C

USUHS

OFFICE OF RESEARCH (REA) FORMS

C1: USUHS Form 3202

C2: USUHS Form 3204

C3: Human Participants Regulations Decision Charts

REA Date Stamp

USUHS FORM 3202
STUDENT and RESIDENT PHYSICIAN RESEARCH PROTOCOL

Protocol No.: _____

Student/Resident Investigator: _____

USUHS Department: _____

USUHS Building and Room Number: _____

Off-site Address: _____

_____

Telephone: _____ **Fax:** _____ **Email:** _____

Research Advisor: _____

Research Advisor's Department: _____

Research Advisor's Telephone: _____

1. Type of Student/Resident Physician

☐ Graduate Student (Ph.D.) or (Dr.P.H.) year ☐ 1 or ☐ 2 of the project (select one)

☐ Graduate Student (Masters)

☐ Medical Student

☐ Nursing Masters Student year ☐ 1 or ☐ 2 of the project (select one)

☐ Physician Assigned for Graduate Medical Education Project Award (billeted resident physician) USUHS Billet Number: _____

2. Project Information

- Percent Effort: (the percentage of time you will devote to this project; effort on awarded projects and other activities may not exceed 100%) _____
- Anticipated Period of Performance: Project Start: _____ Project End: _____
- Performance Sites: (List all sites where your research will be performed)

_____

_____

_____

_____

- Is this research project related to an active research project of the advisor identified above? If yes, answer A-D below; if no, proceed to Number 3. ☐ Yes ☐ No

A. Protocol Number: _____

B. Project Title: _____

C. Is the project an active protocol? ☐Yes ☐No

D. Project End Date _____

3. Summary of Research Plan: (Attach thesis proposal or research summary. The research summary should include background, hypothesis, methodology and data analysis to be used).

4. USUHS Assurance Committee

A.	Does this project involve human subjects (including human tissues or fluids, and/or survey)? If yes, answer 1 and 2 below; if no, proceed to B.		☐Yes ☐No
	1.	The proposed protocol is specifically covered in all relevant details by the preexisting IRB approvals of your advisor's protocol identified in 2A and therefore, requires no additional approvals. If yes, attach a copy of the USUHS approval letter and, if appropriate, a copy of the approved informed consent.	☐Yes ☐No
	2.	The proposed protocol is not specifically covered in all relevant details by the preexisting approvals of my advisor and a new completed Request for IRB Approval (USUHS Form 3204) is attached.	☐Yes ☐No
B.	Does this project involve vertebrae animals? yes, answer 1 and 2 below; if no, proceed to C.		☐Yes ☐No
	1.	The proposed protocol is specifically covered by the preexisting IACUC approvals of the advisor's protocol identified in 2A.	☐Yes ☐No
		If yes, have you submitted a USUHS Form 3206C to DLAM to obtain a conveyance approval?	☐Yes ☐No
		What is your advisor's approved Animal Protocol Number (APN)?	
	2.	The proposed protocol is not specifically covered by the preexisting approvals and will require an IACUC approval and a completed USUHS Form 3206 has been/will be submitted	☐Yes ☐No
C.	Does this project involve the use of biohazards, controlled or dangerous materials? If yes, answer 1 and 2 below; if no, proceed to D.		☐Yes ☐No
	1.	The proposed protocol is specifically covered by the preexisting BCD approval of your advisor's protocol identified in 2A?	☐Yes ☐No
	2.	The proposed protocol is not specifically covered by the preexisting approvals and will require a BCD approval and a completed USUHS Form 3207a is attached.	☐Yes ☐No
D.	Does this project involve the use of radioactive material? If yes, answer 1 and 2 below; if no, proceed to Section 4.		☐Yes ☐No
	1.	The proposed protocol is specifically covered by the	

	preexisting RSC approval of your advisor's protocol identified in 2A?	☐Yes ☐No
2.	The proposed protocol is not specifically covered by the preexisting approvals and will require a RSC approval and a completed USUHS Form 3205 is attached.	☐Yes ☐No

5. Funding Information (See USUHS Instruction 3200 for budget limitations)

What is the funding source for this project?

☐Graduate Education Office
☐Graduate School of Nursing
☐Department/Program → Department/Program Name: _____
☐External Agency → Agency Name: _____
☐Other → Specify: _____

6. Budget

Supplies (Include animal costs and per diem)	
a.	
b.	
c.	
Small Equipment	
a.	
b.	
c.	
Other Expenses (Specify) (May not include non-mission essential travel, secretarial/administrative support, or scientific conferences)	
a.	
b.	
c.	
Total Supplies, Equipment and Other Expenses	

7. The following signatures attest to the validity of the above information:

	Typed Name	Signature	Date
Student/Resident Investigator:		_____	
Research Advisor:		_____	

8. Other Approvals:

Department Chair/Program Director: _____

If: Graduate Student
Associate Dean for Graduate Education:
Cinda J. Helke, Ph.D.

_____

Nursing Student
Dean, Graduate School of Nursing:

Patricia Hinton Walker, Ph.D., RN _____

Medical Student
Associate Dean for Student Affairs:
Richard M. MacDonald, M.D. _____

Dean, School of Medicine:
Larry W. Laughlin, M.D., Ph.D.

_____

Physician Assigned for Graduate Medical Education _____
Associate Dean for Graduate Medical Education:
Howard E. Fauver, Jr., M.D.

9. In light of the above signatures, the project is approved.
Vice President for Research:
Steven G. Kaminsky, Ph.D. _____

REA Date Stamp

USUHS FORM 3204
RESEARCH INVOLVING HUMAN SUBJECTS
(new or modification/addendum)

Protocol No.: _____

Principal Investigator: _____

Department: _____ **Phone** _____

E-Mail: _____ **Pager or Other Phone Number** _____

Project Title: _____

PLEASE PROVIDE RESPONSES TO THE FOLLOWING:

1. _____ New protocol or _____ Modification/Addendum

2. Indicate the pages of proposal specifically applicable to the involvement or enrollment of volunteers, private information, or human-derived products.
   Pages: _____

3. Check procedure(s) to be used:
   - _____ Use of genetic testing or DNA analysis.
   - _____ Use of blood or blood products: ( ) Blood Draw ( ) Blood Bank ( ) Other
   - _____ Use of human tissue and/or bodily fluids including excreta and external secretions (sweat, saliva, amniotic fluid at the time of rupture of membrane).
   - _____ Hair and/or nail clippings.
   - _____ Teeth and/or dental material including plaque and calculus.
   - _____ Prospective collection and use of donated, pathological and/or diagnostic specimens. **(Refer to question 15)**
   - _____ Use of existing pathological and/or diagnostic specimens.
     - From where are these specimens being obtained?
     - Can the subjects from whom these specimens were obtained be identified directly or by the use of encoded identifiers?
       ( ) Yes ( ) No **(Refer to question 15)**
   - _____ Use of human cell lines: ( ) Primary ( ) Immortalized
   - _____ Moderate exercise by healthy volunteers.
   - _____ Recording of data using noninvasive procedures used in clinical practice.
     - Identify _____.
   - _____ Study of existing data, documents, and/or records.
     - From where are these data being obtained?
     - Can the subjects from whom these data were obtained be identified directly or by the use of encoded identifiers?
       ( ) Yes ( ) No

_____ Survey, interview, or educational (cognitive, diagnostic, aptitude, achievement) test or procedures or observation of public behavior.

- Can the subjects be identified directly or by identifiers?
  ( ) Yes ( ) No
- Do the data collected involve sensitive information (e.g., drug and alcohol use, sexual practices, child or spousal abuse, or other information that could be criminal or damaging to one's financial or social standing, employability, insurability, or psychological well-being)?
  ( ) Yes ( ) No

_____ Use of normal educational practices in accepted educational settings such as instructional strategies, effectiveness of or comparison among instructional techniques, curricula or classroom management methods.

_____ Use of taste and food quality evaluation and consumer acceptance studies?

4. Indicate the age and sex as well as the physical and psychiatric condition of the volunteers to be enrolled.
   Age _____
   Gender: _____
   Physical & psychiatric condition:

5. Indicate the total number and rate of enrollment of volunteers.
   Total number: _____ (entire project)
   Rate: _____ (#/ time period)

6. If applicable, explain with a compelling rationale the exclusion or under representation of one gender and/or minorities from the subject population.

7. Explain the inclusion of any vulnerable population (e.g., children, pregnant women, prisoners, cognitively impaired persons) and why that population is being studied.

8. State how physical and psychiatric condition will be determined and by whom.

9. If normal volunteers are to be enrolled, state how this will be determined.

10. Describe the status of the volunteers relative to the principal investigator and/or USUHS (e.g., patient at Walter Reed, active duty, students, civilian employees, etc.)

11. Describe the status of the volunteer's Attending Physician to the project including his or her role in safeguarding the rights of the volunteer.

12. Identify the specific procedures, issues, and/or experimental drug administration involving the volunteers that are important for the IRB to consider. Describe possible risks, ethical issues, and/or side effects for each. Factors to consider including, but are not limited to, the following:

    A. What is the volunteer being asked to do which they would not be doing unless part of this research project?

    B. Does the research collect personally sensitive information (e.g., drug and alcohol use, sexual practices, child abuse)? If so, how is confidentially protected?

    C. Does the research involve deception of the subject? If so, how is the subject debriefed after completion of the project?

13. If this study involves the administration of drugs not approved by the FDA, state how approval will be obtained.

14. Do any of the investigators have an equity or consultative relationship with a non-USUHS source related to this protocol which might be considered to be a conflict of interest? (If yes, please include a statement of disclosure.)

15. Unless otherwise contained in your protocol, if using prospectively collected tissue, or any tissue linked to subject/patient identifiers, indicate:

    A. How, where, and for how long will tissue/samples be stored?

    B. Will patient data that can or will be linked to the tissue/samples be collected?

    C. Will linkage to subjects be maintained or will samples be delinked?

    D. Will any tissue/samples be left over at the end of the study and if so, what will be done with the tissue/samples?

13. Describe fully the modification(s) to your existing protocol to include rationale, procedures, numbers of subjects, etc. (Use blank pages if additional space is required.)

I have read and will comply with USUHS Instruction 3201, *"The Use of Human Volunteers in Research at the Uniformed Services University of the Health Sciences,"* March 1999.

I have read, understood, and will comply with the tenets contained in the Belmont Report ("Ethical Principles and Guidelines for the Protection of Human Subjects of Research," The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, April 18, 1979. URL: http://ohrp.osophs.dhhs.gov/humansubjects/guidance/belmont.htm).

_____ _____

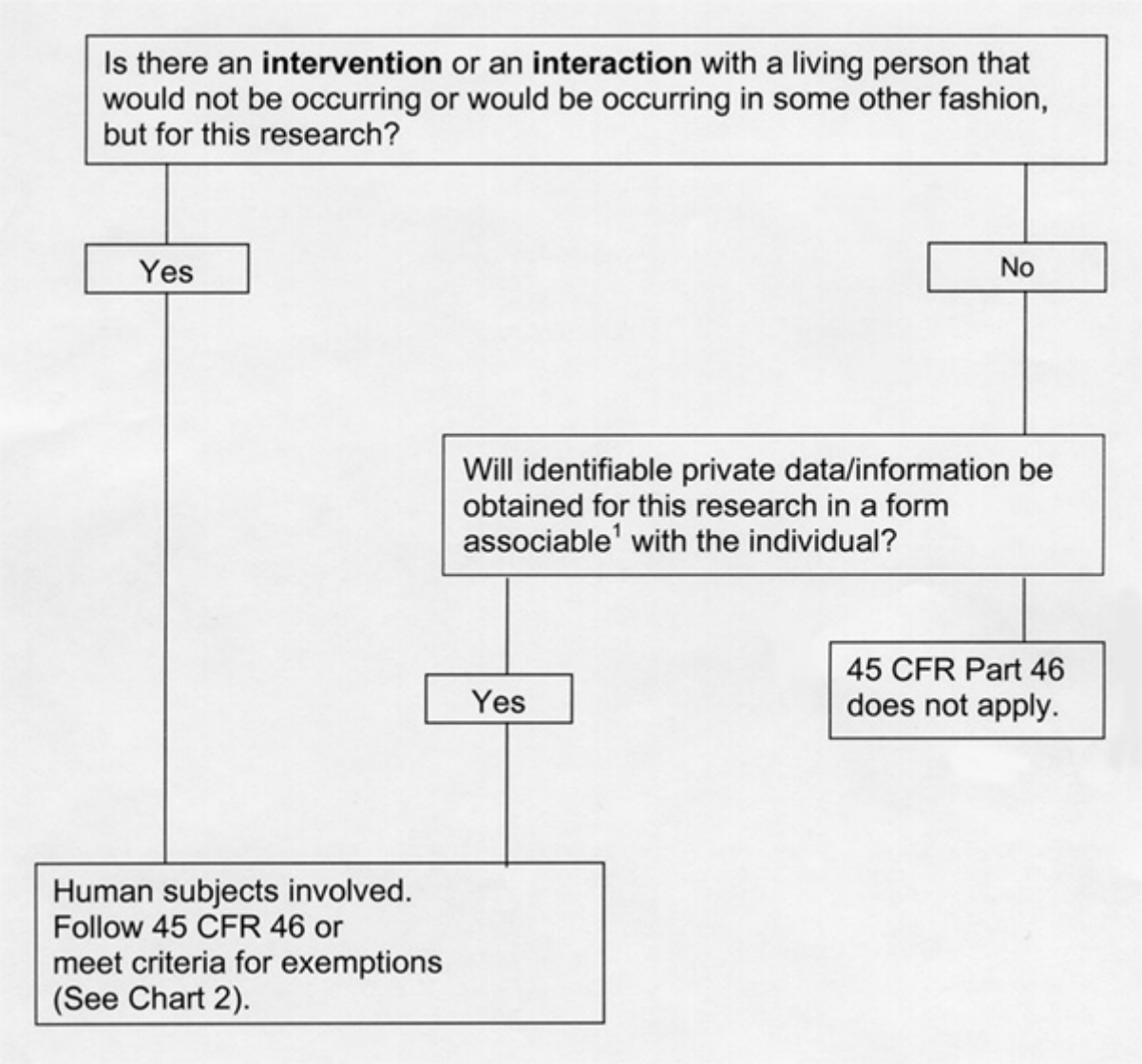
Principal Investigator (signature) **Date**

Human Subject Regulations Decision Charts

The Office for Protection from Research Risks (OPRR) provides the following graphic aids to clarify portions of the Department of Health and Human Services (DHHS) human subject regulations at Title 45 Code of Federal Regulations Part 46 (45 CFR 46). These portions of the regulations are the subject of frequent inquires to OPRR.

Chart 1: Definition of Human Subject at Section 46.102(f)

Is the definition of "human subject" at Section 46.102(f) met in this research activity?

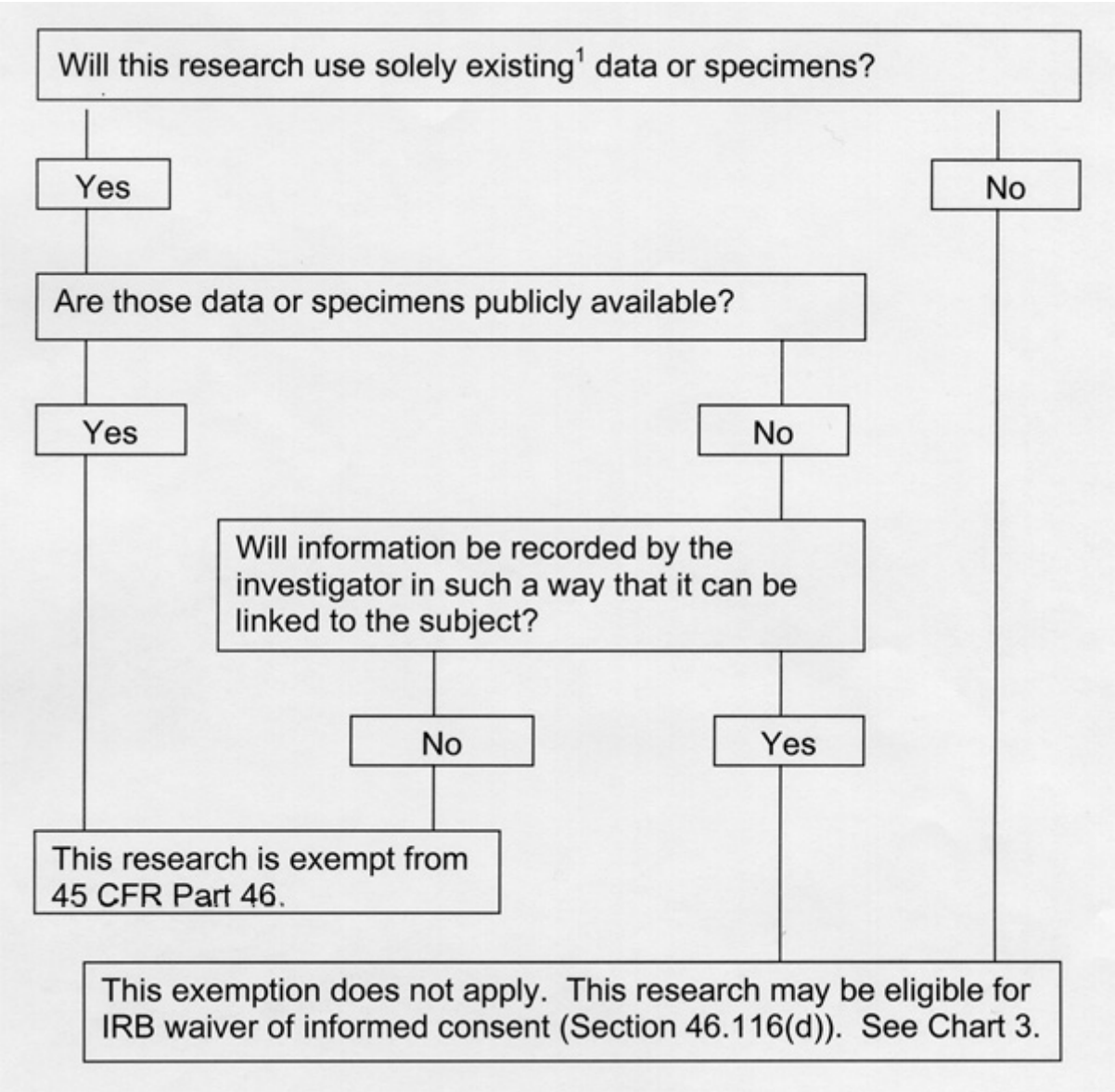


[1]That is, the identity of the subject is or may readily be ascertained or associated with information.

OPRR 10/01/98

Chart 2: Exemption at Section 46.101(b)(4) regarding research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens.

Is the research exempt in accordance with Section 46.101(b)(4)? The regulations at 45 CFR Part 46 do not apply if the criteria for exemption under Section 46.101(b)(4) are met.

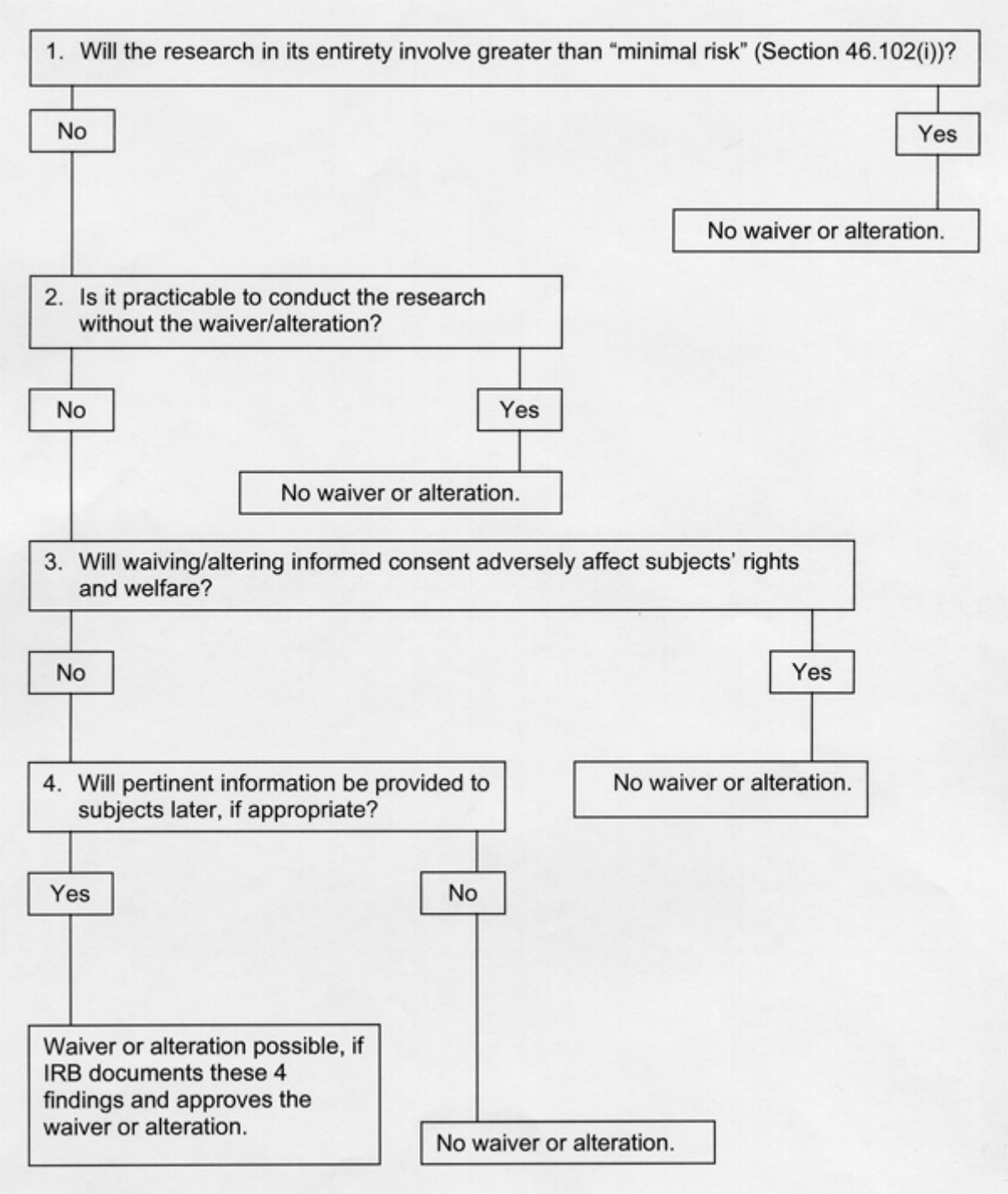


[1]"Existing" means collected (i.e., on the shelf) prior to the research for a purpose other than the proposed research. It includes data or specimens collected in research and non-research activities.

OPRR 10/01/98

Chart 3: Waiver or Alteration of Informed Consent under Section 46.116(d).

Can the Institutional Review Board employ Section 46.116(d) to waive informed consent or alter informed consent elements?



OPRR February, 1998

APPENDIX D

AUTHORSHIP GUIDELINES

AND

MANUSCRIPT CLEARANCE FORM

D1: Authorship Guidelines

D2: Manuscript Clearance Form

Department of Preventive Medicine and Biometrics

Authorship Guidelines

These guidelines have been adapted from a memorandum to the faculty, Department of Preventive Medicine and Biometrics, dated 30 July 2001, and approved for implementation by the Chair of the Department.

For a manuscript that is substantially based on a graduate student's dissertation/thesis or independent research project that is conceived, designed, and conducted by the student, he or she will be listed as the primary or first author. Typically, a member of the USUHS faculty will serve as a project mentor or advisor. As a mentor, the faculty member works closely with the student on all phases of the research project, including directing, analyzing, writing, and drawing conclusions. Therefore, the mentor is usually considered the principal "scientific leader" and is listed as the last author.

To qualify as an author on a manuscript, an individual must have contributed to the following aspects of the project, specifically combining task (1) and (4) or task (3) and (4). Every "author" must have participated in writing and editing the paper.

1. Concept and design
2. Research and resources
3. Analysis and interpretation
4. Writing and editing

Individuals who make a contribution to only one of the above four aspects of manuscript preparation should be acknowledged in the paper. Similarly, individuals who participate in more than one aspect, but not in writing and editing, should be placed in the "acknowledgement" category. Avoid awarding "honorary authorship." It is unfair and dilutes credit from those who deserve authorship.In some instances, an individual may have contributed much more than technical support to the project and participated in some planning, data interpretation, and writing pertaining to their section of the paper. Biostatisticians or health care providers may fall into this category.

Author sequence or "author string" guidelines:

- Authorship issues should be addressed in the early phases of project design and development
- The first author has the key role in conducting the study, including data analysis and first draft of the manuscript
- The last author is almost always the "scientific leader" of the project (e.g., principal investigator of the grant under which the first author does the investigation or the project mentor)
- Other authors are listed by degree of participation in decreasing order
- When two or more individuals have made equal contributions to the paper, additional weight may be given to other considerations, such as whether or not faculty are in a tenure track position, etc.

Submission of manuscript for Departmental clearance/approval:

- Manuscripts to be submitted for publication require Departmental and possibly University, DoD, or higher-level clearance or approval (depending on content)
- Enumeration of author contributions should be attached to the clearance package

Uniformed Services University of the Health Sciences
Department of Preventive Medicine and Biometrics
USUHS Dept PMB Rm A1044
4301 Jones Bridge Road
Bethesda, MD 20814-4799

DATE

Manuscript Approval or Clearance

INITIATOR

1. USU Principal Author:
2. Faculty/Mentor Advisor:
3. Faculty Academic Title:
4. **Institution: School of Medicine, Department of Preventive Medicine and Biometrics**
5. Faculty Phone:
6. Type of Publication (Manuscript, Abstract, Poster, etc):
7. Publication Title and Author(s):

8. Enumeration of Author Contributions: Attach as separate document to this package (see memorandum for PMB faculty on authorship guidelines, dated 30 July 2001)
..9. Intended Journal, Meeting, Forum, etc. & Date:
10. Approval required by:
11. Date submitted for Department approval:

CHAIR OR DEPARTMENT HEAD APPROVAL

1. Name: Gerald V. Quinnan, Jr., M.D., CAPT, USPHS
2. **School of Medicine, Department of Preventive Medicine and Biometrics**
3. Date Submitted for USU approval:
4. ☐ Higher approval/clearance required (for University, DoD, or US Governmental-level policy,communication systems or weapons issues review*)

Note: *It is DoD policy that clearance of information or material shall be granted if classified areas are not jeopardized, and the author accurately portrays official policy, even if the author takes issue with that policy. Material officially representing the view or position of the University, DoD, or the Government is subject to editing or modification by the approving authority.*

☐ Chair or Department Head Approval

_____ _____

Gerald V. Quinnan, Jr., M.D. Date
CAPT, USPHS
Professor and Chair
(if approval or clearance is required, see other side of form)

DEAN APPROVAL

1. Name: Larry W. Laughlin, M.D., Ph.D.
2. Dean, F. Edward Hébert School of Medicine
3. Date :_____

4. ☐ Higher approval/clearance required (for university- DoD or US Governmental-level policy, communication systems or weapons issues review*)

Note: *It is DoD policy that clearance of information or material shall be granted if classified areas are not jeopardized, and the authors accurately portrays official policy, even if the author takes issue with that policy. Material officially representing the view or position of the University, DoD, or the Government is subject to editing or modification by the approving authority.*

☐ Dean Approval

_____
Larry W. Laughlin, M.D., Ph.D.
Dean, SOM

DIRECTORY, UNIVERSITY AFFAIRS (OUA) ACTION

1. Name: :_____
2. Date : _____

3. ☐ USU approved or

☐ DoD approval/clearance required

4. ☐ Submitted to DoD (Health Affairs) on: _____

Or

☐ Submitted to DoD (Public Affairs) on: _____

5. DoD approved/cleared (as written) or DoD approved/cleared (with changes)

6. DoD clearance/date: _____

7. DoD disapproval/date: _____

_____
Director, OUA Signature/Date

USUHS Form 5230 (VAM) 10/99—Modified

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Core Learning Objectives	PMO 505	PMO 530	PMO 540	PMO 680	PMO 503	PMO 511	PMO 526	PMO 671	PMO 504	PMO 672	PMO 673	PMO 670	PMO 674	PMO 681
BIOSTATISTICS														
Describe and interpret public health data using simple descriptive and graphical statistical methods, including exploratory data analysis (EDA) methods.	●			○	●			○	○	○	●	○	●	
Apply the concept of probability to statistical inference.					●				○	○	○		○	
Use the conditional probabilities of sensitivity, specificity, and predictive value to evaluate diagnostic and screening tests.					●				○		○		○	
Understand and appropriately apply major statistical probability distributions (binomial, Poisson, normal, Chi-square, Student's t, and F).					●				○	○	●		●	
Describe the appropriate use of sampling techniques, and the concept of the sampling distribution and its role in statistical inference.					●			●	○	●	●		●	
State the Central Limit Theorem and describe its use in statistics.					●				○					
Compute and interpret point and confidence interval estimates, based upon a given sample (or samples), for univariate and bivariate parametric and non-parametric situations.					●				○	○	○	○	○	
Compute and interpret hypothesis tests, based upon a given sample (or samples), for univariate and bivariate parametric and non-parametric situations.					●			○	○		●		●	

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Core Learning Objectives	PMO 505	PMO 530	PMO 540	PMO 680	PMO 503	PMO 511	PMO 526	PMO 671	PMO 504	PMO 672	PMO 673	PMO 670	PMO 674	PMO 681
Determine simple random sample size needed for a biomedical study by confidence interval and hypothesis testing approaches.					●			○	○	●	●	○	●	
Apply and interpret the analysis of contingency tables.		○						○	●	○	○		○	
Describe and interpret the linear association between two continuous variables using linear regression and correlation.		○						●	●	○	○		○	
Understand and apply basic principles of experimental design, including randomization, pairing, blocking, blinding, nesting, and replication.		○			●	○		●	●	○	○		○	
Extend the analysis of the difference between two population means to more than two means via analysis of variance and covariance.					○				●		○		○	
Use and interpret multiple regression to predict a dependent variable as the function of many independent predictors.		○			○			○	●	○	○		○	
Explain and apply appropriate statistical methods to the analysis of survival data.					○			○	●				○	
EPIDEMIOLOGY														
Define epidemiology and appropriately use the language of epidemiology.	○	○		○		●		●		●	●	●	●	
Understand the differences, advantages, and limitations of each of the following analytic and descriptive study designs: case series, ecologic, cross-sectional, case-control, cohort, and clinical trials.						●		●	●	●	●		●	

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Core Learning Objectives	PMO 505	PMO 530	PMO 540	PMO 680	PMO 503	PMO 511	PMO 526	PMO 671	PMO 504	PMO 672	PMO 673	PMO 670	PMO 674	PMO 681
Select the best study design to answer a specific question.						●		○		●	●	●	●	
Formulate clear case definitions and precise exposure measures in epidemiologic studies.		○	○			●		○		●	●		●	
Calculate and interpret statistical measures of association, including rate ratios/relative risks, odds ratios, and attributable risks.	○	○	○			●			○	○	○		○	
Evaluate and explain the impact that chance, bias, confounding, and effect modification, as well as statistical power, sampling methods, and sample size, have on epidemiologic findings and generalizability.					●	●		○		○	●		●	
Interpret and critically evaluate the scientific literature.	○	○			●	●		●	○	●	●	○	●	
Explain how to use epidemiological evidence to judge causal relationships among possible factors and health outcomes.						●		○		○	○		○	
Design and conduct a basic outbreak investigation, including data collection and analysis, interpretation of findings, and formulation of intervention recommendations.	○					●		○						
Calculate, graphically display, and interpret basic epidemiologic measures of disease frequency (epidemic curves, frequency counts, proportions, prevalence, attack rates, incidence, mortality, case fatality, and confidence intervals).	●	○				●		○		○	○		○	
Characterize disease patterns and trends within a population by describing “agent-host-environment” and “person-place-time” variables.						●		○				○	○	
Interpret sensitivity, specificity, predictive values, validity, and reliability for screening and confirmatory diagnostic tests.					●	●								

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Core Learning Objectives	PMO 505	PMO 530	PMO 540	PMO 680	PMO 503	PMO 511	PMO 526	PMO 671	PMO 504	PMO 672	PMO 673	PMO 670	PMO 674	PMO 681
Design and evaluate a basic survey instrument.	○	○			●	○				○				
Manipulate, merge, analyze, and interpret electronic data sets using spread sheets, databases, and other software in common use in epidemiology and public health.	●			○		○					●		●	○
Design, establish, and evaluate basic medical surveillance systems.	○					○		○					○	
Use epidemiology as a tool for the implementation and evaluation of preventive medicine and public health interventions.						○		○					○	
Identify sources of national, international, and military epidemiologic data.	●	○				○	○	●		●	○		○	
List the components of a proposal to conduct an epidemiological study, including specific aims, sample size consideration, and human subjects.						○								
Evaluate the ethical implications of epidemiologic and other scientific studies.		○		●	○	○								
ENVIRONMENTAL AND OCCUPATIONAL HEALTH														
Define environmental epidemiology, and discuss major regional and global environmental health problems in the context of their scientific, social, political and economic aspects.			●					○						

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Core Learning Objectives	PMO 505	PMO 530	PMO 540	PMO 680	PMO 503	PMO 511	PMO 526	PMO 671	PMO 504	PMO 672	PMO 673	PMO 670	PMO 674	PMO 681
Discuss basic toxicological principles as they apply to environmental health, including routes of exposure, factors that influence human effects, endpoints for toxicologic evaluation, and the establishment of human exposure limits.			○											
Discuss significant workplace environmental health issues, including the leading causes of workplace-related disease and injury, basic exposure control mechanisms, and workplace monitoring.		○	●					○				○		
Discuss the impact of air quality on human health, and describe the major sources of air pollutants, general means of reducing air pollution, and trade-offs associated with any control measure.			●											
Discuss the principal environmental health issues related to food, including food service facility inspections, types of contamination, major food borne illnesses, the essential components of food sanitation, and regulatory mechanisms to protect the safety of food supplies.			●											
Discuss the principal environmental health issues related to drinking water, including selection of sources, treatment and disinfection processes, alternative treatment methods, bacteriological monitoring, and regulatory mechanisms to insure appropriate water quality.			●											
Discuss the principal environmental health issues related to wastewater treatment, handling, disinfection, and disposal, describe the treatment processes in a wastewater plant, and discuss the public health aspects of sludge disposal options.			●											

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Core Learning Objectives	PMO 505	PMO 530	PMO 540	PMO 680	PMO 503	PMO 511	PMO 526	PMO 671	PMO 504	PMO 672	PMO 673	PMO 670	PMO 674	PMO 681
Discuss the principal environmental health issues related to solid waste, including major approaches to treatment, disposal, and recycling, regulatory requirements for hazardous and non-hazardous wastes, and incorporation of community input in site selection for waste disposal sites.			●											
Discuss the public health impact of principal disease vectors and hosts, and integrated pest management techniques.			●											
Discuss the leading causes of death and injury for adults and children in the U.S., and outline basic control mechanisms including industrial safety methods, analysis of accidents and injury control policies.		○	●					○						
Discuss the impact of major environmental health legislation on control of hazardous and toxic wastes and substances, the protection and regulation of air, water, food and drugs, and occupational safety and health.			●											
Discuss the basic methods, limitations, and applications of environmental risk assessment, risk management and risk communication.			●											
Describe the common sources of ionizing and non-ionizing radiation, quantification of dosage, basic biological effects, and methods for limiting human exposure.			●											
Discuss the health impact of global environmental issues such as ozone depletion, acid rain, global warming, deforestation, loss of biodiversity, topsoil erosion, wetland destruction, and land use changes associated with rapid development.			●											

PMB Learning Objectives

● Major learning objective ○ Objective addressed; not a major learning objective

Core Learning Objectives	PMO 505	PMO 530	PMO 540	PMO 680	PMO 503	PMO 511	PMO 526	PMO 671	PMO 504	PMO 672	PMO 673	PMO 670	PMO 674	PMO 681
HEALTH SERVICES ADMINISTRATION														
Discuss the evolution of the current U.S. health care system, including the military health care system, and explain the effect of medical, fiscal, administrative, legal, social, and political issues on major transitions.				○			●							○
Identify the macroeconomic factors that influence the need, demand, and cost of medical care and discuss how these factors have led to rapid growth in U.S. health care expenditures.		○					●							
Describe the mechanisms for financing healthcare organizations, to include reimbursement of professionals and institutions by third-party payers, and assess their relationship to cost containment.							●							
Describe the organization of health care services in the U.S., addressing types of facilities (hospitals, outpatient clinics, hospital emergency departments, community health centers, surgicenters, urgent care centers) and levels of care (acute, convalescent, extended care, home care).							●	○						○
Describe the dimensions of health care quality assessment.		○					●							
Describe the legislative process and how laws are enacted that affect the U. S. health care system.							●							
Describe the concept of outcomes measurement in medical care and its application to management of the health care organization.							●	○						

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Core Learning Objectives	PMO 505	PMO 530	PMO 540	PMO 680	PMO 503	PMO 511	PMO 526	PMO 671	PMO 504	PMO 672	PMO 673	PMO 670	PMO 674	PMO 681
Describe available government and non-governmental programs for financing, delivering, and assessing health care in America.	○						●							
Discuss the impact of advancing medical technology on the delivery of health care services.							●							
Compare international health service systems, and describe the essential differences between the health services systems in industrialized versus developing countries.							●							○
SOCIAL AND BEHAVIORAL SCIENCES														
Describe how behavior contributes to national patterns of morbidity and mortality.		●		○			○	○				○	○	
Discuss means of reducing risk behaviors, and promoting health behaviors, which have received empirical support in the scientific literature.		●		○				○						○
Identify challenges inherent in measuring risk behavior and how to increase the validity of such measurement.		●						○						
Explain the importance of assessing a target audience's knowledge, attitudes and practices prior to attempting to influence their health-related behaviors.		●												
Cite cognitive factors, other than knowledge, which influence health-related behaviors.		●												
Discuss how social determinants such as socioeconomic status, culture, and social support can influence health.		●												

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Core Learning Objectives	PMO 505	PMO 530	PMO 540	PMO 680	PMO 503	PMO 511	PMO 526	PMO 671	PMO 504	PMO 672	PMO 673	PMO 670	PMO 674	PMO 681
Analyze a health behavior problem from a sound theoretical perspective.		●						○						
Perform analyses that reflect an appreciation for the ways in which intrapersonal, interpersonal, organizational and societal influences act together to threaten or promote health.		●												

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

II a. Concentration Specific Objectives - Epidemiology/Biostatistics

Upon completion of the Epidemiology/Biostatistics concentration, in addition to meeting the objectives described in the core curriculum, students will be able to:

	Epidemiology and Biostatistics Courses							
Concentration Specific Objectives	PMO 504	PMO 512	PMO 513	PMO 514	PMO 515	PMO 519	PMO	PMO
Demonstrate understanding of how study design influences or determines the use of specific analytic techniques		●						
Understand the natural history and risk factors for important infectious and/or non-infectious conditions and diseases				●	●	●		
Understand strategies to prevent or reduce the incidence and/or consequence of important infectious and/or non-infectious conditions and diseases				●	●	●		
Understand the principles of, and able to perform, a systematic review and meta analysis		●						
Discuss fully the intricacies of various epidemiologic study designs including their strengths, weakness, and appropriateness to address specific research hypotheses		●						
Describe in detail the influence of bias and confounding and how they may affect the inferences that can be made in epidemiologic studies.		●	●					
Understand the ways in which the investigator anticipates and accounts for likely sources of bias (selection, observation, and confounding) in a specific epidemiologic study		○	●					
Understand in detail the theory and application of important epidemiologic analytic tools, including stratification, linear regression, logistic regression, Poisson regression, and Cox proportional hazards regression	●	○	●					
Describe in detail the principle of interaction/effect modification and how to evaluate its' presence using univariate and multivariate analyses		●	●					
Understand how to evaluate if data meet the assumptions of a particular regression model			●					
Understand how to evaluate the adequacy and goodness of fit of a particular regression model			●					

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

III b1. MSPH Environmental and Occupational Health Concentration Objectives

In addition to the Environmental Health Core Objectives, MSPH students in the Industrial Hygiene concentration will be able to:

Concentration Specific Objectives	PMO 549	PMO 550	PMO	PMO	PMO	PMO	PMO	PMO
Anticipate and recognize workplace hazards using appropriate information resources.	○	●						
Evaluate exposures to physical, biological, and chemical agents of concern to environmental and occupational health professionals.	●	●						
Discuss principles of toxicology and how they relate to exposures.	●	○						
Describe exposure standards for environmental and occupational hazards.	●	●						
Design, implement, and evaluate engineering control measures for specific hazards.	○	●						
Prioritize hazard abatement and select appropriate control methods, considering overall effectiveness and cost.	○	●						
Perform an environmental health risk assessment according to US EPA guidelines.	○	○						
Perform standard environmental chemical analyses and understand the capabilities and limitations of the test procedures.								
Explain the complex issues associated with environmental exposure surveillance during deployments, function as a staff officer or field scientist during a military deployment, and develop and implement environmental exposure surveillance.								
Pass comprehensive Board Examinations.								

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Core Learning Objectives – Environmental and Occupational Health Track Courses – DR. LAPUMA

b. Core Learning Objectives - Environmental and Occupational Health: DR. LAPUMA	PMO 540	PMO 549	PMO 550
Define environmental epidemiology, and discuss major regional and global environmental health problems in the context of their scientific, social, political and economic aspects.	●	○	○
Discuss basic toxicological principles as they apply to environmental health, including routes of exposure, factors that influence human effects, endpoints for toxicologic evaluation, and the establishment of human exposure limits.	○	●	●
Discuss significant workplace environmental health issues, including the leading causes of workplace-related disease and injury, basic exposure control mechanisms, and workplace monitoring.	●	●	●
Discuss the impact of air quality on human health, and describe the major sources of air pollutants, general means of reducing air pollution, and trade-offs associated with any control measure.	●	●	○
Discuss the principal environmental health issues related to food, including food service facility inspections, types of contamination, major food borne illnesses, the essential components of food sanitation, and regulatory mechanisms to protect the safety of food supplies.	●	○	○
Discuss the principal environmental health issues related to drinking water, including selection of sources, treatment and disinfection processes, alternative treatment methods, bacteriological monitoring, and regulatory mechanisms to insure appropriate water quality.	●	○	○
Discuss the principal environmental health issues related to wastewater treatment, handling, disinfection, and disposal, describe the treatment processes in a wastewater plant, and discuss the public health aspects of sludge disposal options.	●	○	○
Discuss the principal environmental health issues related to solid waste, including major approaches to treatment, disposal, and recycling, regulatory requirements for hazardous and non-hazardous wastes, and incorporation of community input in site selection for waste disposal sites.	●	○	○
Discuss the public health impact of principal disease vectors and hosts, and integrated pest management techniques.	●	○	○
Discuss the leading causes of death and injury for adults and children in the U.S., and outline basic control mechanisms including industrial safety methods, analysis of accidents and injury control policies.	●	●	●

PMB Learning Objectives

● Major learning objective ○ Objective addressed; not a major learning objective

b. Core Learning Objectives - Environmental and Occupational Health: DR. LAPUMA	PMO 540	PMO 549	PMO 550
Discuss the impact of major environmental health legislation on control of hazardous and toxic wastes and substances, the protection and regulation of air, water, food and drugs, and occupational safety and health.	●	●	●
Discuss the basic methods, limitations, and applications of environmental risk assessment, risk management and risk communication.	●	●	○
Describe the common sources of ionizing and non-ionizing radiation, quantification of dosage, basic biological effects, and methods for limiting human exposure.	●	●	●
Discuss the health impact of global environmental issues such as ozone depletion, acid rain, global warming, deforestation, loss of biodiversity, topsoil erosion, wetland destruction, and land use changes associated with rapid development.	●	○	○

II c. Concentration Specific Objectives—Occupational Ergonomics

Upon completion of the Occupational Ergonomics concentration, in addition to meeting the core curriculum objectives, students will be able to:

	Occupational Ergonomics Courses							
Concentration Specific Objectives	PMO 652	PMO 654	PMO 655	PMO	PMO	PMO	PMO	PMO
Describe the interactions among worker, workplace and work tasks and discuss how these interactions impact work, health and functional outcomes.	●	●	●					

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Concentration Specific Objectives	Occupational Ergonomics Courses							
	PMO 652	PMO 654	PMO 655	PMO	PMO	PMO	PMO	PMO
Identify sources of ergonomic exposures in workplace, tasks, tools and equipment design.	●	○	○					
Utilize various ergonomic assessment tools for analyzing task demands and human performance and apply this knowledge to various military work situations and environments.	●	○	○					
Describe various strategies for preventing, mitigating and controlling ergonomic-related musculoskeletal risk factors in the workplace.	●	●	●					
Describe regulations, polices and standards within the Department of Defense (DoD) and Federal agencies, involved in ergonomics and workplace safety.	●	●	●					
Conduct qualitative and quantitative analyses of systems, operations and activities to identify workplace hazards associated with risk of injury.	●	●	●					
Identify physical, cognitive, perceptual, cognitive and behavioral factors to be addressed in system design.	●	●	○					
Discuss theoretical and conceptual bases for various ergonomic analysis techniques.	●	○	○					
Integrate theoretical and applied aspects of ergonomics in developing solutions for commonly observed situations in the workplace.	○	○	○					
Develop and write a protocol for an ergonomics program that can be implemented in a military work setting.	●	○	○					
Communicate effectively, both in writing and orally, current issues related to ergonomics.	●	●	●					
Work in interdisciplinary groups to address specific issues related to ergonomics within military and DoD workplace environments.	●	●	●					

II d. Concentration Learning Objectives – Health Services Administration

In addition to the Core Learning Objectives for the MPH student, upon completion of the MPH, every student in the HSA concentration will be able to:

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Concentration Specific Objectives	PMO 523	PMO 524	PMO 526	PMO 527	PMO 529	PMO 532	PMO 533	PMO 535
Analyze the evolution of the current U. S. health care system and the effect of medical fiscal administrative, legal, social and political issues on major transitions.	●	●	●	○	○	●		○
Assess financing mechanisms for health care service in the U.S.	○	○	●	●	●			
Characterize three types of health maintenance organizations (HMO).		○	●	○				
Compare and contrast cost control measures under managed care and traditional medical care systems. Formulate health services policy, including the collection and summarization of data relevant to an issues; statement of policy options; and determination of the feasibility and expected outcome of the policy options.	●		●					
Manage a health program under and enrollment-based capitation plan, including human and fiscal resources.		●	○		●		○	
Apply the concept of outcomes assessment to health service management.		●	●		○	●	●	
Develop quantitative models that describe program functioning to support decision-making.		○	○	○	●	●	●	
Develop and implement a program evaluation plan.		●	○		○			
Develop, implement, and monitor a plan for a deployed force to interact with and support the local health care Infrastructure of the host country.	○		○					○
Conduct cost-benefit analyses of programmatic interventions and impact analysis of programmatic changes.	○		○		●			
Conduct legislative program impact analysis.	○							
Describe the Federal annual budget process and its impact on the DoD health services system.			○		●			
Develop and present program budget plans.					●			
Develop and implement a continuous quality improvement plan for a particular process of care, health care service, or medical treatment facility.		○				●	○	
Implement and evaluate a clinical guidelines program, the JCAHO Oryx program, or the NCQA HEDIS program.						●	○	
Describe the major management theories that pertain to health services administration.		●	●	●				

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Concentration Specific Objectives	PMO 523	PMO 524	PMO 526	PMO 527	PMO 529	PMO 532	PMO 533	PMO 535
Discuss the major issues involved in personnel management within the health care industry.		○	○	●				
Identify the medical information management needs of a health care organization.		○	○	●			●	
Define the major legal concepts that pertain to medical care (e.g. standard of care; informed consent; medical records; confidentiality; licensing, credentialing, and privileging; litigation).			○					●
Identify important legal issues that could potentially impact health care delivery (e.g. liability of health care providers, administrative law for health care organizations; rights of patients; federal, state, and local government regulations).	●		○					●
Describe the various statutes governing the U. S. civilian health care system and the DoD health care system.	○		○					●
Discuss ethical considerations as they pertain to current and emerging topics of public health important (e.g. reproduction issues, maternal and fetal rights, experimental treatments, organ transplantation, death, health care rationing).				○				●
Use a framework to characterize the health care system of a particular nation or geographic region or to compare the health services systems of different countries.			●					○
Describe the major differences between health care services in developed and developing nations.			●					
Identify major international assistance programs within the health care sector and the important cultural issues that may impact program effectiveness.			●					

Core Learning Objectives	PMO 523	PMO 524	PMO 526	PMO 527	PMO 529	PMO 532	PMO 533	PMO 535
Health Services Administration								
Discuss the evolution of the current U. S. health care system, including military health care system, and explain the effect of medical fiscal administrative, legal, social and political issues on the major transitions	○	○	●	○	○	●		○
Identify the factors that influence the need, demand, and cost of medical care and discuss how these factors have led to rapid growth in U.S. health care expenditures	●	●	●	●	●	●	○	○

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Describe the mechanisms for financing healthcare organizations, to include reimbursement of professionals and institutions by third-party payers, and assess their relationship to cost containment.	○	○	●	●	●		○	
Describe the organization of health care services in the U.S., addressing types of facilities (hospitals, outpatient clinics, hospital emergency departments, community health centers, surgicenters, urgent care centers) and levels of care (acute, convalescent, extended care, home care).		○	●	○	○	●		
Describe the dimensions of health care quality assessment.		●	●		○	●	○	
Describe the legislative process and how laws are enacted that affect the U.S. health care system.	●	●	●	○	○	●		●
Describe the concept of outcomes measurement in medical care and its application to management of health care organization.	○	○	●	●	●	●	○	
Describe available governmental and non-governmental programs for financing, delivering and assessing health care in America.	○		●	●	●	●	●	
Discuss the impact of advancing medical technology on the delivery of health care services.		○	●	●	●	○	○	
Compare international health service systems, and describe the essential differences between the health services systems in industrialized versus developing countries			●					

II e. Concentration Specific Objectives - Aerospace Physiology

In addition to meeting the objectives described in the core curriculum, every student completing the Aerospace Physiology Concentration will be able to:

Concentration Specific Objectives	PMO 841	PMO 842	PMO 845	PMO 846	PMO 847	PMO 848	PMO 849
Discuss the physiologic implications of the environmental pressure continuum.	●	○				○	○
Discuss the human factors principles important in the aerospace arena.	○	●	●				●
Apply human factors analysis to aerospace physiologic problems.	●	●	●			●	●
Apply human factors analysis to anthropometric problems.		○	●				●
Discuss and apply the principles of mishap investigation.	○	●	●				

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Concentration Specific Objectives	PMO 841	PMO 842	PMO 845	PMO 846	PMO 847	PMO 848	PMO 849
Recognize the relative value of the information found in the literature.	●	●	●	●	●	●	●
Interpret data collected in a research, an operational, and/or a mishap setting.	●	●	●	●	●	●	●
Communicate coherently and logically in both the oral and written format	●	●	●	●	●	●	●

II f. General Ethics Course Specific Objectives

Concentration Specific Objectives	PMO 991						
Articulates the values and beliefs, and subsequent ethical principles, inherent to a public health perspective, including: a belief in the interdependence of people and between people and their environment; the importance of addressing root causes of health and illness; the use of the scientific method for gaining information; and the importance of acting upon reliable information when the resources are available to do so.	●						
Recognizes the public health mandates and powers given to public health institutions.	●						
Recognizes the ethical tensions within public health, such as the underlying, irresolvable tension between ethical principles (e.g. the need to protect the health of an entire community and the need to honor the rights of individuals in the community).	●						
Articulates the historical ethical failures and triumphs, and the purposes of research ethics institutions.	●						
Applies ethics to specific topics such as informatics and genomics.	●						

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

II h. Concentration Learning Objectives – Tropical Public Health: DR. KEEP

In addition to the Core Learning Objectives for the MPH student, upon completion of the MPH, every student in the TPH concentration will be able to:

Concentration Specific Objectives	PMO 504	PMO 512	PMO 514*	PMO 528**	PMO 539**	PMO 560	PMO 561	PMO 564	PMO 565	PMO 567	PMO 569	PMO 573	PMO 577	PMO 578	PMO 613	PMO 614	PMO 661	PMO 990
Characterize the epidemiology, pathogenesis, public health impact and control of the 10 most common infectious diseases of the developing world, including malaria, HIV, tuberculosis, diarrhea, sexually transmitted diseases, and emerging diseases.		●				●			○		●					●		
Discuss the epidemiology, diagnosis, and treatment of important protozoal diseases, such as malaria, leishmaniasis, and trypanosomiasis.			○			●	●		○		●		○	○		●	○	
Discuss the epidemiology, diagnosis, and treatment of important viral diseases, such as dengue, HIV, hepatitis, influenza, and yellow fever.			○			●		●	○			○				●		
Discuss the epidemiology, diagnosis, and treatment of important bacterial diseases, such as tuberculosis, meningitis, and gonorrhea.			○			●			○			○				●		
Apply epidemiological principles and investigative procedures to identify and analyze emerging disease outbreaks.	●	●				○			○		●		○	○	○	○		○
Describe the medical infrastructure of major regions of the tropics, including local health operations, foreign government institutions and non-government organizations.				●	●	○									●			○
Develop a practical and comprehensive prevention and control program for common tropical public health problems.						●	●	●	○		●	○	○	○	○	○		
Explain the impact of local culture, religion, family structure, and alternative medical customs in major regions of the tropics.				●	●	○									●	○		
List the major environmental hazards of the tropics, including plants and animals, extremes of temperature and altitude, and toxic chemicals.						○			○							○		●
Describe environmental variables involved in the maintenance of vector populations and disease transmission.								●	●	●	●		○	○			○	
Characterize the behavioral and ecological conditions that contribute to efficient transmission of vector-borne diseases to humans (conditions that favor human and vector contact).			○					●	●	●	●		○	○			○	
Discuss the principles of disease nidality and vector incrimination.								○	●	○	○							

PMB Learning Objectives

● **Major learning objective** ○ **Objective addressed; not a major learning objective**

Concentration Specific Objectives	PMO 504	PMO 512	PMO 514*	PMO 528**	PMO 539**	PMO 560	PMO 561	PMO 564	PMO 565	PMO 567	PMO 569	PMO 573	PMO 577	PMO 578	PMO 613	PMO 614	PMO 661	PMO 990
Define biological and mechanical transmission and be able to discuss characteristics of major arthropod-borne diseases by type of biological transmission.								●	●	○								
Know and understand the categories, and the major morphological and physiological characteristics of arthropods, with emphasis on those characteristics that distinguish and define insect and arachnid vectors of human disease.									●									
Describe the epidemiology, diagnosis, treatment, prevention, and control of various parasite zoonoses that affect humans.			○			○	●										○	
Use various laboratory techniques to establish the diagnosis of zoonotic parasitic diseases and the four human-infection plasmodia in humans.							●				●							
Describe the morphology and life cycle of the malaria parasite(s) in humans and mosquitoes.						●	●		○		●							○
List different anti-malarials, describe their mode(s) of action, and discuss their worldwide use in drug prophylaxis and treatment.						●					●					○		●
Describe the life stages of anopheline mosquitoes and their general morphology, physiology, behavior, and habits, as related to malaria transmission, surveillance, prevention, and control.									●		●							
Explain the major biological and environmental factors affecting malaria transmission in different ecological situations.									○		●							
Explain the history, principles, successes and failures of malaria control versus malaria eradication and how they apply to current programs and to the future; to include consideration of new technologies (e.g., remote sensing/GIS programs).									○		●		○	○				

* EPI BIO course (PMO 514 Epidemiology and Control of Infectious Diseases)
** HSA courses (PMO 528 International Health I, PMO 539 International Health II)

September 20, 2004

Assessing the Core Competencies Expected of Graduates of USUHS Master Degree Programs in Public Health

Summary. For USU graduate programs leading to the MPH, MSPH, and MTM&H degrees, we expect our students upon graduation to have middle to high level competencies in most of the domains and content areas that were assessed. We expect all our graduates to be able to apply and describe the skills or concepts, and many to be proficient, in five major areas: analytic and assessment skills; cultural competency skills; communication; basic public health sciences; and informatics. Genomics was the only content area where the expectation was to identify the concepts or skills but have limited ability to perform the skills.

Methods. PMB's Graduate Advisory Committee directed an assessment of the competencies expected of graduates of our academic programs in public health. As part of the process, lead faculty for each academic program were asked to assess the expected competencies of graduates in their academic program using the Core Competencies for Public Health Professionals developed by the Council on Linkages Between Academia and Public Health Practice (http://www.trainingfinder.org/competencies/list.htm) and additional competencies identified in the Institute of Medicine's report *Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century* **(**Gebbie KM, Rosenstock L, Hernandez LM. Washington, DC: National Academies Press, 2003).

The following lead faculty were identified and responded for each academic program (degree and track/concentration combination):

Degree	Track/Concentration	Lead faculty
MPH	Aerospace physiology	CAPT Johanson
MPH	Biostatistics & epidemiology	COL Lipnick
MPH	Environmental & occupational health	Col Neal
MPH	General preventive medicine & public health	Col Gackstetter
MPH	Health services administration	Dr. Barbour/LCDR Shepherd
MPH	International health	Col Turner
MPH	Tropical public health	LTC Keep
MPH	Occupational ergonomics	COL Lopez/CPT Daniels
MTM&H	--	LTC Keep
MSPH	Environmental & occupational health	Lt Col LaPuma
MSPH	Health physics	Maj Nemmers
MSPH	Medical entomology	Dr. Andre

For each concept or skill, lead faculty identified whether a graduate of their track/concentration was expected to be "aware," "knowledgeable," or "proficient." Per the Core Competencies for Public Health Professionals, these were defined as:

Aware—Basic level of mastery of the competency. Individuals may be able to identify the concept or skill but have limited ability to perform the skill.
Knowledgeable—Intermediate level of mastery of the competency. Individuals are able to apply and describe the skill.
Proficient—Advanced level of mastery of the competency. Individuals are able to synthesize, critique or teach the skill.
Not applicable was a fourth response option.

Responses for the 12 degree/track/concentration were tabulated and synthesized to identify whether a high, middle, or low level of competency was expected for each concept or skill. A high level competency is defined as an expectation that all graduates are able to apply and describe the skill (knowledgeable) and, depending on the track/program, many graduates are able to synthesize, critique or teach the skill (proficient). A middle level competency is defined as an expectation that all graduates are able to identify the concept or skill (aware) and many graduates are able to apply and describe the skill (knowledgeable). A low level competency is an expectation that all students are able to identify the concept or skill but have limited ability to perform the skill (aware).

Results. For the major domain and content areas, Table 1 reports a synthesis of the level of competency expected of graduates of the master degree programs within all track/concentration combinations. Table 2 reports the same synthesis of level of competency for each skill, concept or attitude within each domain and content area.

Table 1. Level of competency expected of graduates by domain/content area.

Domain/Content Area	**Level of competency**
Domain #1 – Analytic Assessment Skills	High
Domain #2 – Policy Development/Program Planning Skills	Middle
Domain #3 – Communication Skills	Middle to High
Domain #4 – Cultural Competency Skills	High
Domain #5 – Community Dimensions of Practice Skills	Middle
Domain #6 – Basic Public Health Sciences Skills	Middle to High
Domain #7 – Financial Planning and Management Skills	Middle
Domain #8 – Leadership and Systems Thinking Skills	Middle
Content Area – Informatics	Middle to High
Content Area – Genomics	Low
Content Area – Communication	Middle
Content Area – Community-Based Participatory Research	Middle
Content Area – Global health	Middle
Content Area – Public Health Ethics	Middle

Level of competency:

- High—an expectation that all graduates are able to apply and describe the skill (knowledgeable) and, depending on the track/program, many graduates are able to synthesize, critique or teach the skill (proficient).
- Middle—an expectation that all graduates are able to identify the concept or skill (aware) and many graduates are able to apply and describe the skill (knowledgeable).
- Low—an expectation that all graduates are able to identify the concept or skill but have limited ability to perform the skill (aware).

Table 2. Level of competency expected of graduates by skills or attitudes within each domain/content area.

Domain #1 **Analytic Assessment Skills**	**Level of competency**
1. Defines a problem	High
2. Determines appropriate uses and limitations of both quantitative and qualitative data	High
3. Selects and defines variables relevant to defined public health problems	High
4. Identifies relevant and appropriate data and information sources	High
5. Evaluates the integrity and comparability of data and identifies gaps in data sources	High
6. Applies ethical principles to the collection, maintenance, use, and dissemination of data and information	High
7. Partners with communities to attach meaning to collected quantitative and qualitative data	High
8. Makes relevant inferences from quantitative and qualitative data	High
9. Obtains and interprets information regarding risks and benefits to the community	High
10. Applies data collection processes, information technology applications, and computer systems storage/retrieval strategies	High
11. Recognizes how the data illuminates ethical, political, scientific, economic, and overall public health issues	High
Domain #2 **Policy Development/Program Planning Skills**	
1. Collects, summarizes, and interprets information relevant to an issue	High
2. States policy options and writes clear and concise policy statements	Middle
3. Identifies, interprets, and implements public health laws, regulations, and policies related to specific programs	Middle
4. Articulates the health, fiscal, administrative, legal, social, and political implications of each policy option	Middle
5. States the feasibility and expected outcomes of each policy option	Middle
6. Utilizes current techniques in decision analysis and health planning	Middle
7. Decides on the appropriate course of action	Middle
8. Develops a plan to implement policy, including goals, outcome and process objectives, and implementation steps	Middle
9. Translates policy into organizational plans, structures, and programs	Middle
10. Prepares and implements emergency response plans	Middle
11. Develops mechanisms to monitor and evaluate programs for their effectiveness and quality	Middle

Domain #3 **Communication Skills**	**Level of competency**
1. Communicates effectively both in writing and orally, or in other ways	High
2. Solicits input from individuals and organizations	High
3. Advocates for public health programs and resources	Middle
4. Leads and participates in groups to address specific issues	Middle
5. Uses the media, advanced technologies, and community networks to communicate information	Middle
6. Effectively presents accurate demographic, statistical, programmatic, and scientific information for professional and lay audiences	High
Attitudes	
1. Listens to others in an unbiased manner, respects points of view of others, and promotes the expression of diverse opinions and perspectives	High
Domain #4 **Cultural Competency Skills**	
1. Utilizes appropriate methods for interacting sensitively, effectively, and professionally with persons from diverse cultural, socioeconomic, educational, racial, ethnic and professional backgrounds, and persons of all ages and lifestyle preferences	High
2. Identifies the role of cultural, social, and behavioral factors in determining the delivery of public health services	High
3. Develops and adapts approaches to problems that take into account cultural differences	High
Attitudes	
1. Understands the dynamic forces contributing to cultural diversity	Middle
2. Understands the importance of a diverse public health workforce	Middle

Domain #5 **Community Dimensions of Practice Skills**	**Level of competency**
1. Establishes and maintains linkages with key stakeholders	Middle
2. Utilizes leadership, team building, negotiation, and conflict resolution skills to build community partnerships	Middle
3. Collaborates with community partners to promote the health of the population	Middle
4. Identifies how public and private organizations operate within a community	Middle
5. Accomplishes effective community engagements	Middle
6. Identifies community assets and available resources	Middle
7. Develops, implements, and evaluates a community public health assessment	Middle
8. Describes the role of government in the delivery of community health services	Middle
Domain #6 **Basic Public Health Sciences Skills**	**Level of competency**
1. Identifies the individual's and organization's responsibilities within the context of the Essential Public Health Services and core functions	Middle
2. Defines, assesses, and understands the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention, and factors influencing the use of health services	High
3. Understands the historical development, structure, and interaction of public health and health care systems	Middle
4. Identifies and applies basic research methods used in public health	High
5. Applies the basic public health sciences including behavioral and social sciences, biostatistics, epidemiology, environmental public health, and prevention of chronic and infectious diseases and injuries	High
6. Identifies and retrieves current relevant scientific evidence	High
7. Identifies the limitations of research and the importance of observations and interrelationships	High
Attitudes	
1. Develops a lifelong commitment to rigorous critical thinking	High

Domain #7 **Financial Planning and Management Skills**	**Level of competency**
1. Develops and presents a budget	Middle
2. Manages programs within budget constraints	Middle
3. Applies budget processes	Middle
4. Develops strategies for determining budget priorities	Middle
5. Monitors program performance	Middle
6. Prepares proposals for funding from external sources	Middle
7. Applies basic human relations skills to the management of organizations, motivation of personnel, and resolution of conflicts	Middle
8. Manages information systems for collection, retrieval, and use of data for decision-making	Middle
9. Negotiates and develops contracts and other documents for the provision of population-based services	Middle
10. Conducts cost effectiveness, cost benefit, and cost utility analyses	Middle
Domain #8 **Leadership and Systems Thinking Skills**	
1. Creates a culture of ethical standards within organizations and communities	Middle
2. Helps create key values and shared vision and uses these principles to guide action	Middle
3. Identifies internal and external issues that may impact delivery of essential public health services (i.e. strategic planning)	Middle
4. Facilitates collaboration with internal and external groups to ensure participation of key stakeholders	Middle
5. Promotes team and organizational learning	Middle
6. Contributes to development, implementation, and monitoring of organizational performance standards	Middle
7. Uses the legal and political system to effect change	Low
8. Applies theory of organizational structures to professional practice	Middle

Level of competency:

- High—an expectation that all graduates are able to apply and describe the skill (knowledgeable) and, depending on the track/program, many graduates are able to synthesize, critique or teach the skill (proficient).
- Middle—an expectation that all graduates are able to identify the concept or skill (aware) and many graduates are able to apply and describe the skill (knowledgeable).
- Low—an expectation that all graduates are able to identify the concept or skill but have limited ability to perform the skill (aware).

Institute of Medicine (IOM) Content Area Competencies for Public Health Professionals

Adapted from: Kristine Gebbie, Linda Rosenstock, and Lyla M. Hernandez, *Editors.* Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century. Committee on Educating Public Health Professionals for the 21st Century, Board on Health Promotion and Disease Prevention, Institute of Medicine. 2003, Washington, DC, The National Academies Press.

Content Area—Informatics	**Level of competency**
Uses IT tools for the full range of electronic communication appropriate to one's programmatic area	High
Uses IT tools to identify, locate, access, assess, and appropriately interpret and use on-line public health-related information and data	High
Applies relevant procedures to ensure that confidential information is appropriately protected	High
Uses distance learning to support life-long learning	Middle
Uses IT as a strategic tool to promote public health	Middle
Recognizes the role of information systems in improving the effectiveness of the public health enterprise	Middle
Content Area—Genomics	
Applies the basic public health sciences to genomic issues and studies and genetic testing, using the genomic vocabulary to attain the goal of disease prevention	Low
Identifies ethical and medical limitations to genetic testing, including uses that don't benefit the individual	Low
Maintains up-to-date knowledge on the development of genetic advances and technologies relevant to an individual in his/her specialty or field of expertise and learns the uses of genomics as a tool for achieving public health goals related to that person's field or area of practice	Low
Identifies the role of cultural, social, behavioral, environmental, and genetic factors in the development of disease, in disease prevention, and in health promoting behaviors, and identifies the impact of these factors on medical service organization and delivery of services to maximize wellness and prevent disease	Middle
Participates in strategic policy planning and development related to genetic testing or genomic programs	Low
Collaborates with existing and emerging health agencies and organizations, and academic, research, private, and commercial enterprises, including genomic-related businesses, agencies and organizations and community partnerships to identify and solve genomic-related problems	Low
Participates in evaluation of program effectiveness, accessibility, cost-benefit, cost effectiveness, and quality of personal and population-based genomic services in public health	Low
Develops protocols to ensure informed consent and human subject protection in research	Middle

Content Area—Communication	**Level of competency**
Uses different communication skills to interact with various publics, including co-workers, elected officials and policymakers, health care providers, media, and lay citizens	High
States the case for public health programs and activities, drawing upon knowledge of the history of public health promotion and research efforts associated with a topic, an audience, and one's own agency and area	High
Conducts audience analysis to assess perceptions associated with "risk" (voluntary, control, distribution equity, natural) and audience perspectives of costs versus benefits of health-promoting behaviors and policies	Middle
Assesses innovative formative evaluation strategies to uncover individual, community, and societal models associated with health and health care issues, and implicit costs versus benefits of healthy and unhealthy habits	Middle
Assesses how information is being collected from the public, keeping these to a minimum to enhance disclosure	Low
Uses mass media strategically in combination with community organizing to advance public health policies through media advocacy, targeting policymakers, organizations, and/or legislative bodies	Low
Frames public health problems as social inequities to derive policy solutions, as well as apply news values and advertising principles to design stories about these public health issues for media outlets	Middle
Identifies people, groups, and/or organizations that have the authority, power, and influence to create and change policy, and work with them to increase exposure and reach of messages	Middle
Works effectively with media gatekeepers to build media partnerships and access strategies and in designing and conducting media evaluation research	Middle
Applies ethical principles to communication about health and health information	High
Evaluates strategic communication for evidence that information is being distorted to achieve public health aims	Middle
Assesses for unintended outcomes that may occur as a result of communication	Middle

Content Area—Community-Based Participatory Research	**Level of competency**
Promotes active community involvement in the processes that shape research and intervention strategies, and in the conduct of research studies	Middle
Conducts research that maximizes the participants' ability to make informed decisions; assures that participation is voluntary; reveals openly all ramifications of the research; and accommodates community concerns about design or conduct of the research	Middle
Utilizes team building, group process, negotiation, developing consensus, teaching, interpersonal communication, and political acumen to gain entrée into the community and to foster cooperation and trust among various community groups	Middle
Content Area—Global health	
Articulates global health issues and their determinants, and how local actions can have health impacts across the globe	Middle
Works with individuals from other countries to solve the problems facing our global community	Middle
Content Area—Public Health Ethics	
Articulates the values and beliefs, and subsequent ethical principles, inherent to a public health perspective, including: a belief in the interdependence of people and between people and their environment; the importance of addressing root causes of health and illness; the use of the scientific method for gaining information; and the importance of acting upon reliable information when the resources are available to do so	Middle
Recognizes the public health mandates and powers given to public health institutions	Middle
Recognizes the ethical tensions within public health, such as the underlying, irresolvable tension between ethical principle (e.g., the need to protect the health of an entire community and the need to honor the rights of individuals in the community)	Middle
Articulates the historical ethical failures and triumphs, and the purposes of research ethics institutions	Middle
Applies ethics to specific topics such as informatics and genomics	Middle

Level of competency:

- High—an expectation that all graduates are able to apply and describe the skill (knowledgeable) and, depending on the track/program, many graduates are able to synthesize, critique or teach the skill (proficient).
- Middle—an expectation that all graduates are able to identify the concept or skill (aware) and many graduates are able to apply and describe the skill (knowledgeable).
- Low—an expectation that all graduates are able to identify the concept or skill but have limited ability to perform the skill (aware).

Appendix VI-1. PMB Faculty Research (1 January 2002 to 31 December 2004)

Division of Epidemiology and Biostatistics

Title: "SD Class Prediction by Gene Expression Profiles"
Funding agency: NSF
Start and End dates: 8/1/2003---7/31/2006
Amount of funds: $100,000
Short description of purpose: Study class prediction by gene expression profiles
Is this community based? No
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? No

Title: "What is the relationship between military deployment and self-assessed health status?"
Funding agency: USUHS starter grant (R087PW)
Start and End dates: May 2002 - present
Amount of funds: $13,030
Short description of purpose: Of 17,721 military members who completed major deployments in 1999, 1.9% self-reported fair or poor health; 1.2% had sought or planned to seek care for mental health concerns; 3 to 7% reported that they had other health concerns or conditions; and 15% self-reported at least one measure of low health or health concern. Deployers who reported fair or poor health were over two times more likely to have 5 or more outpatient visits, but were not more likely to be hospitalized or separate from military service, during the 6-month period after they returned from deployment. Part 1 of this study will examine self-reported post-deployment health in a larger, more recent population of deployers and determine their health outcomes and health care utilization for at least one year after their return from deployment. Part 2 of this study will examine whether the relationship between recent deployment and health status is seen in military members who participated in the 1998 Department of Defense Survey of Health Related Behaviors among Military Personnel. Military personnel who reported a recent deployment at sea or in the field will be compared to those who had not deployed recently on measures of general, physical and mental health during the past 30 days, and other measures of health and health-related behavior.
Is this community based? No
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? No

Title: "Does self-assessment of post-deployment health predict health outcomes?"
Funding agency: USUHS pilot grant (R087NW)
Start and End dates: Feb 2001 - Nov 2002
Amount of funds: $1,200
Short description of purpose: Military members completing major deployments of at least 30 days duration fill out a DD Form 2796, Post-deployment Health Assessment, as part of their health evaluation before returning from deployment. The study will evaluate whether the responses of deployed military members to questions on the Post-deployment Health Assessment predict their health outcomes during the first year after deployment. Specifically, the study will evaluate the rates of hospitalization, ambulatory care visit,

medical disability or separation, and death among deployed military members who report "poor or fair" health compared to those who report "good, very good, or excellent" health.
Is this community based? No
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? No

Title: "Assessment of toxicological assays methods and chemical exposures among a cohort of US Marines deployed in the Gulf War"
Funding agency: USAMRMC
Start and End dates: 2001-present
Amount of funds: No funds designated for USU work.
Short description of purpose: The objectives of this study are to (1) determine whether a cohort of U.S. ground troops deployed to Saudi Arabia and Kuwait was exposed during Operation Desert Storm to selected chemical substances, which have been hypothesized to cause long term health problems among veterans; (2) evaluate biomonitoring/ biomarker methods and models leading to the development of simple and effective procedures to assess military personnel for exposure to selected toxic chemicals and chemical mixtures during deployment, including exposure to the chemicals and mixtures that were a concern during the Gulf War; and (3) determine whether it is possible to utilize other Gulf War health databases (combined clinical registry data, and DoD and VA hospitalization data) to help evaluate this cohort for possible long-term health problems from low level chemical agent exposures.
Is this community based? No
Is this a collaborative project with an outside agency? Yes, Naval Medical Research Center and Centers for Disease Control and Prevention.
Do you have an interagency agreement? No

Title: "Assessing consistency and reliability across three and more evaluators"
Funding agency: USUHS intramural grant
Start and End dates: 2004-2006
Amount of funds: $3,000
Short description of purpose: To develop applied statistical method on assessing consistency and reliability across three and more evaluators
Is this community based? No
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? NA

Title: "Functional neuroimaging of acute stress disorder & PTSD"
Funding agency: National Institute of Mental Health
Start and End dates: 2001-2005
Amount of funds: $800,000
Short description of purpose: To develop clinical interventions to decrease the incidence of psychopathology following traumatic events
Is this community based? No
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? NA

Title: "What is the relationship between military deployment and self-assessed health status?"
Funding agency: USUHS intramural grant
Start and End dates: 2002-2004
Amount of funds: $13,000
Short description of purpose: To study the relationship between military deployment and self-assessed health status
Is this community based? Yes
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? NA

Title: "Epidemiology of scrub typhus in the Republic of Maldives"
Funding agency: USUHS
Start and End dates: October 2004 - September 2005
Amount of funds: $20,000
Short description of purpose: To study the epidemiological factors that led to an outbreak of scrub typhus in the Republic of Maldives
Is this community based? Yes
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? Yes

Division of Environmental and Occupational Health

Title: "Triage and Treatment of Laser Eye Injury on the Modern Battlefield"
Funding agency: US Army Peer Reviewed Medical Research Program
Start and End dates: 01 Mar. 2003 to 28 Feb. 2007
Amount of funds: $1,600,000
Short description of purpose: Determine extent of injuries and best treatment from laser insult.
Is this community based? No.
Is this a collaborative project with an outside agency? No.
Do you have an interagency agreement? No.

Title: "Bioeffects of the 3.8 micron Laser"
Funding agency: NSWC
Start and End dates: Dec. 2002 to Sept. 2005
Amount of funds: $410,000
Short description of purpose: Determine safe limits of exposure to 3.8 micron lasers
Is this community based? No
Is this a collaborative project with an outside agency? No.
Do you have an interagency agreement? No.

Title: "Bioavailability of Chromate Containing Primer Paint"
Funding agency: Air Force Office of Scientific Research
Start and End dates: Aug 2003 - June 2004
Amount of funds: $72,000
Short description of purpose: Purchased an Inductively Coupled Plasma system to detect metals for chromate primer paint research. Also purchased refrigerated centrifuge.

Is this community based? No
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? No

Title: "Bioavailability of Chromate Containing Primer Paint"
Funding agency: Air Force Pollution Prevention Branch, Wright Patterson AFB, OH
Start and End dates: June 2003 – Sept 30 2005.
Amount of funds: $46,990
Short description of purpose: Lab supplies and equipment to conduct research in support of chromate primer paint research.
Is this community based? No
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? No

Title: "Calibration of solid-phase microextraction (SPME) sampling technique interfaced with field portable gas chromatography-mass spectrometry (GC-MS) system for chemical warfare agent (CWA) vapors"
Funding agency: MARCORPSYSCOM
Start and End dates: Dec. 2002 to Sep 2005
Amount of funds: $300,000 total to date
Short description of purpose: This work is designed to support MARCORPSYSCOM efforts to enhance the capabilities of the USMC Chemical Biological Incident Response Force (CBIRF) to respond to incidents involving accidental or intentional release of CWAs or toxic industrial chemicals (TICs)
Is this community based? No
Is this a collaborative project with an outside agency? Yes. This project involves the USMC Chemical Biological Incident Response Force, FBI Forensics Research Laboratory and Defense Research and Development Canada (DRDC) – Suffield.
Do you have an interagency agreement? No

Division of Health Services Administration

Title: "Geographic Variation in Visit Interval for Chronic Illness"
Funding agency: USUHS (Starter Grant)
Start and End dates: March 2001 – August 2003
Amount of funds $16,000
Short description of purpose: Develop a re-usable database for studying the variation in care patterns of patients with chronic conditions treated by Medicare.
Is this community based? Yes
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? N/A

Title: "Tobacco Habits of Active Duty Personnel In California"
Funding agency: California State Health Dept.
Start and End dates: August 2001-August 2004
Amount of funds: $303,900
Short description of purpose:
Is this community based? Yes
Is this a collaborative project with an outside agency? No

Do you have an interagency agreement? N/A

Title: "Evaluating Readiness of American Hospitals for bio-terror response
Funding agency: Health Resources and Services Administration (HRSA), DHHS"
Start and End dates: April 2003 – September 2007
Amount of funds: $2,000,000
Short description of purpose: To provide in-depth analyses of focused areas of emergency response capabilities of HRSA awardees.
Is this community based? Yes
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? Yes

Title: "Epidemiology of cancer in the Military Health System"
Funding agency: United States Military Cancer Institute
Start and End dates: Feb 2002 – June 2003
Amount of funds: $200,000
Short description of purpose: Prepare a basic descriptive analysis of cancer in beneficiaries of the MHS with focus on geographic distribution, cancer types and sources of care.
Is this community based? Yes
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? N/A

Title: "Study of IAAP Workers' Health"
Funding agency: US Congress
Start and End dates: January 2002 to July 2004
Amount of funds $2,000,000
Short description of purpose: Conduct Health Study of IAAP Workers Health
Is this community based? Yes
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? Yes

Division of Social and Behavioral Sciences

Title: "Patterns of Alcohol Use Among Airline Passengers"
Funding agency: National Institute on Alcohol Abuse and Alcoholism
Start and End dates: 4/04-03/07
Amount of funds: $371, 750
Short description of purpose: Exploratory study of individual and contextual factors that influence excessive alcohol consumption by commercial airline passengers.
Is this community based? No
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? No

Title: "Intervening to Prevent Toddler Drownings"
Funding agency: USUHS
Start and End dates: 04/01-09/05
Amount of funds: ~ $50,000

Short description of purpose: Evaluate a videotape designed to get pregnant pool owners to make their pools safer and take infant/child CPR
Is this community based? Yes.
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? Yes

Title: "Colorectal Cancer Screening among Low-Income African Americans"
Funding agency: USUHS (Intramural)
Start and End dates: 6/2004 – 5/2007
Amount of funds: $150,000
Short description of purpose: To understand factors important in the decision to undergo colorectal cancer screening among low-income African Americans.
Is this community based? Yes
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? No

Division of Tropical Public Health

Title: "Neutralization Resistance of HIV-1"
Funding agency: Agency: NIH, NIAID; Type: RO1 (AI37438)
Start and End dates: June 1, 1995 –March 31, 2006
Amount of funds: $1,296,750
Short description of purpose: elucidate the molecular mechanisms of resistance of HIV to neutralizing antibodies. Studies include examining mechanisms of resistance induced by exposure of virus to neutralizing antibodies, as well as mechanisms that distinguish primary and laboratory adapted isolates.
Is this community based? No
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? CRADA

Title: Broadly Effective Neutralization and CTL Against HIV-1
Funding agency: NIH, NIAID; Type: HIVRAD Program Project (PO1AI48280)
Start and End dates: 9/15/01-7/31/05
Amount of funds: $4,666,307
Short description of purpose: to evaluate the potential for protection of rhesus monkeys against challenge with virulent recombinant SHIV, when immunized to induce cross-reactive, primary virus neutralizing antibodies. The immunization platform is the VEE replicon system. The effect of neutralization with and without potent CTL induction will be evaluated. Protection against strains of HIV relevant to the epidemic in China will be studied.
Is this community based? No
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? CRADA

"Novel Alphavirus Replicons"
Agency: USUHS; Type: Intramural; April 2003-2004
Amount: $13,000/year

Short description of purpose: to develop more effective and easily produced alphavirus replicons that can be used as vectors for immunization against biological threat agents, HIV, and other infectious diseases.
Is this community based? No
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? No

Title: "Role of Neutralizing Antibodies in Determining Susceptibility to Persistent Hepatitis C Virus Infection"
Funding agency: DOD
Start and End dates: July, 2003-June, 2005
Amount of funds: $356, 117
Short description of purpose: to modify the hepatitis C virus envelope protein complex so that it can be expressed at the cell surface and induce B cell responses.
Is this community based? No
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? Yes

Title: "MidAtlantic Region Regional Center for Excellence in Biodefense Research", Subproject: "Alphavirus Replicons"
Funding agency: NIAID, NIH, Cooperative agreement
Start and End dates: 9/15/03-9/14/08
Amount of funds: $433,009
Short description of purpose: To conduct research related to development of a new generation alphavirus replicon system.
Is this community based? No
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? CRADA

Title: "Analysis of Malaria Vector Competence Using the Polymerase Chain Reaction"
Funding agency: Walter Reed Army Institute of Research, 1996-231-6648
Start and End dates: October 1994 October 2002
Amount of funds: $120,000 per year
Short description of purpose: To study malaria vector competence using PCR.
Is this community based? No
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement: No

Title: "Epidemiology of Bartonellosis in Peru: Vector Studies"
Funding agency: Uniformed Services University of the Health Sciences, RO87HU-07
Start and End dates: October 1996 October 2003
Amount of funds: $27,000 per year
Short description of purpose: To study the epidemiology of the transmission of Bartonellosis in the Peruvian Andes
Is this community based? Yes
Is this a collaborative project with an outside agency? Yes, Peruvian MOH
Do you have an interagency agreement: Yes, US Navy Research Lab, Lima

Title: "The Effect of Climatic Change on an Important Vector-Borne, Public Health Disease (Epidemic Bartonellosis) in Peru"
Funding agency: NOAA, NSF, EPA, NASA, and EPRI, (Joint Program Announcement, FY2000)
Start and End dates: October 2000 to October 2004
Amount of funds: $145,000 per year
Short description of purpose: To study the effect of climatic change such as El Nino on the transmission of Bartonellosis in Peru
Is this community based? Yes
Is this a collaborative project with an outside agency? Yes, Peruvian MOH
Do you have an interagency agreement? Yes, US Navy Research Lab, Lima

Title: "Research and Training in Emerging Infectious Diseases"
Funding agency: National Institutes of Health (Fogarty), G187II
Start and End dates: July 1998 to July 2004
Amount of funds: $150,000 per year
Short description of purpose: To train public health personnel in developing countries on emerging infectious diseases
Is this community based? Yes
Is this a collaborative project with an outside agency? Yes, Peruvian MOH
Do you have an interagency agreement? Yes, US Navy Research Lab, Lima

Title: "Environmental Determinants of Malaria in Belize, C.A."
Funding agency: NIH/NSF
Start and End dates10/01/00-09/30/05
Amount of funds: $800,000
Short description of purpose: The major goal is to examine the role of anthropogenic change on the ecology of malaria and malaria vectors.
Is this community based? Partially community based
Is this a collaborative project with an outside agency? Yes, UC-Davis and Belize Ministry of Health
Do you have an interagency agreement? Yes, with Belize MOH

Title: “Behavior-modifying compounds for disease vector control”
Funding agency: NIH partnership grant
Start and End dates: Started in 09/08/03 and ends 01/03/08
Amount of funds: $3,500,000
Short description of purpose: Goal is to develop new chemicals for vector control
Is this community based? No
Is this a collaborative project with an outside agency? Yes, NIH, USDA, DoD, and BASF Corporation
Do you have an interagency agreement? Yes

Title: “Remote Sensing of Environmental Factors Affecting Public Health”
Funding agency: NASA
Start and End dates:09/01/02-09/30/07
Amount of funds: $800,000
Short description of purpose: Goal is to use remote sensing and GIS technologies for public health research.
Is this community based? Partially community based

Is this a collaborative project with an outside agency? Yes, NASA and Belize Ministry of Health
Do you have an interagency agreement? Yes, with Belize MOH

Title: "Analysis of parasitic specimens"
Funding agency: Food and Drug Administration
Start and End dates: 1994- indefinite
Amount of funds: $20,000 per year
Short description of purpose: Examination of stool specimens for parasites
Is this community based? No
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? Yes

Title: "Molecular Detection of *Cyclospora cayetanensis* in the Environment"
Funding agency: Environmental Protection Agency
Start and End dates: 2002-2005
Amount of funds: $51,570
Short description of purpose: Collect and process specimens from Nepal
Is this community based? No
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? Yes

Title: "Risk for domestic transmission of leishmaniasis acquired by U.S. service members in Iraq/Afghanistan"
Funding agency: USUHS
Start and End dates: 2004-2007
Amount of funds: $ 150,000
Short description of purpose: Determine whether leishmania parasites acquired by soldiers in Iraq and Afghanistan can be transmitted by domestic sand flies; determine if sand flies are present on three Army bases from which large numbers of troops deployed to OIF/OEF, describe the frequency and distribution of sand flies in major training areas, correlate with environmental data, and if possible develop a predictive model.
Is this community based? No
Is this a collaborative project with an outside agency? No
Do you have an interagency agreement? No

Title: "Building research Ethics Capacity in the US and Peru"
Funding agency: NIH (NHLBI)
Start and End dates: 9/27/02-7/31/05
Amount of funds: $476,175
Short description of purpose: Collaborative training in research ethics for Peruvian research ethics committee members and researchers as well as a conference fro a US audience on ethical and practical issues of research with human subject in Latin-America.
Is this community based? No
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? Yes

Title: "A Randomized, Controlled Treatment Trial for Verrucous Stage of *Bartonella bacilliformis* Infection in Peru"
Funding agency: Pfizer

Start and End dates: 2002-2005
Amount of funds: $25,000
Short description of purpose: The major goal of this project is to compare the efficacy two different antibiotic treatments for the verrucous stage of *Bartonella bacilliformis* infection.
Is this community based? Yes
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? Yes

Title: "Using Situated Learning in Interactive Multimedia to Teach Morphology"
Funding agency: USUHS
Start and End dates: 2/20/2003-9/30/2004
Amount of funds $6,303
Short description of purpose: To determine if the situated learning theory can be used in an interactive multimedia program to improve the effectiveness of teaching morphology.
Is this community based? No
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? No

Title: Evaluation of HIV envelope protein adjuvated vaccine candidates for their ability to induce cross-reactive neutralizing antibodies
Funding agency: GlaxoSmithKline Biologicals SA
Start and End Dates: 12/04-12/06
Amount of funds: $200,000
Short description of purpose: HIV vaccine development
Is this community based? No
Is this a collaborative project with an outside agency? Yes
Do you have an interagency agreement? Yes, CRADA

Graduate Programs Office

Title: "Nested Case-Control Study of Fatal Motor Vehicle Crashes Among Gulf War Era Veterans, Protocol Amendment to USU Project# G187LC"
Funding agency: U.S. Army Medical Research Acquisition Activity
Start and end dates: June 2003-August 2005
Amount of funds: $282,000
Short description of purpose: Analysis of risk factors for fatal motor vehicle crashes in the postwar period among veterans of the 1991 Gulf War era to construct a profile of individuals at greatest risk and to specifically evaluate deployment as an effect modifier
Is this community based? No
Is this a collaborative project with an outside agency? Yes. Department of Veterans Affairs, Environmental Epidemiology Division
Do you have an interagency agreement? No

Title: "A Descriptive Analysis of Injuries and Illnesses in U.S. Military Members During Operation Iraqi Freedom, USU Project #H187UN"
Funding agency: Office of the Assistant Secretary of Defense/Health Affairs
Start and end dates: 1 October 2004-30 September 2005

Amount of funds: $300,000
Short description of purpose: Characterize illnesses and injuries occurring in military personnel deployed in support of Operation Iraqi Freedom using available data sources
Is this community based? No
Is this a collaborative project with an outside agency? This is a Health Affairs-directed project involving multiple Army, Navy, and Air Force agencies
Do you have an interagency agreement? Letter of authorization from Health Affairs, Deployment Health Support Directorate

Title: "Assessing the Potential Impact of the Gulf War on Saudi Arabian National Guard Members and Their Dependents, Protocol Amendment to USU Project #G187KR"
Funding agency: Office of the Special Assistant for Gulf War Illnesses
Start and end dates: 1999 to September 2005
Amount of funds: total funding $1,200,000; currently operating under a no-cost extension
Short description of purpose: Systematic assessment of potential health effects of the 1991 Gulf War on coalition partner native to the Gulf region
Is this community based? No
Is this a collaborative project with an outside agency? Yes—Naval Health Research Center (NHRC), Centers for Disease Control and Prevention (CDC), University of Iowa, King Abdul Aziz Medical City (KAMC), Riyadh, Saudi Arabia
Do you have an interagency agreement? Yes—with NHRC, CDC, and KAMC

Title: "Epidemiologic Support of Health-Related Research Pertaining to Military, Veteran, and Dependent Populations"
Funding agency: NHRC
Start and end dates: 1996-February 2004
Amount of funds: cumulative total (1996-2004, approximately $20,000,000)
Short description of purpose: administrative and epidemiologic support of studies related to military and veteran populations—primary research site NHRC
Is this community based? No
Is this a collaborative project with an outside agency? Yes—NHRC
Do you have an interagency agreement? Yes

Title: "Outcome-Based Evaluation of Graduate Programs"
Funding: Dean, School of Medicine, USU, Special Projects Fund, #250-087-00000-00-102035
Start and end dates: ???
Amount of funds: $20,000
Short description of purpose: Systematic assessment of the effectiveness of PMB graduate education programs in public health, including the development and administration of survey instruments for alumni their supervisors for purposes of ongoing quality improvement

UNIFORMED SERVICES UNIVERSITY
ANNUAL PERFORMANCE EVALUATION
FOR FULL/PART-TIME FACULTY
(TENURED, TENURE TRACK AND NON-TENURE TRACK)
RATING PERIOD 1 JUNE - 31 MAY

NAME: SSN:

TITLE: DEPT:

MAJOR ACTIVITY	ACTIVITY RATED	CRITICAL ELEMENT	% OF TIME	PERFORMANCE EVALUATION		
	(CHECK AS APPROPRIATE)			O	FS	U
TEACHING	☐	☐		☐	☐	☐
RESEARCH	☐	☐		☐	☐	☐
PUBLICATIONS	☐	☐		☐	☐	☐
DEPARTMENTAL, MEDICAL SCHOOL OR UNIVERSITY ADMINISTRATIVE ACTIVITIES	☐	☐		☐	☐	☐
PATIENT CARE	☐	☐		☐	☐	☐
OUTSIDE SERVICES	☐	☐		☐	☐	☐
PERSONAL ADVANCEMENT	☐	☐		☐	☐	☐

SUPERVISORY EVALUATION AND SUMMARY RATING:

EMPLOYEE COMMENTS:

RATER: _____ DATE: _____

REVIEWER: _____ DATE: _____

FACULTY MEMBER: _____ DATE: _____

FITNESS REPORT & COUNSELING RECORD (E7 - O6)

RCS BUPERS 1610-1

1. Name (Last, First MI Suffix)	2. Grade/Rate	3. Desig	4. SSN

5. ACT ☐ TAR ☐ INACT ☐ AT/ADSW/265 ☐	6. UIC	7. Ship/Station	8. Promotion Status	9. Date Reported

Occasion for Report				Period of Report	
10. Periodic ☐	11. Detachment of Individual ☐	12. Detachment of Reporting Senior ☐	13. Special ☐	14. From:	15. To:

16. Not Observed Report ☐	Type of Report			20. Physical Readiness	21. Billet Subcategory (if any)
	17. Regular ☐	18. Concurrent ☐	19. Ops Cdr ☐		

22. Reporting Senior (Last, FI MI)	23. Grade	24. Desig	25. Title	26. UIC	27. SSN

28. Command employment and command achievements.

29. Primary/Collateral/Watchstanding duties. (Enter primary duty abbreviation in box.)

For Mid-term Counseling Use. (When completing FITREP enter 30 and 31 from counseling worksheet sign 32.)	30. Date Counseled	31. Counselor	32. Signature of Individual Counseled

PERFORMANCE TRAITS: 1.0 - Below standards/not progressing or UNSAT in any one standard; 2.0 - Does not yet meet all 3.0 standards; 3.0 - Meets all 3.0 standards; 4.0 - Exceeds most 3.0 standards; 5.0 - Meets overall criteria and most of the specific standards for 5.0. Standards are not all inclusive.

PERFORMANCE TRAITS	1.0* Below Standards	2.0 Progressing	3.0 Meets Standards	4.0 Above Standards	5.0 Greatly Exceeds Standards
33. PROFESSIONAL EXPERTISE: Professional knowledge, proficiency, and qualifications. NOB ☐	- Lacks basic professional knowledge to perform effectively. - Cannot apply basic skills. - Fails to develop professionally or achieve timely qualifications. ☐	- ☐	- Has thorough professional knowledge. - Competently performs both routine and new tasks. - Steadily improves skills, achieves timely qualifications. ☐	- ☐	- Recognized expert, sought after to solve difficult problems. - Exceptionally skilled, develops and executes innovative ideas. - Achieves early/highly advanced qualifications. ☐
34. COMMAND OR ORGANIZATIONAL CLIMATE/EQUAL OPPORTUNITY: Contributing to growth and development, human worth, community. NOB ☐	- Actions counter to Navy's retention/reenlistment goals. - Uninvolved with mentoring or professional development of subordinates. - Actions counter to good order and discipline and negatively affect Command/Organizational climate. - Demonstrates exclusionary behavior. Fails to value differences from cultural diversity. ☐	- ☐	- Positive leadership supports Navy's increased retention goals. Active in decreasing attrition. - Actions adequately encourage/support subordinates' personal/professional growth. - Demonstrates appreciation for contributions of Navy personnel. Positive influence on Command climate. - Values differences as strengths. Fosters atmosphere of acceptance/inclusion per EO/EEO policy. ☐	- ☐	- Measurably contributes to Navy's increased retention and reduced attrition objectives. - Proactive leader/exemplary mentor. Involved in subordinates' personal development leading to professional growth/sustained commitment. - Initiates support programs for military, civilian, and families to achieve exceptional Command and Organizational climate. - The model of achievement. Develops unit cohesion by valuing differences as strengths. ☐
35. MILITARY BEARING/ CHARACTER: Appearance, conduct, physical fitness, adherence to Navy Core Values. NOB ☐	- Consistently unsatisfactory appearance. - Unsatisfactory demeanor or conduct. - Unable to meet one or more physical readiness standards. - Fails to live up to one or more Navy Core Values: HONOR, COURAGE, COMMITMENT. ☐	- ☐	- Excellent personal appearance. - Excellent demeanor or conduct. - Complies with physical readiness program. - Always lives up to Navy Core Values: HONOR, COURAGE, COMMITMENT. ☐	- ☐	- Exemplary personal appearance. - Exemplary representative of Navy. - A leader in physical readiness. - Exemplifies Navy Core Values: HONOR, COURAGE, COMMITMENT. ☐
36. TEAMWORK: Contributions towards team building and team results. NOB ☐	- Creates conflict, unwilling to work with others, puts self above team. - Fails to understand team goals or teamwork techniques. - Does not take direction well. ☐	- ☐	- Reinforces others' efforts, meets personal commitments to team. - Understands team goals, employs good teamwork techniques. - Accepts and offers team direction. ☐	- ☐	- Team builder, inspires cooperation and progress. - Talented mentor, focuses goals and techniques for team. - The best at accepting and offering team direction. ☐
37. MISSION ACCOMPLISHMENT AND INITIATIVE: Taking initiative, planning/prioritizing, achieving mission. NOB ☐	- Lacks initiative. - Unable to plan or prioritize. - Does not maintain readiness. - Fails to get the job done. ☐	- ☐	- Takes initiative to meet goals. - Plans/prioritizes effectively. - Maintains high state of readiness. - Always gets the job done. ☐	- ☐	- Develops innovative ways to accomplish mission. - Plans/prioritizes with exceptional skill and foresight. - Maintains superior readiness, even with limited resources. - Gets jobs done earlier and far better than expected. ☐

FITNESS REPORT & COUNSELING RECORD (E7 - O6) (cont'd)

RCS BUPERS 1610-1

1. Name (Last, First MI Suffix)	2. Grade/Rate	3. Desig	4. SSN

PERFORMANCE TRAITS	1.0* Below Standards	2.0 Pro-gressing	3.0 Meets Standards	4.0 Above Standards	5.0 Greatly Exceeds Standards
38. **LEADERSHIP:** Organizing, motivating and developing others to accomplish goals. NOB ☐	- Neglects growth/development or welfare of subordinates. - Fails to organize, creates problems for subordinates. - Does not set or achieve goals relevant to command mission and vision. - Lacks ability to cope with or tolerate stress. - Inadequate communicator. - Tolerates hazards or unsafe practices. ☐	☐	- Effectively stimulates growth/development in subordinates. - Organizes successfully, implementing process improvements and efficiencies. - Sets/achieves useful, realistic goals that support command mission. - Performs well in stressful situations. - Clear, timely communicator. - Ensures safety of personnel and equipment. ☐	☐	- Inspiring motivator and trainer, subordinates reach highest level of growth and development. - Superb organizer, great foresight, develops process improvements and efficiencies. - Leadership achievements dramatically further command mission and vision. - Perseveres through the toughest challenges and inspires others. - Exceptional communicator. - Makes subordinates safety-conscious, maintains top safety record. - Constantly improves the personal and professional lives of others. ☐
39. **TACTICAL PERFORMANCE:** (Warfare qualified officers only) Basic and tactical employment of weapons systems. NOB ☐	- Has difficulty attaining qualifications expected for rank and experience. - Has difficulty in ship(s), aircraft or weapons systems employment. Below others in knowledge and employment. - Warfare skills in specialty are below standards compared to others of same rank and experience. ☐	☐	- Attains qualifications as required and expected. - Capably employs ship(s), aircraft, or weapons systems. Equal to others in warfare knowledge and employment. - Warfare skills in specialty equal to others of same rank and experience. ☐	☐	- Fully qualified at appropriate level for rank and experience. - Innovatively employs ship(s), aircraft, or weapons systems. Well above others in warfare knowledge and employment. - Warfare skills in specialty exceed others of same rank and experience. ☐

40. I recommend screening this individual for next career milestone(s) as follows: (maximum of two)
Recommendations may be for competitive schools or duty assignments such as: LCPO, DEPT CPO, SEA, CMC, CWO, LDO, Dept Head, XO, OIC, CO, Major Command, War College, PG School.

41. COMMENTS ON PERFORMANCE. * All 1.0 marks , three 2.0 marks, and 2.0 marks in Block 34 must be specifically substantiated in comments. Comments must be verifiable. Font must be 10 or 12 pitch (10 to 12 point) only. Use upper and lower case.

Promotion Recommendation	NOB	Significant Problems	Progressing	Promotable	Must Promote	Early Promote
42. INDIVIDUAL						
43. SUMMARY	X					

44. Reporting Senior Address

45. Signature of Reporting Senior

Date:

Member Trait Average:

Summary Group Average:

46. Signature of individual evaluated. " I have seen this report, been apprised of my performance, and understand my right to make a statement."
I intend to submit a statement ☐ do not intend to submit a statement ☐

Date:

47. Typed name, grade, command, UIC, and signature of Regular Reporting Senior on Concurrent Report

Date:

UNIFORMED SERVICES UNIVERSITY
OF THE HEALTH SCIENCES

SUBJECT: Recruitment and Nomination Procedures for Appointment, Promotion and Granting Tenure for USUHS Civilian and Military Faculty

Instruction 1107A

September 17, 1994

- o -

ABSTRACT

This instruction establishes procedures for the appointment, promotion, granting of tenure and termination of civilian and military faculty members. This instruction outlines the required documentation, processes and responsibilities of the President, USUHS, the Deans, SOM and GSN, the Committee on Appointments, Promotion and Tenure (CAPT), Department Chairs and faculty members in relation to faculty appointments, promotions, tenure decisions, and separation decisions.

- o -

Enclosures: (1) Recruitment
(2) Faculty Appointments, Promotion and Tenure
(3) Required CAPT/Board Documentation
(4) Curriculum Vitae Format (CAPT)
(5) Abbreviated Curriculum Vitae Format (Board)

References: (a) USUHS Instruction 1100A, Appointments, Promotion and Tenure of Faculty, September 1994
(b) USUHS Instruction 1417, Completion and Approval of Requests for Personnel Action, SF-52, 25 May 1993

- o -

A. REISSUANCE AND PURPOSE

This instruction reissues USUHS Instruction 1107, Recruitment and Nomination Procedures for the Appointment, Promotion and Granting of Tenure for Billeted and Non-Billeted Faculty Members, 8 June 1990. This instruction delineates the procedures for appointments, promotion, tenure and separation decisions for all faculty members.

B. INTRODUCTION

The policy governing the appointment, promotion, granting of tenure and termination for the USUHS schools' civilian and military faculty is set forth in USUHS Instruction 1100A, ref. (a).

C. EQUAL EMPLOYMENT OPPORTUNITY AND AFFIRMATIVE ACTION

1. All recruitment, appointment, promotion and tenure actions taken by the USUHS administration and faculty will be designed to provide for fair and equal employment consideration to all qualified candidates

without regard to age, citizenship, national origin, marital status, race, religion, sex or handicapping condition.

2. All vacancies will be advertised and publicized in a manner that will reach a diverse candidate pool.

a. Advertising media may include medical journals related to the position's scientific/medical specialization; other medical schools; minority organizations and professional associations.

b. At a minimum, all vacancies will be advertised in the Affirmative Action Register.

c. Paid advertisement for positions on University funds will be paid by the Civilian Human Resources Department (CHRD). Advertisement for positions paid with extramural funds will be paid out of extramural funds. Total advertisement funding for any one position is limited to $2,000.00, unless an increase is requested and approved by the appropriate dean.

D. APPLICABILITY.

This instruction applies to all civilian and uniformed faculty and staff members of the USUHS School of Medicine (SOM), Graduate School of Nursing (GSN) and USUHS administrators.

E. PROCEDURES.

Recruitment, appointment, promotion, granting of tenure procedures and requirements are contained in encl (1) through (5).

F. EMPLOYEE CATEGORIES.

1. Faculty:

a. Billeted - professor, associate professor, assistant professor, instructor, and faculty members with visiting appointments.

b. Non-billeted - professor, associate professor, assistant professor, instructor

2. Administrators: President, vice president, dean, associate dean, assistant dean, department chair, interdisciplinary program (IP) director, executive assistant and general counsel

3. Schedule A Staff Members: postdoctoral fellow, research associate, senior research associate and visiting scientist

G. EFFECTIVE DATE. This instruction is effective immediately.

James A. Zimble, M.D.
President, USUHS

RECRUITMENT

1. Search Committees:

1.1. All search committees appointed must follow the procedures specified in the charge to the committee. These procedures include:

- appropriate guarantees of confidentiality,
- steps to be followed in the recommendation process,
- time projections for completing these steps,
- examination for special qualifications required for the position,
- consultations regarding candidates' qualifications, including faculty in the field, both within and outside the USUHS schools, student representatives, alumni, and others knowledgeable in the area, and
- compliance with the equal employment opportunity and affirmative action policies of the USUHS.

1.2. Search committees will develop screening and candidate evaluation criteria and methods based on their determination of the appropriateness of the position being filled. The committee must:

- agree on methods for grouping candidates based on established screening and evaluation criteria,
- agree on a consistent structure for candidate evaluation by interviewers, and
- be briefed on their responsibility for ensuring that committee actions and recommendations are made in accordance with established USUHS policy for equal employment opportunity and affirmative action (EEOAA).

1.3. Except in unusual circumstances, each search committee shall submit a minimum of two candidates.

2. Deans of USUHS Schools:

2.1. The President, USUHS, shall appoint and charge search committees to review candidates and recommend selections for the position of Dean for all USUHS schools.

2.1.1. Recruitment will begin upon the Civilian Human Resources Directorate's (CHRD) receipt of a position description and Request for Personnel Action, (SF-52), signed by the President, USUHS, with funding certified by Financial Management Office.

2.1.2. Paid advertisement will be written by the Office of the President, USUHS or the chair of the search committee appointed by the President.

2.1.3. The advertisement may be placed by CHRD or the chair of the search committee. If the advertisement is placed by CHRD, a copy of the text and a completed USUHS Form 404, Requisition Form, for each publication in which the advertisement will be placed should be forwarded to CHRD.

2.2. The search committee appointed by the President will consist of senior members of the appropriate school and senior USUHS administrators.

2.2.1. The search committee will be charged in accordance with reference (a) to:

- develop selection criteria,
- review the credentials of candidates,
- request and review letters of recommendation,
- conduct interviews, and
- make selection recommendation(s) to the President, USUHS.

2.2.2. Upon review of the committee's recommendation(s) the President will forward the nominations to the Board of Regents (Board) along with the documentation list in encl (3), (4) and (5). Board recommendation for selection or non-selection will be returned to the President, USUHS, for a final selection decision.

3. <u>Department Chairs</u>:

3.1. Recruitment will begin upon CHRDs receipt of a position description and SF-52, signed by the appropriate dean, with funding certified by the Financial Management Office.

3.1.1. Paid advertisements will be written by the office of the dean or the chair of the search committee appointed by the dean.

3.1.2. The advertisement text and a completed USUHS Form 404, Requisition Input Form, for each publication in which the advertisement will be placed should be forwarded to CHRD along with the SF-52 and position description.

3.2. The dean will appoint and charge a search committee of at least four (4) faculty members including at least one (1) chair and not more than one (1) member from the department whose chair is under consideration.

3.2.1. Civilian faculty must be tenured and uniformed faculty must have an appointment at the rank of associate professor or above. Uniformed faculty may have the modifier of "clinical *<u>specialty</u>*" (i.e. Associate Professor of Clinical Surgery).

3.2.2. The search committee should have civilian and military representatives and must be chaired by a tenured professor from a department other than the one in which the vacant chair position is located.

3.2.3. The search committee must follow the procedures outlined in Part A of this Enclosure to forward selection recommendations and documentation listed in encl. (3), (4) and (5) to the dean.

3.2.4. Upon review of the search committee's recommendation(s), the dean will forward the nomination(s) to the Board along with the documentation listed in encl. (5) for review. Board recommendations for selection or non-selection will be returned to the dean for a final selection decision.

3.3. The respective roles of the search committee, CAPT, deans, Board and President, USUHS, are delineated in encl. (1) and (2) of ref. (a).

4. Civilian Faculty:

4.1. Recruitment for civilian faculty positions is initiated by the department chair by the submission of an SF-52, Request for Personnel Action, a position description, a draft advertisement for placement and information on the sources and costs for paid advertisement.

4.2. On approval to recruit, the chair may appoint and charge a departmental search committee of at least two faculty members. If a search committee is appointed, all members must be at or above the faculty rank for which the search is conducted.

4.3. Search committee recommendations will be submitted to the department chair, who will review the information provided and make a tentative selection subject to further review and approvals outlined below.

4.4. All full time department faculty of equivalent or higher rank to the position under recruitment shall receive notice from the chair of all proposed appointments and may comment in writing prior to the submission of any recommendation from the chair to the dean. Such comments will be reflected in the chair's recommendation, including comments on the merit of any negative opinions.

4.5. Professor and Associate Professor:

4.5.1. Chairs shall forward documentation listed in encl. (3), (4) and (5) to CHRD for submission to the CAPT and Board.

4.5.2. The CAPT shall:

- recommend approval of the appointment to the dean who may agree and forward the recommendation to the Board for consideration or decide to disapprove the action,
- recommend disapproval of the appointment to the dean who may accept the recommendation or request that the CAPT reconsider, or
- defer consideration pending additional information.

4.5.3. The authority for reconsideration of disapproval decisions is outlined in ref. (a).

4.6. Assistant Professor and Instructor:

4.6.1. Chairs may establish search committees to review candidates or may review applicants personally.

4.6.2. Upon completion of candidate review, the chair will forward the recommended nominee(s) and the documentation listed in encl. (3) to CHRD for submission to the dean for approval.

5. Uniformed Faculty:

5.1. Uniformed services members are assigned to USUHS and affiliated military medical centers for prescribed tours of duty and extensions under agreement with the surgeons general.

5.2. The department chair in the appropriate school will confirm the availability of a programmed billet with the Directorate of Military Personnel (MPO). The chair will identify candidates by coordinating with the appropriate surgeon general's consultant for that specialty.

5.3. Prescribed tours of duty preclude uniformed service faculty's acquiring of tenure.

5.4. Academic rank terminates on reassignment from the USUHS school unless an adjunct academic title as described in [Section 5.] of ref. (a) is requested by the appropriate department chair.

5.5. The following steps apply in the identification and assignment of uniformed faculty:

- confirmation of a programmed billeted position by the MPO,
- identification of a candidate by the Surgeon General's consultant for that specialty;
- submission of a request for the candidate by name to the MPO using USUHS Form 1307 or memorandum along with any other appropriate documentation,
- review and signature of the Brigade Commander before submission to the Surgeon General for approval, and
- notification of Surgeon General's decision through the USUHS chain of command.

5.6. <u>Search, Review and Approval for Military Faculty</u>:

5.6.1. Advertisement requirements described in [Section 1.] of this enclosure will not apply to military faculty selections. Departmental search committees may be appointed to review nominations for departmental positions at the chair's discretion.

5.6.2. All documentation requirements stated in encl. (3) for review and approval of appointments by the President, deans, CAPT and Board will apply to the appointment of military faculty, depending on the faculty position for which they are being considered except for the description of advertising sources and text.

5.6.3. All requests for approval of a USUHS faculty appointment for non-billeted military members must be accompanied by a memorandum documenting the concurrence of the nominee's commanding officer of his or her parent command.

6. <u>Secondary Appointments</u>:

6.1. Chairs may offer a secondary appointment with the concurrence of the chair of the primary department.

6.2. Candidates for secondary appointments are subject to the same reviews and approvals as they were for their primary appointment. Secondary appointments are not tenured.

FACULTY APPOINTMENTS, PROMOTION AND TENURE

1. Civilian Appointments (billeted):

1.1. Associate Professor and Professor - Initial Appointment, Promotion, or Granting of Tenure.

1.1.1. The appropriate department will forward the required information and documents discussed and listed in [Section 11.] of ref. (a) and in encl. (3) and (4) of this instruction to CHRD for submission to the CAPT.

1.1.2. The CAPT will review the action for academic merit and will return it with a recommendation through the appropriate dean to CHRD.

1.1.3. If the CAPT recommends approval and the dean concurs, CHRD will forward the recommendation to the Board with one copy of the abbreviated curriculum vitae described in encl. (5).

1.1.4. If the CAPT recommends approval and the dean disagrees, the action of the dean is final. The department chair may seek the dean's reconsideration based on additional supporting information. The dean's action on the reconsideration is final.

1.1.5. If the CAPT recommends disapproval and the dean disagrees, the dean may request reconsideration through a memorandum to the CAPT, setting forth the basis of the request. The CAPT's disapproval on reconsideration is final. The CAPT will furnish copies of the final recommendation efforts to CHRD.

1.1.6. If a recommendation is to be made to the Board, CHRD will provide the dean with a copy of the proposed faculty nominations list.

1.1.7. Once the CAPT has approved the appointment, promotion or granting of tenure, CHRD will provide the Executive Secretary to the Board with one (1) copy of the covering memorandum, the proposed faculty nominations list and matrix, and a copy of the abbreviated curriculum vitae described in encl. (5).

1.1.8. Upon receiving the approval of the Board, CHRD will prepare an *Offer of Appointment* letter. After the offer letter is signed by the dean, CHRD will mail the original to the selectee/faculty member and forward a copy to the nominating department chair.

1.2. Assistant Professor, Instructor, and Visiting Faculty Members for Appointments of Less Than One Year - Initial Appointments.

1.2.1. On receipt of a nomination from the department chair along with the information and documents discussed in [Section 11.] of ref. (a) and encl. (3) to this instruction, CHRD will prepare an *Offer of Appointment* letter and will forward it along with the required documentation to the dean for signature.

1.2.2. Upon signature by the dean, CHRD will send the original to the selectee/faculty member and a copy to the nominating department chair.

1.2.3. On receipt of the selectee/faculty member's acceptance, CHRD will file the original letter of acceptance in the faculty member's official personnel file (OPF) or faculty appointment file as appropriate. The nominating chair will be provided a copy of the acceptance.

1.2.4. If the selectee/faculty member declines the position, CHRD will cancel the recruitment and inform the dean and the appropriate chair.

2. Civilian Appointments (non-billeted):

2.1. Associate Professor and Professor, modified or unmodified titles - Initial Appointment or Promotion to these positions.

2.1.1. On receipt of a Request for Personnel Action (SF-52) and the documentation described in encl. (3) from the department chair, CHRD will submit the appointment nomination for appropriate review. The steps in this review are outlined above in [Section 1.1.] of this enclosure.

2.1.2. If the requested appointment is disapproved, the letter indicating this disapproval will be forwarded by the CAPT through the dean to the chair of the nominating department. A copy of this letter will be forwarded to CHRD.

2.2. Assistant Professor and Instructor, Visiting Faculty Members with Appointments of Less Than One Year - Initial Appointments.

2.2.1. The nominating department chair will forward to CHRD a SF-52 along with information and documentation requirements outlined in ref. (a) and encl. (3) to this instruction.

2.2.2. Further steps in this process are outlined above in [Section 1.2.].

3. Uniformed Services Appointments:

3.1. Procedures for initial appointment of **billeted** uniformed faculty are specified above in [Section 1.1.].

3.2. For **non-billeted** uniformed faculty, the nominating chair will submit the request for appointment on USUHS Form 107, *Request for Personnel Action for Military Personnel*, and a letter showing parent command approval along with the required documents outlined in encl. (3) to this instruction.

4. Academic Support Faculty Members:

4.1. Appointments to academic support faculty positions which include **visiting scientists** and similar positions will follow the procedures for faculty appointments as described in [Section 1.1.] of this enclosure.

4.2. Appointments to academic support faculty positions will be consistent with comparable positions at the comparability survey schools with the District of Columbia metropolitan area.

4.3. The dean is the approving authority for academic support faculty appointments and will notify the Board of all such appointments.

4.4. Academic support faculty positions are not in the tenure track. Appointees to these

positions may have secondary appointments in academic departments, if appropriate. Such appointments may or may not be tenured or in the tenure track, but they must be so designated at the time of initial appointment.

5. Notification of Nonselection:

5.1. Chair: Upon selection and appointment of a chair, the dean will forward a list of non-selected candidates to CHRD for preparation of *Letters of Regret* for the dean's signature.

5.2. Faculty Positions Other Than Chair: Upon selection and appointment of a faculty members for any position other than chair, the department chair will notify the non-selected candidates of the decision by letter. Prior to issuance of such letters, chairs will respond to any oral or written inquiries regarding the selection process by indicating that letters of notification are being prepared.

5.3. Senior Administrators: Upon selection and appointment of a senior administrator, the President will forward the list of non-selectees to CHRD for preparation of *Letters of Regret* for the President's signature.

5.4. Academic Support Faculty and Staff Members: The appropriate dean, department chair/activity head will notify non-selectees for staff or academic support faculty positions of their non-selection by letter. Prior to issuance of such letters, responses to any oral or written inquiries regarding the selection process will be that letters of notification are being prepared.

6. Credentials: All civilians and uniformed billeted faculty members will provide CHRD with copies of their doctoral diplomas, and if they are physicians, copies of their current licenses to practice medicine and copies of their current approvals for hospital privileges.

7. Reappointments for Non-tenured Faculty Members:

7.1. Except for tenured faculty or billeted uniformed faculty at the rank of professor, all faculty will be informed annually of their renewal status in accordance with ref. (a).

7.2. CHRD will forward a list of currently appointed faculty members to each department chair by the date specified below requesting reappointment determinations. Chairs must indicate whether or not they wish to reappoint each individual listed and return the list the CHRD.

7.3. Chairs must notify all faculty members on the list of their individual renewal status (reappointed or non-reappointed). Notification of a decision not to reappoint must be in writing and must be provided to the faculty members by the dates specified below. A copy of all notifications of non-reappointment must be provided to CHRD.

7.4. The Director CHRD will make the official written notification of non-reappointment for

billeted tenure track and non-tenure track faculty and for non-billeted faculty by the dates specified below.

7.5. Notification of Reappointment and Non-reappointment decisions will be made as follows:

7.5.1. Billeted Tenure-track faculty: Assistant Professor, Associate Professor.

- CHRD list to Department . . . . . 1 April
- Department list to CHRD . . . . . 1 May
- Department notification to faculty member . . . . . 1 July

7.5.2. Billeted non-tenure track faculty: Instructor, Assistant Professor, Associate Professor, Professor.

- CHRD list to Department . . . . . 1 November
- Department list to CHRD . . . . . 1 December
- Department notification to faculty members . . . . . 1 January

For [Sections 7.5.1. and 7.5.2.] in cases of non-reappointment, written notification will be coordinated with CHRD prior to issue.

7.5.3. Nonbilleted civilian and uniformed faculty: Instructor, Assistant Professor, Associate Professor, Professor.

- CHRD list to Department . . . . . 1 April
- Department list to CHRD . . . . . 1 May
- Notification to faculty members . . . . . 1 July

8. <u>Promotion</u>:

8.1. Promotion procedures for both primary and secondary appointments shall begin at the department or Interdisciplinary Program (IP) level.

8.2. The department chair or IP director shall initiate promotions and prepare and forward all promotion recommendations and documentation.

8.3. Review committees shall be appointed by the department chair or IP director to review candidates for promotion. Committees for promotion to the rank of professors will consist of faculty members at the rank of professor. Committees for promotion to the rank of associate professor will consist of faculty members at the rank of professor or associate professor. The committee will serve as an advisory body to the department chair or IP director and will consider the candidates in light of the qualifications outlined in ref. (a). Consideration will include the opinions of junior faculty members and, when appropriate, residents and students.

8.4. All full time department faculty with ranks equivalent to or higher than those of candidates for promotion will receive notice from the chair and will be invited to comment in writing.

8.5. Recommendations forwarded for review and approval of the dean and/or CAPT will include the information outlined in ref. (a) and encl. (3) of this instruction. Recommendations and

supporting documentation will be forwarded to CHRD for submission to the dean and/or CAPT.

8.6. When a recommendation is to be made to the Board, CHRD will provide the dean with a copy of the nominations list. In addition, CHRD will provide a copy of the cover memorandum, the proposed faculty recommendations list, the matrix, and a copy of the abbreviated curriculum vitae, encl. (5) to the Executive Secretary to the Board.

8.7. When the appropriate dean, CAPT and Board review results in approval of a recommended promotion CHRD will:

8.7.1. Prepare a letter for the dean's signature informing the candidate of his/her selection for promotion.

8.7.2. Upon receipt of the acceptance letter from the candidate, file the original in the faculty member's OPF or faculty appointment folder and forward a copy to the appropriate department chair or IP director.

8.7.3. Process an *Official Personnel Action* documenting the promotion for billeted civilian faculty members.

9. <u>Tenure</u>:

9.1. All recommendations for tenure must begin at the departmental level.

9.2. The department chair submits requests for the granting of tenure and prepares and forwards all tenure recommendations and required documentation as outlined in ref. (a) and encl. (3), (4), and (5) of this instruction.

9.3. Upon review and approval of candidates for tenure, the dean will notify CHRD so that the appropriate *Notification of Personnel Action* can be processed.

- o -

REQUIRED CAPT/BOARD DOCUMENTATION
for
APPOINTMENT

1. Chair of a Department:

1.1. A **cover letter** from the chair of the search committee with a recommendation for appointment to include a description of the candidates interviewed in regard to equal employment opportunity affirmative action factors. To the degree possible, the sex, national origin, handicap, etc. of each candidate interviewed should be provided. This letter should summarize the education, experience, professional information of each interviewee and discuss these factors relative to any recommendations made. *(original and seven copies)*

1.2. A complete **curriculum vitae** as described in encl. (4). *(original and seven copies)*

1.3. Six to eight **letters of recommendation** in support of the nominee and copies of the committee letters requesting recommendations. *(original and seven copies)*

1.4. A **complete description** of *1)* the search committee composition (title, sex, national origin for each member), *2)* recruitment/advertising sources with copy of advertisement text, and *3)* committee procedures, recommendations, and objections if the recommendation(s) are not unanimous. *(original and seven copies)*

1.5. An **abbreviated curriculum vitae** for Board review in the format outlined in encl. (5) . *(original only)*

1.6. Any additional supporting material mandated by the CAPT procedures. *(original and seven copies)*

2. Associate Professor and Professor:

2.1. A **cover letter** signed by the department chair recommending the approval of a candidate for appointment. This letter should include a description of candidates interviewed in regard to equal employment opportunity and affirmative action factors. To the degree possible, the sex, national origin, and handicap of each candidate interviewed should be provided. This letter should summarize the education, experience and professional information of each interviewee and discuss these factors relative to any recommendations made. Reflected in the recommendation will be all views concerning the candidate expressed by the department search/review committee and other faculty, including comment on the merit of any negative opinions. *(original and seven copies)*

2.2. A complete **curriculum vitae** with bibliography in the format provided in encl. (4). *(original and seven copies)*

2.3. **Letters of recommendation** obtained by the chair from recognized national authorities in the candidate's field of interest and copies of the departmental letters requesting recommendations. The required number of letters and their source varies according to the rank and specialty at which the appointment, promotion or tenure decision is requested. Specific requirements are outlined in ref. (a). *(original and seven copies)*

2.4. A **complete description** of *1)* the departmental search committee composition (title, sex, national origin for each member), *2)* recruitment/advertising sources with copy of advertisement text, *3)* committee procedures, recommendations and objections if the recommendation(s) are not unanimous. *(original and seven copies)*

2.5. An **abbreviated curriculum vitae** for Board review in the format outlined in encl. (5). *(original and seven copies)*

2.6. Any additional supporting documentation required by the CAPT. *(original and seven copies)*

3. <u>Assistant Professor and below:</u>

3.1. A **cover letter** signed by the department chair recommending the approval of a candidate for appointment. This letter should include a description of candidates interviewed in regard to equal employment opportunity and affirmative action factors. To the degree possible, the sex, national origin and handicap of each candidate interviewed should be provided. This letter should summarize the education, experience, professional information of each interviewee and discuss these factors relative to any recommendations made. Reflected in the recommendation will be all views concerning the candidate expressed by the department search/review committee and other faculty, including comment on the merit of any negative opinions. *(original only)*

3.2. A **complete curriculum vitae** with bibliography in the format provided in encl. (4). *(original only)*

3.3. If a departmental search committee was appointed, a **complete description** of the departmental search committee composition (title, sex, national origin for each member). *(original only)*

3.4. Recruitment/advertising sources, copies of advertisement text, committee procedures and recommendations, and any objections if the recommendation(s) are not unanimous. *(original only)*

CURRICULUM VITAE FORMAT
CAPT

Curriculum vitae should be dated, up-to-date, and in the standard format outlined below. Publications should be distinctly separated into designated lists of peer-reviewed and non-peer-reviewed materials, such as book chapters, proceedings of meetings, solicited reviews, etc. The CAPT is interested in publications which are "in press" or "submitted for publication" provided that a journal reference and date of submission are provided. Lists of abstracts or materials "in preparation" should not be listed.

Information regarding grants approved or pending is not required; however, the CAPT is interested in the ability of candidates to compete successfully for research grants and renewals and information regarding grants may be listed.

CURRICULUM VITAE

I. PERSONAL DATA

Name:
Address:
Citizenship:

II. EDUCATION

Year	Degree	Institution

III. POST GRADUATE EDUCATION

Year	Position	Institution

IV. ACADEMIC APPOINTMENTS

Year	Position	Institution

V. OTHER EMPLOYMENT PERTAINING TO CURRENT PROFESSIONAL APPOINTMENT

VI. MILITARY SERVICE

Previous Assignments Duty Title

VII. CERTIFICATION AND LICENSURE

	Date	Number
Certification Board(s)		
License(s)		

VIII. MEMBERSHIP IN SCIENTIFIC SOCIETIES\PROFESSIONAL ORGANIZATIONS.

(Offices held, if applicable)

IX. AREAS OF RESEARCH INTEREST

X. CURRENT PROTOCOLS

Title Funded (amount) Grant Period

XI. TEACHING ACTIVITIES FOR THE PAST FIVE YEARS

XII. OTHER PROFESSIONAL ACTIVITIES

(no more than five)

XIII. CLINICAL ACTIVITIES

(Attending, consultant; days/week and months/year)

XIV. COMMITTEES (national advisory, professional societies, hospitals)

(list the five most significant)

XV. HONORS AND AWARDS

(for military include military awards)

XVI. BIBLIOGRAPHY

(total number of full papers, total number of books, three or four most recent publications listing title, full authorship and journal)

ABBREVIATED CURRICULUM VITAE
BOR

Date prepared:

I. NAME:

Department:
Current professional address:
Citizenship:
Other personal information *(if desired)*:

II. EDUCATION:

Degree	Year	Institution

III. GRADUATE MEDICAL EDUCATION:

Specialty	Years	Institution

IV. EMPLOYMENT RECORD:

(Academic, hospital and military assignments, appointments, consultantships, etc.)
(Chronologic order with inclusive years)

V. LICENSURE:

State	Year

VI. AMERICAN SPECIALTY BOARD CERTIFICATION:

Board	Year

VII. EDITORIAL POSITIONS AND APPOINTMENTS IN SOCIETIES OR REVIEW BOARDS:

VIII. HONORS:

IX. PUBLICATIONS *(divided as shown)*

Number of publications in refereed journals (include page numbers):
Number of published books, chapters or articles in non-refereed publications:
Numbers of published abstracts:

SUBJECT: Appointments, Promotion, and Tenure of Faculty
Instruction 1100 (ADF)
ABSTRACT

This instruction establishes policies and procedures for the appointment, promotion and tenure of the faculty of the Uniformed Services University of the Health Sciences (USUHS). Information contained in the Enclosures to this document defines the necessary scholarly and professional qualifications for faculty members, tracks, titles, and the procedures for appointment. The policies and procedures for promotion, tenure, termination, suspension or due process are included.

A. Reissuance and Purpose.

This Instruction reissues USUHS Instruction 1100Aa, provides policies and procedures for the appointment, promotion, and tenure of USUHS faculty, and describes terms of appointment, provisions for annual review, granting, suspension and termination of appointments and tenure, and due process for faculty actions.

B. References. See Enclosure 1.

C. Applicability.

This Instruction applies to all USUHS components.

D. Policy. It is USUHS policy that:

1. The mission, governance, organization. responsibilities, and functions of the set forth in Department of Defense (DoD) Directive 5105.45b.

2. The President USUHS manages university programs, activities, personnel and resources as prescribed by the Assistant Secretary of Defense (Health Affairs), with the advice of the Board of Regents (BOR). The BOR will provide advice to the President, USUHS on all policy decisions and all recommendations regarding faculty status. The BOR will work with the President, USUHS to assure comparable faculty standards across the USUHS. The Deans of each school shall develop and administer policies and procedures on the academic affairs of their respective schools. The faculty has the responsibility to initiate appointments, promotion, tenure and will provide guidance concerning policy development. review, and administrative responsibilities in matters of faculty status.

3. Faculty appointments, promotions, and tenure shall reflect the mission of the USUHS, the School of Medicine (SOM), and the Graduate School of Nursing (GSN).

E. Qualifications of Faculty

1. Faculty shall be judged on their areas of scholarship, professional service, clinical service, institutional citizenship, and other professional attainments. These may include but are not limited to:

a. Research activity;
b. Teaching ability and activity;
c. Clinical expertise;
d. Professional and intellectual integrity;
e. Reputation among peers;
f. Receipt of scholarly awards and fellowships;
g. Professional service to scholarly, scientific, military, or public health communities through membership, service, and leadership on professional or scientific committees;
h. Institutional citizenship through committee and administrative work and service to the USUHS and/or its' affiliated institutions;
i. Contributions to continuing education programs; and
j. Advanced degrees and professional certifications.

The University is a federally established educational institution. Faculty are responsible to the University and to DoD. Faculty in their professional and University related activities shall conduct themselves in a manner that will preserve their professional effectiveness and reflect credit upon the academic profession, the USUHS, and DoD.

F. Selection and Appointment of the Dean of a USUHS School.

1. The President, USUHS with the advice of the BOR shall appoint and charge a search committee.

a. The faculty representation required on the search committee shall consist of at least two tenured civilian and two uniformed service members holding academic rank at the level of associate Professor or higher. The majority of the committee members will be from the school in which the Dean being selected will serve.
b. The search committee shall follow the procedures outlined in their charge and the relevant Enclosure of this Instruction. The search committee shall only recommend candidates it deems qualified for appointment with an academic title at the rank of Professor. I he academic rank and tenure status of the Dean shall be determined by the standards defined in the relevant Enclosure of this Instruction.
c. The search committee shall submit its recommendation to the President, USUHS.

2. The President, USUHS shall consult with the BOR and appropriate Chairs concerning all recommended appointments.

3. The President, USUHS may reject the search committee's recommendations and may ask the committee to review other candidates or the President, USUHS may accept the recommendations.

4. The final choice for the Dean will be made by the President, USUHS.

G. Delegation of Authority.

The President, USUHS; appropriate deans; and Department Chairs may delegate in writing his or her duties as prescribed in this Instruction and Enclosures.

H. Termination or Suspension of Faculty Appointments. See Enclosure 2.

I. Procedures. See Enclosures 3 and 4.

Enclosures:

1. References
2. Termination or Suspension of Faculty Appointments

3. Procedures - F. Edward Hebert School of Medicine
4. Procedures - Graduate School of Nursing

This page last updated on 7/08/03

This web site is maintained by Eric Marks, M.D., Associate Dean Faculty Affairs
E-mail any suggestions or comments to: emarks@usuhs.mil

UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

SUBJECT: Officer/Enlisted Evaluation Reports

Instruction 1305

JUL 22 2004

(MPO)

ABSTRACT

This Instruction defines responsibilities for all personnel who are in the rating chain of military personnel assigned to the University. It provides guidance on when, and under what circumstances, military members of the different services are due evaluations.

A. Reissuance and Purpose. This reissues USUHS Instruction 1305[a] to:

1. Establish the Officer/Enlisted Evaluation Report program.

2. Incorporate guidance in AR 623-105[b], "Officer Evaluation Reporting System," November 15, 1981; DA Circular 623-88-1[c], "Noncommissioned Officer Evaluation Reporting System," February 1, 1988; AR 623-1[d], "Academic Evaluation System," October 14, 1985; AFR-3610[e], "Officer Evaluation System," August 1, 1988; AFR 39-62[f], "Enlisted Evaluation System;" BUPERSINST 1610.10 of 2 August 1995[g], "Navy Performance Evaluation and Counseling System;" PHS Manual Circular 341[h], "Annual Commissioned Officers' Effectiveness Reports."

B. References. *See Enclosure 1.*

C. Background. An Evaluation Report (ER) is the single most important document affecting a military member's career. It provides information used in selection for assignments, schooling, and promotions. It is essential that each report be rendered accurately and fairly, so that a reliable indication of competence is given when an individual is compared with others of the same grade. Timely submission of these reports is mandatory. Late reports may adversely affect the career progression of the individual being rated, and are therefore inexcusable.

D. Applicability. This Instruction applies to Officer and Enlisted personnel of all military departments, and the Public Health Service assigned to, or attached to the Uniformed Services University of the Health Sciences (USUHS).

E. Policy. It is USUHS policy that Officer/Enlisted Evaluation reports fully and accurately reflect the ratee's performance. Reports must be completed by established suspense dates. Raters will notify the Military Personnel Office (MPO), by memorandum, in advance, if suspenses cannot be met. Chairpersons/Activity Heads will notify MPO, by memorandum, of personnel or organizational changes which cause a rating scheme to change.

F. Responsibilities. *See Enclosures for service-specific requirements.*

1. Rating chain officials will:

a. Comply with applicable portions of instructions accompanying each report.

b. Complete applicable portions of the report.

c. Provide suggested comments (typed, double-spaced on a separate sheet of paper) for next rating chain official(s) when the next rating chain official(s) is outside the department (i.e., Dean and/or President or Brigade Commander).

d. Counsel ratee according to service policies and regulations, and meet specific service responsibilities as outlined in Enclosures 7-13.

e. Notify MPO of any rating scheme change within the respective departments.

f. Provide final typed reports (with the exception of Navy Fitness Reports). *See Enclosure 2.*

g. Return reports to the MPO by the suspense date.

2. The MPO will:

a. Ensure that all uniformed personnel are informed of their rating scheme.

b. Ensure that all officials in the rating chain are aware of the members for whom they are responsible for rating, and of the dates such reports are required.

c. Notify all raters and other rating chain officials when reports are required.

d. Establish suspenses for raters and others in the rating chain that will ensure timely completion, review, and submission of these reports.

e. Provide necessary forms.

f. Monitor progress of reports being prepared.

g. Provide assistance and administrative expertise as to the proper preparation of each report.

h. Review all military evaluations after each rating chain official has completed his/her portion, and then forward each to the next official.

i. Forward completed reports to the appropriate military personnel offices.

j. Maintain a file of current applicable directives and assist in interpretation, as required.

k. Inform all rating officials of any changes in the Military Personnel Evaluation systems, and provide training for such changes.

l. Print Navy Fitness Reports in final format.

3. Department Activity Head, Chairperson will:

a. Notify MPO, by memorandum, of personnel or organizational changes which cause a rating scheme to change.

b. Ensure that evaluations are prepared by the required suspense dates.

4. The Dean, School of Medicine (DSOM) will review all evaluations from within the School of Medicine (SOM).

5. Dean, Graduate School of Nursing will review all evaluations from within the Graduate School of Nursing (GSN).

6. Brigade Commander will review all evaluation reports prior to submission to the individual service personnel centers.

7. Senior Enlisted Advisors (SEA) will review enlisted evaluation reports of their respective service and sign when necessary. *See Enclosures 7 through 12.*

8. Command Master Chief/ Command Sergeant Major will review all enlisted evaluation reports.

G. Medical Officer Candidates.

1. Evaluation reports will be rendered annually at the end of the academic year.

a. MS-I - June
b. MS-II - May
c. MS-III - June
d. MS-IV - May

NOTE: Navy Fitness Reports on Medical Students will have a closeout date of May 31.

2. Reports are due to the respective services 30 days after the designated closeout date with the exception of Navy Fitreps, which are due 15 days after the closeout date.

H. Graduate Fellow Officers.

Except for Air Force officers, officers under orders to USUHS for pre-doctoral, post-doctoral, or other types of graduate education will be evaluated by the Associate Dean for Graduate Education. Air Force Education/Training Reports for graduate fellows are not done at USUHS. Army and Navy graduate fellow evaluations come under the same preparation instructions as evaluations for USUHS staff and faculty.

I. Information Requirements.

Enclosures 2-6 provide an explanation of the requirements for rating chain officials.

J. Effective Date. This Instruction is effective immediately.

James A. Zimble, M.D.
President
Vice Admiral, USN (Ret.)

Enclosures:
1. References
2. Procedures
3. Army Officer Evaluation Reporting Requirements for Rating Chain Officials
4. Army Enlisted Evaluation Reporting Requirements for Rating Chain Officials
5. Navy Officer Fitness Reports Reporting Requirements for Rating Chain Officials
6. Navy Enlisted Evaluation Reporting Requirements for Rating Chain Officials
7. Air Force Officer/Enlisted Reporting Requirements for Rating Chain Officials
8. Public Health Service Officer Evaluation Reporting Requirements and Responsibilities of Rating Chain Officials
9. Army Officer Evaluation Reports Responsibilities of Rating Chain and Other Officials
10. Army Noncommissioned Officer Evaluations Responsibilities of Rating Chain and Other Officials
11. Navy Officer Fitness Reports Responsibilities of Rating Chain and Other Officials
12. Navy Enlisted Performance Evaluations Responsibilities of Rating Chain and Other Officials
13. Air Force Officer Evaluations Responsibilities of Rating Chain and Other Officials
14. Air Force Enlisted Evaluations Responsibilities of Rating Chain and Other Officials

REFERENCES

(a) USUHS Instruction 1305, "Officer/Enlisted Evaluation Reports," December 11, 1986 (hereby cancelled)

(b) AR 623-105, "Officer Evaluation Reporting System," November 15, 1981

(c) DA Circular 623-88-1, "Non-commissioned Officer Evaluation Reporting System," February 1, 1988

(d) AR 623-1, "Academic Evaluation Reporting System," October 14, 1985

(e) AFR 36-10, "Officer Evaluation System," August 1, 1988

(f) AFR 39-62, "Enlisted Evaluation System," May 1, 1989

(g) BUPERSINST 1610.10, "A Navy Performance Evaluation and Counseling System," August 2, 1995

(h) PHS Manual Circular 342, September 1, 1991, "Annual Commissioned Officers' Effectiveness Reports"

PROCEDURES

1. U.S. ARMY.

a. Officers

(1) A report will be initiated on the rated officer who has completed at least 90 calendar days in the same position under the same rater during the same rating period and one of the following conditions occur:

(a) Annual report - A report is mandatory on completion of one calendar year of duty following the "THRU" date of the last report.

(b) Change of Rater - A report is mandatory when the rated officer's immediate supervisor changes.

(c) Change of Duty - A report is mandatory when the rated officer has a change of principal duty, even though the rater remains the same. This includes reassignment within the University, and upon issuance of Permanent Change of Station (PCS) orders.

(d) Separation - A report is mandatory when the rated officer is separated from active duty. This applies without regard to the reason for separation.

(e) Other - Occasions for other reports being rendered include, but are not limited to, relief or incapacitation of rater, upon recommendation for involuntary separation, or failing selection for promotion. *(Refer to paragraphs 5-6 through 5-26, AR 623-105[b] for additional reasons for reports.)*

b. Enlisted - only personnel in the grades of E-5 and above receive evaluation reports.

(1) Annual - A report will be submitted 12 months after the most recent of the following events:

(a) Ending month of last report.

(b) Effective date of promotion to Sergeant.

(2) Change of Rater - A report will be submitted whenever the designated rater is changed, as long as minimum rater qualifications of 90 calendar days are met.

(3) Other - Occasions for other reports, which include, but are not limited to, Complete the Record reports and Relief for Cause reports, are outlined in paragraphs 2-9 and 2-10, DA CIR 623-88-1[c].

2. U.S. NAVY.

a. Regular Periodic Evaluations will be rendered in accordance with the following schedule:

Officer:

GRADE	SUBMISSION DATE
0-1	31 May
0-2	28/29 February & 31 August
0-3	31 January
0-4	31 October
0-5	30 August
0-6	31 July

Enlisted:

GRADE	SUBMISSION DATE
E-3 and Below	31 January
E-4	30 June
E-5	31 March
E-6	30 November
E-7	30 September
E-8	30 September
E-9	30 April

b. Regular Evaluations will also be submitted on the following occasions:

(1) Officer

(a) Detachment of reporting senior.

(b) Detachment of officer

including separation. This report is optional for members who retire.
NOTE: A Periodic Report may be extended by letter for up to two months to serve as either of the above reports. These reports will be completed prior to the member's detachment.

(c) Special Reports - Occasions for special reports include, but are not limited to, elimination of physical readiness deficiency, declining performance or misconduct. Submit special reports in accordance with NAVMILPERSCOMINST 16611.1, Chapter 4.

(2) Enlisted:

(a) Upon transfer, evaluation will be completed 10 working days prior to member's detachment from the USUHS.

(b) Separation (SEP) Reports - Submit 10 working days prior to a member being released from active duty or discharged without immediate reenlistment.

(c) Advancement/Frocking (ADV) Reports - Submit as of the date prior to frocking or date prior to advancement, if not previously frocked.
NOTE: A letter of extension of Periodic Reports up to 3 months may be used in place of the above reports.

(d) Special (SPEC) Reports - Occasions for special reports include, but are not limited to, temporary appointment to officer status, detachment of reporting senior, superior or substandard performance. Submit special reports in accordance with BUPERSINST 1616.9 2-2, Section 2-7.

3. U.S. AIR FORCE. Officer Performance Reports and Enlisted Performance Reports are prepared:

a. On the rated individual who has completed at least 120 calendar days under the same rater and one of the following conditions occur:

(1) One year has elapsed since close out of last evaluation.

(2) A change of rater occurs, provided a minimum of 120 days has elapsed since the close of the last report.

(3) An individual is reassigned, providing 120 days has elapsed since the last report.

b. When directed by Headquarters Air Force.

4. U.S. PUBLIC HEALTH SERVICE. Reports for members of the Public Health Service assigned to the University are due by September 30, and are to be mailed to the Office of Commissioned Personnel Operation Division no later than October 21 annually. In cases of Permanent Change of Station (PCS), reports are due 30 days after date of transfer.

ARMY OFFICER

EVALUATION

Reporting Requirements for Rating Chain Officials

OFFICERS

RATER: A rater must be an officer of the U.S. or Allied Armed Forces or an employee of a U.S. Government agency. The rater will normally be the immediate supervisor of the rated officer. The immediate supervisor is the individual who directs and is most responsible for the rated officer's performance. The rater must be senior to the rated officer in grade or date of rank. *For exceptions to this rule, see paragraphs 3-5, AR 632-105.*

INTERMEDIATE RATER: The intermediate rater must be an officer of the U.S. or Allied Armed Forces or an employee of a U.S. Government agency. A military intermediate rater must be senior in grade or date of rank to the rated officer. A civilian intermediate rater has no minimum grade requirement; however, he or she must be an officially designated supervisor of the rated officer. The intermediate rater will usually be the rater's immediate supervisor; however, he or she may be any supervisor between the rater and the senior rater in the rated officer chain of command. This rule is waived when the provisions of paragraphs 3-28 or paragraph C-4, appendix C, AR 623-105 apply.

SENIOR RATER: The senior rater must be an officer of the U.S. Armed Forces or an employee of DoD. Normally, the senior rater must be supervisor above the rater and intermediate rater in the rated officer's chain of command or supervisory chain. The minimum grade for a senior rater is O-4 (or a promotable O-3 in a position authorized O-4 or higher). The minimum grade for a civilian senior rater is GS-14 or any member of the Senior Executive Service. However, a civilian senior rater must be an officially designated supervisor of the rated officer serving at an appropriate level above the rater. Other rules on the required grades of senior raters are summarized in Figure 3-1, AR 632-105.

NOTE: In certain situations, the supervisor can serve as both the rater and the senior rater, per paragraph 3-17, AR 623-105.

ARMY ENLISTED

EVALUATION

Reporting Requirements for Rating Chain Officials

ENLISTED

RATER: The rater must be the first line supervisor of the rated soldier and designated as the rater for a minimum period of three rated months and must be a Sergeant or higher, if Military, and senior to the rated soldier by either pay grade or date of rank. Where rank is the same, seniority is determined by date of rank. If the soldier is on a Headquarters, Department of the Army (HQDA) recommended list for promotion to one of the top three enlisted grades, and is serving in an authorized position for the new grade, then he or she may rate any soldier he or she supervises if after the rater's promotion he or she will be senior in pay grade or date of rank to the rated soldier. Commanders may appoint a U.S. civilian rater, GS-6 or above, when a first line military supervisor is not available and when the civilian supervisor is in the best position to accurately evaluate the soldier's performance. Members of other U.S. Military services who meet the qualifications above may be raters. Members of Allied Forces are not authorized to be raters.

ENDORSER/SENIOR RATER: The endorser/senior rater must be in the direct line of supervision of the rated soldier and designated as the endorser for a minimum period of three months. He or she must be senior to the rater in grade or date of rank. Commanders may appoint U.S. civilian endorsers, GS-6 or above, when a military supervisor is not available, and when the civilian supervisor is in the best position to accurately evaluate the soldier's performance. Members of other U.S. Military services who meet the qualifications above may be endorsers. Members of Allied Forces are not authorized to be endorsers. An endorser is not required when the rater is a general officer, officer of Flag Rank, or U.S. civilian with Senior Executive Service rank and precedence.

REVIEWER: The reviewer must be a commissioned officer, warrant officer, Command Sergeant Major, or Sergeant Major in direct line of supervision and senior in grade or date of rank to both the rater and endorser. Commanders may appoint officers of other U.S. Military services or U.S. civilians, GS-6 and above, or other civilian pay scales as determined by the commander, as reviewers when grade and line-of-supervision requirements are met. Either the rater or endorser is a uniformed Army official. In cases where both the rater and endorser are other than uniformed Army rating officials, and no Army reviewer is available, the report will be reviewed by a uniformed officer (Army) in the rated soldier's MILPO. As an exception, the MILPO officer is not required to be senior to the rater or endorser. When the rater or endorser is a general officer, officer of flag rank, or U.S. civilian with Senior Executive Service rank and precedence, that officer will also act as reviewer and complete Part V, D of the report.

NAVY OFFICER

FITNESS REPORTS

Reporting Requirements for Rating Chain Officials

FITNESS REPORT WRITER: The incumbent in a position or office of the ratee's supervisor who is responsible for obtaining input from the ratee and responsible for completing the ratee's Fitrep.

REGULAR REPORTING SENIOR: The officer of the Armed Forces of the U.S. or its allies, or a civilian official of the U.S. to whom a naval officer has formally reported for duty or temporary duty pursuant to competent orders. If the orders require reporting to more than one person or command for the same period of duty, the first person or commander listed on the orders (unless otherwise specified) is the reporting senior; others are concurrent reporting seniors. The regular reporting senior is responsible for ensuring that all aspects of the performance of a subordinate are evaluated and made a matter of record. The reporting senior is ultimately responsible for the promotion recommendation of all officers and also for the ranking of those officers in the same comparison groups. (See NAVMILPERS-COMINST 1611.1A, p.p.2-4, paragraphs 2-10.) Unless delegated otherwise, the reporting senior on all Regular Fitness Reports on USUHS staff and faculty shall be the President, USUHS.

NAVY PERSONNEL EVALUATION ADVISOR: A Navy Personnel Evaluation Advisor will be appointed to monitor evaluation practices with regard to Navy personnel and provide assistance and advice. This practice encourages conformity to NAVMIL-PERSCOMINST 1611.1A and to accepted Navy practices. The incumbent in this position will be an appropriate U.S. Navy officer assigned to USUHS. The officer will review the rough draft fitness reports of all staff/faculty/graduate students assigned to USUHS. In the case where the Navy Evaluation Advisor has his or her own fitness report pending, a temporary alternate Advisor will be assigned to review the regular Evaluation Advisor's fitrep and also those fitreps of officers in his grade. The Navy Evaluation Advisor will provide for the regular reporting senior a recommended ranking of officers in comparison groups. Problems which cannot be resolved informally shall be reported to NMPC-32.

NAVY ENLISTED

EVALUATION

Reporting Requirements for Rating Chain Officials

ENLISTED PERFORMANCE EVALUATION REPORTS

REPORTING SENIOR: A reporting senior is any member of the U.S. Armed Forces or civilian official of the U.S. Federal Government who is authorized to submit evaluation reports. A reporting senior may submit evaluation reports only on authorized occasions, and may only evaluate performance during the period of the report unless otherwise provided in BUPERSINST 1616.9.

DELEGATED REPORTING SENIOR AUTHORITY: A delegated reporting senior is a person designated by the Commanding Officer to submit evaluation reports for which that Commanding Officer would otherwise be responsible. At USUHS, all enlisted evaluations will be signed by delegated reporting seniors. This person will be the lowest supervisor in the ratee's chain of command who meets the following criteria:

(1) REPORTS ON E-5 AND ABOVE: Reports on members in the grades E-5 and above, including members frocked to E-5, may not be delegated below the grade of lieutenant commander (O-4) or GM-13 or equivalent. Exceptions require written approval of the Chief of Naval Personnel (Pers-322).

(2) REPORTS ON E-4 AND BELOW: Reports on members in the grades of E-4 and below may not be delegated below the grade of chief petty officer (E-7) or GS-11 or equivalent. Exceptions are not permitted.

AIR FORCE

OFFICER/ENLISTED

Reporting Requirements for Rating Chain Officials

OFFICERS

RATER: The rater is the first official in the rating chain serving in a grade equal to or higher than the ratee. Date of rank is not considered.

ADDITIONAL RATER: The additional rater is the next official in the rating chain, after the rater, serving in a grade equal to, or higher than, the ratee. A Colonel, however, may be the additional rater for another Colonel. The additional rater for health profession officers (AFSC9XXX) on Extended Active Duty (EAD) must be serving in a grade equal to, or higher than, the rater and ratee.

REVIEWER: For Majors and below, the reviewer must be at least a Colonel or equivalent in a wing commander or equivalent position as determined by management level. For OPRs on Lieutenant Colonels and Colonels, the reviewer is the first general officer or equivalent in the rating chain. Equivalent civilian grades are determined by management levels based on the responsibilities of that civilian position.

ENLISTED

RATER: The rater is the person (commissioned officer, warrant officer, non-commissioned officer (NCO) or civilian equivalent of NCO grade) designated as the immediate supervisor of the ratee.

RATER'S RATER: Person immediately supervising the rater.

ENDORSER: For E-9, E-8, and E-7: The endorser must be at least a Major (or equivalent) or a civilian (at least a GS-12 or similar grade). When the rater's rater meets grade requirements, an endorser is not necessary. For E-6 and below: The endorser is the rater's rater.

PUBLIC HEALTH SERVICE

OFFICER EVALUATION

Reporting Requirements and Responsibilities
of Rating Chain Officials

RATING OFFICIAL: Immediate supervisor is the rating official. (Rating official must be first line supervisor of one or more officers.) Sections II, III, IV & V of Form PHS 838 are to be completed by the rating officer. (Section I is completed by the person being rated.)

REVIEWING OFFICER: The reviewing officer, in most cases, is the immediate supervisor of the officer's rating official (i.e., supervisor). It is the reviewing official's duty to fill out Section VI, indicating therein any specific disagreements or agreements with evaluations by the rating official. Space is also provided for comments by other higher levels of management to review and comment on the Commissioned Officer Evaluation Report (COER) at their election.

ARMY OFFICER

EVALUATION REPORTS

Responsibilities of Rating Chain and Other Officials

RATED OFFICER: Describes accurately his/her duties, objectives and significant contributions on DA Form 67-8-1 at the end of the rating period. *See AR 623-105 3-3 for additional responsibilities.*

RATER: Counsels rated officer throughout the rating period. Reviews DA Form 67-8-1 at the end of the rating period and, if appropriate, uses it to provide information about job description. Verifies rated officer's Army Physical Fitness Test (APFT) and height and weight. Provides an objective and comprehensive evaluation of the rated officer's performance and potential on DA Form 67-8. Provides suggested comments, double-spaced typed on a separate sheet of paper, for Intermediate Rater and/or Senior Rater when Intermediate Rater and/or Senior Rater are outside the department. *See AR 623-105 3-6 for additional responsibilities.*

INTERMEDIATE RATER: Assesses the performance of the rated officer using all reasonable means. If appropriate, provides information on DA Form 67-8-1 to assist the senior rater in his/her evaluation. Renders an objective evaluation of the rated officer's performance and potential on DA Form 67-8. *See AR 623-105 3-9 for additional responsibilities.*

SENIOR RATER: Uses all reasonable means to become familiar with rated officer's performance. Assesses the ability of the rated officer. Ensures that rating officials counsel the rated officer throughout the period. Considers information on DA Form 67-8-1 when evaluating the officer. Evaluates rated officer's potential relative to his/her contemporaries. *See AR 723-105-3-12 for additional responsibilities.*

BRIGADE COMMANDER: Reviews all reports for appropriateness.

DEAN, SCHOOL OF MEDICINE: If applicable, reviews reports from his/her area of responsibility prior to the President, USUHS.

DEAN, GRADUATE SCHOOL OF NURSING: If applicable, reviews reports from his/her area of responsibility prior to the President, USUHS.

ARMY NONCOMMISSIONED OFFICER

EVALUATIONS

Responsibilities of Rating Chain and Other Officials

RATER: Counsels the rated noncommissioned officer (NCO) on his/her duty performance and professional development throughout the rating period. At a minimum, the rated NCO will be counseled within the first 30 days of each rating period and quarterly thereafter. DA Form 2166-7-1 is mandatory for use by rater when counseling NCO's CPL thru Platoon Sergeant/Sergeant First Class (PSG/SFC). Uses completed 2166-7-1 to complete the Noncommissioned Officer Evaluation Report (NCO-ER) and maintains the 21667-1 until after NCO-ER for that period has been approved and submitted to the U.S. Army Enlisted Records and Evaluation Center (USAEREC). Assesses performance of rater NCO, using all reasonable means. Prepares a fair, correct report evaluating the NCO's duty performance, values/NCO responsibilities, and potential. Verifies Parts I and II and enters the APFT and height and weight results on NCO-ER. Provides suggested comments, double-spaced typed on a separate sheet of paper, for Senior Rater when Senior Rater is outside the department. *See DA CIRC 623-1 3-6 for more information on responsibilities.*

SENIOR ENLISTED ADVISOR (SEA): Reviews enlisted evaluations and provides input concerning the preparation of reports.

COMMAND MASTER CHIEF/COMMAND SERGEANT MAJOR: Reviews enlisted evaluations.

SENIOR RATER: Uses all reasonable means to become familiar with rated NCO's performance evaluation. Prepares a fair, correct report evaluating the NCO's duty performance, professionalism, and potential. Obtains the rated NCO's signature in part II of the NCO-ER. Ensures the rated NCO is aware his/her signature does not constitute agreement of disagreement with the report, but that the rated NCO has seen the completed report. *See DA CIRC 623-88-1 3-8 for more information.*

REVIEWER: Ensures that the proper rater and senior rater complete the report. Examines evaluations rendered to ensure they are clear, consistent and in just accordance with the known facts. Indicates concurrence or nonconcurrence with rater and/or senior rater. If reviewer judges that the rater and/or senior rater have not evaluated the rated NCO in a clear, consistent, or just manner, the reviewer will approach the rating officials concerning the discrepancy. If the NCOER is then revised so that the reviewer no longer disagrees, the reviewer will then concur. If the reviewer still disagrees, he/she will nonconcur and add an enclosure which clarifies the situation and renders an opinion as to the performance and potential.

REVIEWER MAY ONLY COMMENT WHEN IN DISAGREEMENT WITH THE RATER AND/OR SENIOR RATER. *See DA CIRC 623-88-1 3-10 for more information.*

BRIGADE COMMANDER: Reviews all reports for appropriateness.

DEAN, SCHOOL OF MEDICINE: If applicable, reviews reports from his/her area of responsibility prior to the President, USUHS.

DEAN, GRADUATE SCHOOL OF NURSING: If applicable, reviews reports from his/her area of responsibility prior to the President, USUHS.

NAVY

OFFICER FITNESS REPORTS

Responsibilities of Rating Chain and Other Officials

RATED OFFICER: Is responsible for ensuring the continuity of his/her own fitness report. Upon reporting to USUHS, provides the new reporting senior and/or fitness report writer the date of the last Regular report. Has the right to submit written fitness report input. *See NAVMILPERSCOMINST1661.1A Chapter 15 for additional information.*

FITNESS REPORT WRITER: Is responsible for obtaining input from the rated officer and is responsible for rendering an accurate evaluation of the rated officer's performance by completing NAVPERS 1611/1 WORKSHEET.

NAVY PERSONNEL EVALUATION ADVISOR: Monitors evaluation practices with regard to Navy personnel and provides assistance and advice. Review of rough fitness reports by the Navy Personnel Evaluation Adviser is encouraged to ensure conformity to NAVMIL-PERSCOMINST 1611.1A and to accepted Navy practices. Problems which cannot be resolved informally should be reported to COMNAV-MILPERSCOM (NMPC-32).

BRIGADE COMMANDER: Reviews all reports for appropriateness.

REGULAR REPORTING SENIOR: Is responsible for ensuring that all aspects of the performance of a subordinate are evaluated and made a matter of record. He/she is ultimately responsible for the promotion recommendation of all officers and also for the ranking of those officers in the same comparison group. He/she is responsible for obtaining rated officer's signature when necessary. Signs in Block 85 of 1611/1.

DEAN, SCHOOL OF MEDICINE: If applicable, reviews reports from his/her area of responsibility prior to the President, USUHS.

DEAN, GRADUATE SCHOOL OF NURSING: If applicable, reviews reports from his/her area of responsibility prior to the President, USUHS.

NAVY ENLISTED

PERFORMANCE EVALUATIONS

Responsibilities of Rating Chain and Other Officials

RATED MEMBER: Monitors the continuity of his/her evaluation record. May submit written input for any evaluation report. *See BUPERSINST 1616.9 Chapter 12 for additional information.*

REPORT SENIOR: Ensures all evaluation reports are promptly and properly submitted, and that equitable standards are used throughout the command.

DELEGATED REPORTING SENIOR: Is responsible for obtaining written input for the evaluation report and using it to complete NAVPERS 1616/24 WORKSHEET. Signs the final evaluation.

SENIOR ENLISTED ADVISOR: Reviews enlisted evaluations and provides input concerning the preparation of reports.

COMMAND MASTER CHIEF/COMMAND SERGEANT MAJOR: Reviews enlisted evaluations.

BRIGADE COMMANDER: Reviews all reports for appropriateness.

DEAN, SCHOOL OF MEDICINE: If applicable, reviews reports from his/her area of responsibility prior to the President, USUHS.

DEAN, GRADUATE SCHOOL OF NURSING: If applicable, reviews reports from his/her area of responsibility prior to the President, USUHS.

AIR FORCE

OFFICER EVALUATIONS

Responsibilities of Rating Chain and Other Officials

RATER: Prepares Officer Performance Reports (OPRs). Ensures ratee's duty titles clearly reflect the type of work and level of responsibility of the ratee. Provides suggested comments, double-spaced typed on a separate sheet of paper, for an Additional Rater when an Additional Rater is outside the department.

ADDITIONAL RATER: Reviews OPRs (and returns to the rater for reconsideration, if necessary) to ensure an accurate, unbiased, and un-inflated evaluation by the rater. Completes section VII of the OPR. Assumes the rater's responsibilities under the conditions listed in paragraph 3-5b(2) of AFR 36-10.

REVIEWER: Reviews OPRs (and returns to the additional rater and rater for reconsideration, if necessary) to ensure an accurate, unbiased, and uninflated evaluation by the previous evaluators. When appropriate, nonconcurs with previous evaluators and makes comments. Approves unit mission descriptions. Directs the additional rater to assume the rater's responsibilities when paragraph 3-5b(2) of AFR 36-10 applies.

AIR FORCE ADVISOR (SENIOR AIR FORCE OFFICER): Advises non-Department of the Air Force (DAF) evaluators of Air Force rating policies and procedures. Reviews OPRs for compliance with the policies of AFR 36-10. Signs below section VIII on OPR form. *See AFR 36-10 3-13 for additional information.*

BRIGADE COMMANDER: Reviews all reports for appropriateness.

DEAN, SCHOOL OF MEDICINE: If applicable, reviews reports from his/her area of responsibility prior to the President, USUHS.

DEAN, GRADUATE SCHOOL OF NURSING: If applicable, reviews reports from his/her area of responsibility prior to the President, USUHS.

AIR FORCE

ENLISTED EVALUATIONS

Responsibilities of Rating Chain and Other Officials

RATER: Observes the ratee's behavior and duty performance, achievements, efficiency and the ratee's subordinates' morale and compliance with set standards. Evaluates the ratee's typical performance in relation to specific performance factors. Provides feedback to help ratees improve their performance. Records the ratee's duty performance and makes a promotion recommendation based on performance that accurately describes the ratee when compared with others of the same grade and Air Force specialty. Provides suggested comments, double-spaced typed on a separate sheet of paper, for Rater's Rater when Rater's Rater is outside the department.

SENIOR ENLISTED ADVISOR (SEA): Reviews enlisted evaluations and provides input concerning the preparation of reports. Also, signs as Air Force Advisor for evaluations on AB through Tsgt (AF Form 910). *See AFR 39-62, paragraphs 1-3 for more information.*

COMMAND MASTER CHIEF/ COMMAND SERGEANT MAJOR: Reviews enlisted evaluations.

RATER'S RATER AND ENDORSER: Must be aware of the ratee's typical performance. Ensures the ratee receives performance feedback as required. Carefully reviews the recorded performance information. Reports not completely substantiated should be returned to the previous evaluator for reconsideration of ratings. Makes promotion recommendations based on ratee's performance evaluation that accurately describes the ratee when compared with others of the same grade and Air Force specialty. *See AFR 39-62, paragraph 1-3 for more information.*

COMMANDER: Senior Air Force Officer who signs under "Commanders Review." Reviews report. If he/she agrees, the commander will mark "concur," and sign. If he/she disagrees with report, the commander will discuss the disagreement with previous evaluators, mark "nonconcur" if the disagreement is not resolved, sign, and provide comments on an AF Form 77. *See AFR 39-62. paragraphs 4-5 and 5-10 for additional information.*

BRIGADE COMMANDER: Reviews all reports for appropriateness.

DEAN, SCHOOL OF MEDICINE: If applicable, reviews reports from his/her area of responsibility prior to the President, USUHS.

DEAN, GRADUATE SCHOOL OF NURSING: If applicable, reviews reports from his/her area of responsibility prior to the President, USUHS.

UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

SUBJECT: Civilian Equal Employment Opportunity Program

DEC 1 6 1998

Instruction 1106

(EEO)

ABSTRACT

This Instruction implements DoD requirements for a civilian Equal Employment Opportunity (EEO) Program, per Equal Employment Opportunity Commission (EEOC) Management Directive 714[a], to include an Affirmative Employment Program (AEP), consistent with guidance from the EEOC and the DoD Human Goals Charter[b]. To comply with DoD expectations, this Instruction tailors the EEO Program to the needs of the Uniformed Services University of the Health Sciences (USUHS), and incorporates all key components including the assignment of managerial and supervisory responsibility and accountability.

A. Reissuance and Purpose. This Instruction reissues USUHS Instruction 1106[c] and updates USUHS policies, responsibilities, and procedures for processing complaints of discrimination.

B. References. See *Enclosure 1.*

C. Applicability. This Instruction applies to all civilian employees, supervisors of civilian employees, and civilian applicants seeking employment with the USUHS who are covered by DoD Directive 1440.1[d] It does not apply to Military Personnel for whom equal opportunity is covered by DoD Directive 1350.2[e].

D. Definitions. See *Enclosure 2.*

E. Policy. It is USUHS policy that:

1. The USUHS EEO Program shall:

a. provide equality of opportunity for all persons on the basis of merit; to prohibit any discrimination because of race, color, religion, sex (sexual harassment and/or sexual orientation), age (40 years or older), national origin, physical/mental disability, or reprisal for engaging in a protected activity in all relationships with employees and applicants for employment,

b. recognize that EEO is vital to the accomplishment of the USUHS mission,

c. develop and implement an AEP to achieve a civilian work force in which the representation of minorities, women, disabled veterans, and people with disabilities at each grade level, in every

occupation, and in every major organizational element is commensurate with the representation in the Civilian Labor Force (CLF),

d. eliminate barriers and practices that impede EEO for all USUHS employees and applicants by ensuring that EEO principles are integrated fully into the Civilian Personnel Management System,

e. afford employees and applicants a working environment free of sexual harassment and provide a procedure whereby employees and applicants can seek redress if they believe they are victims of sexual harassment,

f. make reasonable accommodation to the known physical/ mental disability and religion of an employee or applicant unless it causes undue hardship on the mission of the USUHS,

g. not conduct an employment test or other selection criterion that screens out, or tends to screen out, qualified individuals with disabilities,

h. not conduct a pre-employment medical examination or inquiry of an applicant regarding the nature of his/her disabilities, or the severity of the disabilities unless the inquiry is made to determine the applicant's ability to perform the essential functions of the job or the medical qualification requirements. An inquiry to determine the applicant's abilities may be necessary for safe and efficient performance of the duties in question,

i. provide recognition to employees, supervisors, managers, and departments demonstrating significant accomplishments on EEO issues or activities,

j. provide a procedure for filing, processing, investigating, and settling EEO complaints for employees and applicants who believe they have been discriminated against because of race, color, religion, sex, age, national origin, physical/mental disability, or reprisal,

k. analyze the workforce to determine any manifest imbalance or conspicuous absence of minorities, women, and people with disabilities as compared to CLF statistics published by the EEOC, and

l. develop recruitment plans or initiatives to be included in the AEP. These plans or initiatives will also be used for recruitment under the USUHS Federal Equal Opportunity Recruitment Program (FEORP); and

2. The Office of General Counsel, Washington Headquarters Services (WHS), in cooperation with the Office of General Counsel (OGC), USUHS shall:

a. provide advice and guidance regarding EEOC cases and at the formal stage represent the USUHS,

b. review for legal sufficiency no fault settlement agreements, attorney fees, and costs, and

c. litigate all formal EEO complaints filed with the EEOC and civil courts.

F. <u>Responsibilities.</u>

1. The <u>President, USUHS</u> shall:

a. Exercise leadership in establishing, maintaining, and implementing an affirmative and exemplary program of EEO throughout the organization. This shall be accomplished by the wide dissemination of the President's policy statements to supervisors and employees expressing his/her commitment to the program;

b. Treat EEO and AEP as essential elements vital to the accomplishment of the USUHS mission;

c. Designate a Director, EEO and allocate sufficient staff and other resources to ensure a viable EEO program, including assignment of staff to be responsible for EEO and AEP, including Special Emphasis Program (SEP) Managers;

d. Require that EEO be included as a critical job element in the performance plans and appraisals of all supervisors and other staff personnel who supervise civilian employees;

e. Set realistic goals and motivate subordinate managers and supervisors to set and meet their goals to support the accomplishment of USUHS EEO and AEP programs by establishing upward mobility and other developmental programs to provide career enhancement for minorities, women, and people with disabilities; and

f. Be the final USUHS decision authority on formal complaints of discrimination.

2. The Director, Equal Employment Opportunity Program shall:

a. Manage the EEO Program and AEP;

b. Evaluate employment policies, practices, and patterns within the USUHS and identify and correct any institutional barriers that restrict opportunities for the recruitment and advancement of minorities, women, and people with disabilities;

c. Provide policy and program oversight for the USUHS complaint system for individual and class complaints from employees and applicants; and

d. Make timely recommendations and/or decisions on complaints of discrimination and awards of attorney fees.

3. The Director, Civilian Human Resources Directorate shall:

a. Assure that USUHS personnel programs and activities fully meet all provisions of EEO policies and regulations and that the principal and operating officials responsible for carrying out the programs meet the established qualification requirements;

b. Ensure that EEO officials, counselors, and investigators are given appropriate access to personnel records and copies of records or documents when needed in the performance of their official duties;

c. Work with EEO to develop and implement the FEORP for minorities, women, disabled veterans, and people with disabilities;

d. Provide technical support to the Office of General Counsel, WHS; USUHS, OGC; EEO officials; and EEO counselors; and

e. As appropriate, inform and assist supervisors to restructure jobs through the Upward Mobility Program to improve the career progression of minorities, women, and people with disabilities in a fair, equitable, and consistent manner.

4. The Equal Employment Opportunity Officer shall:

a. Be responsible for administering the EEO Program of the USUHS and representing the President, USUHS and the Director, EEO on matters related to the EEO Program and the AEP;

b. Advise the President, USUHS and the Director, EEO with respect to the preparation of policies, procedures, regulations, reports, and other matters affecting the EEO Program;

c. Evaluate the effectiveness of the programs and recommend any required improvements and/or corrections needed;

d. Select, train, and supervise EEO Counselors and SEP Managers for the Federal Women's Program, Black Employment Program, Hispanic Employment Program, Asian/Pacific Islander Program, American Indian/Alaskan Native Program, and Program for People with Disabilities;

e. Evaluate employment policies, practices, and patterns within the USUHS and identify and recommend the correction of any institutional and architectural barriers that restrict opportunities for all employees and applicants for recruitment, employment, advancement, recognition, or training;

f. Ensure that realistic AEP goals are set and accomplished until overall USUHS objectives are met and sustained. Such goals will seek continuing increases in the percentages of minorities, women, disabled veterans, and other people with disabilities in entry and middle level positions. Target recruitment goals will be established to increase percentages of minorities, women, disabled veterans, and other people with disabilities in higher level positions in all occupations, organizations, departments, and activities;

g. Disseminate information and provide advice on EEO and AEP to managers/supervisors and employees to ensure their understanding and to enlist their cooperation in meeting goals;

h. Establish procedures for the informal and formal discrimination complaint process to include receipt, acceptance, investigation, and disposition of individual and class complaints;

i. Ensure fair, impartial, and timely investigation and resolution of complaints of discrimination in employment, including complaints of sexual harassment;

j. Establish a continuing EEO educational program for managers/ supervisors and employees, including training in the prevention of sexual harassment;

k. Compile, analyze, and report data for the USUHS AEP and other reports to the EEOC;

l. Review all awards and management training programs to ensure that minorities, women, disabled veterans, and people with disabilities are considered consistent with their qualifications and program criteria;

m. Identify the barriers that impede the employment and advancement of minorities, women, disabled veterans, and other people with disabilities and adjust the goals to eliminate those barriers;

n. Establish and maintain contacts with minority group leaders and organizations having interest in employment and career advancement opportunities for women, minorities, and people with disabilities to create an understanding of the USUHS EEO Program;

o. Conduct meetings with community action organizations in the interest of improving EEO relationships and serve on temporary and permanent committees established as either decision making or recommending bodies on matters concerning position management, recruitment, training, promotion, job design and reduction-in-force;

p. Provide technical support to the Office of General Counsel, WHS; USUHS, OGC; EEO officials; and EEO counselors;

q. Retain any relevant records or documents until notified by EEO officials that no further administrative or legal decision is pending on the complaint; and

r. Develop and implement the FEORP for minorities, women, disabled veterans, and people with disabilities.

5. The Equal Employment Opportunity Staff shall:

a. Be responsible for assisting the EEO Officer in administering the USUHS EEO Program;

b. Perform the full range of EEO responsibilities to include processing of formal and informal EEO complaints; and

c. Provide technical assistance and instructions to managers and supervisors in major areas of the administrative processing of discrimination complaints;

6. Managers and Supervisors shall:

a. Ensure that EEO principles are integrated into their personnel management process and are considered in employment decisions, such as hiring, promotion, reassignment, training, awards, and other personnel employment decisions;

b. Create and maintain a positive work environment that recognizes the needs and expectations of a diverse working population and balance those needs and expectations with the mission and goals of the USUHS;

c. Take all the steps necessary to prevent sexual harassment from occurring and express strong disapproval of all forms of harassment in the work environment;

d. Take immediate and appropriate corrective action when sexual harassment occurs;

e. Use and develop the skills of their employees so as to allow everyone the equal opportunity to succeed based on personal accomplishments; and

f. Review and evaluate the performance of their subordinates in terms of compliance with EEO and personnel policies, recognizing special achievements, and correcting deficiencies.

7. Special Emphasis Program Managers shall:

a. Assist the EEO Officer and Civilian Human Resources (CHR) on the employment status and AEP goals for women, minorities, disabled veterans, and other people with disabilities;

b. Assist in developing, implementing, and evaluating the AEP to ensure inclusion of goals directed toward recruitment, employment, and advancement of women, minorities, and people with disabilities; and

c. Initiate and maintain contacts with other government agencies and private organizations, such as professional groups, colleges, and universities, that are concerned with, or have an interest in, the employment and advancement of women, minorities, and people with disabilities.

8. Equal Employment Opportunity Counselors shall:

a. Work under the supervision of the EEO Officer on a collateral duty basis;

b. Serve as a bridge between managers and employees during the informal resolution of discrimination complaints; and

c. Conduct informal inquiry with respect to alleged discrimination, identify the issues, and attempt resolution at the informal stage.

9. Agency Employees shall:

a. Treat their co-workers, supervisors, and subordinates in a professional manner, maintaining an attitude of mutual respect toward all

employees and conforming with appropriate EEO personnel policies, practices, and procedures; and

b. Bring to the attention of their supervisors, instances of discrimination to encourage resolution at the source.

G. <u>EEO Complaint Processing Procedures.</u> *See Enclosure 3.*

James A. Zimble, M.D.
President

Enclosures:
1. References
2. Definitions
3. EEO Complaint Processing Procedures

REFERENCES

(a) Equal Employment Opportunity Commission Management Directive 714, "Multi-Year Affirmative Employment Plan"

(b) DoD Human Goals Charter, dated May 19, 1994

(c) USUHS Instruction 1106 "Equal Employment Opportunity Civilian Program" dated May 28, 1993 (hereby cancelled)

(d) DoD Directive 1440.1, "DoD Civilian Equal Employment Opportunity (EEO) Program," dated May 21, 1987

(e) DoD Directive 1350.2, "Department of Defense Military Equal Opportunity (MEO) Program," dated August 18, 1995

(f) Age Discrimination in Employment Act of 1967, as Amended

(g) Civil Rights Act of 1991

(h) Fair Labor Standards Act of 1938, as Amended (Equal Pay Act of 1963)

(i) Rehabilitation Act of 1973, as Amended

(j) Americans with Disabilities Act of 1991

(k) Title VII of the Civil Rights Act of 1964, as Amended

(l) 29 Code of Federal Regulations, Part 1614, "Federal Sector, Equal Employment Opportunity"

DEFINITIONS

1. Affirmative Employment Program. A program to provide sound occupational opportunities to those groups or classes of individuals who have not been in the mainstream of the work place in the past. This program targets specific minority groups and females to increase their representation.

2. Age Discrimination in Employment Act of 1967, as Amended[f] (ADEA) prohibits discrimination in employment on the basis of age (40 years or older).

3. Civil Rights Act of 1991[g] amends Title VII of the Civil Rights Act of 1964, Americans with Disabilities Act of 1990, Age Discrimination in Employment Act of 1967, Civil Rights Act of 1866, (Title 42, USC, Section 1981), and Civil Rights Attorney's Fees Awards Act of 1976.

4. Equal Employment Opportunity Program. A program to ensure equal opportunity in employment for all persons, to prohibit discrimination in employment because of race, color, religion, sex, national origin, age, physical/mental disabilities, and reprisal, and to promote full realization of equal employment opportunity through a continuing affirmative employment program.

5. Fair Labor Standards Act of 1938, as Amended (Equal Pay Act of 1963)[h] (EPA) prohibits sex based wage discrimination. It prohibits federal agencies from paying employees of one sex less wages than those of the opposite sex for performing substantially equal work.

6. Federal Equal Opportunity Recruitment Program. A program designed to implement a formal plan with specific recruitment actions and objectives to increase the availability of applicants having a manifest imbalance or conspicuous absence of protected groups in occupations as compared to their percentages in the CLF.

7. Rehabilitation Act of 1973, as Amended[i] and the Americans with Disabilities Act of 1991[j] prohibits discrimination on the basis of mental and physical handicap.

8. Sexual Harassment.

a. Sexual harassment is a form of sex discrimination that involves unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when:

(1) Submission to or rejection of such conduct is made to either explicitly or implicitly a term or condition of a person's job, pay, or career;

(2) Submission to or rejection of such conduct by a person is used as a basis for career or employment decisions affecting that person; or

(3) Such conduct interferes with an individual's performance or creates an intimidating, hostile, or offensive environment.

b. Any person in a supervisory or command position who uses or condones implicit or explicit sexual behavior to control, influence, or affect the career, pay, or job of a military member or civilian member, is engaging in sexual harassment.

c. Similarly, any military member or civilian employee who makes deliberate or repeated unwelcome verbal comments, gestures, or physical contact of a sexual nature is also engaging in sexual harassment.

d. Pre-complaint processing. An employee or applicant who alleges that he/she is being sexually harassed and who wishes to file a complaint must seek counseling and be counseled in accordance with this Instruction.

9. Special Emphasis Program. A program established as an integral part of the total EEO Program to address the concerns of minorities, women, and people with disabilities and to enhance their employment. The programs are: Federal Women's Program, Black Employment Program, Hispanic Employment Program, Asian/Pacific Islander Program, American Indian/Alaskan Native Program, and People with Disabilities.

10. Target Groups. Those EEO groups covered by law and defined by the EEOC and the Office of Personnel Management. Included are women, minorities, disabled individuals, and the aged (40 and over). The basic categories are defined below.

a. American Indian or Alaskan Native. A person having origins in any of the original peoples of North America and who maintains cultural identification through community recognition or tribal affiliation.

b. Asian or Pacific Islander. A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. Examples include China, India, Japan, Korea, the Philippine Islands, and Samoa.

c. Black. A person having origins in any of the black racial groups of Africa.

d. Hispanic. A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish cultures or origins. This does not include persons of Portuguese culture or origin.

e. White. A person having origins in any of the original peoples of Europe, North Africa, or the Middle East. This also includes persons not included in other categories.

f. People with Disabilities. A person who has a physical or mental impairment, which substantially limits one or more of such person's major life activities; has a record of such an impairment; or is regarded as having such an impairment.

(1) Physical or mental impairment:

(a) Any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological, musculoskeletal, special sense organs, cardiovascular, reproductive, digestive, respiratory, genitourinary, hemic and lymphatic, skin, and endocrine; or

(b) Any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities.

(2) Major life activities. This includes functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, and working.

(3) A record of such an impairment. This includes having a history of, or has been classified (or misclassified) as having a mental or physical impairment that substantially limits one, or more, major life activity.

(4) Perception of having such an impairment. This refers to an individual having a physical or mental impairment that does not substantially limit major life activities, but is treated by an employer as constituting such a limitation; has a physical or mental impairment that substantially limits major life activities only as a result of the attitude of an employer toward such impairment; or has none of the impairments defined above, but is treated by an employer as having such an impairment.

g. Qualified people with disabilities. This includes a person with a disability who, with or without reasonable accommodation, can perform the essential functions of the position in question without endangering the health and safety of the individual or others and who, depending upon the type of appointing authority being used:

(1) Meets the experience and/or education requirements, which may include passing a written test, of the position in question; or

(2) Meets the criteria for appointment under one of the special appointing authorities for people with disabilities.

11. Title VII of the Civil Rights Act of 1964, as Amended[k] prohibits discrimination based on race, color, religion, sex, or national origin. It also prohibits reprisal or retaliation for participating in the discrimination complaint process or for opposing any unlawful employment practice under Title VII.

EEO COMPLAINT PROCESSING PROCEDURES

A. As an organization within the Federal Government, the USUHS follows 29 CFR, Part 1614[1], which governs the processing of discrimination complaints within the Federal Government. Copies of 29 CFR, Part 1614[1] are available in the EEO office and will be provided to anyone initiating a complaint under this Instruction. What follows in this Enclosure is a brief overview of the Procedures found at 29 CFR, Part 1614[1].

B. Aggrieved Persons must contact an EEO Counselor.

All persons who believe they have been discriminated against because of race, color, religion, sex, national origin, age, mental/physical handicap, or reprisal must first make contact with an EEO counselor to receive counseling before filing a formal complaint of discrimination. The counselor must make whatever inquiry into the matter he/she believes necessary and seek resolution of the matter on an informal basis.

1. Time Limits. A person who believes he/she has been discriminated against is required to contact an EEO counselor within 45 days of the date the alleged discriminatory event occurred, or the effective date of the alleged discriminatory personnel action.

2. Resolution of the Matter. If during the course of the EEO Counselor's inquiry, the agency and the aggrieved person agree to an informal resolution of the matter, the terms of the resolution should be reduced to writing and signed by both parties.

3. Failure to Resolve the Matter. If resolution is not reached, the counselor must hold a final interview with the aggrieved person within 30 days of the date he/she brought the matter to the counselor's attention. The aggrieved person has 15 calendar days after receipt of the notice to file a formal complaint.

C. Formal Stage.

1. Investigation. If the aggrieved person elects to file a formal complaint, the investigation should be completed within 180 days of the date of filing the individual complaint.

2. Hearing. The agency shall notify the aggrieved person that, within 30 days of receipt of the investigative file, he/she has the right to request a hearing before an EEOC administrative judge or may receive an immediate final decision from the agency where the complaint was filed. In the absence of the required notice, the aggrieved person may request a hearing at any time after 180 days has elapsed from the filing of the complaint.

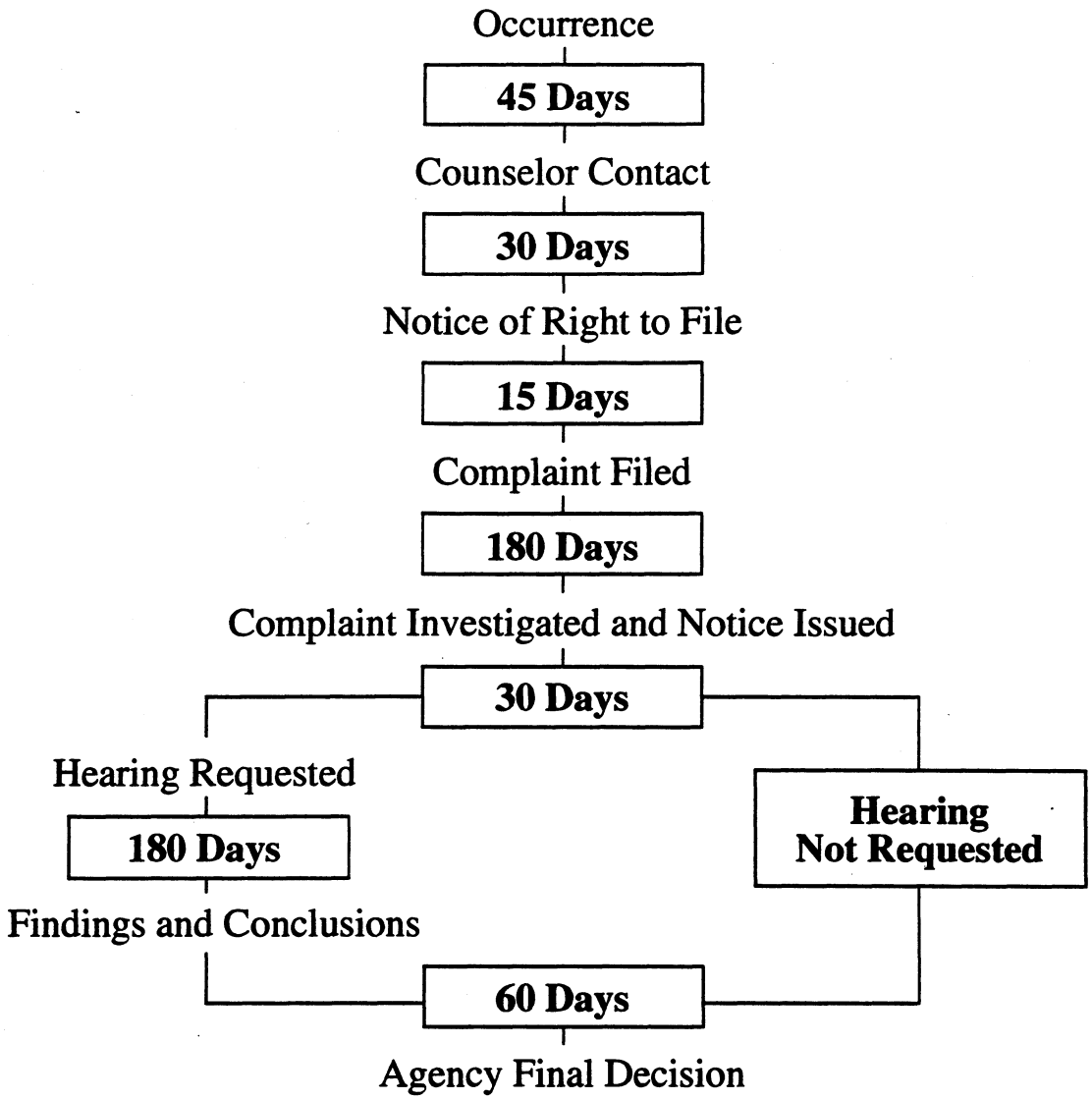
3. Findings and Conclusions. Following the aggrieved person's request for a hearing by the EEOC, an administrative judge shall issue findings of

fact and conclusions of law on the merits of the complaint within 180 days from the date of filing the individual complaint. If the agency does not reject or modify the administrative judge's findings and conclusions within 60 days, then the findings and conclusions and the relief ordered by the administrative judge shall become the final decision of the agency.

4. Agency Final Decision. The agency shall have a final decision within 60 days of receiving notice of the aggrieved person's request for an immediate decision or within 60 days of receiving the finding and conclusion of an administrative judge. The final decision will be based on the merits of each issue in the complaint. The final decision shall contain appeal rights to EEOC, notice of rights to file a civil action in federal district court and the applicable time limits for the appeal and/or lawsuit.

Attachment:
Federal Section Complaint Processing Under 29 CFR, Part 1614

Federal Section Complaint Processing Under 29 C.F.R., Part 1614



Complainant has 30 days to file appeal with EEOC after agency dismisses complaint or decides complaint on the merits.

Complainant can file civil action within 90 days of agency decision or EEOC decision or appeal, or within 180 days after filing complaint or appeal