Senate Bill No.: 0405-14

UNIVERSITY SENATE

UNIVERSITY AT ALBANY
STATE UNIVERSITY OF NEW YORK

Introduced by: Graduate Academic Council

Date: March 11, 2005

PROPOSAL TO ESTABLISH AN INTER-INSTITUTIONAL DUAL-DEGREE PROGRAM WITH ALBANY MEDICAL COLLEGE, MD/MPH

IT IS HEREBY PROPOSED THAT THE FOLLOWING BE ADOPTED:

1. That the University Senate approves the attached proposal as approved and recommended by the Graduate Academic Council.

2. That this proposal be forwarded to the President for approval.

ALBANY MEDICAL COLLEGE

AND

SCHOOL OF PUBLIC HEALTH

STATE UNIVERSITY OF NEW YORK AT ALBANY

MEDICAL DOCTORATE AND MASTERS IN PUBLIC HEALTH DUAL DEGREE (MD/MPH)

PROPOSED STARTING DATE: FALL 2005

I. INTRODUCTION AND RATIONALE

Albany Medical College (College) and the School of Public Health at the State University of New York at Albany (School) are proposing the introduction of an MD/MPH dual degree. The proposed degree will be primarily targeted at medical students enrolled at the College who are interested in acquiring knowledge in the public health field. The marriage between medicine and public health skills will enable physicians to be better practitioners and leaders in the fields of medicine and public health. The design of the MD/MPH allows prospective students to get exposed to knowledge and skills from both fields simultaneously during five years of graduate coursework and internship experience. The degree will build upon the existing relationship between the College and the School to prepare physicians aware and capable of addressing public health problems and public health professionals adept at clinical knowledge and practice.

Description

Individuals interested in pursuing an MD/MPH will be able to complete the degree in five years (compared to medical school's four year curriculum). The degree will benefit from summer sessions in the first two years of medical school to offer students courses that are part of the MPH program. The completion of the first two years of medical school, which are primarily didactic and cover basic sciences, transition students into the 'practicum' phase that spans the next two years. It is before that period (3rd and 4th year of medical school) that MD/MPH students will spend a year completing their MPH course work and part of their internships. Subsequent to that, they will go back to medical school to complete their third and fourth year of medical education. The latter year will also involve the completion of an MPH internship. A more detailed description of the curriculum is provided in another section of this document.

The aim of such a curriculum design is to couple the students' exposure to both disciplines simultaneously to enrich the educational experience. Any other design may cause discontinuity in the students' exposure to either public health or medicine.

Commitment to Professional Development

Since being founded in 1984, the School of Public Health at the University at Albany has been committed to develop and enhance the skills and knowledge of public health professionals, as well as others interested in the field of public health. The commitment has been translated by the School's continuous effort to create an academic setting that couples experiences from various fields and disciplines to that of public health. This effort is reflected by the diverse background of the faculty and the School's partnerships with various public and private agencies and academic settings. Of relevance to this proposal is the School-based Preventive Medicine Residency (PMR) that prepares physicians for careers in public health. The

proposed degree will further advance that goal of engaging professionals from other disciplines, in this instance medical students, in public health issues and ways to address them. The development of such a degree is timely given that medicine and public health are crossing paths more than ever. This degree will aim to provide such an understanding and skills to address issues and concerns shared by both disciplines.

The School of Public Health currently offers a Master in Public Health (MPH), which is considered a *terminal degree for the front-line public health worker*. Students enrolled in the MPH program are expected to choose one of six areas of concentration that include: behavioral science/community health; biomedical sciences; biostatistics; environmental health; epidemiology, and health administration. Students develop an area of concentration through taking several courses in that specific area in addition to the six required core courses. Other degrees offered by the School include the DrPH that is offered through the Office of Interdisciplinary Programs, as well as MS and PhD programs offered through individual departments (the PhD degree in Health Policy, Management and Behavior is in its final development phase). Recently, the School started offering a certificate degree in Public Health Fundamentals and Principles aimed primarily at public health professionals.

The School also supports and partly sponsors the Northeastern Regional Public Health Leadership Institute (NEPHLI) and the Center for Continuing Education. NEPHLI is a nationally recognized Institute that "brings together state and local health departments, academia, public health associations and organizations committed to improving the skills of leaders in the field of public health." The Center for Continuing Education has been regionally recognized as a source of professional development activities for "health professionals, community leaders, and the public of New York State and beyond."

As recognition of that commitment to professional development, The School was designated by the Centers for Disease Control and Prevention (CDC) as a Center for Public Health Preparedness in September 2000. The mission of the Center is "to improve the capacity of the public health workforce in New York and Vermont to respond to current and emerging public health threats, with a focus on bioterrorism and infectious disease outbreaks." In addition, the School has been a designated partner in the New York/New Jersey Public Health Training Center Project.

Albany Medical College

Albany Medical College is one of the nation's oldest private medical schools. It was founded in 1839 with an initial enrollment of 57 medical students. In 1953 the College enrolled for the first time graduate students who pursue masters and doctoral degrees in biomedical sciences. It currently enrolls about 640 medical students.

The Albany Medical Center, which administratively links together the College and a 631-bed Hospital, is the only academic health science center in the 24 counties of eastern New York and western New England. The Center is the hub of the health care network that includes more than 50 hospitals and 3,000 physicians in a 24-county service area with a population of 2.8 million in eastern New York and western New England.

Albany Medical College has a responsibility to educate medical students, physicians, bio-medical scientists and other health care professionals to meet the future health care needs of the region and the nation. The medical school is committed to the idea of the "continuum of medical education" that ranges from the undergraduate medical education, graduate medical education and continuing medical education and training. The joint degree with the School is a natural extension of this continuum of education.

The content of the undergraduate curriculum is integrated over four years. The College recently restructured its curriculum to more effectively address contemporary issues in health care while ensuring that the students continue to receive the highest quality clinical and scientific education. The curriculum focuses on principles of comprehensive care, while teaching students to think and analyze information. The revised curriculum integrates basic science and clinical medicine to build a framework for diagnosis, prevention, and treatment that would utilize an increasingly wide range of resources in an effective, efficient, and compassionate manner.

AFFILIATIONS:

Albany Medical College has academic affiliations with several regional institutions in an effort to attract some of the brightest students to the College:

- Rensselaer Polytechnic Institute: Accelerated Pre-Med Program; BS/MD
- Siena College: A Pre-Med program in Science, Humanities and Medicine; BS/MD
- Union College: Leadership in Medicine/Health Systems Program and Seven-Year Medical Education Program
- Union College: Master of Science Degree program in Bioethics

MD/MPH Dual Degrees Nationwide

Of the thirty-three accredited schools of public health that exist nationwide, twenty-four currently offer an MD/MPH degree. The list includes well-recognized schools such as Harvard College, Emory University, the University of Michigan, the University of Minnesota and the University of North Carolina, among others.

However, MD/MPH degrees are not offered solely by schools of public health. For the 2003-04 academic year, sixty-seven MD/MPH degrees opportunities existed nationwide. Forty of those offer the MPH degree through accredited programs in public health. Seven accredited schools of public health offer the MPH degree to students enrolled as medical students outside of their immediate educational institution.

The length of study required for the completion of the MD/MPH degree ranges from four to six years. Available data show that six MD/MPH degrees are four years in length; forty are five years in length; five are between four to five years in length; and one program requires five to six years for completion.

Potential Demand for the MD/MPH Degree

The administration and faculty of the College and School believe that offering the MD/MPH degree will be attractive to a considerable number of medical students interested in gaining public health knowledge and skills. What makes the MPH degree of interest to the usually busy medical students is that a significant portion of the curriculum is currently offered through distance education. A feature that will undoubtedly increase

its appeal. This is substantiated by feedback from medical students who have recently enrolled in distance education courses offered by the School.

Currently, medical students who are interested in an MPH have to interrupt their medical education to pursue the degree. This has been done in various ways. Some students either completely stop their medical education or wait until they finish their medical degrees (before the residency) to pursue an MPH. In both instances, the major disadvantage is that they get disengaged from medical school while pursuing an MPH and vice versa when going back to medical and clinical education and training. The proposed degree aims to solve this significant problem through simultaneously exposing students to both disciplines during the five years it takes to complete the dual degree (see attached letter of support from Dr. Vincent Verdile, Dean of the College).

II. ADMISSION REQUIREMENTS

To be considered for admission into the MD/MPH, applicants must be admitted first to medical school. Subsequently, an application is sent to the School for formal admission into the State University of New York at Albany (MPH program). To be considered for admission into the MD program, applicants must provide the following:

1. Successful completion of a minimum three years of college-level coursework (90 semester hours or 135 quarter hours of credit) in an accredited college or university
2. Successful completion of one year of each of the following with related laboratory experience:
    - General biology or zoology
    - General chemistry
    - Organic chemistry
    - Physics

    (A minimum of six semester hours or nine quarter hours of credit constitute the usual one-year course)
3. Submission of results of the Medical College Admission Test (MCAT)
4. Submission of letters of recommendation
5. Ability to maintain the Minimum Technical Standards for Matriculation
6. Compliance with New York State and Occupational and Safety Health Administration (OSHA) immunization requirements

A separate application will be filed with SUNY-Albany for admission into the MPH degree. The admission requirements for the MPH program* are subsumed in the admission requirements for the College, they include:

1. Basic admission criteria: Must hold a bachelors degree from a college or university of recognized standing.
    a. Grade point average of 3.00 or better.
    b. One year of biology (either basic biology or physiology or microbiology)
    c. A college level course in mathematics (algebra) or statistics.
    d. A semester of social sciences.
2. Graduate Record Exam (GRE): All applicants must submit GRE scores to be considered for admission. Scores on the Medical College Admissions Test (MCAT) or the Graduate Management Admission Test (GMAT) may be substituted for the GRE.
3. Test of English as a Foreign Language (TOEFL): Applicants whose native language is not English are required to submit a score on the TOEFL prior to being considered for admission. The minimal acceptable score is 600 on the paper-based test or 250 on the computer-based test.
4. Letters of Recommendation: All applicants must submit three (3) letters of recommendation prior to being considered for admission. At least one letter must be from a former university teacher.
5. Statement: All applicants must submit a statement explaining why they wish to pursue a career in public health. There is no limit to the length of the narrative statement. These statements are judged for grammar and spelling as well as for content. The admission committee evaluates not only the academic preparation of candidates, but the degree to which the candidate's goals are appropriate for the program.

***All graduate applications at the University are processed through the Graduate Studies Admissions Office. For additional information on specific programs of study, you can contact the SPH directly.**

III. DETAILED PLAN OF STUDY

Albany Medical College Curriculum

The College's curriculum is spread over four years. During the first year, which begins in September (37 weeks), medical students are exposed to courses in basic sciences that have been organized into conceptual or organ system modules concentrating on normal structure and function relating to a patient's clinical presentation. The curriculum allows medical students to take the summer between the first and second year off.

During the second year, which begins in August (37 weeks), modules focus the students' attention on an understanding of 'abnormal'. Utilizing clinical case material, students integrate their understanding of normal and abnormal in order to develop a logical approach for clinical care. At the beginning of the summer between the second and third year, medical students take their board examination. The third year of medical school which begins in August (52 weeks), consists primarily of clerkships in ambulatory care settings. The last year, which begins in August (40 weeks), involves a rotation of hospital-based clerkships that prepare them for residency and practice.

MPH Degree Requirements

The following includes a description of the coursework and internships (clerkships) required for completion of the MD/MPH degree.

MPH coursework and internships would be completed during the summer between years 1 and 2 (core courses), summer between year 2 and 3 (core courses), third year (core, track, and elective courses; internship), and fifth year (internship).

The following courses/internship will be waived for medical students: 1) HPM 500 would be waived since a similar course is taught during the first year of medical school, 2) BMS505 would be waived due to its coverage as part of the medical school curriculum and 3) a six-credit internship would be substituted by one of the clerkships (designed to reflect medical and public health principles).

Program of Study and Internships

(51 credits minimum, or 45 credits with a 6 credit internship waiver [applicable to the MD/MPH])

A. **Core Curriculum** of 24 credits, minimum*

1. EPI 501 Principles and Methods of Epidemiology I (3);

2. STA 552 Principles of Statistical Inferences I (3);**

3. HPM 500 Health Care Organization, Delivery and Financing (3);

4. EPI 503 Principles of Public Health (3);

5. BMS 505 Biological Basis of Public Health (3);

6. EHT 590 Introduction to Environmental Health (3):

7. HPM 525 Social and Behavioral Aspect of Public Health (3);

8. One course that requires application of computers and/or statistics for analysis of data in area of concentration. Specific course(s) required for concentration are listed in B;

*Students are required to maintain a minimum grade point average of 3.0 in the eight core courses (Epi 501, Sta 552, Hpm 500, Epi 503, Eht 590, Hpm 525, and the course that fulfills the quantitative requirements)

**Students selecting Biostatistics concentration take Sta 558, Introduction to the Theory of Statistics I (3) instead of Sta 552

Note: STA 552 (in-class version) and STA 553 use the computer program SAS for many exercises. Students without programming knowledge will find it advantageous to take EPI 514 before or concurrently with STA 552.

B. Area of Concentration Specific Requirements, 15 credits

Behavioral Science/Community Health

Quantitative course: Sta 553 Principles of Statistical Inferences II (3) or

HPM 520 Fundamentals of Research Design (3) or

HPM 647 Program Evaluation (3)

Hpm521 Introduction to Family and Community Health (3);

Hpm 627 Public Health Education: Targeting Social, Organizational and Behavioral

Factors to Promote Health (3); and

Choice of two electives as approved by advisor.

Biomedical Sciences:

Quantitative course: Sta 553 Principles of Statistical Inferences II (3)

BMS 601A Introduction to Biomedical Sciences (3);

BMS 601B Introduction to Biomedical Sciences (3), and

One Elective in BMS, and

Choice of one electives in any department as approved by advisor.

Biostatistics:

Quantitative course: Sta 559 Introduction to Theory of Statistics II (3)

Sta 554 Methods of Data Analysis I (3);

Epi 502 Principles and Methods of Epidemiology II (3), and

Choice of two electives including at least two from the Department of Epidemiology and Biostatistics as approved by advisor.

Environmental Health:

Quantitative course: Sta 553 Principles of Statistical Inferences II (3)

EPI 514 Computer Programming for Data Management (3) or

EHT 665 Risk Assessment (3)

EHT 530 Principles of Toxicology (3)

EHT elective chosen from the following list:

EHT 515 Environmental Physiology (3)

EHT 520 Principles of Environmental Chemistry (3)

EHT 605 Water Quality and Public Health (3)

EHT 665 Risk Assessment (3)

EHT 730 Hazardous Materials Management (3)

EPI 613 Occupational and Environmental Epidemiology (3), and

Choice of two electives as approved by advisor

Epidemiology:

Quantitative course: Sta 553 Principles of Statistical Inferences II (3)

Epi 502 Principles and Methods of Epidemiology II (3)

Epi 514 Computer Programming for Data Management, and

Two 600 level EPI courses, and

Choice of one elective in any department as approved by advisor.

Health Administration:

Quantitative course: STA 553 Principles of Statistical Inferences II (3), or

HPM 550 Financial Management (3) or

HPM 647 Program Evaluation (3) or

HPM 669 Economic Evaluation (3)

HPM 501 Health Policy Analysis and Management (3)

HPM 641 Principles of Health Organization Management (3)

HPM 650 Strategy and Leadership Applications in Health Management (3), and

Choice of one electives in any department as approved by advisor

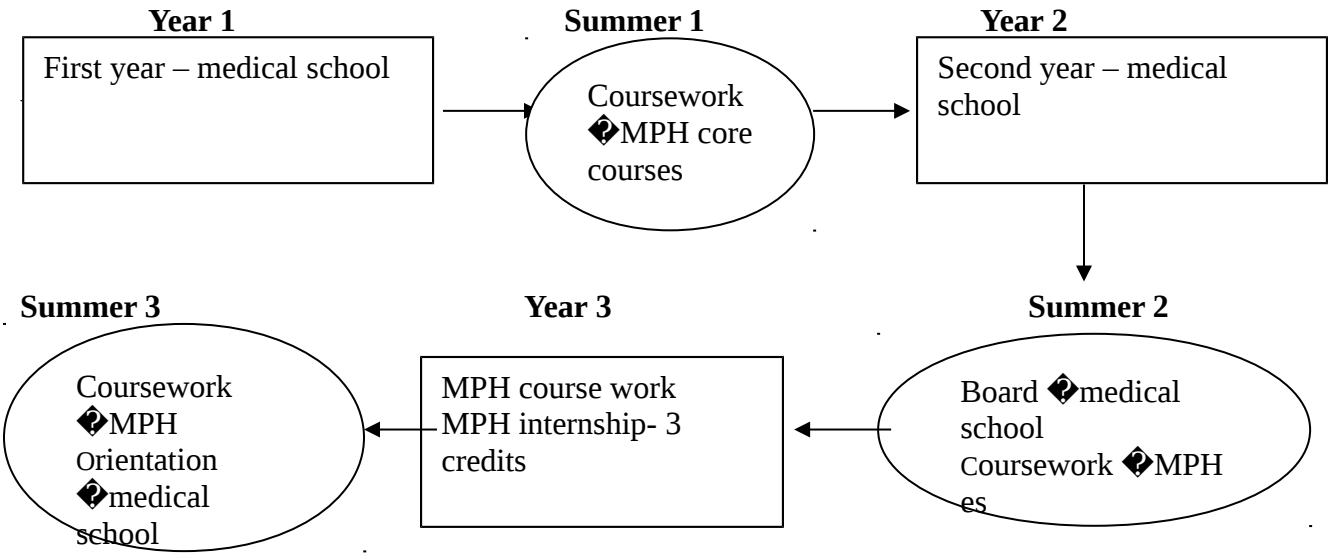
C. Internship and Seminar, 6-12 credits:

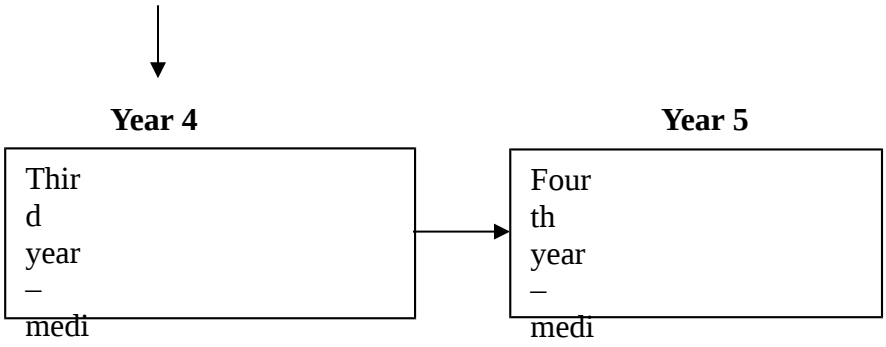
Students are expected to have completed a minimum of four core course before doing the internship. Students must complete at least 6 credits of internship in the area of concentration. At least 3 credits of internship must be in a different area. For an internship in a specific area of concentration, student should have taken the core course in that area.

SPH 690-695 Internship in Public Health (3) and

SPH 680 Seminar for Public Health (0)

All MPH students must enroll in the SPH 680 Seminar series once for each semester they are enrolled in an internship. These seminars are for MPH students to report on their internship experiences and learn from others' experience. Students who enroll in an internship for the summer should enroll in SPH 680 during the spring or fall semester before or after the internship is completed.





IV. PROSPECTIVE STUDENTS

The MD/MPH degree is designed to primarily attract medical students who are interested in acquiring public health- related knowledge and training. The availability and accessibility (geographical and financial) of such a degree will provide them the opportunity to enhance their knowledge and skill base. Also, being able to complete a significant portion of the degree via distance learning will be of great value to medical students whose time may not be as flexible as other students.

It is expected that the first few years of offering the degree will witness a moderate level of student enrollment (3-5 students). However, the School foresees an increase in enrollment as more medical students acknowledge the utility of such a degree. It is worth noting that some schools of public health that co-offer an MD/MPH enroll a significant portion of medical students into the program.

V. RESOURCES AND SUPPORT

The School and College bring together an unusually impressive array of educational, scientific and policy-related resources. Students will find some of the most sophisticated, state-of-the art laboratory equipment available anywhere in the world. In addition, the University and the New York State Department of Health offer advanced mainframe and personal computing facilities. Several excellent libraries are available with extensive information retrieval services. Students also have ready access to a number of unique data bases that open many lines of epidemiological, statistical and policy-oriented research. Below is an overview of the School's resources.

- ***Extensive Computing Facilities:***

  Because of the unique structure of the SPH, students and faculty have access to state-of-the-art computing facilities in two settings: the University and the New York State Department of Health. For further info on computing resources, please visit the School's website.

- ***Laboratory Facilities:***

  The vast New York State Department of Health laboratories are the setting of two of the School's departments, Biomedical Sciences and Environmental Health and Toxicology. Housed in 500,000 square feet of space at the modern Empire State Plaza, the Wadsworth Center for Laboratories and Research is the third largest public health research facility in the U.S. after the National Institutes of Health and the Centers for Disease Control and Prevention. The doctoral level researchers at Wadsworth have a long tradition of excellence in basic public health research.

In addition to the Wadsworth facility, the Health Department's new 125,000 square foot Axelrod Institute, located on New Scotland Ave., is devoted to infectious diseases research, human genome and research on chronic diseases.

- ***Library Resources:***

The extensive library collections of the University at Albany and the Health Department are available to students, as are the resources of Albany Medical College, the New York State Library and the libraries of the member institutions in the Capital District Library Council. By a cooperative arrangement, faculty and students may visit many of these libraries and borrow materials directly from them. Increasingly, each of the libraries is moving toward an electronic format that will speed up the search and retrieval of information.

The University libraries have holdings of 1.9 million volumes and over 5,000 periodical subscriptions. As a member of the Association of Research Libraries, the University library can supply materials in a variety of media from any major scholarly library in the country. The Governor Thomas E. Dewey Graduate Library of Public Affairs and Policy, part of the University Libraries which supports Rockefeller College's programs, has 130,000 volumes in specialized holdings pertinent to public policy research.

The Health Department's Dickerman Library, housed in the Wadsworth Center, is an up-to-date reference and information center specifically geared to the biomedical and public health sciences. The library houses 1100 journals as well as 50,000 books, monographs and technical reports dealing with biomedical and public health subjects. Medical librarians provide reference assistance during the normal work day, and a special 24-hour access is available for students in the School. Traditional reference services as well as computerized databases searching from a variety of systems are available The Schaffer Library at Albany Medical College contains about 130,000 volumes, 3,000 multimedia programs and receives about 1,000 medical journals on a regular basis. Its on-line catalog is the computerized database of the monographic collections of the Albany Medical Center, Capital District Psychiatric Center Branch and the Albany College of Pharmacy libraries.

- ***Data Bases:***

Students at the School of Public Health have access to several large data bases compiled by the New York State Department of Health. These registries, which are among the most comprehensive of any in the U.S., include:

A cancer registry, initiated in 1940 and computerized in 1972, which lists every individual diagnosed with cancer in New York State (with the exception of non-melanoma skin cancer.) Few cancer registries go back so far, or reflect such a large population (18 million New York State residents.) The registry is highly useful in studies of the causes of cancer and investigations into possible treatments. Several Epidemiology students are using data from the cancer registry for their theses.

A birth defects registry, started in 1983 as an outgrowth of studies into environmental exposures. This registry records all major and some minor malformations discovered in children up to age two. A registry of this type is rare, and highly useful in research on the possible environmental causes of birth defects, as well as treatments and provision of services.

A registry of individuals who have elevated blood levels of four different poisonous heavy metals: lead, cadmium, mercury and arsenic. Most often, these individuals turn out to be children or industrial workers, whose exposures are reported by testing laboratories. Started in 1983, the registry is useful in the study of occupational exposures and workplace hazards.

Other registries include one on Alzheimer's patients, another on individuals exposed to high levels of pesticides and a third on persons with occupational lung disease. Still another registry, known as SPARCS, records information on all hospital admissions and discharges. Developed as a billing and cost payment device, SPARCS data offers an opportunity for cost containment studies. A side benefit, however, is information provided on disease incidence throughout the state. Because it is so unusual to have a statewide, integrated database on hospital discharges, SPARCS is used by researchers nationwide.

- ***New Financial and Human Resources:***

Offering the degree will require some additional human resources investment on the behalf of the School. The School has recently hired an administrative assistant who would help with this endeavor.

The courses included in the MD/MPH are existing courses that are required for the completion for the MPH degree. However, coordinating the degree will require some human resources investments. An academic coordinator will be appointed who will advise students at the School. The administrative duties on the School side will be undertaken by the Assistant to Associate Dean, recently hired. On the other side, the Associate Dean’s office at the College will be responsible for coordinating the MD requirements. Communication and recruitment efforts will be conducted by the Assistant Dean for Student Affairs at the School and the Associate Dean’s Office at the College.

Annual evaluations of the MD/MPH will be conducted in coordination between the School and the College. Revisions will be made as needed to the study plan and other aspects if needed.