MEDICINE, DOCTOR OF (M.D.)/PUBLIC HEALTH, MASTER OF (M.P.H.) [DUAL DEGREE]

Program accreditation
Liaison Committee on Medical Education (M.D.)
Council on Education for Public Health (M.P.H.)

To qualify as a dual degree student in any of the training paradigms which appear in the Bulletin, a student must have evidence of having been simultaneously enrolled in one or more courses of both of the programs constituting the "dual degree" for at least one semester.

Program goal
The Division of the Epidemiology in the Department of Family Medicine and Population Health in the School of Medicine offers a program for VCU medical students to obtain a Master of Public Health degree in conjunction with their medical training. The M.D./M.P.H. dual degree program provides an opportunity for medical students who wish to pursue a public health or research career to graduate from medical school trained in both clinical and preventive, population-oriented medicine. Graduates from this program are prepared for positions in preventive medicine, primary care, research, community-based health centers and state and local health departments. To meet degree requirements, students complete a minimum of 36 credit hours of M.P.H. course work that includes:

- 12 credits of core courses
- 12 credits of required courses
- Nine credits of electives
- Three credits of a capstone project

Note that some elective courses may not be available in certain years or may require instructor permission for registration.

The objective of the dual degree program is to provide high quality and in-depth training in public health to qualified medical students. The five-year program includes four years of medical school and one year of study in the M.P.H. program. Students enter the M.P.H. curriculum after the M-3 year. During the M.P.H. year, students take a minimum of 36 credit hours of course work. Students receive three credit hours for successful completion of the "Population Health" course in medical school and take a minimum of one public health elective during the M-4 year to satisfy the public health internship requirement.

Note: Enrollment in the dual degree program requires admission into both the School of Medicine and the Graduate School. Students must successfully complete all required course work to receive both degrees at the end of the five years.

The mission of the M.P.H. program is to engage students in an experiential, learner-centered environment, collaborate with public health partners in Central Virginia to promote health equity and community wellness, and foster lifelong inquiry and discovery in interdisciplinary, translational research that improves human health.

The overall goal of the M.P.H. program is to educate students to become well-grounded in the essential knowledge, skills and attitudes of public health and demonstrate their ability to apply these essentials through course work, internships and the M.P.H. capstone project. This program is designed to provide students with the skills required to advance to positions as public health practitioners in a broad spectrum of positions and settings and who can perform the following:

1. Administer public health programs
2. Collect, analyze and evaluate public health data
3. Plan, implement and evaluate public health interventions
4. Apply results of evaluations and data analyses to policy development as necessary
5. Promote public health through educational campaigns

The structure of the program provides a framework for the progressive development of a mastery of the current state of the subject matter of public health and an ability to synthesize and apply this information to the identification of key areas of practice and research in public health. Students will develop educational competencies outlined by the M.P.H. program. These competencies cover the foundational knowledge necessary for a public health practitioner to both communicate the core of public health knowledge and express the design, results and interpretation of various public health interventions, evaluations, and data collection and analysis efforts to a variety of potential audiences.

Student learning outcomes
Student learning outcomes are monitored by the program faculty and center primarily around competencies for all students. Overall learning outcomes are as follows.

1. Integrated knowledge of public health: Students will demonstrate knowledge of the current elements of public health, at a level assessed by program faculty as competent or higher, according to the program rubric.
2. Demonstration of focused knowledge and skills: Students will demonstrate more detailed knowledge and applied skills in the individual area of scholarship, including familiarity with the research literature and the ability to evaluate and critique publications, at a level assessed by program faculty as competent or higher, according to the program rubric.
3. Development of competencies: Through program course work and applied experiences, students will develop competence in the discipline of public health as demonstrated through annual self-assessment of performance on the M.P.H. program competencies and faculty assessment of (1) student competence in semi-annual student reviews and (2) student performance in the program’s integrated learning experience, the capstone project.
4. Training in appropriate public health skills/knowledge: Through didactic study and two separate applied experiences in professional public health settings, students will gain knowledge and skills required to perform as public health practitioners and/or researchers.

The M.P.H. program trains students to develop educational competencies established by the program’s accrediting body, the Council on Education for Public Health. These competencies may be viewed on the Department of Family Medicine and Population Health website (http://familymedicine.vcu.edu/epidemiology/mph/competencies/).
The M.P.H. program student handbook is available upon request.

Other information
- Visit the academic regulations section for additional information on graduation requirements.
- Visit the academic regulations section for additional information on degree candidacy requirements.
- Visit the academic regulations section for additional information on graduation requirements.
- The M.P.H. program student handbook is available upon request.

School of Medicine graduate program policies

Admission requirements

<table>
<thead>
<tr>
<th>Degree</th>
<th>Semester(s) of entry</th>
<th>Deadline dates</th>
<th>Test requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.D. and M.P.H.</td>
<td>Fall</td>
<td>Applications strongly encouraged by Mar 15</td>
<td>MCAT (acceptable in lieu of GRE scores for this combined professional/academic degree program) TOEFL</td>
</tr>
</tbody>
</table>

Note: Students applying to the dual degree M.D./M.P.H. program should be accepted to the VCU School of Medicine prior to applying to the M.D./M.P.H. Program. Students must apply separately to each program. Applications to the M.P.H. program are made through sophas.org.

In addition to the general admission requirements of the VCU Graduate School, applicants must present the following qualifications.

1. Prior degree: Students must hold a bachelor's degree from an accredited institution, with a minimum GPA of 3.0 on a 4.0 scale in all undergraduate and any other graduate study. Official copies of transcripts for all prior degrees earned must be submitted to the VCU Office of Graduate Admissions.

2. Test scores: The M.P.H. program normally requires GRE scores, but for the combined M.D./M.P.H., students may submit MCAT scores provided for admission to the School of Medicine in lieu of GRE scores.

3. TOEFL: International students must submit TOEFL or IELTS scores. Minimum TOEFL score is 600 (paper-based), 250 (computer-based) or 100 (Internet-based); IELTS minimum score is 7.0. Test scores may be waived for international students who have received a medical degree (M.D.) in the U.S. Contact the program coordinator for more information. The PTE is also accepted with a minimum score of 65.

Students must also submit the following materials with their applications:

1. Letters of recommendation from three individuals who can assess applicant qualifications for graduate school; at least one academic reference is required, but two are preferred. Most appropriate are letters from past professors or work supervisors.

2. Current version of curriculum vitae or resume. Include experience and/or education relevant to study in public health.

3. Personal statement addressing the following issues:
   - Why VCU’s M.P.H. program best suits the student’s public health interests
• Description of applicant’s particular areas of interest in public health (e.g., maternal and child health, epidemiology)
• How an M.P.H. degree will help the applicant achieve her/his career goals
• Why the applicant wishes to pursue an M.P.H. degree
• Description of the applicant’s career goals

Degree requirements

The Master of Public Health program prepares students committed to public health careers in the public, private or nonprofit sectors. Public health works to prevent health problems in populations before these problems occur. The M.P.H. provides a rigorous curriculum to help students develop the analytic and critical reasoning skills to improve population health. The program boasts experiential learning, a highly interactive environment, accessible and approachable faculty and student involvement in important projects.

In addition to general VCU Graduate School graduation requirements (http://bulletin.vcu.edu/academic-regs/grad/graduation-info/), students are required to successfully complete minimum of 36 credit hours of formal course work and practicum, a 20-hour community-based learning experience, attendance at 12 public health seminars, and a capstone project. In addition, medical students will complete a public health elective during the M-4 year at a placement approved by the M.P.H. program director, in lieu of the required public health internship.

The M.P.H. program can be individualized to meet the varied needs and interests of students. The program offers many electives, allowing students to tailor the program to meet educational objectives, and it is flexible enough to accommodate students who enter the program with various backgrounds and experiences.

Capstone project: The culminating work in the M.P.H. program is the capstone project. The project is a practical experience that allows the student to apply what has been learned in the didactic components of the curriculum to a focused project. The goal is to enhance the student’s academic experience through the application of public health concepts and skills in a supervised experience. Students are required to synthesize the literature; analyze, assess or evaluate quantitative or qualitative data; and in general apply theory and integrate knowledge gained and principles in situations that approximate some aspects of professional practice. With this mentored experience, students are able to both broaden their skills and hone their proficiency in a specific area of public health. The major product of this culminating experience is expected to vary depending on the educational goals of the student, but could include one of the following:

1. Manuscript suitable for publication in a peer-reviewed journal
2. Comprehensive disease-related report and analysis
3. Policy analysis report
4. Needs assessment for a specific population
5. Development, implementation, and analysis of target population surveys
6. Program evaluation

At a minimum, the capstone experience will require the integration of multiple major competencies used by a public health professional. In fulfilling the capstone requirement, each candidate must: (a) submit a formal written paper of sufficient depth and rigor and (b) satisfactorily complete a poster presentation of the project chosen as the basis for the written paper at an appropriate venue (e.g., research forum, refereed conference, etc.) approved by the M.P.H. program director.

Noncurricular program requirements

In addition to course work, students are required to complete the following noncurricular requirements for the M.P.H. degree:

1. Attendance at 12 public health seminars
2. Twenty hours of community-based service-learning

M.P.H. curriculum requirements for the dual degree M.D./M.P.H. program

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BIOS 543</td>
<td>Graduate Research Methods I</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 544</td>
<td>Graduate Research Methods II</td>
<td>3</td>
</tr>
<tr>
<td>EPID 547</td>
<td>Applied Data Analysis Lab I</td>
<td>1.5</td>
</tr>
<tr>
<td>EPID 548</td>
<td>Applied Data Analysis Lab II</td>
<td>1.5</td>
</tr>
<tr>
<td>EPID 604</td>
<td>Principles of Environmental Health</td>
<td>3</td>
</tr>
<tr>
<td>EPID 580</td>
<td>Public Health Ethics</td>
<td>1</td>
</tr>
<tr>
<td>EPID 593</td>
<td>Foundations of the Public Health Profession</td>
<td>2</td>
</tr>
<tr>
<td>EPID 594</td>
<td>MPH Practicum</td>
<td>2</td>
</tr>
<tr>
<td>HCPR 601</td>
<td>Introduction to Health Policy</td>
<td>3</td>
</tr>
<tr>
<td>OVPR 603</td>
<td>Responsible Conduct of Research</td>
<td>1</td>
</tr>
<tr>
<td>SBHD 605</td>
<td>Introduction to Social and Behavioral Health (Additional Program Courses)</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional program courses

Electives

Select nine credit hours minimum from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BIOS 549</td>
<td>Spatial Data Analysis</td>
</tr>
<tr>
<td>BIOS 571</td>
<td>Clinical Trials</td>
</tr>
<tr>
<td>CCTR 630</td>
<td>Design Implications in Clinical Trials</td>
</tr>
<tr>
<td>CCTR 631</td>
<td>Adaptive Clinical Trials</td>
</tr>
<tr>
<td>EPID 571</td>
<td>Principles of Epidemiology</td>
</tr>
<tr>
<td>EPID 600</td>
<td>Introduction to Public Health</td>
</tr>
<tr>
<td>EPID 601</td>
<td>Contemporary Issues and Controversies in Public Health</td>
</tr>
<tr>
<td>EPID 603</td>
<td>Public Health Policy and Politics</td>
</tr>
<tr>
<td>EPID 606</td>
<td>Epidemiologic Methods</td>
</tr>
<tr>
<td>EPID 622</td>
<td>Maternal and Child Health</td>
</tr>
<tr>
<td>EPID 624</td>
<td>Chronic Disease Epidemiology</td>
</tr>
<tr>
<td>EPID 645</td>
<td>Public Health Genomics</td>
</tr>
<tr>
<td>EPID 646</td>
<td>Epidemiology of Psychiatric and Substance Use Disorders</td>
</tr>
<tr>
<td>EPID 692</td>
<td>Independent Study</td>
</tr>
<tr>
<td>GRAD 614</td>
<td>Introduction to Grant Writing</td>
</tr>
<tr>
<td>GRTY 501</td>
<td>Physiological Aging</td>
</tr>
<tr>
<td>GRTY 510</td>
<td>Aging</td>
</tr>
<tr>
<td>GRTY 603</td>
<td>Social Gerontology</td>
</tr>
<tr>
<td>GRTY 604</td>
<td>Problems, Issues and Trends in Gerontology</td>
</tr>
<tr>
<td>HEMS 505</td>
<td>Contemporary Issues in Health</td>
</tr>
</tbody>
</table>
HEMS 550  Exercise, Nutrition and Weight Management
HEMS 604  Nutrition for Health and Physical Activity
HEMS 605  Psychology of Physical Activity
HEMS 606  Psychosocial Aspects of Sport and Physical Activity
HGEN 501  Introduction to Human Genetics
HGEN 502  Advanced Human Genetics
HGEN 620  Principles of Human Behavioral Genetics
PSYC 660  Health Psychology
HSEP 601  Emergency Management: Response Planning and Incident Command
HSEP 603  Risk Assessment
HSEP 650  Public Health Preparedness
SBHD 609  Research Methods in Social and Behavioral Health
SBHD 630  Theoretical Foundations of Social and Behavioral Health
SBHD 632  Health Disparities and Social Justice
SBHD 634  Patient-Provider Interaction
SBHD 636  Community-based Participatory Research
SBHD 637  Program Evaluation
SBHD 638  Applications in Qualitative Research Methods
SOCY 510  Domestic and Sexual Violence in Social Context
SOCY 524  Aging and the Minority Community
SOCY 603  Seminar in Population Studies
SOCY 607  Seminar in Racial and Ethnic Relations in America
SOCY 611  Studies in the Community
SOCY 620  Seminar in Criminology
SOCY 624  Community and Community Services for the Elderly
SOCY 632  Intimate Partner and Sexual Violence: Medical Practice and Policy
SOCY 633  Application of the Policy Process to Issues of Violence
SOCY 634  Social Contexts of Childhood and Violence
SOCY 635  Theorizing Gender Violence
SOCY 645  The Sociology of Health and Illness
URSP 521  Introduction to Geographic Information Systems
URSP 621  Introduction to Geographic Information Systems
URSP 622  Community Socioeconomic Analysis Using GIS
URSP 625  Spatial Database Management and GIS Modeling

Noncurricular program requirements
In addition to course work, students must attend 12 public health seminars and complete 20 hours of community-based service-learning.

Total Hours 36

Sample plan of study for dual degree program

Fall semester
After M-3 training
BIOS 543  Graduate Research Methods I 3
EPID 547  Applied Data Analysis Lab I 1.5
EPID 580  Public Health Ethics 1
EPID 593  Foundations of the Public Health Profession 2
HCPR 601  Introduction to Health Policy 3
OVPR 603  Responsible Conduct of Research 1
Electives (See list above) 6

Term Hours: 17.5

Spring semester
After M-3 training
BIOS 544  Graduate Research Methods II 3
EPID 548  Applied Data Analysis Lab II 1.5
EPID 594  MPH Practicum 2
EPID 604  Principles of Environmental Health 3
EPID 694  MPH Capstone Project 2
SBHD 605  Introduction to Social and Behavioral Health 3
Electives (See list above) 3

Term Hours: 18.5

Total Hours: 36

1 Student may elect to complete 1-3 credits of EPID 694 in summer.

Total graduate credit hours required (minimum) 36

Selected course work completed during the M-1 and M-2 years of study for application toward the M.D. accounts for nine credit hours toward the M.P.H. degree. This includes a substitution of training in population health in the M.D. curriculum for the core epidemiology course, EPID 571. The public health internship requirement is fulfilled through completion of a public health elective in the M-4 year, after the student completes the M.P.H. year. This elective occurs at a public health agency that is approved by the M.P.H. program director.

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