

# Applied Biostatistics MPH

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## COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Public Health in Applied Biostatistics.

### About the Program

The Master of Public Health in Applied Biostatistics is a unique degree that responds to the growing need for master's-trained professionals with expertise in advanced biostatistical methods. The program is designed to train professionals in the field of public health who have a clear understanding of and expertise in the use, statistical application and interpretation of large and complex data sets; of the critical importance of valid study designs and analytic methods; and of the application of hypothesis-based development and statistical programming and testing.

Students complete their studies with the fundamental critical thinking skills and statistical/programming competencies necessary for public health practice related to Applied Biostatistics in accordance with Council on Education for Public Health (CEPH) standards. Applied Biostatistics courses address topics such as multivariate biostatistics, including the use of regression models and multifactorial analysis; research design; and analysis of multilevel or hierarchical data. They can also gain considerable skills in data management and analysis, the application of statistical methods to address missing data, and analysis of latent constructs as well as measurement development. Students in the Applied Biostatistics program are trained in the MPH core competencies while gaining skills to use and apply multiple statistical program packages, including SAS and R; to develop appropriate study designs based on appropriate research questions; and to interpret and present study results to various audiences. Thus, the MPH in Applied Biostatistics at Temple University is particularly poised to foster interdisciplinary research and train students to work in an interdisciplinary environment.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students can complete the degree program through evening classes and online courses. Full-time students usually complete the program within two academic years. Part-time students usually take three to four years to complete their degree.

**Interdisciplinary Study:** Interdisciplinary MPH coursework, research and interactions with students and faculty in other departments are encouraged to give students as broad a perspective as possible so as to excel in the complex, diverse and dynamic arena of public health. Through associations with the Center for Obesity Research and Education, Center for Women's Health, and others, students have access to over 100 faculty at Temple University and additional regional scholars who are actively involved in programs, research and teaching in public health. Further, as with other MPH degree programs offered by the College of Public Health, the MPH in Applied Biostatistics can be undertaken as part of these dual MPH degree programs:

- DMD/MPH with Temple University's Kornberg School of Dentistry
- JD/MPH with Temple University's Beasley School of Law
- MD/MPH with the Lewis Katz School of Medicine at Temple University
- MHA/MPH with Temple University's Fox School of Business and Management
- MPP/MPH with Temple University's College of Liberal Arts
- MS Health Informatics/MPH within the Temple University College of Public Health
- MSW/MPH with the Temple University School of Social Work

For more information, visit <https://www.temple.edu/academics/dual-degree-programs>.

**Affiliation(s):** Locally, the program has long-standing research affiliations with Fox Chase Cancer Center, Children's Hospital of Philadelphia, Philadelphia Department of Public Health, Public Health Management Corporation (PHMC), Temple University Health System. The program also has numerous other health systems and community health agencies and organizations inside and outside of Philadelphia. These partnerships allow us to offer students a wide range of fieldwork opportunities to translate skills learned in the classroom to actual practice in the community.

**Study Abroad:** Short-term international travel experiences focused on public health are offered as part of the MPH program of study through the Public Health Beyond Borders (PHBB) group and elective course. Contact the PHBB faculty advisor for information about timing of travel.

**Accreditation:** The MPH is fully accredited by the Council on Education for Public Health (CEPH). Achieving accreditation in 1985, Temple's MPH program is one of the longest established accredited MPH programs in community health in the country.

**Areas of Specialization:** The MPH degree program is offered in six specialty fields of study:

- Applied Biostatistics (APBIO)
- Environmental Health (EH)
- Epidemiology (EPI)
- Health Policy and Management (HPM)

- Nutrition (NUTR)
- Social and Behavioral Sciences (SBS)

Students in the MPH program may complete transcripted College of Public Health certificate programs by taking their 9 credits of electives in the relevant coursework. For questions about certificates, please contact your Academic Advisor or Graduate Program Director.

**Job Prospects:** Graduates with an MPH in Applied Biostatistics are employed in research institutions, such as universities and medical centers; at government agencies at the federal level, such as the Centers for Disease Control and Prevention, as well as local and state governments; and in private industry, including pharmaceutical firms, in positions such as research associates and statisticians.

**Licensure/Certification:** Students who complete an MPH at Temple University are eligible to sit for the Certified in Public Health (CPH) exam offered by the National Board of Public Health Examiners and the Certified Health Education Specialist (CHES®) exam offered by the National Commission for Health Education Credentialing, Inc. (NCHEC). For more information about credentialing in public health, visit <https://www.nche.org/>.

**Non-Matriculated Student Policy:** Non-matriculated students are required to speak with an advisor before registering for classes and to obtain the permission of the professor. If accepted to the program, a maximum of three courses (9 credits) may be applied toward the degree program. Exceptions to this policy relate to formal certificate programs.

**Financing Opportunities:** The Graduate School awards fellowships on a competitive basis only to students with outstanding academic records who are admitted to Temple University for the Fall term. Applicants who wish to be considered for fellowships must apply no later than January 26 for consideration for the Fall term. The Admissions Committee of the Department of Epidemiology and Biostatistics nominates outstanding students for these awards, but the Graduate Board's Fellowship Committee makes all award decisions.

Limited Teaching and Research Assistantships may be available in the College of Public Health. The Graduate School website details the types of graduate student support. Assistantships are awarded on a term or annual basis. Students whose Fall applications are complete prior to or at the application deadline are reviewed for eligibility for Teaching Assistant (TA) positions. TAs are required to work 20 hours per week in any combination of teaching assignments made by the department and must meet the English Language Proficiency standards set by the University and the College. Students who hold Teaching or Research Assistantships are not permitted to hold other employment without the written prior approval of their advisor, the Director of Graduate Programs, and the Graduate School. To be considered for a Teaching or Research Assistantship, complete an application form that is sent to students upon admission to the MPH program. The completed application must be returned to [cphtha@temple.edu](mailto:cphtha@temple.edu) to be considered.

The College of Public Health has a limited number of scholarship opportunities available for MPH students, as shown at <https://cph.temple.edu/student-life/scholarships>. Students may also be eligible for financial support through the Office of Student Financial Services.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

All applicants to the MPH program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation, which are completed electronically through the SOPHAS system, should be obtained from college/university faculty members familiar with academic competence. If the applicant has been out of school for more than 5 years, ensure that letters are provided by professional colleagues who can discuss your relevant academic skills, including critical thinking, research and writing.

**Coursework Required for Admission Consideration:** Applicants' files are reviewed for undergraduate coursework in mathematics and/or statistics, social sciences and writing.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of an accredited baccalaureate degree. The minimum acceptable undergraduate GPA is 3.0. No prerequisites must be met to apply to the MPH program at Temple University, but strong grades in mathematics and/or statistics, social sciences and writing are preferred.

A WES evaluation is required for applicants who completed their bachelor's degree outside of the United States. This can be requested at <https://www.wes.org/> and submitted through SOPHAS.

**Statement of Goals:** Write a well-considered 500- to 1,000-word statement of purpose that articulates your interests in public health and our program in particular. Craft your statement to specifically address the following questions:

- Why are you pursuing the MPH in Applied Biostatistics, and what are your particular areas of interest in public health?
- How does the MPH in Applied Biostatistics best fit your public health interests?
- What are your career goals, and how will this degree help you to achieve these goals?
- What are your plans in the first few years after graduation?

#### Standardized Test Scores:

GRE: Optional. While the program takes a portfolio approach to admissions, standardized tests provide important insight into quantitative and verbal abilities. If submitted, scores above the 50th percentile on both the verbal and quantitative sections of the test are desired. Official GRE scores should be sent to SOPHAS using code 0151. If GRE scores are not submitted, it is recommended that the applicant's GPA is 3.25 or greater in mathematics and statistics courses. This provides important information on the applicant's quantitative abilities required for the program. Applications that do not include GRE scores and do not meet the mathematics/statistics GPA must provide some evidence of quantitative abilities either through prior experiences, the personal statement and/or letters of recommendation.

Standardized tests considered in lieu of the GRE include DAT, GMAT, MCAT, OAT and PCAT. The LSAT, which is also considered for some MPH specialties, is not accepted when applying for Applied Biostatistics or Epidemiology.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume or CV required.

**Laptop:** Laptops are integrated into the College of Public Health curricula, and all students are required to have a laptop for full participation in class activities; online class sessions; online exam proctoring; and the use of special software, which is used to reinforce the learning objectives and program student learning competencies in certain classes. A laptop that meets the minimum device specifications defined below IS REQUIRED for all undergraduate and graduate students in the College of Public Health.

Review the College of Public Health laptop requirement for additional information: <https://cphapps.temple.edu/wiki/it/student/laptop>

**Transfer Credit:** Graduate credits from an MPH program accredited by the Council on Education for Public Health (CEPH) may be transferred into the MPH. The credits must be equivalent to coursework offered at Temple, and the grade must be a "B" or better in order to transfer. The MPH program director approves the transfer of credits based on a review of course materials provided by the student. The maximum number of credits a student may transfer is 9.

**Clearance Requirements:** Students attending Temple University College of Public Health are required to submit to Temple University Student Health Services proof of immunizations and immunity. See Student Health Services for requirements and costs:

**Prematriculation Requirements:** Students who are in fully online programs with no in-person class or practicum experience can request a waiver for the above health requirements. Students can contact their Department's Graduate Program Director for more information.

All MPH programs require that students complete an Applied Practice Experience (APE). All students who attend programs, which have a clinical / practicum / field education experience, including the APE for the MPH programs, will be required to purchase access to EXXAT APPROVE compliance module (\$35). This module is to order, store, and maintain compliance documents – it is required for participation in the learning experience at an affiliate site.

All students who attend CPH programs that have a clinical / practicum / field education experience, which are completed at affiliate sites both on and off the Temple University campus, are required to comply with minimum standard compliance metrics and any APE site-specific standards. The compliance items include the above health requirements and may require additional items including, but not limited to, a national criminal background check, Act 33/34 clearances in the state of Pennsylvania, FBI fingerprinting through DHS or DoE. FBI fingerprints is a national check, which can be performed through any of the 50 states. The total cost to complete the compliance items will vary depending on APE site-specific requirements, but may range from \$120-180.

The results of these requirements may limit and potentially eliminate placement options for the student. Failure to complete these requirements will result in students being unable to register for their APE (i.e., EPBI 9289 & 9389), which may delay anticipated graduation for a minimum of one year.

## Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 42*

*Required Courses:*

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
<b>College Core Course</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
<b>Public Health Core Courses</b>		
ENVH 5004	Environmental Health	1.5
EPBI 5006	Biostatistics and Applied Analysis of Health	4.5
EPBI 5201	Epidemiological Research Methods I	3
HPM 5006	Political and Economic Aspects of Health	3
SBS 5001	Fundamentals of Public Health	3
SBS 5002	Program Planning, Theory, and Practice	3
<b>Applied Biostatistics Core Courses</b>		
EPBI 8012	Multivariable Biostatistics	3
EPBI 8204	Multilevel Modeling in Interdisciplinary Research	3
EPBI 8301	Clinical Research Methods in Public Health	3
<b>Applied Biostatistics Elective <sup>1</sup></b>		
Select one from the following:		3
EPBI 5208	Data Management and Analysis	
EPBI 8201	Structural Equation Modeling	
EPBI 8302	Behavioral Measurement	
EPBI 8304	Applied Statistical Methods for Incomplete Data Analysis	
<b>Electives <sup>1,2</sup></b>		
Select two from the following:		6
ENVH 8016	Environmental Exposures and Human Health Risk Assessment	
EPBI 5003	Spatial Analysis in Public Health	
EPBI 8307	Systematic Reviews	
EPBI 9187	Biostat Cnslt Practicum	
<b>MPH Fieldwork Experience</b>		
EPBI 9289	MPH Fieldwork I	3
EPBI 9389	MPH Fieldwork II	3
<b>Total Credit Hours</b>		<b>42</b>

<sup>1</sup> Other electives may be taken with approval.<sup>2</sup> Courses not taken to fulfill the Applied Biostatistics Elective above may be selected to fulfill one or both of these general electives.**Minimum Grade to be Earned for All Required Courses: B-****Culminating Events:***Fieldwork Practicum:*

Students are required to synthesize and integrate the knowledge acquired in coursework and other learning experiences and to apply theory and principles in a situation that approximates some aspect of professional practice through an internship or practicum experience with a public health agency, health services organization, or under the supervision of a faculty preceptor. The MPH fieldwork experience serves as the applied practice experience as required by the Council on Education for Public Health (CEPH), the accrediting body for schools and programs of public health, for completion of the Master of Public Health degree. In addition, this applied practice experience provides the student with the opportunity to develop expertise in a topic area and to contribute original and independent observations to a body of knowledge.

*Evaluative Paper:*

For the applied practice experience to fulfill the requirements of EPBI 9289 and EPBI 9389, MPH in Applied Biostatistics students are expected to complete a fieldwork experience. The required deliverable for the MPH fieldwork requirement is a final evaluative paper. Students must demonstrate their proficiency and the application of theory and principles in the paper.

## Accelerated Programs

Undergraduate students may opt to pursue an accelerated +1 program, enabling them to complete both a bachelor's degree and master's degree in less time than the traditional route.

The accelerated pathway for the Applied Biostatistics MPH is available to students pursuing the Public Health BS.

**Cohort Code:** XMPHAPBIO

**Minimum Cumulative GPA:** 3.50

## Graduate Courses Approved to Count for Both Undergraduate and Graduate Degrees

Code	Title	Credit Hours
EPBI 5201	Epidemiological Research Methods I <sup>1</sup>	3
HPM 5006	Political and Economic Aspects of Health <sup>2</sup>	3
SBS 5001	Fundamentals of Public Health <sup>3</sup>	3
SBS 5002	Program Planning, Theory, and Practice <sup>4</sup>	3

<sup>1</sup> EPBI 5201 fulfills the EPBI 3102 requirement for the Public Health BS.

<sup>2</sup> HPM 5006 fulfills the HPM 2214 requirement for the Public Health BS.

<sup>3</sup> SBS 5001 fulfills a Public Health elective for the Public Health BS.

<sup>4</sup> SBS 5002 fulfills a Public Health elective for the Public Health BS.

## Suggested Academic Plan

Course	Title	Credit Hours
<b>Year 3</b>		
<b>Fall</b>		
SBS 5001	Fundamentals of Public Health	3
<b>Credit Hours</b>		<b>3</b>
<b>Spring</b>		
HPM 5006	Political and Economic Aspects of Health	3
<b>Credit Hours</b>		<b>3</b>
<b>Year 4</b>		
<b>Fall</b>		
EPBI 5201	Epidemiological Research Methods I	3
<b>Credit Hours</b>		<b>3</b>
<b>Spring</b>		
SBS 5002	Program Planning, Theory, and Practice	3
<b>Credit Hours</b>		<b>3</b>
<b>Total Credit Hours</b>		<b>12</b>

## Admissions Criteria

Candidates for the +1 program must:

- be a declared Public Health major.
- take 12 graduate credits.
- earn a B or better in graduate courses.
- take no more than 18 credits per term once starting the +1 program.
- if a junior status entrant, be able to complete their undergraduate degree within two years of program entry; if a senior status entrant, be able to complete their undergraduate degree within one year of program entry.
- complete the graduate degree in one additional year including one summer term.

## Contact Information

Caite Wolak, MPH

caite.wolak@temple.edu

Learn more about the accelerated program in Applied Biostatistics.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/applied-biostatistics-mph-hp-apbs-mph>

### **Department Information:**

Dept. of Epidemiology and Biostatistics  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
epibio@temple.edu  
215-204-8726

### **Submission Address for Application Materials:**

<https://sophas.liaisoncas.com/>

### **Department Contacts:**

#### *Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### *Graduate Program Director:*

Aimee J. Palumbo, PhD, MPH  
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aimee.palumbo@temple.edu  
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#### *Chairperson:*

Resa M. Jones, MPH, PhD  
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