



Training the next generation of epidemiologists in the United States: the case of Boston University

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BUSPH Educational mission



Goal

To provide students with the knowledge, skills, and professional confidence to practice public health



Our Approach

Strong foundation – knowledge and skills for 21st century public health professionals

Specialization – targeted to needs of field

Approach that emphasizes professional development and practical experience.

Large and growing student body



Applications more than doubled in past decade



Active alumni network (> 11,000)



New programs (degrees, certificates, continuing education opportunities)



U.S Bureau of Labor Statistics expects employment in public health to grow by nearly 20% over next several years – much faster than other occupations (5%)

Job outlook in public health is strong

Application trends (BUSPH)

As of March 1,

	2019	2020	2021	2022
Total applications	1949	2416 (+24%)	3032 (+25%)	2619 (-14%)
% International	31%	36%	27%	41%
MPH applications	1187	1566 (+32%)	2167 (+38%)	1813 (-16%)
% International	24%	29%	22%	36%

BUSPH graduate programs

Master of Public Health (MPH)

48 credits - broad exposure to public health, specialization in key functional and context areas, training for professional practice

~75%

Master of Science (MS)

34 credits - focused on study design, analytic skills, interpretation of data; mentored research experience; training for research

~10%

Doctoral degree (PhD, DrPH)

32 credits - advanced training to develop knowledge and skills for leadership in research or practice; educating candidates to become independent professionals

~15%

Master of Public Health (MPH) - certificates

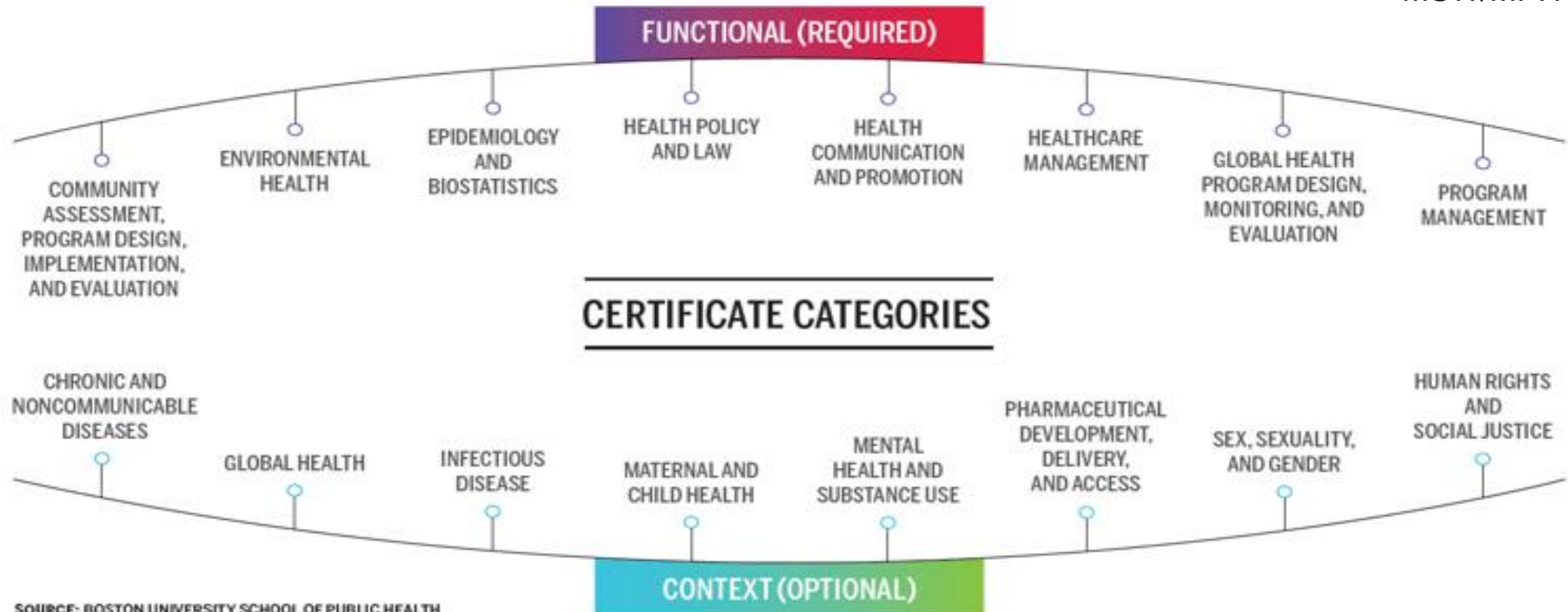
Integrated Core – **in-person and online options**

- Quantitative methods for public health
 - Leadership and management for public health
 - Health systems, law and policy
 - Individual, community and population health
- Practical experience, professional development

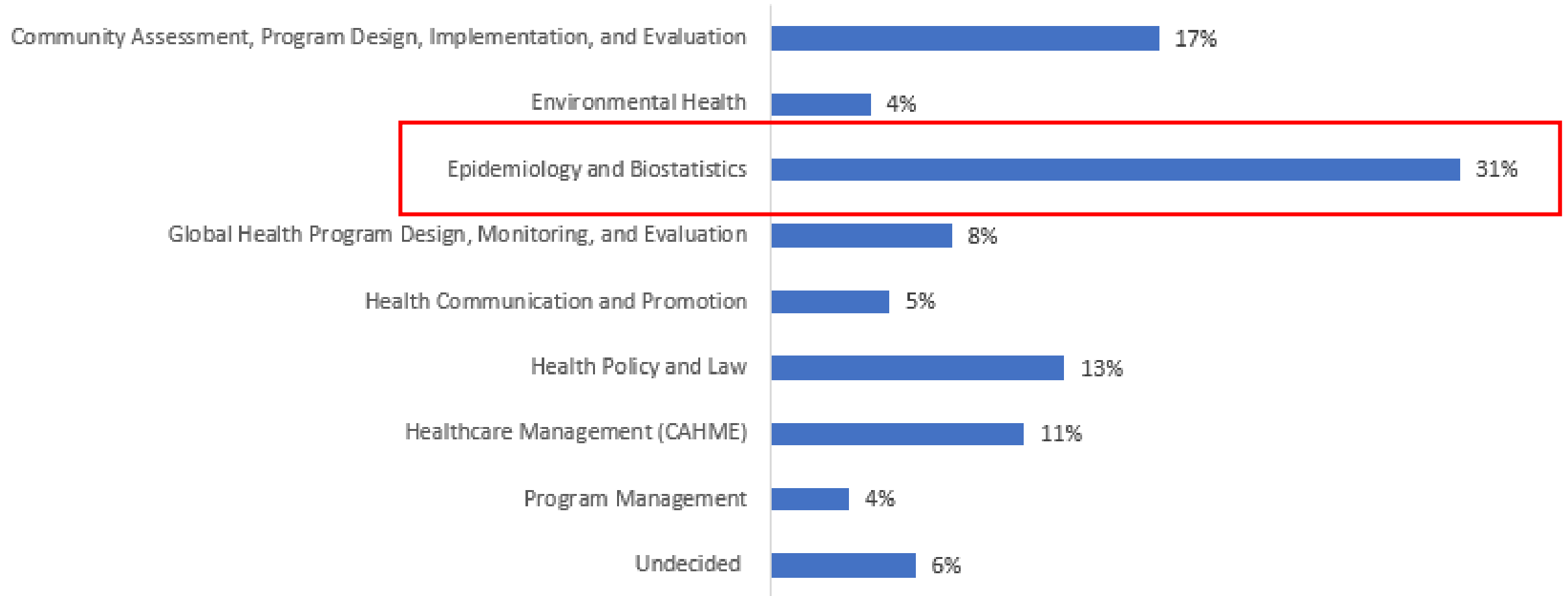
[MPH Core Courses-SPH \(bu.edu\)](https://www.bu.edu/sph/degrees/certificates/)

Dual MPH Degrees

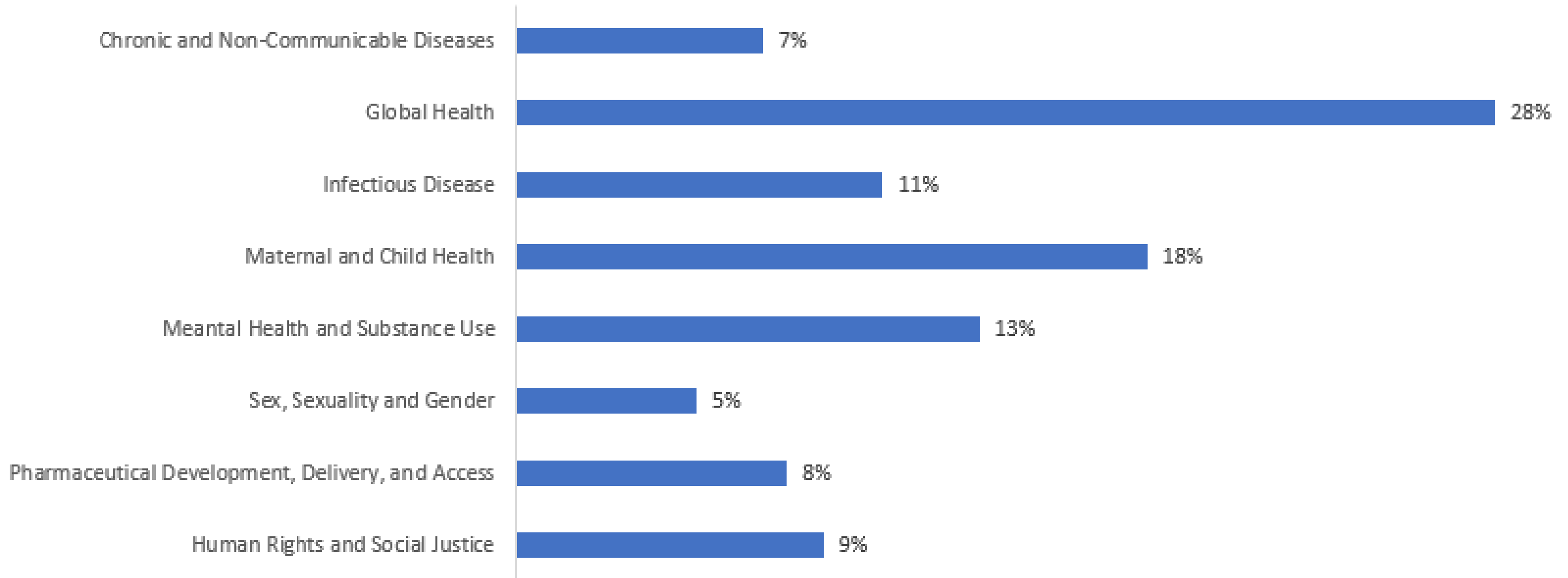
- JD/MPH
- MBA/MPH
- MD/MPH
- MS/MPH
- MSW/MPH



Interest among current students: Functional certificates



Interest among current students: Context certificates (55%)



MPH professional development and practical experience



Practicum

Minimum 240 hours, flexible - sites in Boston, around the US, or around the globe - Funding opportunities, many paid placements



Career PREP

Explore the field of public health - Learn to market oneself - Build networks - Negotiate job offers - Life-long commitment to careers



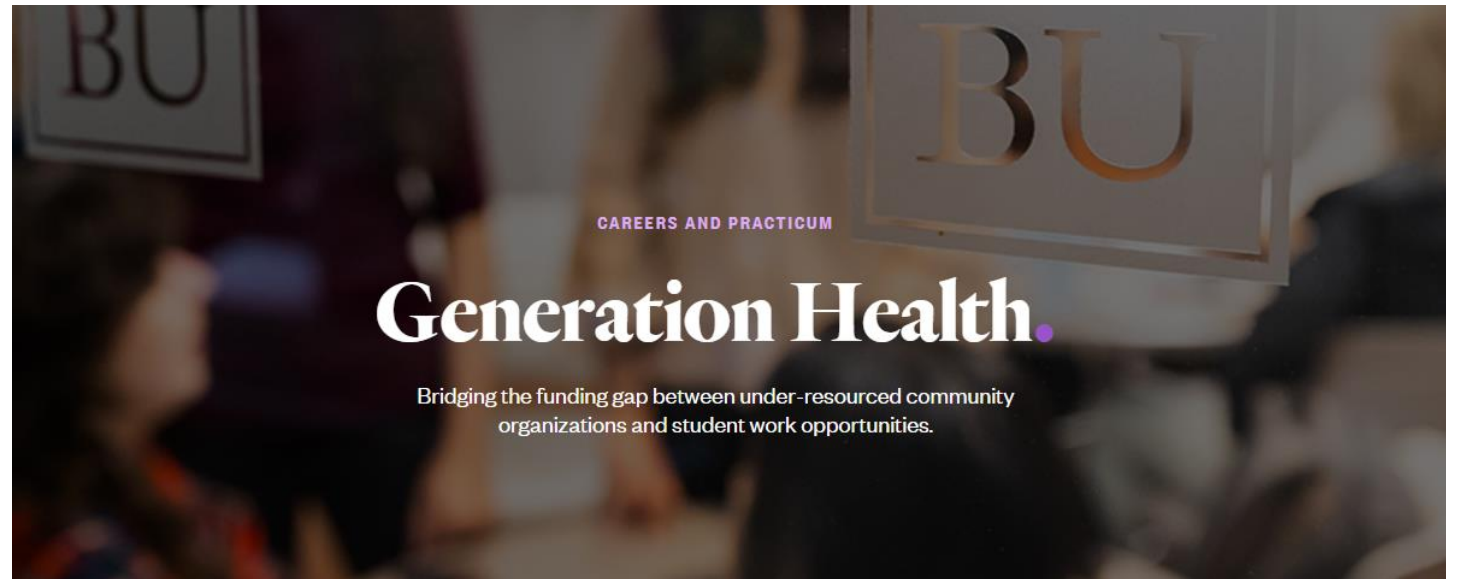
Integrative Learning Experience

Tied to functional certificate, work product (e.g., literature review or data analysis) to show employers. Required for CEPH accreditation

CEPH = Council on Education for Public Health

SPH Commits \$1M to Support Student Practica

Generation Health reduces financial barriers for students to work with organizations advancing public health in communities local to BUSPH and around the world.



NEW Online MPH



Accessibly priced
at \$24,000



Can be
completed in as
few as 24
months or up to
5 years



42 credit,
6 module
program



Focus on health
equity



Spring and Fall
starts

Mission: BUSPH aims to offer an accessible, flexible, high-quality public health education that empowers a diverse group of learners from across the globe to lead efforts to create healthier, more equitable communities

MS in Population Health Research

Essentials of population health research – **Online**

Accelerated training in statistical computing

+24 credits of specialized coursework – **Choice: online vs. in person, part- vs. full-time**

Mentored research experience (400 hours with faculty mentor or approved partner)

Research skills and dissemination

Population Health Research

Climate and
Health

Epidemiology

Global Health

Public Health
Data Science

Translation and
Implementation
Science

Customized
program

Graduate Employment & Practicum Data.

SPH graduates work in a variety of exciting roles all over the globe. Below is employment data for the 2021 academic year.

MPH



MS



EMPLOYMENT RATE

6 months post-graduation

Doctoral degrees

PhD in
Biostatistics

PhD in
Environmental
Health

PhD in
Epidemiology

PhD in Health
Services
Research

DrPH

PhD in epidemiology

Required Courses

- SPH EP 854 Advanced Epidemiology
- SPH EP 855 Advanced Epidemiology Seminar: Issues in Study Design
- SPH EP 860 Novel Analytical Methods for Epidemiology
- SPH PH 700 Foundations of Public Health

•Remaining credits:

•<https://www.bu.edu/academics/sph/programs/epidemiology/phd/>

- Written qualifying exam in biostatistics and epidemiology (x2)
- Dissertation: three publishable manuscripts

PhD program – funding



BUSPH has a full-funding model, where all PhD students are guaranteed 4 years of stipend support and coverage of tuition, health insurance, and student fees.



1. BU sets minimum stipend each academic year. SPH offers 12-month PhD stipends of \$38,253 for academic year 2023-2024
2. SPH PhD students are funded as: trainee on T32 or graduate research assistant (GRA) on faculty grants
 - 3.1. T32: non-service award with academic requirements. Provides ~\$25,000 in stipend support, health insurance & fees, and ~\$16,000 in tuition support/trainee/year. SPH makes up financial shortfalls
 - 4.2. GRA: service award supported by faculty grants that cover full stipend amount, health insurance & fees. SPH covers full tuition for GRAs

Personal and professional development

Office of Graduate Student Life

Career Services Office

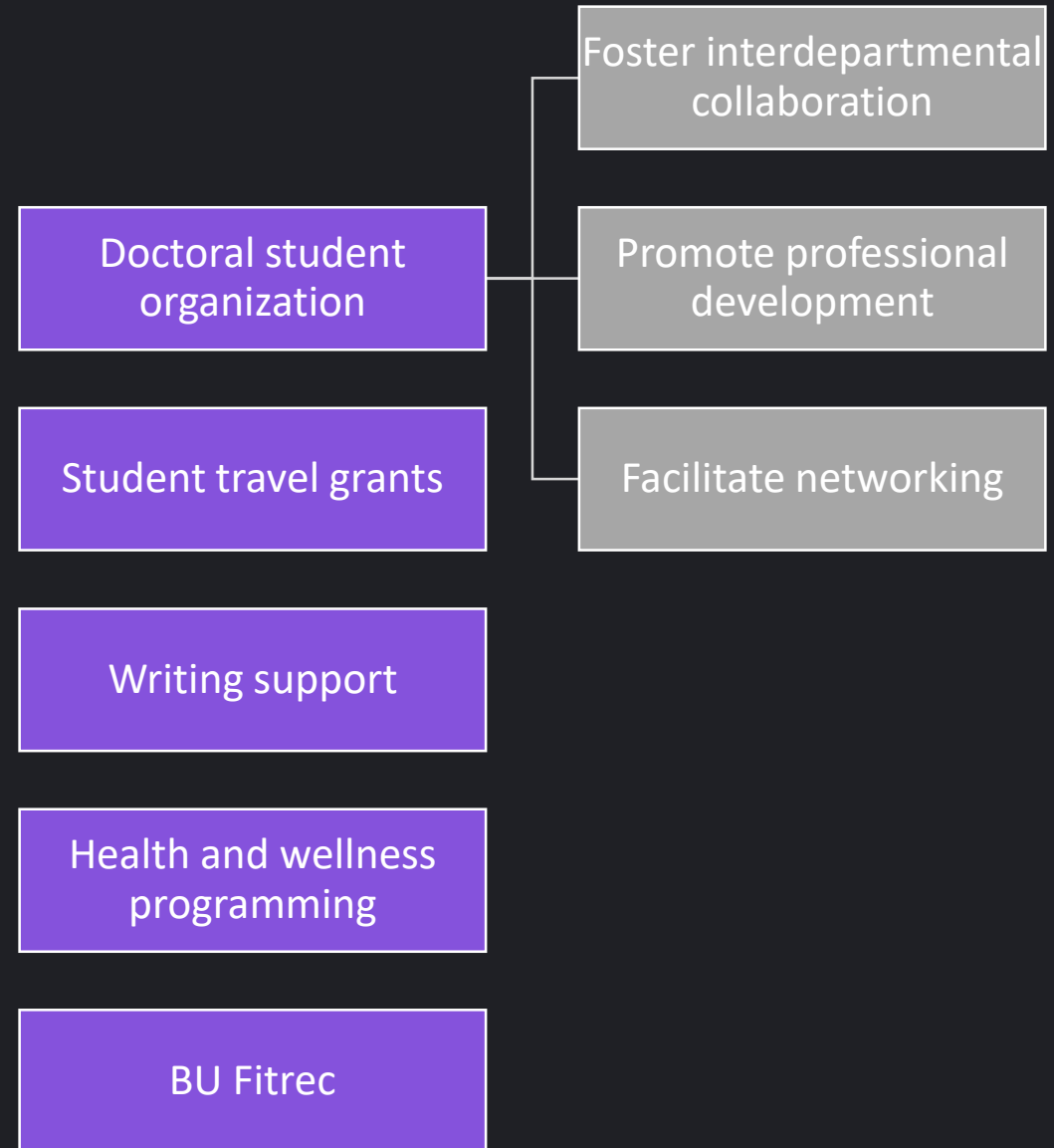
Office of Professional Development and Postdoctoral Affairs

- Pilot funding
- Professional development workshops available to all students

University resources for graduate students

- Fellowships
- Parenting resources
- Dental care discounts

Opportunities for engagement and support



Recent PhD graduates: jobs

- Research scientists
- Directors in pharmaceutical, biotech companies
- Directors in community organizations, NGOs
- Postdoctoral research fellows
- Assistant professors



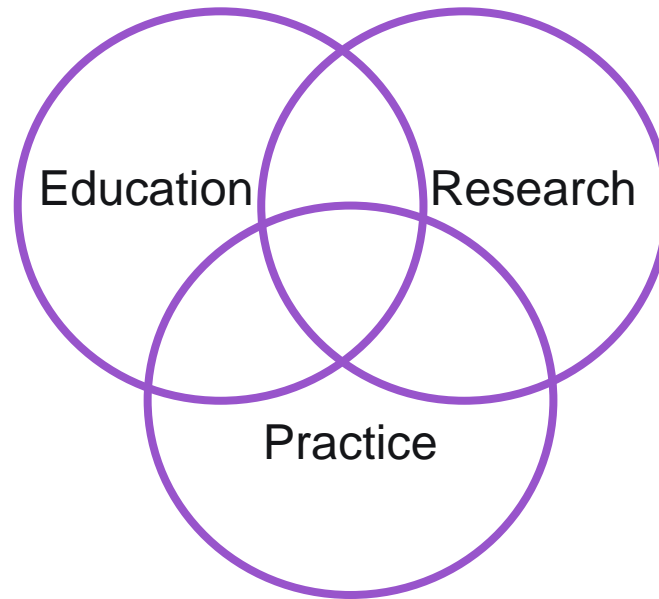
Acknowledgements

- I am grateful to Dr. Lisa Sullivan, Associate Dean for Education and Professor of Biostatistics at BUSPH, for sharing her slides with me!

Extra slides

Our approach

- World-renowned faculty who are committed to teaching
- Strong and growing research base
- Commitment to service and activism
- Flexibility



Application trends (United States)

As of March 1,

	2020	2021		2022
Total applications	47441	65936	(+39%)	59661 (-10%)
% International	36%	30%		42%
MPH applications	26575	38644	(+45%)	33683 (-13%)
% International	28%	22%		36%

MS professional development and practical experience



Research rotation

400 hours of mentored research - Sites in Boston, around the US, or around the globe - Funding opportunities, paid placements



Career PREP

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Research and dissemination skills

Learn project management, communication and collaboration, data visualization, translation - Produce discovery-based project to showcase skills

MS Applied Biostatistics

Biostatistical methods

Design and conduct experimental and epidemiological studies

Build skills in data analysis and advanced statistical modelling

Work with faculty in mentored research experience

Recent Research in Biostatistics.



CHILDBIRTH

Combined Prenatal Drinking and Smoking Increases Risk of Stillbirth Three-fold



ALUMNI NEWS

Rupal Shah (SPH'15): 'Basic Needs Are Still Missing for Many People'



GENETICS

Genetic Analysis Identifies 26 Brain Regions That May Affect Eating Behaviors



AWARDS

Professor, Student Recognized for Data-Driven Research

PhD Resources

Professional Development & Postdoctoral Affairs aims to ensure that every doctoral student at Boston University has an inclusive training experience, furthering their development as successful and thriving professionals. PDPA is consistently working to expand our offerings and resources available to doctoral students. Find support programs and ways to connect with our office below:

PhD Office Hours

Monthly drop-in Office Hours with members of the PDPA team for doctoral students to get one-on-one advice and counseling related to PhD life and career exploration.

Moderated Discussions

Moderated discussions are organized multiple times each year, with the panelists and themes driven by the questions submitted directly by doctoral students.

Professional Development Grants

The professional development grant program was established to provide financial support for professional development opportunities beyond BU.

Teaching Resources

The Center for Teaching and Learning and the Digital Learning & Innovation teams offer a variety of learning opportunities and tools for doctoral students to take advantage of.

Communications Resources

PDPA often partners with other offices like the Educational Resource Center (ERC) or the Public Relations & Social Media office to offer programming designed to support doctoral students in building their communications skills.

Funding Resources

There are a variety of funding resources available to doctoral students at BU including grants, fellowships, and internship opportunities to support doctoral student research, travel, and scholarship.

Health, Wellness, and Community

The Graduate Education website has a range of resources for doctoral students regarding student health services, resources available through the Wellbeing Project, tips on living in Boston and finding a community at BU.



- Highly sought after by recruiters/employers
- Highly satisfied with their training
- Stay connected to BUSPH community through active alumni network and lifelong learning opportunities

Our graduates



STUDENT NEWS

Student Uses Instagram to Demystify Academia

Kertu Tenso, a doctoral student studying health services research, uses her platform to empower others, especially women, to take up space in both academic and STEM settings.

Student Receives Civic Research Innovation Prize from MetroLab Network

Beth Haley, a doctoral student in the Department of Environmental Health, will use the award to support her work to improve the water quality of the Merrimack River.

March 10, 2022



BY MALLORY BERSI

SHARE

Beth Haley, a doctoral student in the Department of Environmental Health at the School of Public Health, was recently named one of three winners of MetroLab Network's Civic Research Innovation Prize.

The prize provides an opportunity for students from across MetroLab Network's member colleges and universities to pitch innovative ideas for civic research projects that they will carry out in partnership with a local government agency or community partner. Each winner received a \$5,000 grant to advance their ideas and bring their projects to life.

"I am deeply committed to conducting research that is relevant to communities and decision-



Emerging Women Leaders Program Promotes Diversity in Public Health Leadership

In its third year at SPH, the program connects doctoral students with senior public health leaders through mentorship circles, professional development workshops, and networking events.

April 7, 2022



BY MALLORY BERSI

SHARE

Since its inception in 2019, the [Emerging Women Leaders \(EWL\) Program](#) at the School of Public Health has worked to provide career mentorship opportunities for doctoral students to address gender inequity and foster career progression among women and underrepresented groups.



Emerging Women Leaders 2022 program participants (back row) with mentor Kayla Laserson (front left), deputy director for infectious diseases at the Gates Foundation India Country Office, and Veronika Wirtz, EWL faculty lead.

PhD Progression

PhD Progression is an online micro-credentialing platform designed specifically for PhD students at Boston University. The platform creates a framework for students to explore, build, and apply skills outlined in the [PhD Core Capacities](#).

How PhD Progression works:

Through the acquisition of digital badges connected to activities and assessments recorded on the Badgr pro platform, you will be able to plan, monitor, and share your progress through [scaffolded learning pathways](#) in two Levels. **Level 1** focuses on Skill Exploration and **Level 2** focuses on Skill Development, Pathways are made up of a series of badges. Badges are issued individually after the completion of the earning criteria and the submission of a brief assessment. The Badgr pro dashboard allows you to organize, download, and share a summary of your progress in the Pathways with mentors. Badges can be shared publicly on personal websites and public profiles like LinkedIn or Twitter.

Explore the PhD Progression pathways:

Level 1 (Skill Exploration Pathways)

- [Career Development](#)
- [Discipline-Specific Knowledge](#)
- [Research Skills](#)
- [Management & Leadership](#)
- [Self-Awareness](#)
- [Communications Skills](#)
- [Teaching Skills](#)