

Introduction

The interdisciplinary Public Health Minor began in 2011, and now, in a typical year, has 50-60 graduates. The Minor serves as a complement to a wide variety of major courses of study.

Mirroring a national trend, the Minor was created in response to growing student interest in Public Health at W&M, and a proliferation of self-designed majors in this area. An interdisciplinary group of faculty developed the Minor by identifying W&M courses that related, directly or indirectly, to core areas of Public Health and its foundational disciplines. The Minor served as an excellent guide for students seeking available course offerings most closely related to Public Health.

Since the Public Health Minor's inception, there has been a steady growth in Public Health-related teaching, research, and service opportunities for students on campus. Some catalysts for this include:

- Hiring of 3 new TE faculty and 1 Lecturer with graduate training in Public Health;
- A new Public Health concentration within the Kinesiology & Health Sciences major that includes courses in all core areas of Public Health (Epidemiology, Social & Behavioral Sciences and Health, Environmental Health, Health Policy, Statistics, Global Health) and additional Public Health elective courses;
- Continued expansion of Public Health-related course offerings in a variety of departments across campus; and
- Implementation of the COLL curriculum, whose "big idea" (COLL100), intersectional (COLL200), and global/cross-cultural elements (COLL300) are particularly well-suited to Public Health topics.

With this growth, we have expanded opportunities for students to explore their interests in Public Health core areas, and at the intersection of Public Health with related disciplines. It is within these core areas and their intersection with other disciplines where some of the most innovative research, graduate study, and job growth is occurring. As students have become increasingly aware of these trends, they are again asking Public Health faculty to advise self-design majors, now in these emerging areas.

With these developments in mind, we have been working over the past 18 months on an updated version of the Public Health Minor. This process has been highly collaborative, with input from faculty across campus. Alison Scott (KINE) and Diane Shakes (BIOL) (co-directors of the Minor) were assisted in this process by a **steering committee** that included: Teresa Longo (Dean of Interdisciplinary Studies), Joel Schwartz (former Dean of Interdisciplinary Studies), Janice Zeman (Dean of Undergraduate Studies), Kelly Crace (Assoc. Vice President of Health and Wellness), Michael Deschenes (Chair, KINE), Jennifer Mellor (ECON and Director, Schroeder Center for Health Policy), Carrie Dolan (KINE), Catherine Forestell (PSYC), Robert Scholnick (ENGL), Bev Sher (CHEM, Pre-Med Adviser), Dorothy Ibes (CGA), Camilla Buchanan (KINE), Michael White (Rec Sports), Jennifer Dunfree (Rec Sports), Iyabo Obasanjo (KINE), Elizabeth Raposa (PSYC), and Sarah Menefee (KINE).

PROPOSED REVISIONS

The revised Minor includes a number of different tracks from which students can choose. For students who want a broad-based introduction to Public Health issues, the Public Health Fundamentals track updates and streamlines the current Public Health Minor. This track is well suited for students with a general interest in Public Health or students who intend to pursue post-graduate work in medicine/ nursing/ other health-related fields.

In addition to this 'Fundamentals' track, alternative tracks provide options for students who wish to do more targeted exploration, either within certain core areas or at the intersection with related disciplines, as mentioned above.

All tracks share a common structure with all students taking the same introductory core (Intro to Public Health and Epidemiology) and a culminating seminar. Student experience within the culminating seminar is supported by participation in an experiential learning activity prior to enrollment in the seminar. The tracks vary mainly in their specific suite of foundational courses and specific elective options. This structure allows the Minor to incorporate a greater range of courses and content areas, while still guiding students to engage with the most appropriate courses to meet their goals.

Summary of track options:

- **Public Health Fundamentals:** This track provides a broad-based foundation in the core areas of Public Health and the disciplines that inform it. This track is well suited for students who wish to complement their major course of study with a comprehensive introduction to the theories, tools, and concepts of Public Health.
- **Global Health:** The coursework in this track introduces students to international health and development issues through a Public Health lens. Students will investigate the social, economic, political, and environmental determinants of global health inequity, and the programs and policies used to address it.
- **The Environment & Public Health:** This track supports the exploration of environmental issues as they relate to human health and disease, with an emphasis on Environmental Health and climate change. Students have the opportunity to blend foundational courses in Public Health with courses related to environmental policy, ethics, and science.
- **Health, Wellness, & Society:** This track emphasizes the multidimensional nature of health, with a focus on the social, cultural, and behavioral determinants of human health. Students will explore personal and community-based practices that promote health, and the theoretical underpinnings of these practices.
- **Data & Public Health:** This track introduces students to the foundations of Public Health and Data Science, and is appropriate for students interested in the intersection of health, computing, and statistics (the three pillars of Health Data Science, a growing field).
- **Health Equity & Justice:** This track introduces students to issues in health equity and health opportunity. Students will learn about the intersectionality of health with wealth,

race/ ethnicity, gender, disability, and other axes of identity. Elective courses will provide additional foundation in these critical social issues.

Students will receive structured, ongoing **advising** from Minor coordinators to assist them in selecting a track and completing the Minor requirements. To declare the Minor, students will meet with one of the Minor coordinators to discuss the track requirements, and to fill out a declaration form. The declaration form will require students to specify which track they will complete. If students wish to change tracks after declaring the first time, they will be required to submit a new declaration form. The declaration meeting also will include discussion of the experiential learning activity and culminating seminar. The Minor web page will include instructions and FAQ's about Minor requirements and procedures.

The curriculum for the current Minor is below, followed by the proposed revised curriculum.

CURRENT PUBLIC HEALTH MINOR:

Public Health, Minor

Required Credit Hours: 21

Requirements Include:

- [KINE 270 - Foundations of Epidemiology](#) (3)
- and
- [KINE 280 - Introduction to Public Health](#) (3)

A Course on Research Methods or Statistics

- [ANTH 302 - Ethnographic Research](#) (3)
- [BIOL 327 - Introduction to Biostatistics](#) (3-4)
- [ECON 307 - Principles and Methods of Statistics](#) (3)
- [GOVT 301 - Research Methods](#) (3)
- [KINE 394 - Statistics and Evaluation](#) (3)
- [MATH 106 - Elementary Probability and Statistics](#) (3)
- [PSYC 301 - Elementary Statistics](#) (4)
- [PSYC 302 - Experimental Methods](#) (4)
- [SOCL 352 - Research Design](#) (3)
- [SOCL 353 - Quantitative Research Methods](#) (3)

A Course on Global Health/International Topics in Public Health

- BIOL 150 - Emerging Diseases (4)
- [KINE 290 - Introduction to Global Health](#) (3)
- [KINE 405 - Maternal, Neonatal, and Child Health](#) (3)

A Course on the Biological Aspects of Public Health.

- [BIOL 106 - Disease, Biomedicine, and Biomedical Research](#) (3)
- [BIOL 204 - Introduction to Organisms, Ecology, Evolution](#) (3) and
- [BIOL 204L - Introduction to Biology Laboratory \(Spring\)](#) (1)
- [BIOL 203 - Introduction to Molecules, Cells, Development](#) (3) and
- [BIOL 203L - Introduction to Biology Laboratory \(Fall\)](#) (1)
- [BIOL 306 - Microbiology](#) (4)
- [BIOL 310 - Molecular Cell Biology](#) (3)
- [BIOL 345 - Neurobiology](#) (3)
- [KINE 200 - Introduction to the Human Body](#) (3)
- [KINE 304 - Human Physiology](#) (3)
- [KINE 310 - Microbes in Human Disease](#) (3)

A Course on the Social, Behavioral, and/or Cultural Aspects of Public Health.

- [AMST 203 - Introduction to American Studies: American Medicine: A Social and Cultural History](#) (4)
- [AMST 350 - Topics in American Culture](#) (1-4) (Public Health topics only)
- [ANTH 309 - Medicine and Culture](#) (3)
- [ANTH 492 - Biocultural Anthropology](#) (3)
- [LAS 440 - Seminar Topics in Latin American Studies](#) (1-4) (Public Health topics only)
- [KINE 300 - The Social and Behavioral Sciences in Health](#) (3)
- [KINE 403 - The Social Determinants of Health: Living and Dying in the USA](#) (3)
- [PSYC 350 - Community Psychology and Prevention](#) (3)
- [PSYC 356 - Health Psychology](#) (3)
- [PSYC 406 - Service Learning in Developmental Psychology](#) (3)
- [SOCL 311 - Birth, Sex, Death: Population and Society](#) (3)

- [SOCL 362 - Medical Sociology](#) (3)
- [SOCL 405 - Sociology of Aging](#) (3)
- [SOCL 440 - Special Topics in Sociology](#) (1-3) (Public Health topics only)

Additional Requirement

3 credits, or 1 additional course, not from the department of the student's major, drawn from the courses in: Global Health/International Topics in Public Health; Biological Aspects of Public Health; and Social, Behavioral, and/or Cultural Aspects of Public Health (above), OR from the following list of additional approved courses.

- [ANTH 363 - Culture and Cuisine: The Anthropology of Food](#) (3)
- [ECON 322 - Environmental and Natural Resource Economics](#) (3)
- [ECON 456 - Economics of Health Care](#) (3)
- [ECON 483 - Macroeconomics of Development](#) (3)
- [GOVT 350 - Introduction to Public Policy](#) (3)
- KINE 150 - Nutrition, Health, and Disease (4)
- [KINE 320 - Issues in Health](#) (3)
- [KINE 325 - Environmental Issues in Public Health](#) (3)
- [KINE 350 - Science of Nutrition](#) (3)
- [KINE 393 - Health Ethics](#) (3)
- [KINE 442 - Exercise Physiology](#) (4)
- [KINE 455 - Physiology of Obesity](#) (3)
- [KINE 450 - Cardiovascular Physiology](#) (3)
- KINE 460 - Health Policy (3)
- [KINE 460 - Topics in Kinesiology & Health Sciences](#) (1-4) (Public Health topics only)
- [PBHL 410 - Special Topics in Public Health](#) (1-3)
- [PBHL 498 - Internship](#) (1-3) (for a total of 3 credits)
- [PHIL 325 - Neuroscience and Ethics](#) (3)
- [RELG 322 - Medicine and Ethics](#) (3)
- [SOCL 310 - Wealth, Power, and Inequality](#) (3)

- [SOCL 313 - Globalization and International Development](#) (3)
- [SOCL 426 - Sociology of Mental Illness](#) (3)
- [SOCL 427 - Energy, Environment, and Development](#) (3)

NB:

With advisor approval, students may replace requirement 7 with one or more independent study or internship ([PBHL 498](#)), which must total 3 credits.

PROPOSED REVISIONS TO PUBLIC HEALTH MINOR:

GENERAL STRUCTURE:

1. Core Requirements (6 credits): All students take KINE 280 (Public Health) and KINE 270 (Foundations of Epidemiology) as the core of the curriculum. This is unchanged from the current Minor structure.
2. Track Requirements (3-6 credits): All students take additional foundational courses in Public Health, and in some cases a foundational course in the track content area.
3. Track Electives (6-9 credits): Elective course options in each track provide students depth and guidance in the track content area.
4. Experiential Learning and Culminating Experience (1credit): All students will participate in a seminar that will serve as a culminating experience. In the seminar, students from different tracks will synthesize content from coursework and an experiential learning activity.

Public Health Foundations (22 credits)

Purpose: *This group of courses provides a broad-based foundation in the core areas of Public Health and the disciplines that inform it. This track is well suited for students who wish to complement their major course of study with a comprehensive introduction to the theories, tools, and concepts of Public Health.*

1. CORE REQUIREMENTS (6 credits)

KINE 280	Foundations of Public Health
KINE 270	Foundations of Epidemiology

2. TRACK REQUIREMENTS: TAKE TWO (2) OF THE FOLLOWING (6-7 credits)

BIOL 106	Disease, Biomedicine, Biomedical Research (3)
CHEM 150	Emerging Diseases (4)
KINE290	Global Health (3)
KINE 325	Environmental Issues in Public Health (3)
KINE 323	Health Policy (3)

3. TRACK ELECTIVES (9-10 credits): Take ONE (1) class from each menu below (A-C) for a total of 3 classes.

a. STATISTICS (3-4)

BIOL 327	Introduction to Biostatistics (4)
ECON 307	Principles and Methods of Statistics 3)
KINE 394	Statistics and Evaluation (3)
MATH 106	Elementary Probability and Statistics (3)
MATH 351	Probability and Statistics for Scientists
PSYC 301	Elementary Statistics (3)
SOCL 353	Quantitative Research Methods (3)

b. SOCIAL AND BEHAVIORAL ASPECTS OF HEALTH (3)

ANTH 309	Medicine and Culture (3)
AMST 350	The Social Determinants of Health and Dying in the USA (3)
KINE 300	Social and Behavioral Sciences and Health (3)
SOCL 362	Medical Sociology (3)
SOCL 405	Sociology of Aging (3)

c. ETHICS AND HEALTH (3)

ENSP 303	Issues in Environmental Ethics (3)
PHIL 303	Ethics (3)
PHIL 315	Biomedical Ethics (3)
PHIL 325	Neuroscience and Ethics (3)
RELG 321	Ecology and Ethics (3)

RELG 322 Medicine and Ethics (3)

4. EXPERIENTIAL LEARNING AND CULMINATING EXPERIENCE (1credit): Complete both of the following:

- a. Experiential Learning Activity (ELA). *See page 15 for more details.*
- b. PBHL 410 Special Topics in PH: Public Health Minor Seminar (1 credit). *See page 16 for more details.*

Global Health (19 credits)

Purpose: The coursework in this track introduces students to international health and development issues from a Public Health lens. Students will investigate the social, economic, political, and environmental determinants of global health inequity, and the programs and policies used to address it.

1. CORE REQUIREMENTS (6 credits)

KINE 280 Foundations of Public Health
KINE 270 Foundations of Epidemiology

2. TRACK REQUIREMENTS (3 credits)

KINE 290 Global Health

3. TRACK ELECTIVES (9 credits). NO MORE THAN 6 CREDITS MAY BE TAKEN IN A SINGLE DEPARTMENT.

ANTH 309 Medicine and Culture
ANTH 363 Culture and Cuisine: The Anthropology of Food OR SOCL 340: Food and Global Health
BIOL 106 Disease Biomedicine OR CHEM 150 Emerging Diseases
EDUC 360 Globalization and Education
ENSP 202 Global Environmental Challenges: Climate Change OR GEOL 312 Global Climate Change
KINE 405 Maternal, Neonatal, Child Health OR KINE 369 Methods in Health and Development
SOCL 311 Birth, Sex, Death: Population and Society
SOCL 313 Globalization and International Development OR SOCL 205: Global Social Problems

4. EXPERIENTIAL LEARNING AND CULMINATING EXPERIENCE (1credit): Complete both of the following:

- a. Experiential Learning Activity (ELA). *See page 15 for more details.*
- b. PBHL 410 Special Topics in PH: Public Health Minor Seminar (1 credit). *See page 16 for more details.*

The Environment & Public Health (19 credits)

Purpose: This group of courses supports the exploration of environmental issues as they relate to human health and disease, with an emphasis on Environmental Health and climate change. Students have the opportunity to blend foundational courses in Public Health with courses related to environmental policy, ethics, and science.

1. CORE REQUIREMENTS (6 credits)

KINE 280 Foundations of Public Health
KINE 270 Foundations of Epidemiology

2. TRACK REQUIREMENTS (6 credits)

GEOL 312 Global Climate Change OR ENSP 202 Global Environmental Challenges--Climate Change
KINE 325 Environmental Issues in Public Health

3. TRACK ELECTIVES (6 credits)

AMST 350 Addressing Environmental Challenges ST
BIOL 318 Conservation Biology
CHEM 150 Emerging Diseases
CLCV 100 Why Water Matters
ECON 322 Environmental and Natural Resource Economics
ENSP 249 Ecotherapy OR Campus Park Rx OR Re-wilding OR ENSP 250—Landscapes of Disease (ALL ST)
ENSP 302 Philosophic History of American Environmentalism
ENSP 303 Issues in Environmental Ethics
GEOL 110 Earth's Environmental Systems: Physical Geography
GEOL 305 Environmental Geology
GEOL 316 Environmental Geochemistry
SOCL 308 Environmental Sociology OR SOCL 427 Energy, Environment, and Development

4. EXPERIENTIAL LEARNING AND CULMINATING EXPERIENCE (1credit): Complete both of the following:

- a. Experiential Learning Activity (ELA). *See page 15 for more details.*
- b. PBHL 410 Special Topics in PH: Public Health Minor Seminar (1 credit). *See page 16 for more details.*

Health, Wellness, & Society (20 credits)

Purpose: This track emphasizes the multidimensional nature of health, with a focus on the social, cultural, and behavioral determinants of human health. Students will explore personal and community-based practices that promote health, and the theoretical underpinnings of these practices.

1. CORE REQUIREMENTS (6 credits)

KINE 280 Foundations of Public Health (3)
KINE 270 Foundations of Epidemiology (3)

2. TRACK REQUIREMENTS (4 credits)

KINE 300 The Social and Behavioral Sciences and Health (3)
INTR 110 Wellness Applications (1)

3. TRACK ELECTIVES (9 credits): Take a total of three (3) classes, with at least one (1) class from menu A and at least one (1) class from menu B.

A. Psychological and Behavioral Determinants of Health.

ECON 150 Economics of Bad Behavior
ENSP 249 Ecotherapy OR Campus Park Rx OR Re-wilding OR ENSP 250—Landscapes of Disease
PSYC 318 Abnormal Psychology
PSYC 356 Health Psychology
RELG 100 Meditation and the Mind
RELG 382 Buddhism and Science

B. Social and Cultural Determinants of Health.

ANTH 309 Medicine and Culture
BUAD441 Social Entrepreneurship
PSYC 350 Community Psychology and Prevention
KINE 415 Public Health: Equity, Sustainability, and Well-Being in a Global Age (D.C.)
SOCL 332 Families and Health
SOCL 426 Sociology of Mental Illness

4. EXPERIENTIAL LEARNING AND CULMINATING EXPERIENCE (1credit): Complete both of the following:

- a. Experiential Learning Activity (ELA). *See page 15 for more details.*
- b. PBHL 410 Special Topics in PH: Public Health Minor Seminar (1 credit). *See page 16 for more details.*

Data & Public Health (19 credits)

Purpose: *This track introduces students to the foundations of Public Health and Data Science, and is appropriate for students interested in the intersection of health, computing, and statistics (the three pillars of Health Data Science, a growing field).*

1. CORE REQUIREMENTS (6 credits):

KINE 280	Foundations of Public Health
KINE 270	Foundations of Epidemiology

2. TRACK REQUIREMENTS (6 credits):

DATA 141/CSCI 140	Programming for Data Science
DATA 146/CSCI 146	Reasoning under Uncertainty

3. TRACK ELECTIVES (6 credits):

a. TAKE ONE (1) OF THE FOLLOWING COURSES (3 credits)

BIOL 106	Disease, Biomedicine, and Biomedical Research
KINE 290	Global Health
KINE 300	Social and Behavioral Sciences and Health
KINE 323	Health Policy
KINE 325	Environmental Health

b. TAKE ONE (1) OF THE FOLLOWING COURSES (3 credits):

BIOL 325	Quantitative Biology
BIOL 327	Biostatistics
BUAD 462	Healthcare Informatics
DATA 301	Data Driven Decision-making
ECON 456	Economics of Health Care
INTR 204	Introduction to GIS (4 cr)
INTR 490	Advanced Topics in GIS
KINE 369	Methods in Health and Development
MATH 351	Probability and Statistics for Scientists

4. EXPERIENTIAL LEARNING AND CULMINATING EXPERIENCE (1credit): Complete both of the following:

- Experiential Learning Activity (ELA). *See page 15 for more details.*
- PBHL 410 Special Topics in PH: Public Health Minor Seminar (1 credit). *See page 16 for more details.*

Health Equity & Justice (19 credits)

Purpose: The coursework in this track introduces students to issues in health equity and health opportunity. Students will learn about the intersectionality of health with wealth, race/ethnicity, gender, disability, and other axes of identity. Elective courses will provide additional foundation in these critical social issues.

1. CORE REQUIREMENTS (6 credits)

KINE 280	Foundations of Public Health
KINE 270	Foundations of Epidemiology

2. TRACK REQUIREMENTS: TAKE ONE OF THE FOLLOWING (3 credits)

AMST 350	Social Determinants of Health <u>OR</u> SOCL 440 Social Inequalities and Health
KINE 300	Social and Behavioral Sciences and Health
KINE 415	Public Health: Equity, Sustainability, and Well-Being in a Global Age (D.C.)
SOCL 332	Families and Health

3. TRACK ELECTIVES: Take 3 courses (9 credits), with no more than 6 credits from a single department.

AMST 205	Sexuality in America <u>OR</u> SOCL 432 Sociology of Sexualities <u>OR</u> GSWS 290 Introduction to LGBTIQ
AMST 208	Dis/Ability Studies
ANTH 306/ GSWS 306	Women, Gender, and Culture <u>OR</u> SOCL 304/ GSWS 304 Gender in Society <u>OR</u> GSWS 205 Introduction to Gender, Sexuality, and Women's Studies
ANTH 371/ AFST 371	The Idea of Race <u>OR</u> SOCL 425 Blacks in American Society
SOCL 337	Immigration, Assimilation, and Ethnicity
SOCL 203	Institutions and Inequality <u>OR</u> SOCL 204 Contemporary Social Problems in the U.S. <u>OR</u> SOCL 310 Wealth, Power, and Inequality

4. EXPERIENTIAL LEARNING AND CULMINATING EXPERIENCE (1credit): Complete both of the following:

- a. Experiential Learning Activity (ELA). *See page 15 for more details.*
- b. PBHL 410 Special Topics in PH: Public Health Minor Seminar (1 credit). *See page 16 for more details.*

EXPERIENTIAL LEARNING ACTIVITY (ELA)

To fulfill this non-credit bearing requirement, students must complete 30 hours (minimum) of a hands-on experience related to Public Health, as verified by a site supervisor. This must be completed and approved for students to receive Instructor Permission to register for PBHL 410, the culminating Public Health Minor Seminar.

There are a wealth of Public Health-related experiential opportunities available on and off campus. Experiential activities that would count include *Public Health-related* research with faculty members, volunteer projects on or off campus, internships, service trips, study abroad or study away experiences, or course-based experiential learning.

To give some specific examples, there are opportunities through entities such as the Schroeder Center for Health Policy, AidData, the Global Research Institute, the Parks Lab, and others. Many individual faculty do lab-based or community-based research relevant to Public Health. The Office for Community Engagement facilitates community-based projects and alternative breaks related to Public Health. A number of COLL 300 study away and study abroad opportunities have a health focus, direct or indirect. Local safety net clinics such as Olde Towne Medical Center, the Lackey Clinic, and Angels of Mercy are in need of volunteers. If students need support finding a suitable opportunity, they can consult with the Minor coordinators.

Students will consult with the Minor coordinators before the experience. During the experience, students will complete daily field notes to record and reflect upon the experience. These field notes will be instrumental in their participation in the culminating seminar. Students must register for PBHL 410 within 12 months of completing their experiential learning activity.

To receive approval to register for PBHL 410, students will submit a form to Minor coordinators that describes their 30-hour experience, with dates of engagement and the signature of a site supervisor. In this summary, students will also explain linkages with their Minor coursework. The argument for this connection should be clear and compelling.

Experiences that *will not* fulfill the requirement:

- Research, service, internship, or volunteering that is not related to Public Health
- Activities completed more than 18 months ago
- Shadowing
- Scribing
- Data entry

PBHL 410 (Special Topics in Public Health): PUBLIC HEALTH MINOR SEMINAR (1 credit, Instructor Permission)

To register for PBHL 410, students must have completed core and track requirements and the experiential learning activity. They may have a maximum of 6 credits of elective requirements remaining.

This seminar will serve as a culminating experience for the Public Health Minor, and an opportunity for students from different tracks to collaborate. In the seminar, students from different tracks will engage in class discussions and written assignments to integrate content from coursework and experiential learning, and to juxtapose it within Public Health research and practice. Students will also collaborate to design and present multilevel interventions to address an important health issue.