

# **PUBLIC HEALTH**

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## **PUBLIC HEALTH**

Public Health at Austin College promotes a multidisciplinary approach to studying the varied and interconnected ways of preventing disease, promoting health, and prolonging life through organized efforts, both public and private. The curriculum includes courses from the social sciences, natural sciences, mathematics, and humanities, and is designed to give students insight into the breadth of the field. The program emphasizes involvement at the local level in conjunction with a global perspective.

A student who elects to major or minor in public health will obtain an understanding of the nature of the scientific approach, the importance of statistical analysis, and the effects of social, economic, behavioral, political, and cultural factors on health.

A background in public health can prepare a student to enter a diverse range of careers, varying widely both in focus (local, regional, national, global) and in sector. For example, careers are available in local, state, and federal government, hospitals and health departments, nonprofit organizations, corporations, and universities. A number of these careers require graduate study (for example, a Master of Public Health degree). A broad-based liberal arts education that includes training in public health is also a strong background for many other graduate and professional programs ranging from medicine and other health careers to hospital administration, public policy, health economics, human rights, and diverse programs in the natural sciences and social sciences.

Students are encouraged to consider in which aspect of public health their primary interests lie (e.g., policy/management, economics, environmental, scientific/biological, communications, etc.) and to choose additional coursework that will position them strongly for graduate work or the job market.

Students who are interested in the public health major or minor are strongly encouraged to consult with Saritha Bangara or George Diggs at their earliest convenience.

### **Degree Plans Offered in Public Health and Health Care Administration**

Major in Public Health

Minor in Public Health

Major in Health Care Administration

A **major in public health** consists of:

**Core requirements (3 courses)**

\_\_\_\_\_ PUBH 235 Fundamentals of Public Health

\_\_\_\_\_ PUBH 332 Epidemiology

\_\_\_\_\_ PUBH 345 Global Health

**Required supporting course**

\_\_\_\_\_ PUBH 120 Introduction to Biostatistics (or other approved statistics courses including MATH 120, PSY 120 or PSCI 271)

**Policy Component (select 1 course)**

\_\_\_\_\_ PSCI 317 Public Policy

\_\_\_\_\_ ENVS 379 Environmental Policy

\_\_\_\_\_ PUBH 379 Health Management and Policy

**Science of Health and/or Disease (select 1 course)**

\_\_\_\_\_ BIOL 100 Evolution and Human Health

\_\_\_\_\_ BIOL 115 Evolution, Behavior, and Ecology

\_\_\_\_\_ BIOL 228 Genetics

\_\_\_\_\_ BIOL 230 Microbiology

\_\_\_\_\_ BIOL 340 Immunology

\_\_\_\_\_ BIOL 347 Cancer Biology

\_\_\_\_\_ BIOL 354 Human Infectious Diseases

\_\_\_\_\_ PUBH 250 Environmental and Evolutionary Health

\_\_\_\_\_ PUBH 432 Advanced Epidemiology

\_\_\_\_\_ SCI 100 Human Nutrition (or equivalent course)

\_\_\_\_\_ SCI 201 Earth, Body, and Mind

\_\_\_\_\_ SCI 201 Emerging Viral Diseases (or equivalent course)

\_\_\_\_\_ SCI 202 Microbes and Human Health (or equivalent course)

**Behavioral, Social and Cultural Aspects of Health Component (select 1 course)**

\_\_\_\_\_ ANTH 123 Cultural Anthropology

\_\_\_\_\_ CHIN 250 Chinese Medicine

\_\_\_\_\_ COMM 222 Interpersonal Communication

\_\_\_\_\_ COMM 350 Health Communication

\_\_\_\_\_ COMM 455 Intercultural Communication

\_\_\_\_\_ ECO 280 Health Economics

\_\_\_\_\_ ECO 371 Econometrics

\_\_\_\_\_ ENG 252 Literature, Medicine, and Culture

\_\_\_\_\_ ENVS 235 Fundamentals of Environmental Studies

\_\_\_\_\_ ENVS 245 Food Systems

\_\_\_\_\_ PHIL 209 Ethics and Medicine

\_\_\_\_\_ PHIL 250 Public Health Ethics

\_\_\_\_\_ PSY 222 Environmental Psychology

\_\_\_\_\_ PSY 255 Health Psychology

\_\_\_\_\_ PSY 265 Psychology of Human Sexuality

\_\_\_\_\_ PSY 281 Psychopathology

\_\_\_\_\_ PUBH 250 Social Constructions of “Wellness”

\_\_\_\_\_ PUBH 336 Health Care Law and Regulation

\_\_\_\_\_ PUBH 346 Health Care Administration

\_\_\_\_\_ PUBH 350 Behavioral and Community Health

\_\_\_\_\_ PUBH 350 Essentials of Health Behavior and Promotion

\_\_\_\_\_ PUBH 357 Health Care Law

\_\_\_\_\_ REL 220 Illness, Medicine, and Healing in Asian Religion

**Other Considerations When Planning for the Major:**

- Five courses must come from the three components above.
- At least six courses must be at the 200 level.
- At least three courses must be at the 300 level.
- An internship or other similar experience or individual research project is highly encouraged.

**Total Credits Requirement = 8 course credits**

A **minor in public health** consists of:

**Core requirements (2 courses)**

\_\_\_\_\_ PUBH 235 Fundamentals of Public Health

\_\_\_\_\_ PUBH 332 Epidemiology

**Required supporting course**

\_\_\_\_\_ PUBH 120 Introduction to Biostatistics (or other approved statistics course including MATH 120, PSY 120 or PSCI 271)

**Policy Component**

\_\_\_\_\_ PSCI 317 Public Policy

\_\_\_\_\_ ENVS 479 Environmental Policy

\_\_\_\_\_ PUBH 379 Health Management and Policy

**Science of Health and/or Disease**

\_\_\_\_\_ BIOL 100 Evolution and Human Health

\_\_\_\_\_ BIOL 115 Evolution, Behavior, and Ecology

\_\_\_\_\_ BIOL 228 Genetics

\_\_\_\_\_ BIOL 230 Microbiology

- \_\_\_\_\_ BIOL 340 Immunology
- \_\_\_\_\_ BIOL 347 Cancer Biology
- \_\_\_\_\_ BIOL 354 Human Infectious Diseases
- \_\_\_\_\_ PUBH 250 Environmental and Evolutionary Health
- \_\_\_\_\_ PUBH 432 Advanced Epidemiology
- \_\_\_\_\_ SCI 100 Human Nutrition (or equivalent course)
- \_\_\_\_\_ SCI 201 Earth, Body, and Mind
- \_\_\_\_\_ SCI 201 Emerging Viral Diseases (or equivalent course)
- \_\_\_\_\_ SCI 202 Microbes and Human Health (or equivalent course)

**Behavioral, Social, and Cultural Aspects of Health Component**

- \_\_\_\_\_ ANTH 123 Cultural Anthropology
- \_\_\_\_\_ CHIN 250 Chinese Medicine
- \_\_\_\_\_ COMM 222 Interpersonal Communication
- \_\_\_\_\_ COMM 350 Health Communication
- \_\_\_\_\_ COMM 455 Intercultural Communication
- \_\_\_\_\_ ECO 280 Health Economics
- \_\_\_\_\_ ECO 371 Econometrics
- \_\_\_\_\_ ENG 252 Literature, Medicine, and Culture
- \_\_\_\_\_ ENVS 235 Fundamentals of Environmental Studies
- \_\_\_\_\_ ENVS 245 Food Systems
- \_\_\_\_\_ PHIL 209 Ethics and Medicine
- \_\_\_\_\_ PHIL 250 Public Health Ethics
- \_\_\_\_\_ PSY 222 Environmental Psychology

- \_\_\_\_\_ PSY 255 Health Psychology
- \_\_\_\_\_ PSY 265 Psychology of Human Sexuality
- \_\_\_\_\_ PSY 281 Psychopathology
- \_\_\_\_\_ PUBH 250 Social Constructions of “Wellness”
- \_\_\_\_\_ PUBH 336 Health Care Law and Regulation
- \_\_\_\_\_ PUBH 346 Health Care Administration
- \_\_\_\_\_ PUBH 350 Behavioral and Community Health
- \_\_\_\_\_ PUBH 350 Essentials of Health Behavior and Promotion
- \_\_\_\_\_ PUBH 357 Health Care Law
- \_\_\_\_\_ REL 220 Illness, Medicine, and Healing in Asian Religion

**Other Considerations When Planning for the Minor:**

- Additional courses are selected from the components above (at least one course from at least two of the components).
- At least four courses must be at the 200 level or above.
- At least one course must be at the 300 level or above (i.e. Public Health 332).

**Total Credits Requirement = 5 course credits**

All elective courses for the major and minor should be selected in consultation with the program director based on student interests and career objectives.

## **HEALTH CARE ADMINISTRATION**

The Health Care Administration major provides an interdisciplinary approach to prepare students in leadership, management, and administration as applied to health and health care organizations. The program curriculum, through close cooperation between the Department of Economics and Business Administration and the Public Health program, consists of courses that provide students with background in the business and management side of health care but also the policies and the complexities of human needs in the modern health context. It also promotes the critical thinking skills necessary in the ever-changing and rapidly growing health care industry. Further, it encourages students to gain real-world experiences, such as internships, volunteer work, or other experiential activities through the many private and public health care institutions within the North Texas area.

Students are encouraged to choose additional coursework in addition to their major that will position them strongly for graduate school or the job market. Of special importance are courses that will broaden their perspective (e.g., a health-related ethics course, literature, medicine and culture, health communication, health psychology, etc.). Likewise, choosing a minor (or second major) that would complement their interest in Health Care Administration could potentially be valuable to their career path.

Students who are interested in the health care administration major are strongly encouraged to consult with Mathias Akuoko or Kevin Simmons at their earliest convenience.

A major in **health care administration** consists of:

**Core requirements (8 courses)**

\_\_\_\_\_ ACCT 261 Financial Accounting

\_\_\_\_\_ BA 361 Finance

\_\_\_\_\_ BA 495 Strategic Management

\_\_\_\_\_ ECO 280 Health Economics

\_\_\_\_\_ PUBH 235 Fundamentals of Public Health

\_\_\_\_\_ PUBH 357 Health Care Law

\_\_\_\_\_ PUBH 379 Health Policy

\_\_\_\_\_ PUBH or BA An approved elective from Public Health or Business Administration

\_\_\_\_\_ A course in ethics or another approved course with a values or ethics component

**Required supporting courses**

\_\_\_\_\_ ECO 101 or 102 (Principles of Micro/Macro Economics)

\_\_\_\_\_ PUBH 120 Biostatistics (spring 2017) or MATH 120 Elementary Statistics or PSY 120 Psychological Statistics or PSCI 271 Quantitative Methods (an introductory Political Science statistics course).

**Total Credits Requirement = 9 course credits**

**COURSES IN PUBLIC HEALTH**

**PUBH 120 Introduction to Biostatistics**

An introduction to selected topics in biostatistical analysis and reasoning with a focus on

analyzing health related data. Topics will include descriptive statistics and graphical displays, sampling methods and types of studies, tools for describing central tendency and variability of data, the basics of probability theory, random variables, discrete distributions, the normal distribution, the chi-squared distribution, hypothesis testing for means and comparison of means (including t tests), confidence intervals, correlation, and regression analysis. A section will be included on how statistics can be misused or can lead to wrong conclusions. Health related examples will be used throughout. Students can receive credit for only one statistics class: Public Health 120, Psychology 120, Mathematics 120, Social Science 120, etc. Requirements met: Quantitative Competency. (Each year starting 2016-17).

### **PUBH 235 Fundamentals of Public Health**

An overview of the fundamentals of public health. Topics covered will include the definition of public health, the history and accomplishments of the field, an examination of relevant cultural, social, and behavioral issues, and an examination of core public health sub-disciplines. These include an introduction to epidemiology of infectious and chronic diseases, environmental health, global health, health promotion, and health policy and management. Requirements met: Non-Lab Science Breadth. (Each semester)

### **PUBH 250 Topics in Public Health**

A study of selected topics for beginning students based on faculty and student interests. Offered on an occasional basis. Course may be repeated when the topic varies. 1 course credit.

### **PUBH 260 Intermediate Directed Study**

Student investigation of topic of interest working in collaboration with a faculty member resulting in significant oral and written work. See On-Campus Learning Opportunities for more information. Special permission required. Offered in variable course credit from 0.25-1.00.

### **PUBH 294 Intermediate Student Research**

Intended for less experienced students to develop and execute a research project related to public health, beyond the constraints of the normal classroom, suitable for public dissemination on or off campus under mentorship of a faculty member. Typically, this work results in a formal presentation, written work, or creative works. Course credit varies from 0-1.00. PREQ: Instructor permission required.

### **PUBH 332 Epidemiology**

An introduction to and examination of the field of epidemiology. The course will cover the principles and methods of epidemiology including an analysis of the distribution, causes, and prevention of illness and premature death in populations. It will include quantitative analysis of the biological, social, economic, and environmental conditions that affect health, as well as an examination of the potential sources of bias in health studies. A laboratory component is included. PREQ: Public Health 235 and Mathematics 120, Psychology 120, or Social Sciences 120. (Each year starting 2015-16)

### **PUBH 336 Health Care Law & Regulation**

This course will examine how law can both promote and impede the public's health. It will introduce students to the legal concepts that underlie the public health system and that inform

public health policymaking in the United States. Topics to be covered include the role of law in public health care and policy (e.g., governmental powers vs. civil liberties, regulation of public health, tobacco regulation), managed care and public health, the role of public health officials in shaping law and policy, and public health law reform. Meet the Policy Component of the Public Health major. PREQ: Public Health 235 or instructor permission. (Each year starting 2016-17)

### **PUBH 345 Global Health**

An introduction to Global Health, including major global health challenges, programs, and policies. It will examine the global distribution and social and cultural costs of disease and mortality, the determinants of global health disparities, the making of global health policies, and the results of global health interventions. PREQ: Public Health 235. (Each spring starting 2015-16)

### **PUBH 346 Health Care Administration**

The course explores how health care organizations are managed in a rapidly changing environment. Using literature from management, social science, policy analysis, and health services, students will examine the environments in which health care managers work. Students will also be introduced to the essential analytical tools and managerial skills for managing health care organizations. Topics include health care leadership, organization design, teamwork, communication, power and conflict, change and innovation, quality improvement, strategic thinking, competitive advantage, strategic alliances, health policy, information systems, consumerism, ethics, and globalization. Crosslists with Business Administration 350: Health Care Administration when offered. PREQ: Public Health 235 or instructor permission (As schedules allow)

### **PUBH 347 Health Care Law**

This course is designed to introduce students to the legal foundations of health care in the United States. Health care is bought in the market as a commodity. Yet, Americans believe healthcare should be a fundamental right of every American. The conflict or in this case the balance between these opposing view is the result of the complex healthcare system we have. Promoting and protecting the health and welfare of Americans is a key responsibility of our governments. Such actions sometimes come with regulations and restrictions. Understanding how, we as a nation, balances the promotion and protection of health and welfare, while respecting and upholding individual rights and welfare is the cornerstone of this class. (Fall terms)

### **PUBH 350 Advanced Topics in Public Health**

An investigation of selected topics for more advanced students based on faculty and student interests. Offered on an occasional basis. Course may be repeated when topic varies. Prerequisites vary. Offered in variable course credit from 0.25-1.00. 1 course credit.

### **PUBH 379 Health Management and Policy**

This course builds upon Fundamentals of Public Health and incorporates key ideas from a number of other disciplines in a study of policy options for responding to health challenges. The course examines both theoretical and practical approaches to solving, mitigating, or preventing a variety of health problems. PREQ: Public Health 235. (Each year starting 2015-16)

**PUBH 394/494 Advanced Student Research**

Intended for advanced students to develop and execute a research project related to public health suitable for public dissemination under mentorship of a faculty member. Students are expected to present the results of their research in a public forum. Typically, this work results in a formal presentation, written work, or creative works. Course credit varies from 0-1.00. PREQ: Instructor permission required.

**PUBH 432 Advanced Epidemiology**

This course is designed to introduce undergraduate public health students to graduate level concepts in epidemiology. We will build on fundamental applied theories and methodologies with which students became acquainted in the introductory course PUBH 332. Students will learn how to interpret data, critique research, and develop appropriate study designs. This course will also provide insight into how epidemiology can be used to resolve a wide variety of issues affecting us at a community as well as at a global level. PREQ: Public Health 332. (Each fall)

**PUBH 450 Advanced Topics in Public Health**

This course builds upon Fundamentals of Public Health and incorporates key ideas from a number of other disciplines in a study of policy options for responding to health challenges. The course examines both theoretical and practical approaches to solving, mitigating, or preventing a variety of health problems. PREQ: Public Health 235.

**COURSES IN HEALTH CARE ADMINISTRATION**

**ECO 280 Health Economics** (see Economics 280)

**ACCT 261 Financial Accounting** (see Accounting 261)

**BA 361 Finance** (see Business Administration 361)

**BA 495 Strategic Management** (see Business Administration 495)