

An aerial photograph of a university campus, likely the University of Michigan, featuring a large, light-colored, domed building in the center. The campus is surrounded by green trees and other academic buildings. A large, semi-transparent blue diamond shape is overlaid on the center of the image, containing the title text.

Master of Public Health

Student Handbook

2023- 2024

**Department of Population & Quantitative Health
Sciences**

Master of Public Health Program

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Charles Rozek, PhD, Vice Provost

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Access Services (IDs & Parking)

Crawford Hall, Lower Level
(216) 368-2273

case.edu/access-services/

Career Center

Sears Building, Room 229
(216) 368-4446

students.case.edu/career/graduate

Center for International Affairs

Tomlinson Hall, 1st Floor, Room 143
(216) 368- 2517

case.edu/international/international-student-services

Financial Aid

Yost Hall, Room 435
(216) 368-4530

case.edu/financialaid/

Free Computer Support & Service

11424 Bellflower Rd.
(216) 368-4357

case.edu/utech/help

Registrar

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Student Affairs

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(216) 368-2020

students.case.edu/departments/office

University Health Service (Student Medical Center)

2145 Adelbert Rd.
(216) 368-2450

students.case.edu/departments/health

University Counseling Services

Sears Building, Room 220
(216) 368-5872

students.case.edu/departments/counseling

Police & Security Services

1689 E. 115th St.

Emergency – (216) 368-3333

Non-emergency- (216)-368-3300

Safe Ride (7pm- 3am): (216) 368-3000

Escort Service (24 Hours) (216)-368-3300

case.edu/publicsafety/

Cleveland Police Department

10600 Chester Ave. **Emergency-** 911

Trevor Lifeline: 866.488.7386

TimelyCare: timelycare.com/cwru

Suicide and Crisis Lifeline: 988

A Message from the Department Chair

Welcome to the Department of Population and Quantitative Health Sciences. We are a large research-intensive department that includes community-based public health experts shaping tobacco use regulation and genetic epidemiologists investigating the correlations between the genome and the environmental, behavioral, and social variables that contribute to complex diseases. We are unusual in that we work across a wide range of disciplines.

We are integrated within one of the nation's top-ranked schools of medicine, putting us at the center of dramatic change in how clinical and research teams are trained. Case Western Reserve University School of Medicine has embraced new models that put medical, nursing, physician assistant, and dental students in the same classroom. Those teams also include data scientists, reflecting the growing demand for professionals trained in epidemiology, biostatistics, and informatics to shape best practices within health systems and their surrounding communities. Our department encompasses Public Health, also integrated within the School of Medicine, recognizing that behavior, community, and environment are essential parts of the health landscape.



We investigate variations in genetic pathways that influence disease, as well as the layout of grocery aisles that define access to quality food. We consider proteomics as it relates to disease phenotype, as well as the geographic distribution of chronic conditions. We use big data analytics to monitor epileptic seizures in real time and develop original computational approaches that apply across many areas of research.

We look forward to you getting to know our faculty, who are nationally and internationally recognized. We come from many walks of life and academic backgrounds. We share a commitment to cultivating the next generation of health leaders and scientists who ask challenging questions and apply leading-edge approaches to solve the most difficult problems in biomedical research.

We are excited that you have joined our department and we cannot wait to see what you accomplish in your time with us.

Sincerely,

Jonathan Haines, Ph.D. Chair, Mary W. Sheldon Professor of
Genomic Sciences

Greetings from the Program Director

Welcome to the Master of Public Health (MPH) program in the Department of Population and Quantitative Health Sciences at Case Western Reserve University School of Medicine! You are a member of a prestigious program of public health that focuses on leadership and health impact in our communities. Our MPH program provides the skills and perspectives to understand and address the complex challenges of health and health equity in our diverse communities and populations. In alignment with our historic motto, we enable people to “Do Best What People Need Most”. We are glad that you are part of this endeavor through this professional graduate degree program!

As we approach our program’s Silver Anniversary next year, we reflect on the many ways public health has evolved and how our students and alumni continue to shape and impact the health of our communities around the world. Public health has undergone significant successes and challenges in the past 25 years. Our world has experienced dramatic decreases in malaria mortality and achievements in disease elimination programs. However, we were also confronted with a deadly global pandemic of a novel coronavirus with estimates of excess deaths in the range of 15 million people. We continue to experience gaps in our nation’s public health preparedness, infectious disease control capacity, health equity, and social justice. The need for increased and enhanced public health workforce development is critical. Our program has a quarter century of experience addressing these issues from the strength of research, education, policy, and public health practice. We are excited to have you join our program!

During this next academic year, please join us in that many opportunities for formal and informal learning, research, applied public health experiences, integrative health experiences, and community service that are available through our program, CWRU, and with our community partners.

Please familiarize yourself with this handbook which provides a general summary of academic program information. Please use this guide in consultation with your academic advisor along with the MPH Advising Guide to get a detailed description of advising in the program. Students are responsible to know and adhere to all Case Western University [policies](#) and Department of Population and Quantitative Health Sciences, and MPH program policies. If a student is uncertain about a requirement or perceives a conflict, then the student should bring this to the attention of their academic advisor. We are excited to have you in our program and look forward to this academic year!

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel J. Tisch".

Daniel Tisch, PhD, MPH
MPH Program Director

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Lesbian, Gay, Bisexual, and Transgender Center, Suite 179, Tinkham Veale University Center, 368-LGBT(5428)	77
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MPH Program Leadership

Staff

Program Director: Daniel Tisch, PhD, MPH

Associate Program Director: Kristina Knight, PhD, MPH

Administrative Director: Tara Hannum, MA

Director of Community Based Education: Andrew Morris, MPH

MPH Management Team

Program Director: Daniel Tisch, PhD, MPH

PQHS Vice Chair for Education and MPH Director of Research: Mendel Singer, PhD, MPH

Associate Program Director: Kristina Knight, PhD, MPH

Administrative Director: Tara Hannum, MA

Director of Community Based Education: Andrew Morris, MPH

Curriculum Committee Chair & Health Promotion Disease Prevention Concentration Coordinator: Erika Trapl, PhD

Health Policy and Management Concentration Coordinator: Kate Nagel, DrPH

Global Health Concentration Coordinator: Peter Zimmerman, PhD

Assistant Director, Enrollment Management: TBD

MPH Student Representatives: Ian Zonfa, Anusha Mudigonda, Luke Koski, Aashna Rana

Mission Statement

The Case Western Reserve University (CWRU) School of Medicine's Master of Public Health (MPH) Program is an exciting and necessary component to the educational, research, and service resources of CWRU's great health science institution. Accredited by the Council on Education for Public Health (CEPH), this program takes advantage of the strong assets of the Schools of Medicine and Graduate Studies, the Department of Population & Quantitative Health Sciences, and other excellent CWRU graduate and postgraduate programs. The CWRU MPH Program opened in 1999 with resources many other programs take years to develop.

The Mission of the CWRU MPH Program

To develop leaders who will improve health, advance health equity, and create new knowledge through the synthesis of innovative research, education, and community partnerships.

Vision

Healthy people. Thriving communities.

Program Goals

- Develop collaborative solutions to identified public health problems.
- Prepare students for successful professional careers in public health and pursuit of advanced professional/academic degrees.
- Incorporate current research and community data in each student's training
- Engage students in community learning in each semester
- Foster an understanding of health inequities and approaches to improve health for all
- Provide all public health students with interdisciplinary learning experiences
- Provide all students with the skills required to be a successful leader
- Improve the health of the public through collaborations between CWRU, community organizations, governmental health agencies, foundations, and the private sector
- Provide all students with professional development opportunities (workshops, seminars, guest speakers, site visits, etc) each semester

Values

The following values reflect the mission and goals of the program and should inform the student's approach to their education, the content and structure of the program's curriculum, and all products resulting from the program's activities.

Public health education, research and service are optimized through:

- Diverse, equitable partnerships to achieve community health objectives
- Dynamic, responsive, and innovative approach to public health transformation
- Excellence in critical thinking and solution-finding using evidence-based principles
- Professionalism and ethical conduct in multidisciplinary teaching, research, and practice

- Social justice and health equity
- Healthy communities

An Introduction to the Master of Public Health Program

A Master of Public Health degree is designed to prepare students to address the broad mission of public health, defined as “enhancing health in human populations through organized community effort,” utilizing education, research, and community service. Public health practitioners are prepared to identify and assess the health needs of different populations, and then to plan, implement, and evaluate programs to meet those needs. It is the task of the public health practitioner to protect and promote the wellness of human-kind. A Master of Public Health degree requires education in knowledge basic to public health, including biostatistics, epidemiology, environmental health sciences, health services administration and social and behavioral sciences. Individual interest, experience, and program resources guide emphasis for different students.

A Master of Public Health degree provides a broad base of knowledge and skills necessary in various areas of public health. In addition to providing students with this broad foundation, the MPH program provides students with experience in the application of this knowledge and their newly developed skills to community health problems. The CWRU MPH Program has a particular emphasis on urban health, social justice and care of the underserved.

Anyone with a career interest in working with communities to improve the health of their members should consider the MPH degree. The CWRU MPH Program is especially suited to those with previous experience in public health, those with advanced degrees, or those in training for advanced degrees. Degrees with shared interest and content with public health include:

- Medicine: MD/MPH
- Law: JD/MPH
- Nursing: MSN & NP/MPH
- Bioethics: MA Bioethics/MPH
- Nutrition: MS/MPH
- Dentistry: DMD/MPH
- Management: MBA/MPH
- Anthropology: MA-PhD/MPH
- Social Work: MSSA & MSW/MPH
- Integrated Graduate Studies: BA /MPH

Foundational Knowledge & Core Competencies

The CWRU MPH program ensures that all students are grounded in the following foundational public health knowledge upon graduation:

Foundational Skills

Profession & Science of Public Health

1. Explain public health history, philosophy and values
2. Identify the core functions of public health and the 10 Essential Services
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.
6. Explain the critical importance of evidence in advancing public health knowledge

Factors Related to Human Health

7. Explain effects of environmental factors on a population's health
8. Explain biological and genetic factors that affect a population's health
9. Explain behavioral and psychological factors that affect a population's health
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities
11. Explain how globalization affects global burdens of disease
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)

Core Competencies

Core competencies identify the knowledge and skills all degree earning students attain, and reflect the mission, goals and objectives of the MPH Program. All students develop a core set of skills in each of the fundamental domains of public health:

- Biostatistics
- Epidemiology
- Environmental health sciences
- Health policy and management
- Public health history
- Social and behavioral sciences.

Additionally, the CWRU MPH program ensures that all students can demonstrate the following competencies upon graduation:

Evidence-based Approaches to Public Health

1. Apply epidemiological methods to the breadth of settings and situations in public health practice
2. Select quantitative and qualitative data collection methods appropriate for a given public health context
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
4. Interpret results of data analysis for public health research, policy or practice

Public Health & Health Care Systems

5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels

Planning & Management to Promote Health

7. Assess population needs, assets and capacities that affect communities' health
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
9. Design a population-based policy, program, project or intervention
10. Explain basic principles and tools of budget and resource management
11. Select methods to evaluate public health programs

Policy in Public Health

12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations
15. Evaluate policies for their impact on public health and health equity

Leadership

16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making
17. Apply negotiation and mediation skills to address organizational or community challenges

Communication

- 18. Select communication strategies for different audiences and sectors
- 19. Communicate audience-appropriate public health content, both in writing and through oral presentation
- 20. Describe the importance of cultural competence in communicating public health content

Interprofessional Practice

- 21. Perform effectively on interprofessional teams

Systems Thinking

- 22. Apply systems thinking tools to a public health issue

Curriculum

The CWRU MPH Program has a two-year curriculum requiring 42 credit hours. Eighteen credits are accumulated in six core required courses, representing the fundamental domains of public health: biostatistics, epidemiology, environmental health sciences, health services administration, public health history, and social and behavioral sciences. Students receive nine credits for three courses in the concentration of their choice, six credits for two elective courses, and nine credits for the **multi-semester** “Culminating Experience,” a public health field practicum (3 credits) and public health capstone research project (6 credits) encompassing one or more semesters of the MPH program. The manner in which Culminating Experience credits are allocated is flexible and is determined between the student and their advisor. Previous experience or education pertaining to public health may increase the student’s flexibility in course selection. Students may also enroll part-time and take courses over a three to five-year period.

CURRICULUM OVERVIEW

(see appendix for detailed course descriptions)

CORE REQUIRED COURSES - 18 credits:

MPHP 405: Statistical Methods in Public Health** (Spring)
MPHP 406: History & Philosophy of Public Health (Fall)
MPHP 411: Introduction to Health Behavior (Fall)
MPHP 429: Environmental Health (Spring)
MPHP 439: Public Health Management & Policy (Spring)
MPHP 483: Introduction to Epidemiology for Public Health Practice (Fall)

CULMINATING EXPERIENCE - 9 credits:

MPHP 650: Public Health Practicum (3 credits)
MPHP 652: Public Health Capstone (6 credits)

CONCENTRATIONS - 9 credits each (Choose 1):

Population Health Research
Global Health
Health Care Policy & Management
Health Promotion & Disease Prevention
Health Informatics

PUBLIC HEALTH ELECTIVES - 6 credits

** Students in the Population Health Research concentration should take MPHP 405. If they petition to take MPHP 431: Statistical Methods I in place of MPHP 405, additional modules will be assigned to meet competencies.

SAMPLE FULL TIME COURSE SEQUENCE

FALL, YEAR ONE - 9 credits

MPHP 411: Introduction to Health Behavior (3)
MPHP 406: History & Philosophy of Public Health (3)
MPHP 483: Intro. to Epidemiology for Public Health Practice (3)

SPRING, YEAR ONE - 12 credits

MPHP 405: Statistical Methods in Public Health (3)
MPHP 429: Environmental Health (3)
MPHP 439: Health Management & Policy (3)
_____: Public Health Elective (3)

FALL, YEAR TWO - 12 credits

MPHP ____: Concentration Course #1 (3)
MPHP ____: Concentration Course #2 (3)
MPHP 650: Public Health Practicum (3)***
MPHP 652: Public Health Capstone (3)

SPRING, YEAR TWO - 9 credits

MPHP 652: Public Health Capstone (3)
MPHP ____: Concentration Course #3 (3)
_____: Public Health Elective (3)

*** We recommend completing the practicum in Spring Year One or the summer before Fall Year Two, but the credits can be placed in Fall Year Two.

Concentrations

Currently, five different concentrations are offered by the CWRU MPH Program:

- Population Health Research
- Global Health
- Health Policy & Management
- Health Promotion & Disease Prevention
- Health Informatics

Each concentration has a required course or courses (in addition to the core required courses) plus selective offerings to be combined for a total of 9 credit hours in concentration coursework. Students develop a Capstone project relevant to the concentration area to expand and apply the knowledge of the subject. Individual emphasis will differ from student to student within each concentration.

MPH students can also choose to expand the emphasis and depth of their program of study by electing to do a double concentration plan of study. For the double concentration, the student chooses two areas (two concentrations) of equal emphasis and takes 3 courses in each area. The student's Capstone project must embrace and integrate both emphases. Students choosing to do the double concentration plan of study should also work closely with an advisor to ensure optimal course selection and foster the evolution of a successful Capstone project.

Population Health Research Concentration

Coordinator: Mendel Singer, PhD, MPH mendel@case.edu

Concentration Competencies:

- Design efficient computer programs for data management and manipulation, statistical analysis, as well as presentation using R (or another statistical programming language, such as SAS)
- Apply advanced statistical methods for analyzing count data, categorical data, and time to event data: specifically, Poisson regression models, multinomial and ordinal logistic regression models, and Cox proportional hazard models
- Perform predictive modeling employing different strategies for model selection (best subsets and shrinkage approaches), imputation of missing values, and splitting data into training and test data sets
- Construct a conceptual model and choose an appropriate existing data set, such as electronic health records, Medicare/Medicaid, Medical Expenditure Panel Survey, Health Care Utilization Project and Health and Retirement Study, to address a specific population health research question
- Design and perform a study consisting of a retrospective analysis of an existing data set to address a population health research question of interest

Required Courses

PQHS 515: Secondary Analysis of Large Health Care Databases

MPHP 432: Statistical Methods II

Public Health Elective Courses

MPHP 426: An Introduction to GIS for Health and Social Sciences

MPHP 431: Statistical Methods I

MPHP 450: Clinical Trials & Intervention Studies

MPHP 467: Comparative and Cost Effectiveness Research*

MPHP 482: Qualitative & Mixed Methods in Public Health

MPHP 484: Global Health Epidemiology

HSMC/ MPHP 421: Health Economics and Strategy

PQHS 414: Data Management and Statistical Programming

PQHS 427: Geospatial Analytics for Biomedical Health

Applications

PQHS 435: Survival Data Analysis

PQHS 440: Introduction to Population Health

PQHS 451: Principles of Genetic Epidemiology

PQHS 452: Statistical Methods in Human Genetics

PQHS 453: Categorical Data Analysis

PQHS 459: Longitudinal Data Analysis

PQHS 465: Design and Measurement in Population Health Research

PQHS 471: Machine Learning & Data Mining

PQHS 491: Advanced Study Design and Analysis

CRSP 500: Design and Analysis of Observational Studies

NURS 631: Advanced Statistics: Multivariate Analysis

NURS 632: Advanced Statistics: Structural Equation Modeling

PSCL 412: Measurement of Behavior

Additional courses may be approved by Population Health Research coordinator

* MPHP 467 is offered in a modular format for 1-3 credits. To fulfill the concentration requirement partial courses must be combined to total 3 credits.

** Students in the Population Health Research concentration should take MPHP 405. If they petition to take MPHP 431: Statistical Methods I in place of MPHP 405, additional modules will be assigned to meet competencies.

Global Health Concentration

Coordinator: Peter Zimmerman, PhD paz@case.edu

Concentration Competencies:

- Evaluate the relationships and agencies focused on colonial health, tropical medicine, international health and global health in a historical context.
- Prioritize diseases of global health importance and their epidemiological context
- Apply methods for strengthening and focusing existing capacities and resources for health program sustainability and enhancement
- Contrast application of technology to impact priority diseases with addressing the underlying social and economic determinants of global health linked to health care delivery systems
- Apply the fundamental international principles and standards for the protection of human research subjects in diverse cultural settings

Required Courses

MPHP 484: Global Health Epidemiology

INTH 401: Introduction to Global Health

Public Health Elective Courses

MPHP 426: An Introduction to GIS for Health and Social Sciences

MPHP 441: Climate Change and Health

MPHP 466: Promoting Health Across Boundaries

MPHP 467: Comparative and Cost Effectiveness Research

MPHP 482: Qualitative & Mixed Methods in Public Health

MPHP 489: Women's Public Health

MPHP 496: Evolution of Public Health into Global Health Practice

MPHP 510: Health Disparities

MPHP 540: Operational Aspects of Global Health and Emergency Response

POSC 457- Economic, Environmental, and Health Challenges—

The Impact of Democracy

ANTH 459: Introduction to International Health

ANTH 461: Urban Health*

ANTH 480: Medical Anthropology and Global Health I*

ANTH 481: Medical Anthropology and Global Health II*

ANTH 511: Seminar in Anthropology and Global Health*

Additional courses may be approved by Global Health coordinator

* Enrollment may be subject to pre-requisites and/or instructor consent and may not be available to students who are not matriculated in an associated program or dual degree.

Health Policy & Management Concentration

Coordinator: Kate Nagel, DrPH, MPH kfn@case.edu

Concentration Competencies:

- Apply the principles of program development, planning, budgeting, and resource management in organizational or community initiatives
- Describe how policy impacts healthcare delivery and outcomes
- Apply a continuous quality and performance improvement framework to address organizational coordination and performance
- Identify methods for decision making using evidence-based, systems thinking, and data-driven approaches to health policy and management
- Identify how access, quality, and cost are influenced by organizational or financial structures

Required Courses

MPHP 468: Continual Improvement of Health Care

HSMC/MPHP 421: Health Economics & Strategy **OR** HSMC/MPHP 456 Health Policy & Management Decisions

Public Health Elective Courses

MPHP 412: Racism and Public Health

MPHP 433: Community Interventions & Program Evaluation

MPHP 466: Promoting Health Across Boundaries

MPHP 467: Comparative and Cost Effectiveness Research

MPHP 482: Qualitative & Mixed Methods in Public Health

MPHP 510: Health Disparities

MPHP 540: Operational Aspects of Global Health and
Emergency Response

BAFI/HSMC 420: Health Finance†

BETH 417: Introduction to Public Health Ethics

POSC 457: Economic, Environmental, and Health
Challenges— The Impact of Democracy

HSMC 425: Dialogues in Healthcare Management

POSC 483: Health Policy & Politics in the United States

LAWS 4201: Health Law I

LAWS 4202: Health Law II

LAWS 5205: Public Health Law

LAWS 5218: Health Care Organizations, Finance, and
Regulation

LAWS 5220: Health Care Controversies*

LAWS 5226: Public Health Law Lab*

SASS 500: Violence: Social Work and Public Health

SOCI 457: Sociology of Human Rights

Additional courses may be approved by Health Policy & Management coordinator

* Course is available for 2-3 credits

† Enrollment in BAFI/HSMC 420 may be subject to pre-requisites and/or instructor consent

Health Promotion & Disease Prevention Concentration

Coordinator: Erika Trapl, PhD erika.trapl@case.edu

Concentration Competencies:

- Assess needs for health interventions for the general public as well as at-risk populations
- Systematically evaluate health promotion strategies across typologies of evidence
- Apply system complexity concepts in the context of nested individuals, social networks, organizations, and communities (i.e., systems nested within systems) in the analysis of public health problems and solutions
- Develop health education/health promotion strategies that create an understanding of and respect for the importance of culture in practice and policy
- Apply social and behavioral theory and planning models and evidence-based health promotion strategies for a variety of populations in the development of a health education/health promotion plan

Required Courses

MPHP 413: Health Education, Communication, & Advocacy

MPHP 433: Community Interventions & Program Evaluation

Public Health Elective Courses

MPHP 412: Racism and Public Health

MPHP 426: An Introduction to GIS for Health and Social Sciences

MPHP 441: Climate Change and Health

MPHP 466: Promoting Health Across Boundaries

MPHP 468: Continual Improvement of Health Care

MPHP 482: Qualitative & Mixed Methods in Public Health

MPHP 484: Global Health Epidemiology

MPHP 485: Adolescent Development

MPHP 489: Women's Public Health

MPHP 496: Evolution of Public Health into Global Health Practice

MPHP 510: Health Disparities

MPHP 540: Operational Aspects of Global Health and Emergency Response

BETH 417: Introduction to Public Health Ethics

BETH 419: Medical Science and Technology in Society

NTRN 401: Nutrition for Community & Health Care Professionals*

NTRN 439: Determinants of Dietary Behavior

POSC 457: Economic, Environmental, and Health Challenges— The Impact of Democracy

SASS 500: Violence: Social Work and Public Health

SOCI 457: Sociology of Human Rights

ANTH 435: Illegal Drugs in Society

Additional courses may be approved by Health Promotion & Disease Prevention coordinator

* Course is available for 2-3 credits. To count as an elective, the course must be taken for 3 credits.

Health Informatics Concentration

Coordinator: Siran Koroukian, PhD skoroukian@case.edu

Concentration Competencies:

- Understand the fundamentals of using biomedical ontologies for integration of biomedical and health data
- Differentiate between standard health data exchange formats and vocabularies
- Explain how clinical data originating from different systems are collected and coded and how they are normalized, aggregated, and analyzed
- Describe how biomedical terminological systems are used in natural language processing workflow for unstructured biomedical text
- Describe the ethical, regulatory, managerial, financial, and practical aspects of data security

Required Courses

IIME 473: Fundamentals of Clinical Information Systems

PQHS 416: Computing in Biomedical Health Informatics

Public Health Elective Courses

MPHP 432: Statistical Methods II

HSMC/MPHP 457: Informatics, Analytics, and Decision-Making

PQHS 515: Secondary Analysis of Large Health Care Data Bases

NUND 510: Application of Health Information Technology and Systems

NURS 533: Introduction to Data Science in Healthcare

Additional courses may be approved by Health Informatics Coordinator

Intensive Research Pathway

What is it?

The Intensive Research Pathway (IRP) is an alternative plan of study option within the MPH program that creates an enhanced route toward research careers and PhD programs, within the framework of the broader public health education and community training of the professional MPH degree. Application for the IRP alternative plan of study is handled separately from application to the program. We encourage interested students to apply prior to the start of their first semester. Contact the MPH Office if interested in applying.

Who should be interested?

Students who want research to be a strong part of their future career and have good quantitative aptitude.

What are the benefits?

Students taking this option will be strongly competitive for research assistant positions and better prepared for PhD study (with more courses counting towards a future PhD program). Dual-degree professionals will be trained for independent research success.

Course #	Course Title	Units	Grading	Semester
Core Courses				
PQHS 490	Epidemiology: Intro to Theory and Methods	3	Graded	Fall
MPHP 439	Public Health Management and Policy	3	Graded	Spring
PQHS 431	Statistical Methods I	3	Graded	Fall
MPHP 429	Introduction to Environmental Health	3	Graded	Spring
MPHP 411	Introduction to Health Behavior	3	Graded	Fall
MPHP 406	History & Philosophy of Public Health	3	Graded	Fall
TOTAL		18 CREDITS		
Culminating Experience				
MPHP 650	Public Health Practicum	3	P/F	Fall/Spring/Summer

MPHP 652	Capstone	6	P/F	Fall/Spring/Summer
TOTAL		9 CREDITS		
Required				
PQHS 465*	Design and Measurement in Population Health Sciences	3	Graded	Fall
PQHS 414*	Data Management and Statistical Programming	3	Graded	Fall
PQHS 432*	Statistical Methods II	3	Graded	Spring
TOTAL		9 CREDITS		
CONCENTRATION (6 or 9 credits)*				

*Students selecting the Population Health Research concentration in conjunction with the IRP will count MPHP 432 toward the concentration. Students selecting a different concentration may, at the discretion of the concentration leader and on a case-by-case basis, count PQHS 465, 414, or 432 as a concentration elective. Otherwise, all nine credits will be taken in the student's concentration for a total of 45 credit hours. Please be sure to communicate with your advisor(s) throughout your course planning process.

Because of the breadth and scope of the field of public health, the MPH is an ideal degree to integrate with other professional schools and graduate programs at CWRU. University leadership recognizes collaboration as one of the priorities for the university, strongly encouraging interdisciplinary efforts. The MPH Program now participates in ten dual degree programs:

- MA or PhD Anthropology/MPH (School of Graduate Studies Medical Anthropology Program)
- MD/MPH (School of Medicine and Lerner College)
- NP or MSN/MPH (Frances Payne Bolton School of Nursing)
- MA Bioethics/MPH (School of Graduate Studies)
- MBA/MPH (Weatherhead School of Management)
- JD/MPH (School of Law)
- MSSA/MPH (Mandel School of Applied Social Science)
- DMD/MPH (School of Dental Medicine)
- MS Nutrition/MPH (Department of Nutrition)
- Integrated Graduate Studies Program

Generally, dual degree students complete both degrees by adding one year of study to the partner degree. For example, an MD student could add one year to the four-year MD Program to complete his/her MD/MPH dual degree in five years. In most cases, it will be assumed that dual degree students will adopt an area of concentration specific to their shared degree area. **Due to the changing nature of these programs, requirements may change. Students are responsible for working with advisors from each program to develop a plan of study that meets all requirements and credit hours. All individual planned programs of study are subject to approval by the respective graduate programs and the School of Graduate Studies.**

Dual degree students should have academic advisors from both the MPH Program and the partner program faculty. Advisors of dual degree students are encouraged to develop dialogues with their partner advisors and collaborate on students' programs of study. This dialogue should be accomplished by a minimum of one annual group meeting of both advisors with the student. It is the student's responsibility to arrange advising sessions. During the initial meeting, before the end of the student's first semester, a Planned Program of Study (PPOS) is developed. The PPOS can be revised later, also with the approval of both advisors. The PPOS should include (if relevant) a written description of how outside courses will benefit the student's public health education. Academic performance issues, or any other issues, are presented by the advisors to the MPH Management Team for final disposition. The MPH Management Team will adjudicate any difference in opinion between advisors.

The Director of the MPH Program, assisted by the program Administrative Director, is the coordinator of the dual degree programs and provides services for student support, including special events and publications dedicated to serving the needs of dual degree students and building their sense of scholarship and community as a group. The Office of the MPH Program Director provides dual degree students a destination for help and building identity. ***Applicants must apply to each program separately.***

Anthropology & Public Health (MA/MPH and PhD/MPH)

Students take courses in both the Anthropology Department and the MPH program, following a plan of study prepared in consultation with the advisers in each program. 9 credit hours (the equivalent of one full-time semester) are shared between the departments to reduce the time to achieve the joint degrees. Requirements for the MA/MPH, including the capstone experience, MPH practicum, and the Anthropology MA qualifying examination, can be completed in 3 years. Students continuing for a PhD in Anthropology must complete an additional 18 credit hours of courses and complete the PhD candidacy process prior to conducting their dissertation research. Students work with their dissertation adviser in the Department of Anthropology to develop and plan for completion of their dissertation.

Contact: Janet McGrath, PhD, Professor (Anthropology, Mather Memorial 211): 368-2287, janet.mcgrath@case.edu

Medicine & Public Health (MD/MPH)

Graduates of this 5-year, 42 credit hour master's degree program are qualified to work in local and state health departments, universities and colleges, hospitals, ambulatory medical centers, non-profit organizations and the insurance and pharmaceutical industries. Areas of concentration include health promotion and disease prevention, population health research, health policy and management, global health, and health informatics.

Contact: Please contact the MPH program to be assigned a MD/MPH Advisor

Nursing & Public Health (NP or MSN/MPH)

Application involves a dual submission process and applicants must be accepted into both the MSN and MPH programs. Individual program plans available upon admission to both programs.

Contact: Latina Brooks, PhD, CNP, Assistant Professor: 368-1196, lm3@case.edu

Bioethics & Public Health (MA/MPH)

The joint MA/MPH program can be completed in three years of full-time study to complete a minimum of 63 credit hours. Options will be available for part-time pursuit of the degree within five years, or for an accelerated plan completed in five semesters. Students will develop individual education plans (IEP) with their advisors and may customize their approach and pace through the program. Students will complete 24 credit hours from the MA in Bioethics and Medical Humanities program. Students will complete 39 credit hours from the MPH program. The 9 credit hour culminating experience is required of all public health students. The capstone must embody both degrees - public health and bioethics. Students must have preceptors from both program areas. Both programs will use MHPH 652 and BETH 417 to reach the total number of required credit hours for both degrees.

Contact: Aaron Goldenberg, PhD, MPH, Associate Professor (Bioethics, Tower Annex 200): 368-8729, aaron.goldenberg@case.edu

Business & Public Health (MBA/MPH)

The Weatherhead School of Management awards the MBA degree (60 credit hours) taken as a full time student, completed in two years. The School of Graduate Studies awards the MPH degree (42 credit hours) taken full-time over 2 years, not including summer. If a student were to pursue the two degrees MBA and MPH separately, they would need to complete 102 credit hours (60 credit hours— MBA and 42 credit hours – MPH) of coursework to earn each of the degrees. As dual-degree students, they will be required to complete only 93 credit hours of combined coursework to earn both degrees. Weatherhead School of Management and the School of Graduate Studies will transfer in 9 credit hours. The total reduction of credit requirements for both degrees moves from 102 to 93 credits. The anticipated length of time to complete the dual degree is three years. Students will finalize the curriculum of the MBA program in consultation with the MBA program manager and/or faculty advisor. The MPH Program has 18 credit hours of core coursework in addition to the 3 credit hours of concentration coursework. Students will also be required to complete 6 credit hours of elective coursework and 9 credit hours of culminating experience coursework towards the requirement of the program. Students will develop planned programs of study (PPOS) with their MPH advisors and may customize their approach and pace through the program. Students will select electives in the MPH program in consultation with MPH faculty advisors. MPH students in this dual degree will be in the Health Policy and Management concentration. If another concentration is added, additional classwork will be required.

Contact: Deborah Bibb, Executive Director of Admission (Peter B. Lewis Building, Suite 150): 368-6702, deborah.bibb@case.edu

Social Administration & Public Health (MSA/MPH; MSW/MPH)

There is a total of 18 credits that are shared. MSASS will recognize 12 credits from the MPH program and MPH will recognize 6 credits from the MSASS program. The total number of credits for a typical MSW/MPH dual degree student is 84. This breaks down to 48 MSASS (60-12 double counted) credits and 36 MPH credits (42-6 double counted). Students will be able to complete the joint program in 36 months. The Council on Social Work Education (CSWE) expects all Master of Social Work programs to require 60 credit hours; 15 of those hours are completed in a social work field placement internship. Students enrolled in the Master of Public Health are required to obtain 42 credits of approved public health coursework in accordance with the program's Council on Education for Public Health accreditation requirements. Thirty-three of these credits are courses (core, concentration courses and free electives) while nine credits are from experiential and practical experiences. Dual degree students will share a total of 9 credits for coursework. The MPH program will accept 6 credits of coursework as a replacement for the electives required for the MPH program. MSASS will accept 3 credits from the MPH program. Students will spend their first year in the MPH program/coursework followed by two years of social work coursework (depending on their specialty) as well as field placements and practicum/capstone placements. The Master of Social Work program has multiple variations. Credits required for the MSASS program range from 36 to 60 based on whether the student has advanced standing. Patterns of enrollment can be individualized for each student depending on specific areas of specialization. Regardless of the specialization, the shared credits will be MHP 655, 656, and 657, and 9 credits of shared coursework across both programs (3 for MSASS and 6 for MPH).

Contact: David B. Miller, PhD, MSW, MPH, Associate Professor: 368-8755, dbm5@case.edu

Dentistry & Public Health (DMD/MPH)

Combining dentistry and public health leads to the awarding of both degrees after 5 years of study. Students may enter the MPH program before their first year in the DMD program (preferred) or between years 2 and 3. It is recommended that students in the DMD/MPH program major in the Health Promotion & Disease Prevention (HPDP). Six credits from the DMD program will be accepted for the MPH program. For specific information on these credits and scheduling please contact your advisor.

Contact: Sena Narendran, BDS, MPH, Associate Professor of Community Dentistry (School of Dentistry, Room 216): 368-1131, sena.narendran@case.edu

Law & Public Health (JD/MPH)

The MPH degree adds one year of additional coursework to the JD degree, creating a four-year program. The law school requires 88 credit hours for the JD. The law school first year courses (30 credits) are required. In the student's second year in the law program, they must complete an upper-level research and writing course (LLEAP3), a 4-credit course in Constitutional Law, and a 3-credit course in Professional Responsibility. Before graduating, the students must also complete an upper-level writing requirement, four of eight offered general education courses, and 12 experiential education credits (including a 6-credit capstone project during their final year). All other credits are electives. The law school offers several health law courses that meet the MPH elective requirements. Law students enrolled in the dual JD/MPH degree program may earn up to 12 credits toward the JD in graduate level MPH courses with approval by the Associate Dean for Academic Affairs in advance of enrollment. No credit may be given for work done in such courses before the student completes the first year of law school. The JD/MPH students complete the full 42 credit hours of MPH courses.

Contact: Jessica Berg, JD, MPH, Co-Dean and Professor: 368-6363, jessica.berg@case.edu

Nutrition (MS/MPH)

The dual-degree program with the Department of and Nutrition includes a mixture of courses from nutrition, biochemistry and public health. The trained graduate could be employed in a wide variety of settings, including (but not limited to) local, state, national or global public policy, governmental public health, hospital outreach, community-based health non-profit organizations, research projects; or the Food and Drug Administration. dual MS/MPH program will take 36 of the 42 required MPH credits in the MPH program. This includes 18 credits for the Core classes, 9 credits for the concentration and 9 credits for the culminating experience. Students can apply six credits from Nutrition courses to cover the public health free electives. The Nutrition program consists of 30 credits to be chosen from the NTRN listings. For the dual degree program, students take 23 credits of NTRN coursework, plus Biochemistry 407 and/or 408, for a total of 27-31 credits. Nutrition will apply three credits from the MPH program to reach their 30-credit minimum requirement. The credit load is reduced from 72 credits if taken separately to 63 if completed as a dual degree.

Contact: Hope Barkoukis, PhD, RD, LD, Chair and Associate Professor, Department of Nutrition: 368-2441, hope.barkoukis@case.edu

Integrated Graduate Studies Program (BA/MPH)

The IGS program is not currently available to new applicants. Changes to the program may occur according to School of Graduate Studies and College of Arts and Sciences requirements.

The Integrated Graduate Studies Program (IGS) is intended for highly motivated undergraduate students who are candidates for the B.A. and whose objective is a degree at the graduate level. By more closely integrating undergraduate and graduate studies, qualified students may be admitted to graduate study for their senior year and pursue the simultaneous completion of requirements for both the master's and bachelor's degrees. The baccalaureate will normally be awarded upon completion of a year of graduate study and attainment of a total of 120 semester hours of credit. In order to be considered for BA/MPH (IGS), students need to have completed:

- All SAGES requirements except the SAGES Capstone, which can be completed after admission to the IGS/MPH program
- All Physical Education (PE) requirements
- 84 hours in Arts and Sciences
- 90 total hours (can be in progress but need to be completed before the start of the program)
- 75% of credits for major

Students need a total of 120 hours to graduate with the undergraduate degree.

If the student takes MPH coursework before being admitted to the BA/MPH (IGS) program, those courses cannot count towards the BA degree. Once the student is admitted into the IGS program, MPH coursework may count toward the total 120 credit hours needed for the undergraduate degree, but MPH courses may not be used to meet specific major requirements. (The MPH capstone may also be used as the SAGES capstone, if approved.) The GRE is not required for IGS applicants.

Contact: Wesley Schaub, Assistant Dean for Undergraduate Studies (Sears Library Building): 368-2928,
wws@case.edu

Culminating Experience

The **multi-semester Culminating Experience** is the centerpiece of the CWRU MPH Program. A Public Health Practicum and **multi-semester** Capstone project are required of all MPH students. This two-course sequence (9 credits total) places students in health-related settings to work on projects of mutual interest and benefit to the agency or organization and the student. The experience gives students the opportunity to apply the knowledge and skills they have acquired through their academic coursework to a problem involving the health of the community. Students learn to communicate with target groups in an effective manner, to order priorities for major projects according to definable criteria, to use computers for specific applications relevant to public health, to identify ethical, social, and cultural issues relating to public health policies, research and interventions, to identify the process by which decisions are made within the organization or agency, and to identify and coordinate the use of resources at the site.

The Public Health Practicum is an integral component of the MPH curriculum, allowing students to apply, develop, and refine their public health skills and knowledge in a supervised, community-based experience. To complete the Practicum, students register for three (3) credits of 'MPHP 650, Public Health Practicum', dedicating at least 120 hours to a substantial public health experience with a governmental agency or community organization which contributes to the public health system.

Capstone Projects are broadly oriented toward a problem involving the health of the community. The manner in which credits are allocated between semesters is flexible and is determined by the student and their advisor. **Capstone projects must be relevant to the student's chosen concentration.** Students are strongly encouraged to complete their Practicum and Capstone experience as a single culminating experience, with a single proposal that describes both the Practicum and Capstone project. The Capstone Essay of publishable quality is presented to peers and advisors during the biennial *Public Health Innovations Conference* in the semester in which they intend to graduate. Samples of Capstone Essays are available in the MPH Office. Students can also submit a manuscript in lieu of the traditional Capstone Essay. The Capstone Experience is supported by the "*Culminating Experience Guide*" publication. Students completing unrelated Practicum and Capstone are required to submit separate proposals for each experience. **Students are unequivocally discouraged from completing their Culminating Experience in a single semester.**

Public Health Practicum (MPHP 650) Requirements

- Exhibiting professionalism in all work situations (e.g., behavior, dress, oral and written communication, and ethics) as evaluated by the student's practicum preceptor
- A structured, individually arranged **Practicum learning agreement** with a community partner that describes the nature of the Practicum experience, including public health competencies addressed (or, with an integrated Practicum and Capstone, a single written proposal encompassing the entire project)
- Attendance at Community Health Research & Practice (CHRP) meetings
- Completion and documentation of 120 hours dedicated to the Practicum
- Preparation and presentation of a professional poster describing the practicum experience, to be presented at the *Public Health Innovations Conference* hosted by the MPH program near the end of each fall and spring semester
- At least two **portfolio products (deliverables)** that are useful to the host organization and that demonstrate attainment of the identified competencies. Portfolio deliverables can be in electronic or physical form as appropriate. The poster completed for the *Innovations* conference is **not** included as a portfolio product unless the student also presents the poster in another forum as a part of the project (e.g., at a regional conference as a representative of the student's host organization).
- Evaluation of the practicum site and preceptor (completed by the student) and an evaluation of the student and their portfolio products (completed by the preceptor)

Public Health Capstone (MPHP 652) Requirements

- Complete Capstone project proposal and accompanying forms
- Capstone progress report(s), if applicable
- Capstone competency evaluation forms (to be completed by the student and all members of the Capstone Committee)
- Capstone essay of publishable quality
- Capstone essay evaluation forms (to be completed by all Capstone Committee members)
- Oral presentation detailing the project and its findings given at the *Public Health Innovations Conference*
- Presentation evaluation forms (to be completed by all Capstone Committee members)

Possible Approaches to the Culminating Experience

These are only ideas for the Culminating Experience. Students are strongly encouraged to discuss other potential approaches with their Capstone Advisory Committee, the Practicum Preceptor, and the community organization. In all cases, students should combine multiple approaches for their Culminating Experience. The best approaches to Culminating Experiences, like public health, require engaging with the public!

Program Design

Design a health-related program that could be implemented at the partner site, including instructions, procedures, manuals, and materials. Alternatively, participate in the design of a new program initiated by the community organization.

Program Implementation

Participate in a substantive way towards the implementation of a program already planned at the community organization.

Data Analysis

Complete a substantial new analysis of existing data (e.g., dataset, survey, or claims database) on a health-related topic of interest to the community organization and report on the results. (Note: Data analysis, in isolation, is not sufficient for a Practicum Experience.)

Community Intervention

Design and implement a community intervention supported by the community organization.

Program Evaluation

Evaluate an existing program at the community organization to assess the effectiveness and outcomes of the program.

Health Policy Statement/Advocacy

Develop a health policy position paper related to the mission of the community organization and advocate for its approval. Alternatively, for the Capstone Project, a position paper may be written on a health topic of local, state, regional, national, or international importance.

Population Health Research

Research the determinants or distribution of a health problem identified by the community organization.

Community Assessment

Undertake in-depth analysis of the health characteristics of a defined population or community of interest to the community organization.

Public Health Services & Systems Research

Research the nature of access to health care, quality and cost of services, or evaluation of the provision and design of health services offered by the community organization.

Survey Research

Survey an identified population on a topic of mutual interest with the community organization

2022-2023 Community Partners

The 2022-2023 academic year saw MPH students conducting community-based work with both new and established community partners locally, regionally, nationally, and internationally. Many projects were conducted in a fully or partially remote environment, and it is important to recognize the hard work and dedication put forth by our students, faculty, and community partners to create meaningful and impactful work despite various COVID-related obstacles.

Topics and populations of interests included (but weren't limited to) health economics, LGBTQ+ health, opiates, obesity, adolescent health, epidemiology, access to care, program evaluation, environmental health, refugee health, bioethics, COVID-19, oral health, cancer disparities, mental health crisis, heat-related illness, and more.

Culminating Experience projects took many forms, which included (but weren't limited to) policy analysis, survey research, epidemiology, program implementation, secondary data analysis, quality improvement, and program evaluation.

2022- 2023 Community Partnership Sites

Acumen, LLC	Community Justice Action Fund	CWRU Kelvin Smith Library
AMOS Health & Hope	Community Legal Aid	CWRU Mary Ann Swetland Center for Environmental Health
Cancer Support Community Central Ohio	Connecticut Agricultural Experiment Station	CWRU Office of Interprofessional and Interdisciplinary Education and Research
Case Comprehensive Cancer Center	Cuyahoga County Medical Examiner's Office	CWRU Pandemic Response Study
Cleveland Clinic Bariatric and Metabolic Institute	CWRU Center for Global Health and Diseases	CWRU School of Nursing
Cleveland Clinic Children's Hospital	CWRU Department of Anthropology	Euclid High School
Cleveland Clinic Foundation	CWRU Department of Nutrition	FOYA Uganda
Cleveland Clinic Lerner Research Institute	CWRU Department of Population & Quantitative Health Sciences	Health Stream
Cleveland Department of Public Health	CWRU GIS Health and Hazards Lab	Healthwatch Hackney

MetroHealth Medical Center	Old Brooklyn Community Development Corporation	Richards Frankel Dentistry
MetroHealth Population Health Research Institute	Periods for Peace	Tesar Lab
Milton A. Kramer Law Clinic	Pfizer, Inc	The Medical University of South Carolina
Neighborhood Family Practice	Prevention Research Center for Healthy Neighborhoods	TMJ & Sleep Therapy Centre of Cleveland
Nourishing Beginnings	Publicis Health	United Way of Greater Cleveland
		University Hospitals Center for Child Health & Policy

2022-2023 Capstone Committee Members and Practicum Preceptors

Adam Perzynski	Ellen Rome	Kevin Makino	Rachel Pope
Alenda Phillips	Elliane Irani	Kirsten Eom	Rebecca Miller
Amber Jones	Emile Olivieri	Kristen Berg	Regina O'Rear
Amy Schmidt	Eric Kim	Kristina Knight	Rekha Srinivasan
Amy Teleron	Erika Trapl	Kristina Wolf	Rosanna Watowicz
Andrew Curtis	Farren Briggs	Laura Fernandez	Sana Loue
Andrew Morris	Fred Schumacher	Lee Hoffer	Sandra Bempah
Angela Flowers	Heidi Ballard	Licia Clowtis	Sara Lee
Arlene Dent	Holly Hartman	Lynn Singer	Sarah Koopman Gonzalez
Arnitta Holliman	Jacqueline Curtis	Manreet Bhullar	Sarah Polly
Ash Sehgal	Jean Frank	Marel Corredor-Hyland	Sarah Ronis
Audrey Kinsella	Jennifer Cullen	Margaret Frankel	Scott Frank
Briana McIntosh	Jennifer King	Marie Curry	Scott Sinick
Bridget Haas	Jesse Honsky	Maya Simek	Scott Williams
Carolina Palacios	Jessica Berg	Megan Holmes	Shelby McGhee
Catherine Osborn	Jessica Song	Megan Linske	Siran Koroukian
Christine Lafferty	Jin Kim-Mozeleski	Mendel Singer	Solomon Makgoeng
Colleen Croniger	Johnie Rose	Meredith Goodwin	Stephanie Deuley
Daniel Tisch	Kaitlyn Funk	Nilanjana Majumdar	Stephanie Pike Moore
Danny Shoag	Kanariya Yuseinova	Nora Nock	Susan Phillips
David Cavallo	Karen Flynn	Owusua Yamoah	Tyler Reimschisel
Diane Ross	Karen Mulloy	Patricia Tousel	Vinh Trinh
Elaine Borawski	Kate Nagel	Peter Zimmerman	Xiaojuan Li
Elizabeth Svoboda	Katie Matuska	Rachael Sommer	

Public Health Innovations Conference

The Culminating Experience is the centerpiece of the CWRU MPH Program. The experience gives students the opportunity to apply the knowledge and skills they have acquired through their academic coursework to a problem involving the health of the community. The *Public Health Innovations Conference* is an opportunity for graduating MPH students to showcase the results of their work. There will be two Innovations Conferences per academic year, one in the fall and one in the spring. These conferences typically occur in November and April. While the fall Innovations Conference will generally be a one-day event (due to the smaller number of students graduating at that time), the spring Innovations Conference often spans two days. Each Innovations Conference will feature a keynote speaker who will discuss a topic relevant and current to the field of public health. Everyone is welcome and invited to attend the Innovations Conferences, including CWRU faculty, staff, students, family and friends of presenting MPH students, public health practitioners, and other community members. Capstone Committee members are expected to attend the presentation in order to evaluate the capstone presentation for the student. **MPH student attendance is mandatory.** It should be noted that students graduating during the summer session will be expected to present their Capstone Project during the summer session to Committee members and are encouraged to present again at the next Innovations Conference. Presenting students will have the opportunity to practice their presentations in front of MPH faculty/staff/students during CHRP sessions in the weeks before the Innovations Conference. Students should plan on having a draft of their presentation done before this time and be prepared to attend this practice session.

There are some **important deadlines** around the Innovations Conference for graduating MPH students:

- **No later than four weeks prior to the Innovations Conference:** Presenting students should turn in completed drafts of their Capstone Essay to all Committee members for review and suggestions.
- **No later than two weeks prior to the Innovations Conference:** Capstone Committee members should provide feedback and suggestions for revisions to the student on the draft of the Capstone Essay.
- **On the day of the Innovations Conference:** Presenting students should turn in final copies of their Capstone Essay to all members of their Capstone Committee. Students should also provide all Committee members with both essay and presentation evaluation forms (available in the Culminating Experience Guide).
- **No later than the stated deadline:** Graduating students are responsible for turning in the following items to the MPH Office: electronic copy of their final Capstone Essay, electronic copy of their Capstone Presentation (e.g. PowerPoint slides), essay evaluation forms from all Committee members, and presentation evaluation forms from all Committee members. **Without these items, the MPH Office cannot certify a student to graduate.**

For more details on the Culminating Experience, please see the *Culminating Experience Guide* (available on the MPH program's website).

Important Dates (Academic Calendar)

The CWRU University Registrar keeps the official Academic Calendar on their website at <https://case.edu/registrar/calendar/>. Please note that each semester is listed with key dates (first day of classes, holidays, late registration fees, drop/add, etc.) for the next 5 years.

Additionally, students will want to familiarize themselves with the Dates + Deadlines page on the School of Graduate Studies website at <https://case.edu/gradstudies/current-students/dates-deadlines/>. Please note that each semester is listed with key dates (deadline to apply for graduation, deadline to submit all materials for graduation, awarding of degrees, etc.) listed for the upcoming semesters.

Academic Planning & Advising

The MPH staff and faculty make every effort to respond to student requests for support and provide academic advising tailored to each student's needs. The MPH program believes that advising is key to student success and satisfaction. In order to get the most out of the program, students should refer to the **MPH Advising Guide**. All new students are assigned an academic advisor to aid in planning their academic career at Case Western Reserve University. To ensure successful and timely completion of the MPH curriculum, students should select a concentration by the end of their first semester. This choice will inform course selections and the plan of study. Consult with your advisor to discuss academic progress, course selection and schedule of offerings, and appropriate number of credit hours to be taken. Students may change advisors at any time by notifying the MPH program. Advisors can approve course selection and authorize registration. Faculty advisors may or may not be on a student's Capstone committee, but they should be available for consistent academic advising, planning and support. MPH students may wish to consult with the MPH Office regarding additional potential advisors, depending on the student's major or area of interest.

The School of Graduate Studies limits all graduate students (including IGS) to a maximum of 17 credits without requesting a credit override. The MPH program will only grant registration for 18 credits including undergraduate coursework, if applicable. All requests for an increase to 18 credits must be approved by the MPH program through a credit overload petition process. Please complete the credit override form to request an override.

Career Planning & Advising

The MPH Program administration also routinely offers career advising, including resume review, letters of support, and networking. Notices of job opportunities are shared as they are received from university, community, state, national, and international sources. This information is shared with students and alumni via email. The MPH program shares competitive summer internship opportunities from each of the local health departments in Cuyahoga County, and from additional community sites of the students' choice to encourage student engagement in the community. Internship positions facilitate networking that may contribute to the development of Capstone projects. Several student internships have resulted in post-graduate employment. Students may contact the MPH Office for career planning assistance. MPH students have full access to the [School of Medicine's Career and Professional Development](#) office. The Career and Professional Development office offers individualized assistance and technologically advanced resources to enable students and alumni to develop lifelong career management skills, to obtain work experience, and to integrate academic and career

plans. The Center provides training in all phases of the job search, including self-assessment, resumes, correspondence, interviewing (including mock interviews), networking, etiquette, and access to online job postings.

Registration

The registration process for enrolled students should include the following steps:

- If you have not already done so, activate your CWRU network ID, and create your password. Your network ID is your passport to CWRU's networking and computing services (SIS, Webmail, Software Center, and more...). It is composed of your first, middle, and last initials followed by numbers (e.g. abc123). Go to: <https://its-services.case.edu/my-case-identity/activate/index.cgi>. You will be asked for a PIN (provided via email by the School of Graduate Studies) or your seven-digit student identification number.
- Meet with your advisor to get recommendations based on your progress, status and course availability for the semester in question.
- Select a concentration by the end of your first semester or nine credit hours of study. MPH students must inform the MPH Office of their chosen concentration, as this will affect their course selection. Near the end of each semester, the concentration declaration form will be sent out to students. Students will declare their concentration through this form.
- Consult with your advisor to discuss academic progress and course selection. After consultation, your advisor can indicate approval by releasing your advising hold in the Student Information System (SIS).
- Register for classes using the SIS.

Prior to the end of your second semester in the program, you may need to submit a Planned Program of Study (PPOS) to the Office of Graduate Studies using the SIS. Students are advised to refer to the calendar of important dates and deadlines available at the Graduate Studies office or website (gradstudies.case.edu). Any student who does not have an approved PPOS by the end of their second semester in the program will have a hold placed on their account by Graduate Studies. This hold will only be removed once an approved PPOS is in place.

Students will be furnished with registration reminders electronically via the MPH student listserv on a semester basis, including university and departmental advice. These reminders should not be ignored as they often contain new course information and important updates. Academic calendars with important deadlines are available on-line at the following website:

<https://case.edu/gradstudies/current-students/dates-deadlines> The Office of the Registrar encourages using the Internet for information dissemination and accessing forms and allows graduate students to register on-line.

The address for the searchable schedule of classes is: <https://case.edu/registrar/dates-deadlines/academic-calendar>.

Course Repeat Policy for Graduate Students

Graduate students may petition their department chair to repeat a maximum of two courses during their degree program in order to improve their performance. When a course is repeated, the first grade will remain visible on the transcript but will be removed from the calculation of the cumulative grade point average and the grade point average for the semester in which the course was first taken. The new grade will then be used for calculation of the cumulative grade point average and the grade point average for the semester in which it was earned, regardless of whether the new grade is higher or lower than the first grade. The student's transcript will show the

comment "Repeated: No credit awarded" directly below the original grade. However, if the first attempt of the course resulted in a passing grade, but the second attempt results in a failing grade, then the original grade will remain. Similarly, if a student withdraws from a course that is being repeated, the Course Repeat Option will not be applied and the original grade will stand. Course repetition may be exercised according to the following conditions:

1. The course repeat option can only be used on a course in which a C or lower was earned. Courses with a grading basis of P/NP are not eligible under this policy.
2. A student may not use the Pass/No Pass option on a course that is being repeated.
3. A student may only use the repeat option on the same course (name, number, credits).
4. Research based courses (for example, 601, 651, and 701) are exempt from this repeat policy. Thesis research course 651 and dissertation research course 701 grading policies can be found in this bulletin.
5. The course repeat option may not be exercised after a degree has been awarded.
6. A [**Course Repeat Request**](#) form must be signed by the student's advisor and department chair. The form must be submitted to the School of Graduate Studies for approval.
7. The tuition and associated fees for a repeated course may be the responsibility of the student.

Email Policy

All students are provided with a Case Western Reserve University email account. Email service for CWRU is provided through *Google Apps for Education*, a collaboration suite of services that includes a 25+ GB case.edu email account and access to dozens of other Google Apps including Google Sites, Google Docs and Google Talk (IM). Email can be read in clients such as Outlook, Thunderbird, and Mail for Mac.

IMPORTANT NOTICE: All correspondence for current students from the CWRU MPH Program will be sent to students' CWRU email addresses. The MPH Program cannot send this correspondence to personal email addresses. It is the student's responsibility to regularly check their CWRU email account. The MPH Program recommends checking your CWRU email daily.

University and Department Policies

Community of Scholars and Professionals

As a student in the Department of Population and Quantitative Health Sciences, you have joined a community of scholars and professionals. You will be expected to conduct yourself in a manner consistent with this position. While in our program, and in the future as a graduate of our program, you represent our institution, a leading medical school in an esteemed University. This professionalism should be reflected in your interactions (in person, email, text, phone) with faculty, staff, fellow students, guests of our department, collaborative and community partners, and others. Included in this expectation is respect for all people. Behavior that is not consistent with the level of professionalism expected of a scholar and professional may be addressed through University, department and/or program policy.

Communication Among Students, Staff, and Faculty

All students enrolled at Case Western Reserve University are given a Case Email address and Network ID. The general format for a CWRU email address is firstname.lastname@case.edu. Students also receive a Network ID, which generally consists of their first, middle, and last name initials followed by a number (ex: abc123@case.edu). This Network ID will give you access to your Case Webmail account, SIS, and any other University-related login systems that you have access to. If you use another email account, please ensure that you read both accounts regularly or that you forward the CWRU email to your regular email.

Students are responsible for reading the information and content of communications sent to their Case Email account at least once a day. Faculty, students, and staff often use the CWRU email system to communicate information about courses, seminars, events, etc., particularly when personal notification (e.g. during class) is not possible. You will be held accountable for missed information if you fail to check your email in a timely manner.

Statement on Professional Conduct

The Case Western Reserve University Master of Public Health is a graduate-level professional degree, focused on preparing students to become experts and leaders in the health of populations. The MPH program aims to provide students with an environment that is supportive and conducive to learning the essential competencies of public health. We hold our faculty and instructors to high standards to ensure that this learning environment is maintained. Students, too, have a responsibility to ensure that a supportive learning environment is maintained. In addition to the skills and competencies that you will gain in the process of earning your MPH degree, two important competencies apply to the classroom environment:

- Promote high standards of personal and organizational integrity, compassion, honesty, and respect for all people.
- Appreciate the importance of working collaboratively with diverse communities and constituencies (e.g. researchers, practitioners, agencies, and organizations).

The MPH program has granted the authority to faculty and instructors to issue grades that are reflective of these professionalism competencies. Reflective of the high standards of personal integrity, students are expected to behave in a respectful manner that values collaboration and interactive learning. Acting in a way that does not reflect personal integrity, compassion, honesty, and respect for all people can have a negative impact on your learning process and, ultimately, your grades at the discretion of the instructor.

Students are expected to use technology in the classroom in a manner that is consistent with the learning environment. In particular, students should refrain from using technology (including but not limited to social media) in the classroom that does not directly relate to the learning process. Use of these technologies for non-classroom purposes can significantly impede your learning process and be a distraction for other students. Faculty and instructors have the discretion to ban the use of technology in the classroom if it is detracting from the optimal learning environment that we strive to deliver. Use of technology in an inappropriate manner in or out of the classroom can have a negative impact on your learning process and, ultimately, your grades at the discretion of the instructor.

University Student Code of Conduct

Any member of the university community may notify the Office of Student Affairs of a violation of the University's Standards of Conduct (including, but not limited to, the policies listed in the preceding pages of this document). The matter will be evaluated by the vice president for student affairs or his/her designee to determine if further judicial action at the university level is warranted. Full details about the University Disciplinary Process can be found online (<https://students.case.edu/policy/conduct/doc/codeofconduct.pdf>).

Failure to Comply

Students shall cooperate with all University officials, instructional or administrative, at all times. Failure to comply includes, but is not limited to:

- Failure to follow the directions of University official, instructional or administrative, acting in performance of their duties
- Failure to respond to a request to see identification; or
- Failure to complete judicial sanctions.

Academic Policies & University Requirements

This section includes extractions from School of Graduate Studies Policies and Procedures, available from the School of Graduate Studies and online at <http://case.edu/gradstudies/media/caseedu/grad-studies/documents/SGS-Academic-Integrity-Policies-and-Rules.pdf>. All MPH students should become familiar with the [School of Graduate Studies Policies and Procedures](#) and consider a companion piece to this handbook.

Graduate study assumes a considerable maturity on the part of the student in planning and reaching his or her educational objectives. The effectiveness of the graduate program lies jointly with the individual student and the faculty adviser. The MPH Degree is defined by the University as a Plan B course work degree and does not require students to write a Master's thesis. Successful completion of the Capstone Experience, Essay, and Presentation satisfies the requirement for a Comprehensive Exam for the degree. Further details on requirements for the Master of Public Health degree are available beginning on page 20 of this document.

Student Records

The MPH Office maintains a file of the progress of each graduate student. A student may request, in writing, an opportunity to review the contents of their educational file. Certain materials are excluded from review as specified in the Family Educational Rights and Privacy Act of 1974 (FERPA). The FERPA contains several provisions that are important to students. Specific provisions are printed in the University's General Bulletin. Students may also obtain from the Office of the Provost a copy of the policy which the University has adopted to meet the requirements of FERPA.

Standards of Conduct

The following rules are designed to preserve freedom of expression and association on the CWRU campus and reaffirm the civil, personal, and property rights of the University and its members. University members who violate one or more of these rules will be subject to disciplinary action. Conduct which is subject to University disciplinary action includes:

- Interference with freedom of speech or movement, or intentional disruption or obstruction of teaching, research, administration, or other functions on university property
- Any actual or threatened physical harm or mental abuse of any person on University premises or at functions sponsored or supervised by the University
- Failure to comply with the directions of university officials, instructional or administrative, acting in performance of their duties
- Theft or vandalism of University property or that of a member of the university community or campus visitor
- All forms of dishonesty, including cheating; plagiarism; knowingly furnishing false information to the university; forgery; and the alteration or misuse of University documents, records, or instruments of identification
- Falsification, distortion, or misinterpretation of information before a hearing body
- Unauthorized carrying or possession on university premises of firearms or of any weapon with which injury, death, or destruction may be inflicted
- Violations of law on University premises or in connection with university functions

- Violation of published university rules and regulations

Students are encouraged to familiarize themselves with these policies by reviewing the [Graduate Studies Policies and Procedures](#). The following pages contain excerpts of critical policies contained in that document.

Statement on Ethics

Universities seek to preserve, disseminate, and advance knowledge. At Case Western Reserve University, as elsewhere, we recognize that to fulfill these purposes requires a norm of expected conduct shared by all in the University community, governed by truthfulness, openness to new ideas, and consideration for the individual rights of others, including the right to hold and express opinions different from our own.

The University's mission rests on the premise of intellectual honesty in the classroom, the laboratory, the office, and the solitary examination desk. Without a prevailing ethic of honor and integrity not only in scientific pursuits but also in all scholarly activity, the very search for knowledge is impaired. In these respects, each of us—especially but not exclusively faculty — must regard ourselves as mentors for others.

These principles we strive to uphold make it possible for the larger society to place trust in the degrees we confer, the research we produce, the scholarship we represent and disseminate, and the critical assessments we make of the performance of students and faculty, as well as judgments of staff and administrators. To safeguard the standards on which we all depend, each of us must, therefore, accept individual responsibility for our behavior and our work and refrain from taking credit for the work of others. The culture of a university also requires that the rights of all be protected, particularly by those entrusted with authority for judgment of the work of others.

The University being a human community is subject to human failings, ambiguities, and errors. It is, therefore, the responsibility of the bodies regulating the affairs of faculty, students, and staff to maintain processes for judging and resolving instances where these principles may have been violated. However, all such systems depend for their effectiveness, in turn, on the acceptance of common norms of conduct—the ties of trust which bind the university community together.

IRB Approval of all Research and Protection of Data

All research activities including those related to capstones, theses, dissertations, etc involving human subjects, even if involving only secondary data analysis, must have IRB approval or a documented IRB determination of exemption. Typically, the research advisor will be the PI of the IRB, but in any case the student must be involved in this process. If the work is part of a larger project that has already received clearance, the student should be added as key personnel to the IRB protocol and assurances should be made that any new research activities not previously approved are added to the IRB protocol (such as by IRB addendum) and receive IRB review and IRB approval. The IRB approval or exemption number must be provided to the MPH program before starting research activities and must be included in the Capstone document. The CWRU IRB Office can be contacted at

<https://case.edu/research/faculty-staff/compliance/institutional-review-board-cwru-irb>. All data must be securely maintained and privacy of participants protected. Students are required to adhere to the University's, School of Medicine's, and relevant IRB's data protection policies. Human subject data or study materials provided to, obtained from, or created by a student, may not be transmitted or shared with any other individuals (including another student) without explicit written permission from the study's principal investigator and/or the responsible investigator listed on the approved IRB protocol. The departmental Approval for all IRB proposals is through the Vice-Chair for Research.

Academic Integrity

Students should familiarize themselves with the standards for academic integrity set forth by the university, a full description of which is available on-line at: [School of Graduate Studies: Academic Integrity Policies](#). The University's research, scholarship, teaching, and community service are central to its mission. In order to achieve that mission, it is critical that the highest standards of academic integrity are articulated to all members of the University community: faculty, students, and staff. All members of the community have an expectation to interact in a professional manner in those endeavors which promote and facilitate the University's common mission. **Students are expected to uphold standards of academic integrity by taking reasonable precaution in the academic arena. Reasonable precaution involves implementing measures that reduce the opportunities for academic misconduct, but do not inhibit inquiry, create disruption or distraction in the testing environment, or create an atmosphere of mistrust.** Adherence to professional Codes of Ethical Conduct can and do play a central role in the matter.

Statement on Plagiarism

Unless specifically stated otherwise, **the faculty of any PQHS/MPHP/CRSP course expect and require original writing for all assignments given.** Submitting plagiarized work for an academic requirement is a violation of the academic integrity standards set forth by the University. Plagiarism is the representation of another's work or ideas as one's own; it includes the unacknowledged, word-for-word use and/or paraphrasing of another person's work, and/or the inappropriate unacknowledged use of another person's ideas. Submitting substantially the same work to satisfy requirements for one course that has been submitted in satisfaction of requirements for another course, without permission of the instructor of the course for which the work is being submitted, is also prohibited.

Artificial Intelligence (AI) Writing Policy

The Department of Population and Quantitative Health Sciences requires that students seek permission from their course instructors prior to using AI tools in completing coursework and exams. Unauthorized use of AI tools puts your academic integrity at risk. Please refer to the individual course syllabi for guidelines and consult current [CWRU policy](#) prior to using AI tools for coursework.

Policy of Non-Discrimination

Case Western Reserve University admits students of any race, religion, age, sex, color, disability, sexual orientation, gender identity or expression, and national or ethnic origin to all the rights and privileges, programs, and activities generally accorded or made

available to students at the university. It does not discriminate on the basis of race, religion, age, sex, color, disability, sexual orientation, gender identity or expression, or national or ethnic origin in administering its educational policies, admission policies, employment, promotion and compensation policies, scholarship and loan programs, and athletic or other university-administered programs.

Harassment Policy

Members of the University Community are expected to respect the rights of others by refraining from any inappropriate behaviors that may negatively impact a student's experience. Harassment includes but is not limited to:

- Conduct which intimidates, threatens, or endangers the health or safety of any person;
- Behavior that intentionally or negligently causes physical, financial, or emotional harm to any person;
- Behavior that is construed as a nuisance, including prank phone calls or abusing or harassing another user through electronic means.

Abuse Policy

Students are expected to respect the rights of students, staff and faculty members by refraining from any threatening or antagonistic behaviors. Abuse includes, but is not limited to:

- Actual or threatened physical or mental abuse of any person on University premises or at functions sponsored or supervised by the University;
- A singular situation involving an act of physical, verbal or mental abuse directed toward an individual or individuals;
- Repeated antagonistic and malevolent acts consisting of physical, verbal or mental abuse directed toward an individual or individuals;
- Repeated acts of an anti-social nature involving physical or mental abuse directed toward an individual, group or any other component of the University community.

Sexual Harassment Policy

It is the policy of Case Western Reserve University to provide a positive, supportive, discrimination-free educational and work environment. Sexual Harassment is unacceptable and unlawful conduct, which will not be tolerated. The purpose of this policy is to define sexual harassment and the procedures the university uses to investigate and take appropriate action on complaints of sexual harassment. This policy and the accompanying procedures shall serve as the only internal university forum of resolution and appeal of sexual harassment complaints.

This policy applies to all members of the university community including all students, faculty, staff, and other university officials, whether full or part-time or under temporary contract, and guest lecturers, volunteers, and visitors. Sexual harassment may involve the behavior

of a person(s) regardless of the person's gender identity or expression against a person(s) of the opposite or same gender or against a person who is transsexual or transgender. All members of the university community must adhere to the sexual harassment policy and report violations of the policy.

Sexual Assault Policy

Case Western Reserve University is a community dependent upon trust and respect for its constituent members: students, faculty, staff and those under temporary contract. Sexual assault is a violation of that trust and respect and will not be tolerated. Sexual assault is a serious crime that can occur to men and women, whether gay, straight, transgender or bisexual. The following definition of sexual assault is relevant to Case Western Reserve University policies and procedures. All students, faculty, and staff of the university are subject to this policy. An individual who violates this policy may also be subject to criminal prosecution and civil litigation. For legal definitions refer to the Ohio Revised Code at <http://codes.ohio.gov/orc/2907>.

Any non-consensual physical contact of a sexual nature, whether by an acquaintance or by a stranger, is a sexual assault. Physical resistance need not occur to fulfill the definition of sexual assault. Consent CAN NEVER be given by anyone under the age of sixteen. Sexual assault includes, but is not limited to the following:

- Rape
- Acquaintance rape (e.g. friend, classmate, peer, co-worker, partner, etc.)
- Incest
- Sexual assault with an object
- Forcible sodomy
- Forcible oral sex

Forcible fondling Consent: Consent is the equal approval, given freely, willingly, and knowingly of each participant to desired sexual involvement. Consent is an affirmative, conscious decision – indicated clearly by words or actions – to engage in mutually accepted sexual contact. A person forced to engage in sexual contact by force, threat of force, or coercion has not consented to contact. Lack of mutual consent is the crucial factor in any sexual assault. Consent CANNOT be given if a person's ability to resist or consent is substantially impaired because of a mental or physical condition or if there is a significant age or perceived power differential. Examples include, but are not limited to being:

- Unconscious
- Frightened
- Physically or psychologically pressured or forced,
- Intimidated
- Substantially impaired because of a psychological health condition
- Substantially impaired because of voluntary intoxication

- Substantially impaired because of the deceptive administering of any drug, intoxicant or controlled substance

Consensual Relationships

Case Western Reserve University is a community that values an environment of inclusion, trust, and respect as beneficial for the working and learning environment of all its constituents. Romantic or sexual relationships may occur in a University environment given the numbers of people on a University campus. All relationships must be consensual; but, even though the relationship is consensual, it can raise serious concerns about the validity of the consent, conflicts of interest, and preferential treatment.

For the complete policies and procedures for sexual assault, sexual harassment and consensual relations, students can visit the following link: <http://students.case.edu/policy/sexual/>

Smoking Policy

With the University's commitments to health-related research and teaching, protection of the health environment of students, employees, and guests is a major concern. Therefore, in July 2017, Case Western Reserve University became a smoke-free campus.

Alcohol Usage Policy

The University expects responsible behavior of students who choose to drink alcoholic beverages and requires an environment free of coercion for those who choose to abstain. Therefore, students must adhere to guidelines provided by the University for responsible and legal consumption of alcoholic beverages. Individual students must also accept responsibility for their own behavior and should demonstrate a concern for the safety and well-being of others in the University community.

The University will conform to all state and local laws controlling the sale and use of alcoholic beverages. It is illegal to sell, provide, or serve beer, wine or liquor to anyone who is under the legal age (21). Servers of alcohol and sponsors of social events must be aware of and comply with all state statutes and with Case policies and procedures. The Alcohol Policy can be found in its entirety at: [Student Affairs: Alcohol Policies](#)

Drug Use Policy

The University's policy on drugs, which governs the students in all schools and colleges, states that:

The use or possession of drugs* is illegal except when prescribed by a physician, and the University cannot protect students from prosecution for violation of federal or state laws. Case Western Reserve University cannot condone the illegal possession, consumption, provision, or sale of drugs. The University, however, has a strong obligation to make readily available to student's full information about the use and effects of all drugs, and even more important, to make available sources of counseling to those who are using or have used drugs. Not only the students but also the faculty and all others who are in any position to advise students should be made aware of the need for counseling.

*Drugs to which these statements and rules apply are currently defined as including:

- Opiates (such as morphine, heroin, codeine, opium, demerol, and paregoric)
- Cocaine
- Marijuana
- Hallucinogens (such as LSD, DMT, Mescaline, peyote, and psilocybin)
- Barbiturates (such as nembutal and seconal)
- Tranquilizers (such as librium, phenothiazines, and reserpine)
- Amphetamines (such as benzedrine, methedrine, and dexadrine)
- Gamma-hydroxybutyrate (GHB or ecstasy)

All students, faculty, and administrators should be informed that the discovery that a student is using drugs is not, automatically, cause for disciplinary action, but is a compelling reason to urge that student to seek counseling or to refer the student to the proper source of counseling. Student Affairs and other administrative officials do not consider themselves law enforcement officers but advisers of students in the best interest of the students.

The following rules have been adopted by the University:

- Illegal possession or consumption of drugs is an offense which may be subject to penalty proportional to the seriousness and extent of the offense.
- The illegal provision or merchandising of drugs will ordinarily result in expulsion.
- Possession and/or use of drug paraphernalia, including but not limited to vapes, hookas, pipes and bonges, on University premises is prohibited and will be confiscated, even if the paraphernalia is not being used for consumption of drugs.

Students are reminded that a drug prescribed for one person may be harmful to another and are warned not to offer or provide their own medication to others.

Disciplinary Policy

Students must adhere to all University, School of Graduate Studies, School of Medicine, Department, and Program policies in regards to academic matters and interpersonal behavior, as well as meet the expectations that come with being a part of a community of scholars and professionals. This includes respect for all people. Behaviors that interfere with another's well- being or ability to perform their responsibilities, learning, or professional development will be considered especially egregious.

Violations may be subject to disciplinary action on the part of the program or department. The nature of the violation, its severity, and history of prior violations will all be considered in any formal disciplinary action taken. Students will receive a letter from the department detailing the reasons for the disciplinary action and any required steps they must complete to return to good standing in

the program. The Dean of the School of Graduate Studies reserves the right to issue discipline even in cases where the Program and Department have chosen not too. Disciplinary actions may include:

Warning:

Students who are in violation of program, department, and/or university policies might be issued a warning from either their Program Director or in certain circumstances the Vice Chair for Education. Students are not guaranteed to receive a warning prior to other disciplinary action being taken by the program, department, school, and/or the University. It is up to the discretion of program, department, and/or university leadership as to whether or not a student will receive a warning for an infraction or immediately be disciplined with academic probation, suspension, or separation.

If a student receives a warning, they will receive no more than one warning from the program, department, school, or University. Any subsequent violations will result in academic probation, suspension, or separation. Students who are issued a warning will receive a letter from the department detailing the reasons for the warning.

Academic Probation:

Students who are in violation of program, department, school, and/or university policies will be placed on academic probation by either their Program Director, the PQHS Vice Chair for Education, or by the School of Graduate Studies. Students placed on academic probation will receive a letter from the program/department or School of Graduate Studies detailing the reasons for the probation and a course of action (including deadlines) for the student to be removed from academic probation. If a student fails to meet the conditions and/or deadlines established in the academic probation letter, they can be suspended or separated from the program, department, and/or the University. Any student failing to maintain good standing in their program will automatically be placed on academic probation. Qualifying for an academic probation while on academic probation or after resolving a previous academic probation can result in separation from the program and University.

Suspension from the Program and University:

In certain cases, a suspension will be implemented only for serious breaches of conduct that threaten to compromise the standards of a department or create concern for the safety and welfare of others. In the event of a suspension the student will be entitled to an appeal through the grievance procedure of the Graduate School. Students will receive a letter from their Program Director and Vice Chair of Education explaining the reasons for and terms of their suspension.

Separation from Program and University:

Students who have failed to meet the conditions established in previous disciplinary actions, qualified for a second academic probation, OR who have committed a serious breach of conduct that threatens the welfare/safety of others or the integrity of the program are subject to separation from the program and university. In the event of such suspension the student will be entitled to an appeal through the grievance procedure of the Graduate School. Students will receive a letter from their Program Director and Vice Chair of Education explaining the reasons for and terms of their dismissal from the program and University.

Students who are separated from a PQHS program are not automatically eligible for reapplication. Separated students must submit a formal petition to the program seeking permission to reapply to the program. All separated students granted permission to reapply will be considered as a part of the normal application process.

Reviews of violations will be made under the direction of the program director. All disciplinary decisions will be certified by the Vice Chair for Education. In certain circumstances, the review of violations may be overseen by the Vice Chair for Education instead of the program director.

Examples of behaviors that may result in disciplinary action from the Department:

- Engaging in dishonest behavior: Academic integrity is expected in all PQHS programs. Cheating in any form is unacceptable and in violation. This includes:
 - Plagiarism- to avoid plagiarizing, one must give credit whenever one uses: - another person's idea, opinion, or theory - any facts, statistics, graphs, drawings – any pieces of information – that are not common knowledge. - quotations of another person's actual spoken or written words; or a paraphrase of another person's spoken or written words.
 - Copying or helping another student during an assignment/exam.
 - Obtaining examination questions prior to the test.
- Being under the influence of alcohol or chemical substances on campus or at an off campus assignment.
- Any form of unprofessional behavior such as the use of profane or vulgar language on campus or at an off campus assignment, hostility, harassment, stalking, unwanted attention, insubordination, demonstration of uncooperative or negative attitude toward faculty, instructors, clients, or fellow students.
- Violation of University, School of Graduate Studies, Department or Program policies.
- Violation of directives from the University (e.g. Office of Student Conduct, Title IX), School of Graduate Studies, Department or Program.
- Engaging in unethical or unwelcoming behavior while on or during off campus assignment

- Interfering with an effective learning environment for fellow students, staff, and faculty.
- Behaviors that interfere with the experiences of other students, faculty, staff, community partners, affiliates or external sites that serve as locations for MPH experiences (e.g. practicum, seminar, workshops).

Maintenance of Good Standing

To remain in good standing within the MPH program, students must satisfy the following conditions:

- Complete all Program, Department and School of Graduate Studies procedural requirements and requests by specified deadlines.
- Register each fall and spring semester unless on an official leave of absence that has been approved by the School of Graduate Studies.
- Receive a grade no lower than a “C” in any of the required core, concentration, or elective courses. If illness or other circumstances intervene, the student must notify the course instructor and advisor as soon as possible.
- Satisfy all program deadlines and time limits as outlined earlier in this handbook.
- Remove Incomplete (I) grades by the date specified by the instructor OR no later than the 11th week of class in the semester following the one in which the Incomplete grade was received. Students who have successfully petitioned for an extension must complete terms of removing the incomplete by the extension deadline instead.
- Failure of a conditionally or provisionally admitted student to satisfy the conditions or provisions stated in the letter of acceptance by the end of the first academic year (2 semesters) or after 18 credits of coursework.
- Failure to achieve a quality-point average of 2.75 or higher at the completion of 12 semester hours or 2 semesters of graduate study.
- Failure to achieve a quality-point average of 3.00 or higher at the completion of 21 semester hours or 4 semesters of graduate study.
- Complete degree requirements within the time frame allowed by the School of Graduate Studies. MS and MPH students have 5 years to complete their degrees before needing to petition for an extension.
- Students are expected to check their CWRU email daily and will be held responsible both for the information conveyed and for responding promptly and appropriately to all CWRU communication, whether it comes from faculty, instructors, staff, students, or officials of the School of Medicine, School of Graduate Studies, or other University officials

Students who fail to remain in good standing should expect to be placed on academic probation. Students on academic probation have 1 semester, unless otherwise stipulated in the probation letter, to return to good standing or risk being removed from the program.

In addition to disciplinary actions based on academic standards, on recommendation of the student's department or school, the Dean of Graduate Studies can suspend or separate a student from the University for failure to maintain appropriate standards of conduct and integrity. Such a suspension or separation will be implemented only for serious breaches of conduct that threaten to compromise the standards of a department or create concern for the safety and welfare of others. In the event of such suspension or separation, the student will be entitled to an appeal through the grievance procedure of the Graduate School.

Grading

See the University General Bulletin for a list of valid grades for the School of Graduate Studies and their appropriate use in assigning grades to graduate students. The only grades that can be changed after they have been assigned by the instructor are Incompletes (I). All others will remain permanently on the student's academic record. Additional work cannot be done to change an existing grade to a higher grade. There are some grading schemes in the School of Graduate Studies that have important policy implications. They are:

Incomplete (I)

The grade of Incomplete is a temporary grade permitted by the School of Graduate Studies for instructors to assign to students who have failed to complete a small evaluative portion of course requirements due to extenuating circumstances. Incompletes are issued as a result of a petition process initiated by the student. A petition for incomplete must be approved by both the course instructor and the program director (Details on what is required in a petition can be found below). Approval of these requests are at the discretion of the course instructor, pending written approval of the Program Director, and may be denied for many reasons including logistics.

Incomplete grades will only be issued for letter graded and Pass/No Pass courses for extenuating circumstances, and only when a student fails to complete a small segment of the course. The goal of receiving an incomplete is to allow students dealing with exceptional circumstances additional time to complete course requirements. Incompletes are not available to students who do not have a passing grade at the time of the incomplete petition (B or higher in core courses, or B or higher in required concentration courses or C or higher in elective courses). An incomplete will not be granted to students looking to raise an existing grade, redo an assessment, or to make-up prior work.

Petition Process:

Any request to receive an incomplete must follow a specific set of steps. The request must include a complete list of uncompleted course requirements, reasons for not completing course requirements, and a proposed timeline to finish these requirements. All incomplete request must begin by the student submitting a completed **Incomplete Petition Form** to the course instructor for consideration. Instructors will review the request and will discuss the details of the petition with the student. During this meeting, the instructor will inform the student of any changes they require in order to approve of the petition. After meeting, if the student agrees to the instructor's modifications to the petition, they will submit a revised petitioned form to the student's program for review.

Decisions to permit an incomplete are made by the MPH Program Director in consultation with course instructors and department leadership. Any incomplete that is being considered by an instructor must first be presented by the instructor to the program's Administrative Director. The Administrative Director will then take the petition to the Program Director for consideration and may be presented in a closed session of the MPH Management Team. The parameters for the incomplete that will be discussed including the following:

- Appropriateness of Incomplete Request
- Appropriate planning on the part of the student
- Content of incomplete
- Timeframe of incomplete
- Equity
- Amount of classwork remaining
- Current grade
- Prior requests and/or receipt of incompletes in other CWRU courses
- Feasibility of activity and assessment beyond the scheduled course
- Availability of instructor beyond the scheduled course semester
- Logistics of evaluating the work beyond the scheduled course
- Professionalism reflecting the professional graduate degree program and field

After the incomplete request is reviewed, the MPH program will issue a letter (via email) to the student and the instructor about the determination of whether the incomplete has been granted or not. If granted, the letter will dictate the requirements for the incomplete. If the request for an incomplete is denied, the student has the right to petition the MPH program to appeal the decision and to reconsider. The student has one week from the date on the letter to appeal the decision. The student will be expected to be available in a timely manner to meet with the Program Director in order to state why the incomplete should be reconsidered and granted. A decision will be made following the student's presentation. A letter will be issued from the program stating the final determination from the program.

Restrictions:

All Incomplete requests and decisions must adhere to School of Graduate Studies policies and are subject to School of Graduate Studies' approval.

Students may not sit in the same course in a later semester to complete the work required for the original course.

All work for the incomplete grade must be completed, returned as specified in the approved incomplete petition, and the change of grade recorded in the Office of the University Registrar, by the date specified by the approved student's petition form.

- Incompletes not resolved by the instructor's deadline or the 11th week of the session following the session in which the Incomplete was received (whichever comes first) will result in an Unresolved Incomplete and will be reflected in the final transcript as a grade of "F". This failing grade will remain permanently on the student's academic record. Please Note: An unresolved incomplete is recorded in the transcript as a failing grade even if the student's grade in absence of the work designated for an incomplete would have otherwise resulted in a passing grade.
- If the student cannot complete the work for the Incomplete by the specified deadline, he or she must petition for an extension which must be endorsed by the Instructor and explain the reasons why the work has not been completed, and include a new date for completion. If an extension is approved, students will be allowed only the one extension of no more than one additional semester to complete the work for an Incomplete grade.

Incompletes are not part of disability accommodations. All Disability Accommodations must be formally and exclusively granted through the Division of student Affairs' Office of Disability Resources (not through the instructor). Students with Disability Accommodations are required to complete all course requirements within the semester. Unless explicitly stated by official Office of Disability Resources documentation and within a departmentally approved Incomplete, disability accommodations do not extend beyond the end of the semester.

Students who are not able to complete courses as initially planned during a semester should review the course withdrawal policy and timelines. Course withdrawals typically occur early in the semester, must follow timelines set by the University Registrar, may have financial implications, may appear on the permanent transcript, and will not be available following University withdrawal deadlines.

Pass/No Pass (P/NP)

Some graduate courses are graded on a pass or no pass basis, and students need to be aware of the regulations governing letter graded and pass/no pass credits. Of the minimum credit hours required beyond the bachelor's degree to complete coursework requirements, at least 12 credits must be letter graded for the Master's degree, and at least 24 credits must be letter graded for the Ph.D. degree. Letter graded courses should be the courses most central to the student's plan of study. Additional credit hours of letter graded coursework may be specified by departmental policy.

Satisfactory/Unsatisfactory (S/U)

Grades of Satisfactory (S) and Unsatisfactory (U) are to be used exclusively for three courses: 651 thesis research, 701 dissertation research, and 702 dissertation fellowship.

Changing a Course Grade

Students have an obligation to check their course grades promptly after the end of the semester. On rare occasions, a student may feel the letter grade (A-F) assigned was incorrect or unfair. In such a case, the student needs to contact the instructor immediately. If the instructor feels the student is justified, the instructor may request a grade change using the online grade change function in SIS and submit it for approval.

If a student needs to have a course grade changed, the instructor can change the grade online up to 1 year from the end of the semester. After that time period has elapsed, the instructor will need to complete the online grade change request in SIS and submit it for approval.

Repeating a Course

Graduate students may petition the Graduate Program Director to repeat a maximum of two courses during their degree program to improve their performance. A **Course Repeat Request form** must be completed and submitted to the Graduate Program Director.

Waiving or Replacing a Course

To request being waived out of a required course, or to replace it, students may petition to the Graduate Program Director and the Vice Chair for Education. The petition must provide documentation of the relevant courses completed, with a grade of "B" or higher, a detailed description of the course(s), the syllabus, and textbook used in the completed course(s). The petition should be approved by the academic advisor and submitted to the Graduate Program Director and Vice Chair for Education for approval.

The Graduate Program Director will approach the instructor of the course(s) in question with the petition. The instructor will then evaluate the student's petition, and can either approve or disapprove of the course being waived, or may instead approve replacing the required course with another, advanced course in the same area. In this last case, the replacement course needs to be specified with a plan for when to take it. Special attention must be paid to prerequisites for this replacement course and when it is offered.

For Core courses, it is important that students realize they will be held fully responsible for all content on the general exam, based on how it is taught here, even if the student has the course waived based on coursework elsewhere.

Students can petition to replace a maximum of 2 core courses.

Transfer of Credit

Transfer of credit from another university toward master's and doctoral degree requirements is awarded for appropriate course work (not applied to another degree program) taken prior to admission. Transfer of credit must be requested in the student's first academic year and must be appropriate for the student's planned program of study. For master's candidates, transferred credit is limited to six semester hours of graduate-level courses, and no credit for master's thesis may be transferred from another university. No transfer of credit will be awarded towards the PhD degree except by petition, and no credit for the doctoral dissertation may be transferred from another university.

Students who wish to receive credit for courses taken outside the University once they are enrolled must petition for approval before taking the classes. All transfer of credit requires approval from the student's advisor, the departmental chair or graduate committee, the department for which credit is being granted, and the School of Graduate Studies. Such courses must have been taken within five years of first matriculation at Case Western Reserve University and passed with grades of B or better. The [Transfer of Credit Form](#) can be found on the School of Graduate Studies website.

Transfer of credit does not include the transfer of grades and therefore cannot be used to fulfill GPA or percentage of graded coursework policies.

Internal Transfer of Credit

Students of exceptional ability in the undergraduate programs of Case Western Reserve University who have the approval of the Office of Undergraduate Studies and the School of Graduate Studies may apply to receive credit for graduate courses completed in excess of the undergraduate degree requirements.

Graduate students who internally transfer to another degree program may seek approval to transfer coursework from the original degree program by a petition on a [Transfer of Department Form](#).

Course Audit

Each attendee and participant in a PQHS/MPHP/CRSP course must be registered for the course. The Department of Population and Quantitative Health Sciences does not permit the auditing of courses, either officially or unofficially, without the written approval of the

instructor and the Vice Chair for Education for PQHS. Students looking to take a course outside the requirements of their degree program are encouraged to make use of the Fellowship Course option available through the School of Graduate Studies.

Fellowship Course

The purpose of the Fellowship Course [policy](#) is to allow students pursuing graduate degrees to take courses beyond their degree requirements without additional financial burden to the student and little or no cost to the University. Such courses, referred to as “fellowship” courses, can broaden the educational experience of graduate students by allowing them to pursue studies according to their own intellectual needs.

- A student pursuing a graduate degree shall be charged tuition at the standard hourly rate for all of the credit hours which are intended to count toward the degree. In the fall and spring semesters for which students are registered for a minimum number (as determined by the school) of credits that will be applied toward the degree, fellowship courses will not incur a tuition charge. In the summer semester, there is no minimum registration required to qualify for the fellowship tuition policy.
- In order to enroll in a fellowship course, the student must be in good standing, if applicable, have a PPOS on file (check with your department) with the School of Graduate Studies office, meet course prerequisites, and obtain consent of the instructor. A [Fellowship Course Application](#) form must be submitted to the School of Graduate Studies; the form must be signed by the instructor, their advisor, and the School of Graduate Studies. Up to eight fellowship courses may be permitted in aggregate (total).
- Thesis research (651 and 701) and similar courses cannot be taken as fellowship courses and prior rules for 701 (dissertation research) are not changed by this policy.
- Fellowship courses cannot be audited. The grade that a student receives in the course will not count toward the degree program GPA or total hours.
- Fellowship courses cannot be used toward a degree program at Case Western Reserve University.
- [Fellowship Course Application](#) forms must be submitted before the end of the [Add/Drop period](#).
- Notwithstanding any of the foregoing provisions and policies, the rules, regulations, and terms of tuition and credit enrollments for each school shall remain in full force and effect.
- Registration for fellowship courses within the College of Arts and Sciences is not permitted in the summer term.

Grievance Procedure

Any student who has a potential grievance should consult for resolution, in order, the academic advisor, the chair of their dissertation committee (if formed), Graduate Program Director (who will refer the case to the Internal Advisory Committee or an appointed grievance committee), the Vice Chair for Education, the Department Chair, the Associate Dean of Graduate Education (School of Medicine) and the Dean of Graduate Studies. If the grievance is with the advisor the student should consult his/her dissertation

committee chair first, then follow the order as described above. There is no need to go further than the stage at which the issue is resolved.

The School of Graduate Studies has a general policy to assure that all students enrolled for graduate credit at Case Western Reserve University have adequate access to faculty and administrative consideration of their grievances concerning academic issues. A three-step procedure has been established for graduate students to present complaints about academic actions they feel are unfair. These policies are detailed by the **Division of Student Affairs**.

Communication Among Students, Faculty, and Staff

All students enrolled at Case Western Reserve University are given a Case Email address and Network ID. The general format for a CWRU email address is firstname.lastname@case.edu. Students also receive a Network ID, which generally consists of their first, middle, and last name initials followed by a number (ex: abc123@case.edu). This Network ID will give you access to your Case Webmail account, SIS, and any other University-related login systems that you have access to. If you use another email account, please ensure that you read both accounts regularly or that you forward the CWRU email to your regular email.

Students are responsible for reading the information and content of communications sent to their Case Email account at least once a day. Faculty, students, and staff often use the CWRU email system to communicate information about courses, seminars, events, etc., particularly when personal notification (e.g. during class) is not possible. You will be held accountable for missed information if you fail to check your email in a timely manner.

Time Limitation

All the requirements for the Master's degree must be completed within five consecutive calendar years after matriculation as a graduate student, including any leaves of absence. Any graduate student who fails to complete the requirements within the five-year limit for his or her degree program will be subject to separation from further study unless granted an extension by the Dean of Graduate Studies with the recommendation of the faculty adviser or advisory committee and approval by the department chair.

Leave of Absence

Students undertaking graduate work are expected to pursue their studies according to a systematic plan each year whether registered for full or part-time study. Occasionally a student finds it necessary to interrupt his or her studies before completion of the graduate program. A leave of absence is not to be requested unless the circumstances are such that the student cannot continue graduate study. Under such circumstances the student must request in writing a leave of absence for a period not to exceed two consecutive regular academic semesters. In exceptional circumstances, the leave can be extended for another two semesters. However, the maximum amount of leave permitted per graduate program is four semesters. The reason for the leave must be stated clearly, and the request must be submitted to the Dean of Graduate Studies with the written endorsement of the student's academic department. A leave of absence does not extend the maximum time permitted for the completion of degree requirements, and a leave cannot be taken while students are on extension of the five-year limit. At the expiration of the leave the student must resume

registration unless formally granted an extension of the leave. Retroactive leaves are not permitted. A student who fails to obtain a leave of absence, or who fails to register following an official leave, must petition the Dean of Graduate Studies for reinstatement in order to resume work as a student in good standing at the university. A student who is granted a maternity or paternity leave of absence related to infant care, as well as those who must fulfill military duty obligations can petition to extend the five-year time limit associated with completion of the degree. The length of the extension may not exceed two years. International students must check with the Office of International Student Services before petitioning for a leave of absence, as such a leave can affect their visa status.

Withdrawal

Students must maintain continuous registration throughout their degree programs unless granted an official leave of absence. Students who fail to register for any academic term will be automatically withdrawn from their programs. Students who are withdrawn from their programs must petition for reinstatement in order to continue graduate study.

Transfer of Credit

Transfer of credit from another university toward Master's and Doctoral degree requirements is awarded for appropriate coursework (not applied to another degree program) taken prior to admission. Transfer of credit must be requested in the student's first academic year and must be appropriate for the student's Planned Program of Study. For Master's candidates, transferred credit is limited to six semester hours of graduate-level courses, and no credit for Master's thesis may be transferred from another university. All transfer of credit requires approval from the student's advisor, the departmental chair or graduate committee, and the Dean of Graduate Studies. Such courses must have been taken within five years of first matriculation at CWRU and passed with grades of B or better. Seniors of exceptional ability in the undergraduate programs of Case Western Reserve University who have the approval of the Dean of Undergraduate Studies and the Dean of Graduate Studies may apply to receive credit for graduate courses completed in excess of the undergraduate degree requirements.

Graduation

A candidate for a degree awarded by the School of Graduate Studies must make an application for the degree to the Office of Graduate Studies by the deadline established for that semester, which is approximately two months before the commencement date at which the degree is expected to be awarded. The candidate must meet all the deadlines for completion of degree requirements set forth in the calendar. All candidates must be registered and in good standing during the semester in which the degree is awarded. Full payment of tuition, fees and fines is a prerequisite to the award of a degree. A complete and accurate PPOS must be on record in SIS.

Delayed Graduation

A doctoral or master's thesis applicant who meets all deadlines for commencement in one semester except for the deadline for submission to the Office of Graduate Studies of approved copies of the thesis or dissertation may request use of the "grace" period in order to graduate in the next commencement. Any student utilizing the delayed graduation option must notify the Office of Graduate

Studies in writing of the intention to do so. Permission to use the grace period will be granted only once. Such a student will be permitted a one-month period from the date of commencement for which application has been made for the purpose of making revisions to the defended thesis or dissertation in accordance with the recommendations of the defense committee, in order to submit the required approved copies to the Office of Graduate Studies. A student who meets the delayed graduation deadline will be awarded the degree in the next commencement without the need to be registered or to pay a special fee. If a student fails to meet this deadline, he or she will be required to register for the appropriate thesis or dissertation credit hours in the next semester and to reapply that semester as a candidate for graduation. Upon written request to the Office of Graduate Studies, a master's non-thesis (Plan B) applicant may use the grace period only relative to the scheduling of the required Comprehensive Examination or Completion and Submission of the final project.

Tuition

Graduate Students registered will be charged tuition according to the schedule for 2021-2022. Up-to-date tuition information can be found at <https://case.edu/studentaccounts/tuition-fees/graduateprofessional-tuition-fees/school-of-graduate-studies>.

Students enrolled in undergraduate courses for the summer semester will be charged at a rate which is one half of the previous semester's per credit hour charge. Registration in the fall or spring semester for more than a total of 17 graduate credit hour requires special permission of the Dean of Graduate Studies. Such permission is also necessary for summer session registration in excess of 6 graduate credit hours. Refer to Student Accounts Receivable Website for more info:

<http://www.case.edu/finadmin/controller/bursar/tuition.htm>.

Important information on paying your tuition can be found at the Controller's Office - Student Accounts Receivable website:

<http://www.case.edu/finadmin/controller/>. This website details payment plan options using the E-Z Pay system, information on where to send/how to make tuition payments, as well as information on tuition rates. **A student who completely withdraws from a fall or spring semester will be responsible for paying a percentage of the tuition charge. The percentage charged is based on the number of weeks that classes have been in session at the time of withdrawal.**

All financial obligations to the University must be discharged before a student can graduate and obtain a degree. A student will not be considered to have registered in the University until all tuition and fees have been paid in full or deferred in accordance with the deferred payment plan. Checks and money orders should be made payable to Case Western Reserve University and should show the name and student ID number of the student for whom payment is made.

Memorandum of Assistance

The Memo of Assistance form is required of all graduate and professional students applying for financial aid. Unlike most other forms, it is not completed by the student. Instead, it is completed by the graduate department for the program in which the student is enrolled. A graduate department representative completes the form and forwards it directly to the Office of University Financial Aid, certifying the following information:

- Details of the degree and program
- Exact number of credit hours and tuition fees charged for the academic year

- Type and amount (if any) of graduate financial assistance being received by the student through the department in question

This form is required of all graduate and professional students applying for aid at CWRU, even if said student is not receiving any financial assistance from his or her department.

MPH students must contact the Administrative Director, Tara Hannum, with their student ID number and the amount of credit hours per semester that the student intends to take. It is the student's responsibility to contact the Administrative Director with this information.

Financial Responsibility Agreement

All incoming students or students seeking a new degree program are required to complete the **Student Financial Responsibility Agreement** prior to registration. This is a one-time requirement and covers current and future registrations at the university. For questions regarding completing the agreement or the contents of the agreement, please contact (216)368-2226 or **studentaccounts@case.edu** for assistance.

- Log into SIS at case.edu/sis
- If this is your first time logging into SIS, you may need to first complete the Confidentiality Agreement and the Student Contact Information Update process.
- Click the **"Tasks"** tile in the Student Home and then the **"To Do List"** link.
- Select the **"Financial Responsibility Agreement"** item.
- Carefully read the agreement.
- Select the checkbox next to **"I have read this agreement"** and then click the **Save** button.
- Finally, click the **Next** button in the upper right and then **Finish**.

Living Expenses

The Office of Financial Aid has information about **living expenses** and the cost of living in Cleveland.

Financial Aid

Applying for Financial Aid at Case Western Reserve University is a three-step process:

- Complete the **Free Application for Federal Student Aid (FAFSA)** available online at <http://www.fafsa.ed.gov/>.
- Complete the **CWRU Financial Aid Form** available online at <http://financialaid.case.edu/>
- Arrange to have a Memorandum of Assistance (MOA) sent to the Office of University Financial Aid from the MPH program.

All students are encouraged to complete the Free Application for Federal Student Aid (FAFSA). Information from this form and the Case Western Reserve University Financial Aid application will be used to determine the student's financial need, and the amount of loan for which they are eligible. The majority of students receive enough loans to cover the estimated cost of tuition and expenses.

There are two basic types of federal loans: subsidized and unsubsidized. Both types of loan repayments do not begin until a student's enrollment falls below half-time or six months after graduating, whichever comes first. Students may begin repayments earlier if they choose. Subsidized loans do not accrue interest until after you graduate or fall below half-time enrollment. Unsubsidized loans begin accruing interest immediately, although it does not need to be paid until repayments begin.

Medical Insurance Requirement

The University requires all registered students are required to have medical insurance that is comparable to the Case Western Reserve University Student Medical Plan. Students are charged each semester for the Student Medical Plan unless they have comparable insurance coverage. Insurance coverage must meet the following criteria in order to be deemed comparable:

- Covers conditions in Northeast Ohio or where enrolled in Case Western Reserve classes.
- Offers medical benefits of at least \$50,000, per accident or illness.
- Does not contain any clause that limits coverage on pre-existing conditions.
- Mental health and substance abuse must be covered as any other illness or injury. This includes both in-patient and out-patient treatment.
- Repatriation and medical evacuation amounts meet U.S. State Department requirements.

Students who have medical insurance coverage that is comparable to the Student Medical Plan may waive the coverage through SIS (<http://www.case.edu/sis>) during course registration. Audits will be conducted to ensure that students who waive the Student Medical Plan are providing full and accurate information. If coverage cannot be verified or is determined to be inadequate, students will be contacted and enrolled into the Student Medical Plan.

Student Wellness Fee

A wellness fee will be applied to your SIS bill each semester for use of 121 Fitness Center: <http://onetoone.case.edu/>. Opt-out instructions can be found on page 18-19 in the Student Financial Guide: <http://www.case.edu/finadmin/controller/bursar/student.financial.guide.pdf>. Please note that Veale Center will still be free to use with your Case ID card: http://athletics.case.edu/facilities/veale_center

RTA Fee

Graduates Students can enjoy free access on any bus or train operated by the Greater Cleveland Regional Transit Authority if their school has opted to participate in the program. The program, known as **U-Pass**, short for "Universal Pass," enables students to ride the RTA anywhere, at any time. A \$65 activity fee is automatically billed each semester on their bursar account. Utilization of the U-Pass program is not limited to only University-related activities.

MPH Specific Program Policies Correspondence

The MPH program uses email in order to correspond with students. It is the responsibility of the student to check their email and respond to program requests in a timely fashion. Students must set up their case.edu email.

Study/Travel Abroad Policy

All students are responsible for following all university policies and are encouraged to contact the Center for International Affairs before traveling abroad for research, education, or other activities. Per the guidelines of the CWRU Center for International Affairs, IGS students are classified as undergraduate students for the purposes of study abroad experiences. All undergraduate *and* graduate students must register with the Center for International Affairs Office of Education Abroad (see instructions below). Students may have travel abroad denied or restricted based on current U.S. Department of State Travel Advisories. If a student travels to a country or region which the Office of Education Abroad has identified as restricted, the student may not receive the credits associated with to the study abroad experience. *(Restricted regions typically include those for which Level 4 Travel Advisories have been issued by the U.S. Department of State. Level 3 Travel Advisories may also be subject to restriction. Check with the Office of Education Abroad before traveling if you are unsure of your destination status.)*

As these policies can change, each student s responsible for checking with the Center for International Affairs before traveling abroad for research, education, or other activities. The MPH program requires all undergraduate *and* graduate students register with the Office of Education Abroad. Please review the Center for International Affairs [Pre-departure orientation packet](#).

Students that are going to study abroad must complete these steps:

- Email studyabroad@case.edu and ask for the registration forms for study abroad
- The registration forms will be sent by email from the Center of International Affairs to be completed by the student
- Confirm that the student status is “committed” (typically takes 24 hours)
- Students must notify the MPH program Administrative Director or Director of Community-Based Education of their study abroad confirmation

Financial Support for Capstone Projects

The MPH program recognizes that the Capstone Experience may entail expenses for the student (e.g., survey instruments, materials, etc.). The MPH program provides financial support, on a competitive basis, for student capstone projects up to \$250 per student. Recognizing that international projects entail greater expense, Global Health capstones that include international travel are allotted up to \$500. Full details about financial assistance for the Capstone Experience can be obtained from the MPH Office.

Research Incentives Policy

Any research incentives must be approved by the Case Western Reserve University's Institutional Review Board (IRB). The MPH program does not keep gift cards on hand. If students are using gift cards as incentives for educational or research projects, i.e. capstone projects, students must submit a request to the MPH program for the gift cards. This request is submitted through a form to be approved by the MPH Director of Community- Based Education and then submitted to the Administrative Director for budgetary purposes. The MPH program strongly encourages the use of electronic gift cards such as Amazon.

Process for Gift Card Procurement

- Students submit a Gift Card request form indicating the purpose for the cards.
- The Director of Community-Based Education will request the gift cards by notifying the Department Assistant.
- The amount requested will be documented by the Administrative Director.
- Gift cards will be purchased by the Department Assistant.
- Gift cards are secured in the MPH office by the Director of Community- Based Education.
- Once the Gift cards are available, the Director of Community- Based Education will notify the student.

All incentives and monetary devices must be accounted for by the student to prevent theft or misuse.

Maintenance of Grade Point Average

A minimum cumulative grade point average of 3.0 is required for the award of the Master's degree. Students with a GPA less than 2.75 will be placed on academic probation per Graduate Studies. Additionally, students who fail to maintain the minimum G.P.A. must meet with the MPH Program Director to develop a remediation plan. In these situations, failure to meet with the MPH Program Director to develop the remediation plan or failing to abide by the remediation plan may result in separation from the MPH program.

Additional Academic Requirements

In addition to the above requirements, the MPH Program also requires that **all MPH students achieve a grade of C or higher in all coursework**. Any student who receives less than a C in a course will need to retake the course or petition the program to take another course in its place. In either option, the student must receive a C or higher to have the course count towards their Planned Program of Study. Also, any student with more than two un-remediated Incompletes on their academic transcript may be placed on academic probation.

A course is anything registered for regardless of format (lecture, seminar, internship, practicum, independent study) and number of credits (even a 0 credit course).

Program Required Courses: This includes any course that is specifically designated to meet a program-wide requirement, i.e. all students in the program have to take these specific courses. This includes courses used as substitutes or alternatives for specified program required courses (e.g. all students must take course A or B, then A and B are both considered program required courses). All other courses are described below (“Other Courses”).

Other Courses: This includes Concentration-specific and elective courses. These courses are not required of all students in the program, even if they are required for a subset of students. However, any course substituting for a specific program-wide required course will be considered a “Program Required Course”. This policy does not apply to fellowship courses.

Course Grades and Good Academic Standing

First violations of the grading standards (low or failing grades) will result in a formal warning or academic probation. The table below shows what actions are taken depending on the type of course and grade received. In some cases, a warning is mandatory but may also be probation-eligible. In other cases, probation is mandatory. In some cases, the course must be retaken. If the student has a previous violation of any kind in the PQHS department (e.g. course grade, GPA, ethics) or has 2 or more violations of any kind (low course grades, ethical violations or other violations as stated in this handbook) in the same semester, penalties will likely be more severe with the possibility of separation from the program. In all cases, if the grade is “D”, “F”, “No Pass”, or “U”, academic probation is mandatory and the course cannot be used for the degree.

<u>Course Type</u>	<u>Course Grade</u>	
	C	D, F, No Pass, U
Program Required Courses	W, PE	PM, Retake or Substitute
Other Courses		
PQHS/CRSP/MPHP courses: <i>MS or MPH Program</i>	GS	PM, Retake or Substitute
PQHS/CRSP/MPHP courses: <i>PhD Program</i>	W, PE	PM, Retake or Substitute
Courses based outside PQHS	GS	PM, Retake or Substitute

GS = Good Academic Standing

W=Warning mandatory

PE=Academic Probation Eligible

PM=Probation mandatory

Retake or Substitute= Course doesn't count for degree. May need to be retaken to fulfill program or concentration/track requirements, or substituted (e.g. elective course).

Probation Eligible – Rubric For Decision

When a student has committed a violation which is “probation eligible” (a “C” in certain courses, as listed above):

- In isolation, a first “C” grade will typically result in a warning to the student (that does not go to Graduate Studies) stating that a “C” is more serious in graduate school than in undergraduate school, and state the rules and consequences of further “C” or worse grades, and the minimum GPA to avoid probation and be able to graduate.
- However, the student might be placed on academic probation based on a combination of the “C” grade and other factors relating to the student’s past and current performance or behavior (e.g. prior or concurrent poor grades, ethical breach, lack of professionalism, failure to engage promptly or appropriately with the program).

Attendance Policy

Students are required to attend classes regularly. Each instructor is free to determine the extent to which absences affect the final grades of students but should make the policy regarding attendance known at the start of the course. Students unable to attend classes because of illness should notify their instructors and make the appropriate arrangements directly with the instructor. Any student who is unable to attend classes or participate in any examination, study, or work requirement on a particular day because of his or her **religious beliefs** is excused from any such activity. The student will be given the opportunity to make up the examination or work that is missed, provided that the make-up work does not create any unreasonable burden upon the University. When possible, students should give notice to instructors early in the semester about missing class because of a religious observance.

Student Awards

The MPH Program values and recognizes student achievement through a variety of awards given throughout the year. The awards are given in a public presentation and usually include a certificate and a gift card. The available awards are summarized below:

- **The Scott Frank Student of the Year Award:** Given annually to the student who best represents the Master of Public Health as a scholar, a citizen of the program and a member of the Department of Population and Quantitative Health Sciences.
- **The Spirit of the MPH Award:** The Spirit of the MPH Award is presented to a student entering the second year of the program in recognition of their contribution to the intellectual, social and emotional well-being of the program as illustrated by involvement in discussions, personal initiative relating to the health of the community, and their role in facilitating the development of positive relationships within the program.
- **Excellence in Public Health- Dual Degree Student:** Given annually to the dual degree student who excels at building bridges between their two degree programs and serves as a resource for the fellow students in both programs, while achieving high academic success.
- **Excellence in Public Health- IGS Student:** Given annually to the IGS degree student who excels at building bridges between their two degree programs and serves as a resource for the fellow students in both programs, while achieving high academic success.
- **Excellence in Public Health Award:** Given annually to a student whose sole program of study is public health, who demonstrates a high level of scholarship, and who has great potential for future contribution to the development of the field of public health.
- **Outstanding Population Health Research Award:** Given annually to the student who exemplifies outstanding work in the Population Health Research concentration.
- **Outstanding Global Health Award:** Given annually to the student who exemplifies outstanding work in the Global Health concentration.
- **Outstanding Health Policy & Management Award:** Given annually to the student who exemplifies outstanding work in the Health Policy & Management concentration.
- **Outstanding Health Promotion/Disease Prevention Award:** Given annually to the student who exemplifies outstanding work in the Health Promotion/Disease Prevention concentration.
- **Outstanding Health Informatics Award:** Given annually to the student who exemplifies outstanding work in the Health Informatics concentration.
- **Award for Tenacity & Diligence:** Given to a graduating student who prevailed at completing degree requirements despite interruptions and other professional demands, usually after an unusually long run within the program.

In addition to the Student Awards administered by the MPH program, students may be considered for the following awards administered by the School of Graduate Studies:

School of Graduate Studies Student Awards

- **Graduate Student Appreciation Award** - In recognition of graduate students who make a difference on campus and/or in our Cleveland community.
- **Lenore A. Kola Graduate Student Community Service Award** - In recognition of community service activities (internal and external) that have an impact on the university committee. (Awarded to student that is a current active member of the Graduate Student Senate or a student organization recognized by the Graduate Student Senate.) Award amount: \$1,000.
- **Ruth Barber Moon Award** - To graduate students who demonstrate academic promise, leadership ability and financial need. Award amount will vary depending on the annual allocation and the number of awardees.

Student Feedback & Grievance Procedure

The MPH program faculty and staff maintain an open-door policy in which students may express their concerns or complaints. Students may “drop in” during office hours or express their concerns during a scheduled advising session. Concerns raised by students through this mechanism may be addressed immediately, addressed after being brought to the attention to the entire Management Team. Recognizing that students may not be comfortable raising their concerns to a faculty/staff member, the MPH program has established a number of other mechanisms for students to express their concerns:

- Students may bring their concern to one of the student representatives, who then brings the concern to the attention of the Management Team. The role of student representative is described at fall orientation and in emails throughout the year.
- At the conclusion of each semester, the Student Representatives host a “Student Feedback Session” to allow students to voice their feedback and concerns about courses, the Management Team, and the MPH program in general. To promote a comfortable environment in which to provide feedback, no MPH faculty/staff are present at these sessions. Transcripts of the feedback session, purged of identifying information, are provided to the Management Team by the student representatives. These sessions are publicized with flyers that are placed throughout the department and via emails.
- Also at the conclusion of each semester, students are asked to complete online course evaluations, which are administered and analyzed by the Department of Population and Quantitative Health Sciences. The online course evaluations are announced during class and via emails sent to students enrolled in each course.
- Prior to graduation, students are required to complete an anonymous exit survey, describing any successes and concerns that they have had while in the program. Information about the exit survey is sent via to all students that have applied for graduation. While the exit survey is anonymous, students must acknowledge that they have completed the survey by sending an email to a designated member of the MPH program staff.
- Graduating students are also afforded the opportunity to schedule an exit interview with a member of Management Team, in which they can express any successes and concerns that they have had during the program. The opportunity to schedule an exit interview is publicized via emails sent to all graduating students.
- The program also surveys alumni annually, offering the opportunity for alumni to reflect on the MPH program in light of their professional experiences. Details about the annual alumni survey are sent out via the alumni listserv.

In the event that students do not feel their concern has been satisfactorily resolved through one of the above mechanisms, concerns can also be addressed through the formal grievance policy of the School of Graduate Studies. It is the responsibility of the School of Graduate Studies to assure that all students enrolled for graduate credit at Case Western Reserve University have adequate access to faculty and administrative consideration of their grievances concerning academic issues. A three-step procedure has been established for graduate students to present complaints about academic actions they feel are unfair:

- Students with complaints should first discuss their grievances with the person against whom the complaint is directed.
- In those instances in which this discussion does not resolve a grievance to the student's satisfaction, a complaint should be presented in writing to the department chairperson.
- In the event that a decision still appears unfair to the student, the student may bring the matter to the attention of the dean of graduate studies. The dean may ask the student to put the complaint in writing. The dean will then discuss the case with the student and the department chair to evaluate the particulars and to make a ruling on it. As the situation warrants, the dean may appoint a Grievance Committee to recommend what action should be taken. In this event the Committee will be composed of two faculty members selected from the Committee on Graduate Studies of the Faculty Senate and two graduate students selected either from the Executive Committee of the Graduate Student Senate or from the student members of the Committee on Graduate Studies.
- The dean of graduate studies has the responsibility for the final decision, and the ruling from the Graduate Studies Office will be considered final and binding on the persons involved in the grievance. Additional information about the grievance procedure can be obtained from the School of Graduate Studies.

Financial Support for Conference Attendees

The MPH program and the School of Graduate Studies considers attendance at international, national, state, and local conferences an integral part of the professional development process. As such, the MPH program and School of Graduate Studies offer financial assistance to students attending these conferences. Students who are presenting at the conference are given priority for the following funding opportunities:

- MPH Program Support - Awarded on a case-by-case basis and depending on available funds, up to \$500 per student, per academic career for domestic projects and up to \$1,000.00 for international work. Students should contact the MPH program directly about these awards.
- Graduate Student Travel Award - Awarded on a case-by-case basis, the maximum contribution from the School of Graduate Studies is \$500 for travel within the United States and \$1,000 for travel outside of the United States in support of conference-related expenses such as registration, lodging, meals, and transportation. Students should contact the School of Graduate Studies for further details on the Graduate Student Travel Award. Additional information is also available online at: <https://case.edu/gradstudies/current-students/fellowships-and-awards>.
- Verhosek Fund ("V" Fund) - Awarded on a case-by-case basis, up to \$200 per student. Applicant must be a presenter at a conference to be eligible. The "V" Fund is administered by the Graduate Student Senate. <https://case.edu/gradstudies/current-students/fellowships-and-awards>

MPH Program Student Resources

MPH Student Representatives

Each year, the student body elects three representatives from their peers to function in leadership and governance roles in the program organization. Students may be nominated by faculty, staff, or their fellow students and must be in good standing with the MPH program. In all other regards, the election process is entirely student-run. Student representatives are valuable members of the Management Team and Curriculum Committee and serve as liaisons with the student body. In addition to their role on the Management Team and Curriculum Committee, student representatives plan student feedback sessions each semester, which supplement the online course evaluations, and social events for the student body. The role of student representative is unpaid; however, the MPH program provides a budget from which the representatives can plan events.

Community Health Research & Practice

The purpose of the Community Health Research and Practice (CHRP) seminar is to bring together Case Western Reserve University students, faculty, staff, and the broader public health community in order to support and enhance the professional development of all involved. CHRP sessions occur weekly on Tuesdays, 12-1pm, throughout each academic semester. All students enrolled in MPHP 650 – Public Health Practicum and MPHP 652 – Public Health Capstone are expected to participate in CHRP throughout the completion of their projects.

APHA & OPHA Membership

The MPH program encourages engagement with the [American Public Health Association \(APHA\)](#) and the [Ohio Public Health Association \(OPHA\)](#).

Departmental/MPH Space

- Coffee Lounge (W-G71) - (directly across from the MPH Office) - small meeting area with seating that can accommodate about 4 people
- Computer Lab (W-G63) - computer space for 6 people
- Dingle Cafe (W-G67) – Dedicated student space. Conference table, lounge, lockers, refrigerator and microwave available to students.

Additional Campus Resources

School of Graduate Studies

A main goal of the School of Graduate Studies is to assist students in their efforts to succeed from application to graduation. The School of Graduate Studies serves as a warehouse for internships, fellowships, and funding to support research efforts of graduate students. Funding support for research development, implementation, and travel is made available broadly for students enrolled in programs contained within the school (including the Master of Public Health program). Based on the unique nature of the MPH program, with multiple dual degree programs, respective students are also eligible for research awards from the non-MPH in which they are also enrolled. Full information about the School of Graduate can be found on their website: gradstudies.case.edu.

Office of Student Affairs, 110 Adelbert Hall, 368-2020

The Office of Student Affairs provides programs, facilities, and services that extend and enhance the student experience at Case. Office members work to collaborate actively with students, faculty, and staff to develop programs and services that enhance the quality of life at the university and foster a just and humane campus. Staff members also encourage students to develop ethically, intellectually, socially, and physically. Students learn to act responsibly at the campus level, while embracing leadership and involvement on and off campus. Crisis intervention is an important function of the Vice President for Student Affairs as well as staff members. Students who have personal or family problems are urged to contact the Student Affairs staff and communicate their needs or concerns. Their goal is to listen, intervene if appropriate, or refer the student to other resources. **Students' concerns remain confidential.** Full details about the Office of Student Affairs can be found on their website: studentaffairs.case.edu.

International Student Services, 143 Tomlinson Building, 368-2517

International Student Services provides a smooth transition for international students who attend Case Western Reserve University. The office serves as a liaison with the U.S. Immigration and Naturalization Service, the U.S. Department of State, foreign embassies, educational consular offices, the International Institute of Education, and Fulbright-Hays grant offices. Full details about International Student Services can be found on their website: studentaffairs.case.edu/international.

University Counseling Services, 201 Sears Library Building, 368-5872

University Counseling Services offers wellness programs, psychiatric services, and prevention and recovery service programs. Psychologists, psychiatrists, social workers, counselors and doctoral-level counseling trainees are all part of a student's support network. Clinics on healthy sleep, meditation, anxiety and stress management also are available on a regular basis. **There is no fee for services provided by University Counseling Services.** Full details about University Counseling Services can be found on their website: studentaffairs.case.edu/counseling.

University Health Service, 2145 Adelbert Road, 368-2450.

University Health Service (part of University Health and Counseling Services) provides healthcare for students on an emergency and non-emergency basis. The office provides support from physicians, nurses, psychiatrists and social workers. It also offers specialty clinics for skin, dermatology, allergies, and women's health, and coordinates the Student Medical Plan with Aetna Student Health. UHS is also the primary campus contact for the student insurance program, the Student Medical Plan. (Refer to page 36 of this document for details about the University's health insurance requirement for students.) Full details about UHS can be found on their website: studentaffairs.case.edu/health.

Educational Services for Students, 470 Sears Library Building, 368-5230

Educational Services for Students (ESS) offers resources to enhance the academic experience at Case. Services include the Peer Tutoring and Supplemental Instruction (SI) programs, Disability Resources, Graduate Teaching Assistant (TA) training, and individual consultation for academic success. Students with disabilities are encouraged to contact ESS, to ensure the resources necessary to fully participate in their chosen programs and activities. Full details about ESS can be found on their website: studentaffairs.case.edu/education.

University Libraries

The CWRU libraries are an integrated system comprised of the Kelvin Smith Library, the Judge Ben C. Green Law Library, the Mandel School of Applied Social Science's Lillian F. & Milford J. Harris Library, the Astronomy Library, and the Kulas Music Library. All libraries support the faculty, students and staff of the undergraduate, graduate and professional schools, and are open to the public for in-house use of most materials. Combined, the university collections number more than 2.75 million volumes.

The Master of Public Health Program is most directly served by the Allen Memorial Medical Library, housed in an architecturally significant neo-classical building on the corner of Euclid and Adelbert Avenues. Along with clinical books and journals, the Allen contains The Dittrick Medical History Center and its collection of rare books, archives, medical artifacts, and books on the history of medicine. The CHSL combined collections total over 430,000 volumes including electronics and collectibles, with print and electronic journal subscriptions numbering in excess of 60,000, electronic books numbering over 60,000, and print books numbering over 118,500. Any faculty, staff or student may request new journals which, within budget considerations, are ordered in the fall to begin a subscription for the coming year. Special requests are addressed throughout the year. The Cleveland Health Sciences Library serves as a resource library in the Greater Midwest Region of the National Network of Libraries of Medicine. CHSL also participates in OhioLINK, OHIONET, and OCLC.

Access Services, 18 Crawford Hall, 368-CARD (2273)

Access Services is the office responsible for issuing Case ID Cards and managing their various functions, including granting access to facilities such as buildings and parking lots. Access Services also distributes Greater Cleveland RTA bus and rapid train passes each semester, available to graduate students at a cost of \$75 per semester. Full details about Access Services can be found on their website: www.case.edu/finadmin/security/access/access.htm.

Note: As an active Case graduate student, your ID card will provide access to the following default areas with specific hours determined by the department or school in which the area is controlled: Carlton Basketball Court, Carlton Road Tennis Courts, Glennan 312, Glennan 317A, Juniper Basketball Court, Kelvin Smith Library, Mather Memorial G Restroom, Nord 415 Computer Lab, Medical School Library, Nord Hall Quad Side, North Residential Village Garage doors & elevators, Olin Perimeter, Thwing, Veale Center, and White Perimeter. Your ID card will also provide 24-hour access to the School of Medicine. For new students, access to the School of Medicine will begin after the start of classes.

Office of Financial Aid, 417A Yost Hall, 368-4530

Investing in a Case Western Reserve University education is investing in you. We realize that tuition, fees, and other expenses make it difficult for many students (and their families) to finance the cost of attending a college or university without some form of financial assistance. The Office of Financial Aid operates a sophisticated program of financial aid and scholarship opportunities to assist students and to ease the financial burden that a college education may represent. Full details about the Office of Financial Aid can be found on their website: finaid.case.edu.

Lesbian, Gay, Bisexual, and Transgender Center, Suite 179, Tinkham Veale University Center, 368-LGBT(5428)

The Lesbian, Gay, Bisexual, and Transgender (LGBT) Center at Case Western Reserve University provides a long-awaited home for members of the LGBT community and their allies. It also serves as a source of information and insight for those who have lesbian, gay, bisexual or transgender children or loved ones. Finally, it is also a place that welcomes alumni and prospective students, faculty and staff. The LGBT Center provides a lounge, kitchenette, office, and study and meeting space. It has been designed to offer areas that encourage informal gatherings as well as more structured events. In addition, the Center provides places where people can seek both information and support. Full details about the LGBT Center can be found on their website: www.case.edu/lgbt.

Flora Stone Mather Center for Women, Room 248, Tinkham Veale University Center, 368-0985

The mission of the Flora Stone Mather Center for Women at Case Western Reserve University is to support and empower women through education, advocacy and leadership. The Flora Stone Mather Center for Women serves as a resource to all women at the university by offering a variety of initiatives focused on leadership development and recognition, gender equity in Science, Technology, Engineering and Mathematics (STEM) fields, and women's health. Additionally, the Project on Men and Gender (PMG) features annual programs and workshops that explore masculinity, men's violence, gender stereotypes, and healthy relationships in the interest of reducing violence against women. Full details about the Flora Stone Mather Center for Women can be found on their website: www.case.edu/provost/centerforwomen/.

Writing Resource Center, 104 Bellflower Hall, 368-3798

The Writing Resource Center (WRC) at Case Western Reserve University provides supplemental, discipline-specific writing instruction to students of all levels at the university. WRC writing consultants work one-on-one with students on a wide variety of projects. The WRC encourage visits from students at any stage of the writing process, from brainstorming and drafting, to revising

and organizing, to sharpening expression. While the WRC also works with students on issues of mechanics and grammar, they are not a proofreading service. WRC consultants work collaboratively with students to assist them in becoming better writers. During fall and spring semesters, WRC hours range from 8 a.m. to 5 p.m., Monday through Friday. Students may schedule appointments at any of the WRC locations and online through the online scheduling system at <http://rich37.com/case/>. Online tutoring is also available. Services available to graduate students include:

- Individual Consultations. Graduate students can receive writing assistance on term papers and longer projects such as theses and dissertations. While we encourage graduate writers to take advantage of our services, we ask that they bring portions of longer papers in manageable sections, and come prepared to each session with a specific set of concerns.
- Facilitating Thesis and Dissertation Writing Groups. Occasionally, the WRC receives requests from thesis and dissertation writers whose needs extend beyond our services. We are happy to organize on-campus thesis and dissertation writing groups upon request.
- Referral Services. The WRC is able to refer graduate writers to professional proofreading or typing services.

For more information, visit www.case.edu/writing/writingcenter.html.

Office of Inclusion, Diversity and Equal Opportunity, 315 Adelbert Hall, 368-8877

Be it race, ethnicity, religion, political persuasion, sexual orientation or gender identity, all Case Western Reserve University students—current and future, undergraduate as well as graduate and professional—are celebrated and supported through the Office of Inclusion, Diversity and Equal Opportunity and its extensive network of campus programs, partnerships, groups and global influences. The mission of the office of inclusion, diversity and equal opportunity is to provide support and guidance and to promote equitable and fair treatment in employment, education and other aspects of campus life. the office serves as a resource to the university in the interpretation, understanding and application of federal and state equal opportunity and affirmative action laws and regulations.

Ultimately, the office supports the university's mission by providing strategic leadership in the development of policies, procedures and programs that will help foster diversity, inclusiveness and a welcoming environment for faculty, staff, students and others.

The Office of Inclusion, Diversity and Equal Opportunity at Case Western Reserve University also gives awards to members of the university community in recognition of significant contributions toward enhancing the university's commitment to diversity through inclusive thinking, mindful learning and transformative dialogue.

These awards recognize and encourage such contributions that may include promoting respect, building community, establishing effective cross-cultural initiatives and advocating equity and inclusion within the university community.

For more information about the Office of Inclusion, Diversity and Equal Opportunity visit their website at www.case.edu/diversity/index.html.

Office of Multicultural Affairs, 450 Sears Building, 368-2904

The Office of Multicultural Affairs (OMA) encourages, supports and facilitates the success of all Case students by providing opportunities for diverse interaction and cultural education that occurs outside of the classroom environment.

Building a "Sense of Community"

Case Western Reserve University is a truly diverse, multicultural campus, and the Office of Multicultural Affairs embraces all Case students, faculty and staff.

We Value Diversity

Diversity is a reality created by unique individuals and groups from a broad spectrum of demographic and philosophical perspectives.

Multicultural Enrichment

OMA staff members serve as facilitators for presenting workshops in classrooms, residence halls and for student organizations.

Academic Support and Guidance

The primary goal of the OMA is to assist students in being academically successful during their college career at Case.

Networking and Mentoring Opportunities

The OMA provides students with professional networking/mentoring opportunities, skill-building workshops and job/internship opportunities.

Role Model and Mentoring

OMA provides students with positive role models/mentors to offer guidance and support as they navigate through the obstacles of their college life.

For more information about the Office of Multicultural Affairs, visit their website at studentaffairs.case.edu/multicultural/

Student Space on Campus

Below is a list of space available for students to meet, study, and relax on campus. Please note that some space can be reserved for meetings and are, thus, subject to availability. Whenever possible, meeting spaces that are available for reservation are indicated.

School of Medicine Space

- BRB *Starbucks* (top of stairs in the Biomedical Research Building (BRB)) - seating for 24 people
- BRB Lounge (adjacent to BRB Starbucks, next to the stairs) - seating for 8 people
- BRB Lobby (outside of BRB 105 lecture hall) - table seating for up to 40 people and couch seating for 4-6 people
- BRB Cafeteria (near the BRB Lobby) - table seating able to accommodate large groups
- Wolstein Building Lobby (near the security desk) - comfortable seating for 28 people
- Wolstein *Java Corner* (near the security desk) - table seating for 34 people
- Wolstein Library (near the security desk) - quiet study area available for meetings (RESERVABLE)

University-wide Space

Thwing Center (adjacent to Kelvin Smith Library, across Euclid Avenue from the School of Medicine) - numerous spaces (including RESERVABLE space), including a casual dining restaurant/bar. The Thwing Center has meeting space that can accommodate up to 400 people. Visit <http://studentaffairs.case.edu/thwing/> for more information on the Thwing Center.

Kelvin Smith Library (across Euclid Avenue from the School of Medicine) - includes study carousels (the 4th floor study area is for graduate students and faculty only), comfortable seating, a small dining area (the KSL Library Café) that can accommodate 32 people, and collaboration rooms (RESERVABLE). Visit <http://library.case.edu/ksl/> for more information on the Kelvin Smith Library.

Appendices

Appendix A- Course Planning

CORE COURSES (18 CREDITS TOTAL)*

COURSE NUMBER	CREDITS	SEMESTER/YEAR	GRADE
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MPHP 406	3.0	FALL	_____
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MPHP 411	3.0	FALL	_____
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MPHP 483	3.0	FALL	_____
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MPHP 405	3.0	SPR	_____
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MPHP 429	3.0	SPR	_____
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MPHP 439	3.0	SPR	_____
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CULMINATING EXPERIENCE CREDITS (9 CREDITS TOTAL)

MPHP 650	3.0	_____	_____
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MPHP 652	3.0	_____	_____
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MPHP 652	3.0	_____	_____
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CONCENTRATION COURSES (9 CREDITS REQUIRED)

_____	_____	_____	_____
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_____	_____	_____	_____
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_____	_____	_____	_____
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FREE ELECTIVES (6 CREDIT HOURS)*

_____	_____	_____	_____
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Appendix B- Course Descriptions

Master of Public Health Program (MPHP) Courses

MPHP 405. Statistical Methods in Public Health. 3 Units. (REQUIRED CORE COURSE. OFFERED EVERY SPRING SEMESTER.)

This one-semester survey course for public health students is intended to provide the fundamental concepts and methods of biostatistics as applied predominantly to public health problems. The emphasis is on interpretation and concepts rather than calculations. Topics include descriptive statistics; vital statistics; sampling; estimation and significance testing; sample size and power; correlation and regression; spatial and temporal trends; small area analysis; statistical issues in policy development. Examples of statistical methods will be drawn from public health practice. Use of computer statistical packages will be introduced.

MPHP 406. History and Philosophy of Public Health. 3 Units. (REQUIRED CORE COURSE. OFFERED EVERY FALL SEMESTER.)

The purpose of this course is to introduce students to the science and art of public health through an understanding of the history and philosophies that represent its foundation. Students will learn about the essentials of public health and applications of those precepts throughout history and in the present. The course will examine public health case histories and controversies from the past and present, in order to better understand solutions for the future.

MPHP 411. Introduction to Health Behavior. 3 Units. (REQUIRED CORE COURSE. OFFERED EVERY FALL SEMESTER.)

Using a biopsychosocial perspective, an overview of the measurement and modeling of behavioral, social, psychological, and environmental factors related to disease prevention, disease management, and health promotion is provided.

MPHP 412. Racism and Public Health. 3 Units. (SPRING)

Racism is a threat to public health. Across the US, an increasing number of communities have declared racism as a public health crisis. This declaration is not based on an isolated incident, rather, it is the acknowledgement that racism is structural and has been embedded within the institutional policies and societal norms that are present in our everyday lives. This course will: Recognize racism in the US as a significant cause of poor health, disease, and persistent dis-ease among Black Americans; Explore the relationship between racism and health through a historic accounting of social, political, economic, and environmental conditions post-slavery through the current events of 2020; and, identify how, research, policy, practice, and advocacy can address anti-Black racism and promote health equity.

MPHP 413. Health Education, Communication, and Advocacy. 3 Units. (REQUIRED COURSE FOR THE HEALTH PROMOTION & DISEASE PREVENTION MAJOR. OFFERED EVERY FALL SEMESTER)

Historical, sociological, and philosophical factors that have influenced definitions and the practice of health education and health promotion are studied. Advanced concepts in health communication theory will also be explored. This course is designed to educate, motivate, and empower undergraduate and graduate students to become advocates for their own health, the health of their peers, and the health of the community.

MPHP 419. Topics in Urban Health in the United States. 3 Units.

The focus of this course is on designing sustainable urban policies and programs for advancing health equity in Greater Cleveland. The course builds on recent declarations of racism as a public health crisis in Cuyahoga County and the City of Cleveland and ongoing work in applying system dynamics to addressing structural racism for advancing regional equity. The course introduces the use of system dynamics for understanding urban health inequities and designing sustainable social policies and programs for advancing health equity. The course will cover model structure and its relationships to prior knowledge and assumptions, measurable quantities, and ultimate use in solving problems. Application areas focus on social issues of equity in health, education, and general wellbeing emphasizing transdisciplinary integration of systems (vertically from cells to society and horizontality across systems). Model verification is discussed, along with the basic theory and practice of system dynamics. Quantitative methods are emphasized including the formulation and testing of mathematical models of feedback systems and the use of numeric data and estimation of parameters. Special attention will be given to understanding the dynamics of social and economic justice, value and ethical issues, as well as issues related to race, ethnicity, culture, gender, sexual orientation, religion, physical or mental disability or illness, age, and national origin.

MPHP 421. Health Economics and Strategy. 3 Units. OPTIONAL REQUIRED COURSE FOR THE HEALTH POLICY & MANAGEMENT CONCENTRATION. OFFERED EVERY FALL SEMESTER.)

This course has evolved from a theory-oriented emphasis to a course that utilizes economic principles to explore such issues as health care pricing, anti-trust enforcement and hospital mergers, choices in adoption of managed care contracts by physician groups, and the like. Instruction style and in-class group project focus on making strategic decisions. The course is directed for a general audience, not just for students and concentration in health systems management.

MPHP 426. An Introduction to GIS for Health and Social Sciences. 3 Units (FALL AND SPRING) ONLINE

This course is designed to give students a first exposure to understanding how GIS is integral to understanding a wide variety of public health problems. It introduces students to current spatial approaches in health research and provides a set of core skills that will allow students to apply these techniques toward their own interests.

MPHP 429. Introduction to Environmental Health. 3 Units. (REQUIRED CORE COURSE. OFFERED EVERY SPRING SEMESTER.)

This survey course will introduce students to environmental and occupational health topics including individual, community, population, and global issues. Students will be introduced to the major concepts, methodologies and issues in the fields of environmental and occupational health and will develop an understanding of the human health impacts of physical, biological, and chemical agents in the environment and workplace including basic principles of toxicology. Presentation of concepts including health impact assessment, risk communication and management as well as discussion of environmental and occupational practices, policies and regulations that promote public and population health is included. Case studies will be discussed through the course to illustrate methods for solving problems in this field.

MPHP 431. Statistical Methods I. 3 Units. (FALL)

Application of statistical techniques with particular emphasis on problems in the biomedical sciences. Basic probability theory, random variables, and distribution functions. Point and interval estimation, regression, and correlation. Problems whose solution involves using packaged statistical programs. First part of year-long sequence.

MPHP 432. Statistical Methods II. 3 Units. (REQUIRED COURSE IN THE POPULATION HEALTH RESEARCH CONCENTRATION. OFFERED EVERY SPRING SEMESTER.)

Methods of analysis of variance, regression and analysis of quantitative data. Emphasis on computer solution of problems drawn from the biomedical sciences. Design of experiments, power of tests, and adequacy of models. **Prerequisite: PQHS 431 or equivalent.**

MPHP 433. Community Interventions and Program Evaluation. 3 Units. (REQUIRED COURSE FOR THE HEALTH PROMOTION & DISEASE PREVENTION MAJOR. OFFERED EVERY SPRING SEMESTER)

This course prepares students to design, conduct, and assess community-based health interventions and program evaluation. Topics include assessment of need, evaluator/stakeholder relationship, process vs. outcome-based objectives, data collection, and assessment of program objective achievement based on process and impact, cost-benefit analyses, and preparing the evaluation report to stakeholders.

MPHP 439. Public Health Management and Policy. 3 Units. (REQUIRED CORE COURSE. OFFERED EVERY SPRING SEMESTER.)

This course is designed to introduce students to the basics of health policy-making and includes a background on the basic structure and components of the US Health Care System (such as organization, delivery and financing). It will also cover introductory concepts in public health management, including the role of the manager, organizational design and control, and accountability. We will address relevant legal, political and ethical issues using case examples. At the end of the course, students will understand how health policy is developed and implemented in various contexts, and the challenges facing system-wide efforts at reform. This is a required course for the MPH degree. Grades will be based on a series of assignments.

MPHP 441: Climate Change and Health. 3 Units. (SPRING)

This 3 credit graduate course will teach students from a variety of disciplinary backgrounds about i) the effects of climate change on human health, ii) the social, political, and economic contexts of climate change and health, and iii) potential approaches to address these challenges.

MPHP 450. Clinical Trials and Intervention Studies. 3 Units. (SPRING)

Issues in the design, organization, and operation of randomized, controlled clinical trials and intervention studies. Emphasis on long-term multicenter trials. Topics include legal and ethical issues in the design; application of concepts of controls, masking, and randomization; steps required for quality data collection; monitoring for evidence of adverse or beneficial treatment effects; elements of organizational structure; sample size calculations and data analysis procedures; and common mistakes. Recommended preparation: MPHP 431 or consent of instructor.

MPHP 451. Principles of Genetic Epidemiology. 3 Units. (FALL)

A survey of the basic principles, concepts and methods of the discipline of genetic epidemiology, which focuses on the role of genetic factors in human disease and their interaction with environmental and cultural factors. Many important human disorders appear to exhibit a genetic component; hence the integrated approaches of genetic epidemiology bring together epidemiologic and human genetic perspectives in order to answer critical questions about human disease. Methods of inference based upon data from individuals, pairs of relatives, and pedigrees will be considered. The last third of the course (1 credit) is more statistical in nature.

MPHP 456. Health Policy and Management Decisions. 3 Units. (OPTIONAL REQUIRED COURSE FOR THE HEALTH POLICY & MANAGEMENT CONCENTRATION. OFFERED EVERY SPRING SEMESTER.)

This seminar course combines broad health care policy issue analysis with study of the implications for specific management decisions in organizations. This course is intended as an applied, practical course where the policy context is made relevant to the individual manager.

MPHP 460. Introduction to Health Services Research. 3 Units. (SPRING)

This survey course provides an introduction to the field of Health Services Research and an overview of key health services research concepts and methods, including conceptual frameworks and models; outcomes research; risk adjustment; disparities in health care; policy/health care systems; cost and cost-effectiveness; quality of life, process improvement; patient satisfaction; patient safety; health economics; statistical modeling techniques; and qualitative research methods.

MPHP 464. Obesity and Cancer: Views from Molecules to Health Policy. 3 Units. (Not Offered)

This course will provide an overview of the components of energy balance (diet, physical activity, resting metabolic rate, dietary induced thermogenesis) and obesity, a consequence of long term positive energy balance, and various types of cancer. Following an overview of energy balance and epidemiological evidence for the obesity epidemic, the course will proceed with an introduction to the cellular and molecular biology of energy metabolism. Then, emerging research on biologically plausible connections and

epidemiological associations between obesity and various types of cancer (e.g., colon, breast) will be presented. Finally, interventions targeted at decreasing obesity and improving quality of life in cancer patients will be discussed. The course will be cooperatively-taught by a transdisciplinary team of scientists engaged in research in energy balance and/or cancer. Didactic lectures will be combined with classroom discussion of readings. The paper assignment will involve application of course principles, lectures and readings.

MPHP 466. Promoting Health Across Boundaries 3 Units. (Not Offered)

This course examines the concepts of health and boundary spanning and how the synergy of the two can produce new, effective approaches to promoting health. Students will explore and analyze examples of individuals and organizations boundary spanning for health to identify practice features affecting health, compare and contrast practices and approaches, and evaluate features and context that promote or inhibit boundary spanning and promoting health.

MPHP 467. Comparative and Cost Effectiveness Research. 1-3 Units. (Not Offered)

Comparative effectiveness research is a cornerstone of healthcare reform. It holds the promise of improved health outcomes and cost containment. This course is presented in a convenient 5-day intensive format in June. There are reading assignments due prior to the 1st session. Module A, Days 1-2: Overview of comparative effectiveness research (CER) from a wide array of perspectives: individual provider, institution, insurer, patient, government, and society. Legal, ethical and social issues, as well as implications for population and public health, including health disparities will also be a component. Module B, Day 3: Introduction to the various methods, and their strengths, weaknesses and limitations. How to read and understand CER papers. Module C, Days 4-5: Cost-Effectiveness Analysis. This will cover costing, cost analysis, clinical decision analysis, clinical decision analysis, quality of life and cost-effectiveness model. The full 3-credit course is for taking all 3 modules. Modules A or C can be taken alone for 1 credit. Modules A and B or Modules B and C can be taken together for a total of 2 credits. Module B cannot be taken alone. If taking for 2 or 3 credits, some combination of term paper, project and/or exam will be due 30 days later.

MPHP 468. The Continual Improvement of Healthcare: An Interdisciplinary Course. 3 Units. (REQUIRED COURSE FOR THE HEALTH POLICY & MANAGEMENT CONCENTRATION. OFFERED EVERY FALL SEMESTER.)

This course prepares students to be members of inter-professional teams to engage in the continual improvement in health care. The focus is on working together for the benefit of patients and communities to enhance quality and safety.

MPHP 482. Qualitative and Mixed Methods in Public Health. 3 Units. (FALL)

Understanding complex public health issues requires both qualitative and quantitative inquiry. The exploration of the perceptions and experiences of people is as essential as analyzing the relationships among variables. Often, the integration of the two methods is required in order to effectively address the significant health issues faced by today's society. It is the purpose of this course to facilitate a meaningful and substantive learning process around engaging in, and critically analyzing, qualitative and mixed methods research in public health. This includes gaining first-hand experience in research design and collecting, managing, analyzing, and

interpreting data for the purposes of making data-driven program and policy recommendations. In addition, students will have the opportunity to engage with local professionals engaged in qualitative and mixed methods research.

MPHP 483. Introduction to Epidemiology for Public Health Practice. 3 Units. (REQUIRED CORE COURSE. OFFERED EVERY FALL SEMESTER.)

This course is designed to introduce the basic principles and methods of epidemiology. Epidemiology has been referred to as the basic science for public health. Application of epidemiologic principles is critical to disease prevention, as well as in the development and evaluation of public policy. The course will emphasize basic methods (study design, measures of disease occurrence, measures of association, and causality) necessary for epidemiologic research. It is intended for students who have a basic understanding of the principals of human disease as well as statistics.

MPHP 484. Global Health Epidemiology. 1 - 3 Unit. (REQUIRED COURSE IN THE GLOBAL HEALTH CONCENTRATION. OFFERED EVERY FALL SEMESTER.)

This course focuses on the epidemiology, prevention, treatment, and control of tropical and parasitic diseases. Emphasis will be placed on the triad of agent, host, and environment for infectious disease impacting global health. Three distinct modules will focus on specific examples such as malaria, helminths, bacteria, or viruses. Active class participation is required through discussions, case studies, and group projects. Recommended preparation: MPHP 490, MPHP 491, and a microbiology course or consent of instructor.

MPHP 485. Adolescent Development. 3 Units. (FALL)

Adolescent Development can be viewed as the overriding framework for approaching disease prevention and health promotion for this age group. This course will review the developmental tasks of adolescence and identify the impact of adolescent development on youth risk behaviors. It will build a conceptual and theoretical framework through which to address and change adolescent behavior to promote health.

MPHP 489: Women's Public Health. 3 Units. (SPRING)

This interdisciplinary seminar, designed for graduate students in public health at Case Western Reserve University, is designed to explore in an in-depth and historical account of the public health problems facing female populations including resource-poor societies around the world.

MPHP 490. Epidemiology: Introduction to Theory and Methods. 3 Units. (FALL)

This course provides an introduction to the principles of epidemiology covering the basic methods necessary for population and clinic-based research. Students will be introduced to epidemiologic study designs, measures of disease occurrence, measures of risk estimation, and casual inference (bias, confounding, and interaction) with application of these principles to specific fields of epidemiology. Classes will be a combination of lectures, discussion, and in-class exercises. It is intended for students who have a basic understanding of the principals of human disease and statistics. Prereq or Coreq: MPHP 431.

MPHP 493. Chronic Disease Epidemiology. 3 Units. (Not offered)

This course is intended for graduate students in epidemiology and M.P.H. students who are interested in chronic disease epidemiology and prevention. The course will cover: 1) overview of concepts in chronic disease epidemiology and etiology, study design in epidemiologic research, and causal inference; 2) major chronic diseases in the U.S. populations and prevention; and 3) cancer screening. For each specific disease of interest, the lecture is structured according to 4 major components: 1) basic epidemiology; 2) risk factors and etiology; 3) prevention (and screening); and 4) controversies and future research. Offered as EPBI 493 and MPHP 493. Prereq: MPHP 490 or equivalent.

MPHP 496. The Evolution of Public Health into Global Health. 3 Units. (SUMMER)

This short course will use readings and case studies to explore the motivating factors in the emergence of global health interventions over the last 200 years, with a focus on its roots in public health practice, its expanding scope in the early to mid- 20th century, and the strengths and weaknesses of modern global health interventions. Readings and seminar discussions will involve consideration of the changing definitions of "public health", and of the spaces in which public health interventions are expected to occur.

MPHP 510. Health Disparities. 3 Units. (Not Offered)

This course aims to provide theoretical and application tools for students from many disciplinary backgrounds to conduct research and develop interventions to reduce health disparities. The course will be situated contextually within the historical record of the United States, reviewing social, political, economic, cultural, legal, and ethical theories related to disparities in general, with a central focus on health disparities. Several frameworks regarding health disparities will be used for investigating and discussing the empirical evidence on disparities among other subgroups (e.g., the poor, women, uninsured, disabled, and non-English speaking populations) will also be included and discussed. Students will be expected to develop a research proposal (observational, clinical, and/or intervention) rooted in their disciplinary background that will incorporate materials from the various perspectives presented throughout the course, with the objective of developing and reinforcing a more comprehensive approach to current practices within their fields.

MPHP 540. Operational Aspects of Global Health and Emergency Response. 3 Units. (Fall)

Among professional in the medical field and the field of public health, there is a gap in knowledge, structure and research in best practices surrounding emergency response. This gap results from the limited number of training programs in the United States that focus on this very specialized field and the limited number of academic partnerships with international non-governmental organizations (NGOs). This course helps remedy this gap by introducing public health students and international emergency medicine fellows to the overall structure and operations of international humanitarian coordination systems, types of emergency response, morbidity and mortality associated with various emergencies, and the actors and institutions involved. The course highlights, through reading, workshops, and examples, the real world issues that must be faced and overcome in the field during emergency response operations.

MPHP 650. Public Health Practicum. 1-3 Units. (REQUIRED CORE COURSE. OFFERED EVERY SEMESTER.)

Public health field practicum, involving a placement at a community-based field site. The field placement will provide students with the opportunity to apply the knowledge and skills acquired through their Master of Public Health academic program to a problem involving the health of the community. Students will learn to communicate with target groups in an effective manner; to identify ethical, social, and cultural issues relating to public health policies, research, and interventions; to identify the process by which decisions are made within the agency or organization; and to identify and coordinate use of resources at the placement site.

MPHP 652. Public Health Capstone Project. 1 - 6 Units. (REQUIRED CORE COURSE. OFFERED EVERY SEMESTER.)

Independent project aimed at applying the knowledge gained through the Master of Public Health Program. The Capstone Project is one-half of the Culminating Experience and requires completion of a Master's essay, and may take the form of a research thesis, an evaluation study, or an intervention study. Each student is required to formally present their practicum experience and research findings. In any semester in which a student is registered for MPHP 652 credit, it is required that the student attend the Community Health Research and Practice (CHRP) group at a minimum of two sessions per 3 credits. CHRP is held once a week for approximately an hour and a half for the duration of fall, spring, and summer semesters. MPHP 652 credit is available only to Master of Public Health students.

MPHP 653. Public Health Capstone Experience. 1 - 6 Units. (Every Semester).

The Public Health Capstone is a multi-semester project intended to provide students with the opportunity to develop a broad understanding of their chosen topic area, the ability to communicate effectively with target groups and professionals, and develop skills necessary for scientific investigation. The Public Health Capstone provides students with the opportunity to apply the knowledge and skills acquired through their Master of Public Health academic program to a problem involving the health of the community. Students work in conjunction with a community organization; therefore, the Capstone is expected to be mutually beneficial to both the student's educational goals as well as the host organization. At the conclusion of the Capstone experience, students are required to submit a capstone essay, which represents the culminating experience required for the degree program and may take the form of a research thesis, an evaluation study, or an intervention study. Each student is required to formally present the experience and research findings. While engaged in the Public Health Capstone, students are expected to attend the Community Health Research and Practice (CHRP) seminar, held weekly on Tuesdays at 12:00pm. Counts as SAGES Senior Capstone.

MPHP 655. Dual Degree Field Practicum II. 3 Units (Every Semester).

This course is designed to be taken **ONLY** by MSW/MPH joint degree students as the second field period of their master's program. It consists of a field practicum and participation in professional development opportunities. The Field Practicum is an integral component of the MSASS and MPH curriculums, allowing students to apply, develop, and refine their conceptual knowledge and skills as part of a planned, supervised, and evaluated community-based experience. The Practicum is designed to move students beyond the walls of academia, to understand the political, economic, social, and organizational contexts within which social work and public health activities are conducted. These collective experiences provide students with a forum to develop skills, integrate and operationalize the values and ethics inherent in professional practice, and confront social injustice as self-reflective, competent

developing practitioners. (EPAAS Program Objective M6 and EPAAS Content Area 4.7). The overall goal of this course is to provide graduate level MSW/MPH joint degree students with field related opportunities to continue to develop foundation level competencies in the eight MSSAS abilities by helping students apply knowledge of social work and public health theory, skills, values and ethics acquired in the classroom in an agency setting.
Offered as MPHP 655 and SASS 655.

MPHP 656. Dual Degree Field Capstone III. 3 Units (Every Semester).

This course is a combination of the SASS Field Experience and the Public Health Capstone and is offered **ONLY** to students in the joint MSW/MPH dual degree.
Prerequisite: MPHP/SASS 655

MPHP 657. Dual Degree Field Capstone IV. 3 Units (Every Semester).

This course is a combination of the SASS Field Experience and the Public Health Capstone and is offered **ONLY** to students in the joint MSW/MPH dual degree.
Prerequisite: MPHP/SASS 656

Appendix C- Other Potential Courses

ANTH 423. AIDS: Epidemiology, Biology, and Culture. 3 Units. (Not Offered)

This course will examine the biological and cultural impact of AIDS in different societies around the world. Topics include: the origin and evolution of the virus, the evolutionary implications of the epidemic, routes of transmission, a historical comparison of AIDS to other epidemics in human history, current worldwide prevalence of AIDS, and cultural responses to the epidemic. Special emphasis will be placed on the long-term biological and social consequences of the epidemic.

ANTH 435- Illegal Drugs and Society. 3 Units. (Spring)

This course provides perspectives on illegal drug use informed by the social, political and economic dimensions of the issues. Framed by the history, epidemiology, and medical consequences of drug use, students will confront the complex challenges posed by addiction. Anthropological research conducted in the U.S. and cross-culturally will demonstrate, elaborate and juxtapose various clinical, public health, and law enforcement policies and perspectives. Topics examined will include: why exclusively using a bio-medical model of addiction is inadequate; how effective is the war on drugs; what prevention, intervention and treatment efforts work; and various ideological/moral perspectives on illegal drug use. Offered as ANTH 335 and ANTH 435.

ANTH 459- Introduction to Global Health 3. Units. (Fall)

This course is an introduction to the field of international and global health from the perspective of anthropology. Key health problems in the world are identified and anthropological research on these issues is presented and examined. The course covers current international and global health issues and reviews the history of anthropological engagement in the field. Case studies of current health issues will be discussed. Offered as ANTH 359 and ANTH 459.

ANTH 480. Medical Anthropology and Global Health I. 3 Units. (FALL)

The first in a sequence of two graduate core courses in medical anthropology and global health. This course focuses on foundational concepts and theories in medical anthropology, as well as topical areas which have been central to the development of the field. Prereq: Graduate Standing in Anthropology.

ANTH 481. Medical Anthropology and Global Health II. 3 Units. (SPRING)

The second in a sequence of two graduate core courses in medical anthropology and global health. This course focuses on the application of medical anthropology theory and methods to the study of global health. Recommended preparation: ANTH 480. Prereq: Graduate Standing in Anthropology.

BETH 415. International Bioethics: Policy and Practice. 3 Units. (Not offered)

Taught by Case and international faculty, this course will include 7-10 days of intensive didactic and experiential learning in one of several "host" countries. Examples of sites include: Free University of Amsterdam and University of Utrecht in the Netherlands; University of Paris in France; and Ben Gurion University in Israel. It will afford a unique opportunity to gain perspective on important

bioethics issues in different societies, i.e., euthanasia, public health policies, access to healthcare, and stem cell research. At the international site, students will spend 6 hours per day (5 days) in seminar (involving didactics, discussion, and guided-observation clinical experience). There will be two 3-hour preparatory sessions, required reading, and two 3-hour post trip sessions. Requirements: preparation, attendance, and class participation, a 12–15-page paper (undergraduate credit) and a 15-20 page paper (graduate credit). Graduate credit will also require students to prepare a presentation for a post-intensive session. Enrollment will be capped at 25. This course has an additional fee to cover costs of travel and lodging. Limited scholarships are available.

BETH 417. Introduction to Public Health Ethics. 3 Units. (Spring)

The course will introduce students to theoretical and practical aspects of ethics and public health. This course will help students develop the analytical skills necessary for evaluating of ethical issues in public health policy and public health prevention, treatment, and research. Will include intensive reading and case-based discussions. Evaluation based on class participation, a written exercise and a case analysis. Open to graduate students with permission from instructors.

HSMC 420. Health Finance. 3 Units. (Spring)

Exploration of economic, medical, financial and payment factors in the U.S. healthcare system sets the framework for the study of decisions by providers, insurers, and purchasers in this course. The mix of students from various programs and professions allows wide discussion from multiple viewpoints.

HSMC 425. Dialogues in Health Care Management. 3 Units. (Spring)

Dialogues in Healthcare Management is designed to serve students in the MSM-Healthcare management program. The course seeks to educate students of the intricacies related to specific management challenges that arise in the context of healthcare delivery. This is accomplished through a process of facilitated dialogs with experienced healthcare management professionals. Drawing on the experiences and deep contextual knowledge of these professionals, the course provides students an opportunity to synthesize and apply their prior coursework to better understand the challenges and opportunities that managers face to improve organizational performance. Prereq: MSM Healthcare Students only.

HSTY 495. History of Medicine. 3 Units. (Not offered)

This course treats selected topics in the history of medicine, with an emphasis on social and cultural history. Focusing on the modern period, we examine illnesses, patients, and healers, with attention to the ways sickness and medicine touch larger questions of politics, social relations and identity. Offered as **HSTY 395** and **HSTY 495**. Prereq: Graduate standing or instructor permission.

IIME 473. Fundamentals of Clinical Information Systems. 1-3 Units. (REQUIRED COURSE IN THE HEALTH INFORMATICS CONCENTRATION. OFFERED EVERY FALL SEMESTER.)

Technology has played a significant role in the evolution of medical science and treatment. While we often think about progress in terms of the practical application of, say, imaging to the diagnosis and monitoring of disease, technology is increasingly expected to improve the organization and delivery of healthcare services, too. Information technology plays a key role in the transformation of

administrative support systems (finance and administration), clinical information systems (information to support patient care), and decision support systems (managerial decision-making). This introductory graduate course provides the student with the opportunity to gain insight and situational experience with clinical information systems (CIS). Often considered synonymous with electronic medical records, the "art" of CIS more fundamentally examines the effective use of data and information technology to assist in the migration away from paper-based systems and improve organizational performance. In this course we examine clinical information systems in the context of (A) operational and strategic information needs, (B) information technology and analytic tools for workflow design, and (C) subsequent implementation of clinical information systems in patient care. Legal and ethical issues are explored. The student learns the process of "plan, design, implement" through hands-on applications to select CIS problems, while at the same time gaining insights and understanding of the impacts placed on patients and health care providers. Offered as EBME 473, IIME 473 and SYBB 421.

INTH 401. Fundamentals of Global Health. 3 Units. (REQUIRED COURSE IN THE GLOBAL HEALTH CONCENTRATION. OFFERED EVERY FALL SEMESTER.)

This course seeks to integrate the multiple perspectives and objectives in global health by investigating how the disciplines of Biology, Medicine, Anthropology, Nursing, Mathematics, Engineering analyze and approach the same set of international health problems. Students will develop a shared vocabulary with which to understand these various perspectives from within their own discipline. The focus sites will emphasize issues related to the health consequences of development projects, emergency response to a health care crisis and diseases of development in presence of underdevelopment.

NUND 510. Application of Health Information Technology and Systems. 1 Unit. (FALL)

In this course, an overview of health information technology (HIT) is provided with focus on use of HIT in health care settings and among consumers. Course content includes use and evaluation of HIT by health care providers and patients.

NURS 631. Advanced Statistics: Multivariate Analysis. 3 Units. (SPRING)

This course focuses on selected advanced multivariate topics and procedures in health research. Topics will be covered through lecture, readings, computer analysis as well as critical analysis of published research in the health sciences fields. Topics to be covered in this course include: survival analysis, factor analysis, path analysis, repeated measures ANOVA and advanced regression techniques (logistic, loglinear, mixed models). INSTRUCTOR PERMISSION REQUIRED.

POSC 457- Economic, Environmental, and Health Challenges- The Impact of Democracy (SPRING)

In this era when seemingly intractable problems, such as economic inequality, climate change, and pandemics exist, it is important to understand which political institutions and practices can help address them. To what extent does democracy result in positive economic, environmental, and health outcomes? Which democratic institutions should practitioners advocate for and policymakers introduce to most effectively address economic, environmental, and public health challenges? These questions are all the more important to investigate considering the global erosion of confidence in democracy. Instructed by faculty from the disciplines of ecology, economics, epidemiology, medicine, political science, and sociology, students will learn about current economic, environmental, and public health problems and various democratic and non-democratic political institutions. They will read and

discuss the latest findings about how democratic and non-democratic political institutions impact economic, environmental, and public health outcomes. Topics include economic inequality, economic growth, global warming, air pollution, infectious and chronic diseases, and worker health and safety. Building on this foundation of knowledge, students will work together to investigate the impact of political institutions on problems of their own choosing.

POSC 483. Health Policy and Politics in the United States. 3 Units. (FALL)

Overview of the principal institutions, processes, social forces, and ideas shaping the U.S. health system. Historical, political, economic, and sociological perspectives on the health system are explored as well as the intellectual context of recent policy changes, challenges, and developments. Students will acquire a sense of how health services are financed and delivered in the U.S. They will also learn how to assess its performance compared to that of other similar countries.

PQHS 414. Introduction to Statistical Computing. 3 Units. (FALL)

This course introduces the use of computers in epidemiologic investigations and biostatistical applications. Topics covered include the use of the Internet to access and obtain publicly available databases, database and spreadsheet concepts, and developing a sound approach to analysis planning and implementation. The majority of the course will focus on instruction in the use of SAS software for advanced database management and manipulation and basic statistical analyses, with parallel applications in R to exploit its features. Primary emphasis is on developing the knowledge and familiarity required for running these particular programs in connection with data collection, analysis, and presentation of results in clinical studies. Students will be required to complete assignments using personal computers using Windows operating systems and/or computer systems maintained by the department. Students should expect weekly assignments to reinforce lecture concepts. Knowledge of basic statistics is beneficial, as this course does not teach statistical analysis; but it is not vital to learning the material in this course.

PQHS 416. Introduction to Computing in Biomedical Health Informatics. (REQUIRED COURSE IN THE HEALTH INFORMATICS CONCENTRATION. OFFERED EVERY SPRING SEMESTER.)

The goals of this course are to provide students with a survey of the computational technique that underpin biomedical and health informatics. The course will cover methods in computational system development, including biomedical terminologies, ontologies, natural language processing (NLP), logic, Electronic Health Record (EHR) system architecture as well as applications, and topics related to health information systems. This course is intended for students interested in learning the computational foundations of biomedical and health informatics. Students should have at least a bachelor of science level educational background and an understanding of the fields of biomedical and clinical/translational.

PQHS 426. An Introduction to GIS for Health and Social Sciences. 3 Units. (Fall and Spring)

This course is designed to give students a first exposure to understanding how GIS is integral to understanding a wide variety of public health problems. It introduces students to current spatial approaches in health research and provides a set of core skills that will allow students to apply these techniques toward their own interests. Subject matter will include chronic diseases, infectious diseases, and vectored diseases examples. Other topics related to social determinants of health and current events (e.g., violence,

overdoses, disaster and homelessness) will also be incorporated. Students will be exposed to different types of data and different applications of these data (for example, hospitals, police departments), enabling them to think "outside the box" about how GIS can be utilized to solve real-world problems. Students will learn classic mapping and hotspot techniques. In addition, they will be introduced to novel ways to collect geospatial field data using online sources (Google Street View), primary data collection (spatial video) and mixed method approaches (spatial video geonarratives), all of which represent the cutting edge of spatial epidemiology. Offered as MPHP 426 and PQHS 426.

PQHS 427- Geospatial Analytics for Biomedical Health Applications. 3 Units. (Spring)

Is there greater risk of exposure to Covid-19 for me? How prevalent is monkey pox in the different neighborhoods of Cleveland? Does socioeconomic status contribute to Asthma? Which is the best location in Cleveland to set a mobile Covid vaccination unit? The answer to all these questions and related ones lies in capturing, managing, analyzing and visualizing geospatial data using geospatial analytics for a wide range of biomedical health applications. The motivation behind this course is to equip students with the core skills required for geospatial analytics and to stimulate spatial thinking in students to solve real-world challenges ranging from healthcare quality to effect of environment on individual health. By taking a research-based yet hands-on approach, this course will allow students to explore the different facets of geospatial data analysis using programming languages. Students will be exposed to different type of geospatial techniques that will enable them to think "outside the box" for solving data challenges. As a part of this course, students will be introduced to novel ways of collecting, managing, analyzing, and visualizing large volume of geospatial data in a variety of application domains including biomedical health application.

PQHS/MPHP 431. Statistical Methods I. 3 Units. (FALL)

Application of statistical techniques with particular emphasis on problems in the biomedical sciences. Basic probability theory, random variables, and distribution functions. Point and interval estimation, regression, and correlation. Problems whose solution involves using packaged statistical programs. First part of year-long sequence.

PQHS/MPHP 432. Statistical Methods II. 3 Units. (SPRING)

Methods of analysis of variance, regression and analysis of quantitative data. Emphasis on computer solution of problems drawn from the biomedical sciences. Design of experiments, power of tests, and adequacy of models. Prereq: EPBI 431 or equivalent.

PQHS 435. Survival Data Analysis (Spring)

Basic concepts of survival analysis including hazard function, types of censoring; non-parametric models; extended Cox models: time dependent variables, piece-wise Cox model, etc.; sample requirements for survival studies. Prereq: MPHP 432.

PQHS 440. Introduction to Population Health. 3 Units. (FALL)

This course introduces graduate students to the multiple determinants of health including the social, economic and physical environment, health services, individual behavior, genetics and their interactions. It aims to provide students with the broad

understanding of the research development and design for studying population health, the prevention and intervention strategies for improving population health and the disparities that exist in morbidity, mortality, functional and quality of life.

PQHS 444- Communicating in Population Health Science Research. 1 Units. (Fall)

Doctoral class on scientific communication. The semester-long course focuses on scientific writing, with an emphasis on manuscript and grant writing, and scientific oral presentations. As a required class for the Department of Population and Quantitative Health Sciences (PQHS) Epidemiology and Biostatistics and Biomedical Health Informatics (BHI) PhD programs, emphasis will be placed on scientific topics and anticipated requirements (e.g., departmental seminar in PQHS 501) related to graduate students in these programs. Recommended preparation: PhD students in PQHS. Other students permitted if space available. Fluency in English writing (e.g., in accord with the Harbrace College Handbook). Prereq: PQHS 431 and PQHS 490. Prereq or Coreq: PQHS 432.

PQHS 445- Research Ethics in Population Health Sciences 0 Units. (Spring)

This zero credit course is a required add-on for PhD students in Epidemiology and Biostatistics. Students will register and fulfill all requirements for IBMS 500 "Being a Professional Scientist". The purpose of PQHS 445 is to address specialized population health topics not covered by IBMS 500, including international research, human genomics, and/or big data/electronic medical records. There will be no meetings/lectures for this course. Students will complete a short written assignment due at the end of the semester.

PQHS 450- Clinical Trials and Intervention Studies. 3 Units. (Spring)

Issues in the design, organization, and operation of randomized, controlled clinical trials and intervention studies. Emphasis on long-term multicenter trials. Topics include legal and ethical issues in the design; application of concepts of controls, masking, and randomization; steps required for quality data collection; monitoring for evidence of adverse or beneficial treatment effects; elements of organizational structure; sample size calculations and data analysis procedures; and common mistakes. Recommended preparation: PQHS 431. Offered as PQHS 450 and MPHP 450.

PQHS 451. Principles of Genetic Epidemiology. 3 Units. (FALL)

A survey of the basic principles, concepts and methods of the discipline of genetic epidemiology, which focuses on the role of genetic factors in human disease and their interaction with environmental and cultural factors. Many important human disorders appear to exhibit a genetic component; hence the integrated approaches of genetic epidemiology bring together epidemiologic and human genetic perspectives in order to answer critical questions about human disease. Methods of inference based upon data from individuals, pairs of relatives, and pedigrees will be considered. Offered as EPBI 451, GENE 451, and MPHP 451. Prereq: EPBI/MPHP 431 and EPBI/MPHP 490 or MPHP 405.

PQHS 452. Statistical Methods for Genetic Epidemiology. 3 Units. (SPRING)

Analytic methods for evaluating the role of genetic factors in human disease, and their interactions with environmental factors. Statistical methods for the estimation of genetic parameters and testing of genetic hypotheses, emphasizing maximum likelihood

methods. Models to be considered will include such components as genetic loci of major effect, polygenic inheritance, and environmental, cultural and developmental effects. Topics will include familial aggregation, segregation and linkage analysis, ascertainment, linkage disequilibrium, and disease marker association studies. Recommended preparation: EPBI 431 and EPBI 451.

PQHS 453. Categorical Data Analysis. 3 Units. (Fall)

Descriptive and inferential methods for categorical data with applications: bivariate data; models for binary and multinomial response variables, with emphasis on logit models; loglinear models for multivariate data; model fitting using the maximum likelihood approach; model selection and diagnostics; and sample size and power considerations. Topics in repeated response data as time allows. Recommended preparation: EPBI 441.

PQHS 457. Current Issues in Genetic Epidemiology: Design and Analysis of Sequencing Studies. 3 Units. (Spring)

Statistical methods to deal with the opportunities and challenges in Genetic Epidemiology brought about by modern sequencing technology. Some computational issues that arise in the analysis of large sequence data sets will be discussed. The course includes hands-on experience in the analysis of large sequence data sets, in a collaborative setting. Prereq: PQHS 451 and PQHS 452.

PQHS 459. Longitudinal Data Analysis. 3 Units. (SPRING)

This course will cover statistical methods for the analysis of longitudinal data with an emphasis on application in biological and health research. Topics include exploratory data analysis, response feature analysis, growth curve models, mixed-effects models, generalized estimating equations, and missing data. Prereq: MPHP 432.

PQHS 465. Design and Measurement in Population Health Sciences. 3 Units. (Fall)

This course focuses on common design and measurement approaches used in population health sciences research. This course covers the preliminary considerations used in selecting qualitative, quantitative and mixed methods research approaches including an understanding of different philosophical worldviews, strategies of inquiry and methods and procedures for each approach. The course also includes an introduction to survey design and related concepts of latent variables, factor analysis and reliability and validity. Students will develop an in-depth knowledge of these design and measurement approaches through readings, lectures, group discussions and written and oral project presentations. Prereq: PQHS 440, PQHS 431, PQHS 490, PQHS 432, PQHS 460, PQHS 444 and PQHS 445.

PQHS 471. Machine Learning & Data Mining. 3 Units. (SPRING)

Vast amount of data are being collected in medical and social research and in many industries. Such big data generate a demand for efficient and practical tools to analyze the data and to identify unknown patterns. We will cover a variety of statistical machine learning techniques (supervised learning) and data mining techniques (unsupervised learning), with data examples from biomedical and social research. Specifically, we will cover prediction model building and model selection (shrinkage, Lasso), classification (logistic regression, discriminant analysis, k-nearest neighbors), tree-based methods (bagging, random forests, boosting), support vector machines, association rules, clustering and hierarchical clustering. Basic techniques that are applicable to many of the areas,

such as cross-validation, the bootstrap, dimensionality reduction, and splines, will be explained and used repeatedly. The field is fast evolving and new topics and techniques may be included when necessary.

PQHS 473. Integrated Thinking in Population and Quantitative Health Sciences II. 2 Units. (Spring)

The determinants of common disease are multifactorial and may involve complex interactions among factors, both known and unknown. These risk factors span domains as diverse as social determinants to biochemical lesions. The goal of this course is to teach students to recognize and define explicit and implicit assumptions about studies of disease and to understand how one may integrate different domains of knowledge to improve our understanding of disease etiology and ultimately prevention and treatment efforts. This is the second of a two course sequence required of all PhD in Epidemiology and Biostatistics students. PQHS 472 is the first course in the sequence and is a required prerequisite. This course meets weekly and in-person. Prereq: PQHS 472.

PQHS 480. Introduction in Statistical Theory. 3 Units. (FALL)

An introduction to statistical inference at an intermediate mathematical level. The concepts of random variables and distributions, discrete and continuous, are reviewed. Topics covered include: expectations, variance, moments, the moment generating function; Bernoulli, binomial, hypergeometric, Poisson, negative binomial, normal, gamma and beta distribution; the central limit theorem; Bayes estimation, maximum likelihood estimators, unbiased estimators, sufficient statistics; sampling distributions (chi-square, t) confidence intervals, Fisher information; hypothesis testing, uniformly most powerful tests and multi-decision problems.

PQHS 481- Theoretical Statistics I. Units 3 Units. (Fall)

Topics provide the background for statistical inference. Random variables; distribution and density functions; transformations, expectation. Common univariate distributions. Multiple random variables; joint, marginal and conditional distributions; hierarchical models, covariance. Distributions of sample quantities, distributions of sums of random variables, distributions of order statistics. Methods of statistical inference. Offered as STAT 345, STAT 445, and PQHS 481. Prereq: MATH 122 or MATH 223 or Coreq: PQHS 431.

PQHS 482- Theoretical Statistics II. 3 Units. (Spring)

Point estimation: maximum likelihood, moment estimators. Methods of evaluating estimators including mean squared error, consistency, "best" unbiased and sufficiency. Hypothesis testing; likelihood ratio and union-intersection tests. Properties of tests including power function, bias. Interval estimation by inversion of test statistics, use of pivotal quantities. Application to regression. Graduate students are responsible for mathematical derivations, and full proofs of principal theorems. Offered as STAT 346, STAT 446 and PQHS 482. Prereq: STAT 345 or STAT 445 or PQHS 481.

PQHS 491- Advanced Study Design and Analysis in Population Health Sciences. 3 Units. (Spring)

How do researchers design and analyze population health studies? This course covers essential and cutting edge epidemiological and biostatistical principles and methods for health research. Goals are for students to build a strong foundation for conducting their own research, develop as effective interdisciplinary research team members, and become critical readers of the health literature.

This course will rely on, and expand on, the epidemiology background provided in PQHS 490 and the biostatistics methods from PQHS 431. The focus of this course is on study designs for, and the analysis and interpretation of, observational studies. Causal inference and the potential outcomes/counterfactual framework provides a unifying theme. Specific topics include causal diagrams, cohort and case-control study designs, confounding, effect modification, time-dependent covariates, bias, mediation analysis, Mendelian randomization, and sensitivity analysis. A premise of the course is that students learn best by active engagement, and this will be effected in the course by participation in discussions and in carrying out study designs and data analyses.

PQHS 500- Design and Analysis of Observational Studies 3 Units. (Spring)

An observational study investigates treatments, policies or exposures and the effects that they cause, but it differs from an experiment because the investigator cannot control assignment. We introduce appropriate design, data collection and analysis methods for such studies, to help students design and interpret their own studies, and those of others in their field. Technical formalities are minimized, and the presentations will focus on the practical application of the ideas. A course project involves the completion of an observational study, and substantial use of the R statistical software. Topics include randomized experiments and how they differ from observational studies, planning and design for observational studies, adjustments for overt bias, sensitivity analysis, methods for detecting hidden bias, and focus on propensity score methods for selection bias adjustment, including multivariate matching, stratification, weighting and regression adjustments. Recommended preparation: a working knowledge of multiple regression, some familiarity with logistic regression, with some exposure to fitting regression models in R. Offered as CRSP 500 and PQHS 500.

PQHS 501- Research Seminar 0 Units. (Fall, Spring)

This seminar series includes faculty and guest-lecturer presentations designed to introduce students to on-going research at the University and elsewhere. Seminars will emphasize the application of methods learned in class, as well as the introduction of new methods and tools useful in research.

PQHS 502- Introduction to Statistical Consulting. 1 Unit. (Fall, Spring, Summer)

What challenges are faced by a Biostatistician working in a collaborative and consulting environment? In order to successfully interact with a client, in addition to a solid foundation in statistical methods, the consultant needs to be prepared to deal with issues such as ill-posed research questions, unrealistic expectations on the part of a client, difficulty in understanding the subject of the consultation, thorny ethical issues, and many others. Courses on statistical consulting are essential components of graduate programs in Statistics. Other courses teach students statistical methods and how to use them to address various problems, but those problems are presented by course instructors who typically have as the goal teaching the appropriate choice and utilization of available statistical tools. This course prepares students to the challenges involved in 'real life' consulting situations, exposing the students to different encounter types, while honing their communication and statistical skills and raising their awareness of their professional responsibilities.

PQHS 505- Seminar in Global Health Epidemiology. 0 Unit. (Fall)

This seminar series examines a broad range of topics related to infectious disease research in international settings. Areas of interest are certain to include epidemiology, bioethics, medical anthropology, pathogenesis, drug resistance, vector biology, cell and molecular biology, vaccine development, diagnosis, and socio-cultural factors contributing to or compromising effective health care delivery in endemic countries. Speakers will include a diverse group of regional faculty and post-doctoral trainees, as well as visiting colleagues from around the world. Students will be asked to read a journal article written by the speaker and then discuss this article with the speaker after their seminar.

PQHS 515. Secondary Analysis of Large Health Care Data Bases. 3 Units. REQUIRED COURSE IN THE POPULATION HEALTH RESEARCH CONCENTRATION. OFFERED EVERY FALL SEMESTER.)

Development of skills in working with the large-scale secondary data bases generated for research, health care administration/billing, or other purposes. Students will become familiar with the content, strength, and limitations of several data bases; with the logistics of obtaining access to data bases; the strengths and limitations of routinely collected variables; basic techniques for preparing and analyzing secondary data bases and how to apply the techniques to initiate and complete empirical analysis. Recommended preparation: EPBI 414 or equivalent.

PQHS 550- Meta-Analysis & Evidence Synthesis. 2-3 Units. (Spring)

Systematic reviews use reproducible methods to systematically search the literature and synthesize the results of a specific topic area. Meta-analysis is a specific analytic technique used to pool results of individual studies. Systematic reviews are useful ways to establish one's knowledge in a particular field of study, and can highlight gaps in research which can be pursued in future work. They can also inform the background of a grant. This course is designed to introduce students to the methods of conducting a high quality systematic review and meta-analysis of intervention studies. We will cover the design, methods, and analytic techniques involved in systematic reviews. These concepts will prepare students to conduct their own systematic review or evaluate the systematic reviews of others. Sessions will be lectures, labs, and presentations. Topics include developing a search strategy, abstracting key data, synthesizing the results qualitatively, meta-analytic techniques, grading the quality of studies, grading the strength of the evidence, and manuscript preparation specific to systematic reviews and meta-analysis of intervention studies. Caveat: If you would like to conduct a systematic review of your own that can be published after the course ends, you will need to have several other class members or colleagues willing to work with you on the project. The systematic review should be on a topic where you expect no more than 20-30 included studies in order to be able to complete the review soon after the course ends. Offered as **CRSP 550** and **PQHS 550**. Prereq: **CRSP 401**, **PQHS 431**, **MPHP 405**, **NURS 532**, or Requisites Not Met permission.

Note Page

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Appendix D- CWRU Campus Map

