2024-2025

Department of Population & Quantitative Health Sciences

Program Handbook

MS in Biomedical & Health Informatics

Department of Population & Quantitative Health Sciences School of Medicine, Wood Building
Room WG-57
Case Western Reserve University 10900 Euclid Avenue
Cleveland, Ohio 44106-4945

CASE WESTERN RESERVE
UNIVERSITY

DEPARTMENT OF POPULATION AND QUANTITATIVE HEALTH SCIENCES

Department of Population & Quantitative Health

Sciences

School of Medicine, Wood Building, Room WG-57

Case Western Reserve University

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Additional University Offices

Access Services (IDs & Parking)
Tinkham Veale University Center
216.368.6192
case.edu/access-services/

Career Center
Sears Building, Room 229
216.368.4446
case.edu/studentlife/careercenter/

Financial Aid
Sears Library Building, Room 240
216.368.4530
case.edu/financialaid/

Free Computer Support & Service
Kevin Smith Library, Lower Level
216.368.4357
help.case.edu

Registrar
Sear Library Building, Room 220
216.368.4310
case.edu/registrar

Center for International Affairs
Tomlinson Hall, 1st Floor, Room 143
216.368.2517
case.edu/international/

Student Affairs
Adelbert Hall, Room 110
216.368.2020
studentaffairs.case.edu

University Health and Counseling Services (Student Medical Center)
2124 Cornell Rd
216.368.2450
case.edu/studentlife/healthcounseling/

Police & Security Services Emergency: 911
Urgent Matters; Safe Ride; Escort Service: 216.368.3333
Safe Ride Program (6pm-3am) 216.368.3000
Walking Escorts (24 Hours) 216.368.3300
case.edu/publicsafety/divisions/police

University Circle Police
12100 Euclid Avenue
216.791.1234

A Message from the Department Chair

Welcome to the Department of Population and Quantitative Health Sciences. We are a large research-intense 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

Welcome from the Graduate Program Director

Welcome to the Masters of Science Program in Biomedical and Health Informatics in the Department of Population and Quantitative Health Sciences at Case Western Reserve University School of Medicine! This handbook is a general summary of academic program information and should be used in consultation with an academic advisor. Students should also review the Case Western Reserve University's Student Handbook which describes the University requirements for graduation. The Department of Population and Quantitative Health Sciences has additional expectations and requirements. Those expectations are detailed in this handbook. If a student is uncertain about a requirement or perceives a conflict, then the student should bring this to the attention of her/his academic advisor. Any variation in policy or expectations will be documented and notification will be sent to impacted students.

Congratulations on taking your first step and we are excited to have you in our program!

Sincerely,

Mendel Singer, PhD, MPH
MS in Biomedical & Health Informatics
Program Director
Vice Chair for Education, Department of
Population and Quantitative Health
Sciences

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Mission, Values and General Orientation

The mission of this program is to train outstanding biomedical and health informatics professionals who will become important contributors to primarily health-related research. Our graduates are prepared to be extremely competitive in the job market, while also being prepared for doctoral studies, which many of our graduates choose to pursue.

The use of large, complex, and varied data sets in clinical care and biomedical research presents significant opportunity. There is a great need for professionals who can manage, integrate, analyze, and interpret data to make recommendations that accelerate research, improve clinical care, or shape public policy.

Our program integrates biomedical and health informatics, requiring a broad-based core and extremely flexible electives to allow students with their mentor's guidance to tailor a program that resonates with their personal interests and individual career trajectory. Our students are prepared to serve in a variety of roles from designing studies, integrating large complex data sets, analyzing data, managing projects and teams, leading process improvement in clinical settings, or advancing research that impacts prevention and treatment. They find that our program is an important step supporting career growth in academia, hospitals/health systems, industry, or government.

Students will master the rigorous scientific and analytic methods necessary to be at the forefront of efforts to not only describe, but effectively evaluate and improve population health. Research and professional development seminars will help you keep abreast of current literature and identify important areas of research and collaborative opportunities, as well as guide you in choosing a career path and prepare for the job search. The department operates within a strong interdisciplinary framework involving faculty and staff in the department, the School of Medicine, and across the entire university, as well as leaders in health care institutions and health-oriented organizations and agencies throughout the wider community. More than 200 graduate students outside the M.S. in Biomedical and Health Informatics program are pursuing the Master of Public Health, PhD in Epidemiology and Biostatistics, PhD in Biomedical and Health Informatics, M.S. in Epidemiology and Biostatistics, or the M.S. in Clinical Research – and there are certificate students as well. The rich atmosphere provided by this mix of students simulates the "team science" approach that dominates research today. The diversity in students mirrors the diversity in areas of faculty expertise. Students are encouraged to engage with students and faculty from other programs.

Graduates from accredited universities and colleges will be considered for admission to the department. All applicants must satisfy both CWRU and department requirements for graduate admission. The Master's in Biomedical and Health Informatics program is a 30 credit program. It can be completed in one year or students may choose to do the program at a slower or part-time pace. Students may start the program in either Fall or Spring.

Following the one-year program, students study across the fall/spring/summer semesters. The final, summer semester consists of an internship or practicum that can be done locally in Cleveland or elsewhere, as the required summer course is offered online.

General Requirements

The degree of Masters of Science in Biomedical and Health Informatics is awarded in recognition of general knowledge of foundational areas of biomedical & health informatics and specialized study in a domain area. Our students are prepared to serve in a variety of roles from designing studies, integrating large complex data sets, analyzing data, managing projects and teams, leading process improvement in clinical settings, or advancing research that impacts prevention and treatment. They find that our program is an important step supporting career growth in academia, hospitals/health systems, industry, or government.

The Masters of Science in Biomedical and Health Informatics degree in the Department of Population and Quantitative Health Sciences comprises the following components:

       Required Curriculum (12 credit hours)
       Domain Area Courses (6 credit hours)
       Thesis OR Internship/Practicum (3-6 credit hours)
       Electives (6-9 credit hours)

Required Curriculum (12 credits)

The basic required curriculum is designed to provide MS students with the foundational material. The Basic Required Curriculum is comprised of 12 credits in the following courses:

PQHS 413 Introduction to Data Structures and Algorithms in Python (3 credits-Fall)
PQHS 416 Computing in Biomedical & Health Informatics (3 credits-Spring)
PQHS 431 Statistical Methods in Biological and Med. Sciences I (3 credits-Fall)
PQHS 490 Epidemiology: Introduction to Theory and Methods (3 credits-Fall)

Domain Area Courses (6 Credits)

The MS in Biomedical and Health Informatics program is designed to provide students with both training in interdisciplinary research, innovative methods, and approaches. These domains represent areas of focus within the field of biomedical and health informatics. Exploring these domains contribute to the MS in Biomedical and Health Informatics broad objective of providing interdisciplinary training that equips students to leverage informatics as an integral component of biomedical and health research as well as practice.

PQHS 490 counts for the "Biomedical and Health" Domain. Only the other 2 domains must be satisfied.

Biomedical and Health Domain
- Characterize the information needs of health professionals and researchers
- Lead or participate in the development and use of Electronic Health Record Systems
- Understand and apply epidemiology study methods for population and clinical research

Computation and System Design Domain
- Develop, implement and improve informatics systems
- Implement software engineering techniques to informatics projects
- Understand and apply database management systems fundamentals

Data Analytics Domain
- Apply data analysis techniques for biomedical domain challenges
- Develop and apply probabilistic and stochastic processes to biomedical and health data
- Implement software-based techniques to biomedical data analysis challenge

Electives (6-9 Credits)
In addition to the required courses and domain specific courses, our MS in Biomedical and Health Informatics students are required to complete 6-9 elective credits based on their culminating experience pathway. Students in our Thesis pathway are required to complete 6 credits of electives whereas students in the Internship/Practicum pathway are required to complete 9 credits of electives. Students will work with their faculty mentor or advisor to identify courses that align with their interests and the needs of their culminating experience. Electives can be from either the list of approved courses below or from the list of domain specific courses.

Students interested in focusing on a specific domain area can work with their faculty mentor/advisor and advisory committee to develop a "Concentration". Concentrations focus on one specific domain area and are not required. Students pursuing a concentration would take all of their elective credits within a single domain area instead of taking courses from various domains or the approved elective list.

Thesis or Internship/Practicum Pathway (3-6 Credits)
Students in our MS in Biomedical and Health Informatics program have two pathways to choose from when developing their academic plan of study: Thesis OR Internship/Practicum. The primary difference between the two pathways is that each requires a different culminating project for the degree.

Thesis (6 credits)

For our MS in Biomedical and Health Informatics students who are interested in continuing into a PhD program after completion of the program, we offer the Thesis pathway. This pathway requires 24 credits of coursework and 6 credit hours of thesis work. Students will work with a faculty mentor, create a mentoring/advisory committee to guide and evaluate the thesis, and will present the thesis prior to completing the program. Full time students in the MS in Biomedical and Health Informatics program should expect to complete the program in 16 - 24 months depending. Due to the nature of a thesis project, there is no 11 month intensive plan of study option for students completing a thesis project.

Students will work with their faculty mentor to develop and plan a thesis project. Then the mentoring/advisory committee will guide students in identifying the appropriate domain required and elective courses to provide them with the foundational knowledge required for their thesis topic in the areas of biomedical & health informatics, computation & system design, and data analytics with applications in public health, clinical research, or basic biology.

Internship/Practicum (3 Credits)

For our MS in Biomedical and Health Informatics students who are interested in entering the field immediately after completion of the program, we offer the Internship/Practicum pathway. This pathway offers students the chance to to complete as part of the program an internship or practicum (at least 160 hour long) for their culminating experience. We work with our students to identify opportunities that align with their interests and specialization with our faculty and community partners, such as the Cleveland Clinic, MetroHealth, and University Hospitals. Students are also encouraged to pursue opportunities outside of Cleveland with other regional or national organizations. Our curriculum is designed to allow students to complete their internship/practicum anywhere in the world and still complete the program in as short as 11 months. Students completing the internship/practicum pathway are required to take 3 credits of PQHS 602 - Internship/Practicum and are able to take an additional 3 credit elective.

The internship / practicum experience is focused on providing students the chance to gain professional experience serving as either a consultant or collaborator on a project. The objectives of this mentored experience are: to learn the role of and accompanying responsibilities of being a consulting informaticist, experience the life cycle of a project, develop and apply the interpersonal and communications skills necessary for the field, strengthen skills learned in the program, and to gain insight into the life and career of a biomedical professional. This experience helps prepare our students for future job

interviews and jobs and may lead directly to a job. All students are required to produce a professionally written report in the format of a report to a client or a research paper at the end of the internship or practicum.

PQHS 502 is graded Pass/No Pass. As a required course, the equivalent of a "B" grade is required to earn a grade of "Pass".

Sample Plans of Study

Full Time (2 year Program)

Semester	Course	Credits
Fall	PQHS 413 Introduction to Data Structures and Algorithms in Python	3
	PQHS 431 Statistics I	3
	PQHS 490 Epidemiology: Introduction to Theory and Methods	3
Spring	PQHS 416 Computing in Biomedical and Health Informatics	3
	Domain Area Course	3
	Domain Area Course	3
Fall	Elective	3
	Elective	3
	Elective OR PQHS 651	3
Spring	Thesis: PQHS 651 Master's Thesis OR PQHS 602 Internship/Practicum	3

Full Time (11 Month Intensive Program)

Semester	Course	Credits
Fall	PQHS 413 Introduction to Data Structures and Algorithms in Python	3
	PQHS 431 Statistics I	3
	Domain Area Course	3
	PQHS 490 Epidemiology: Introduction to Theory and Methods	3
Spring	PQHS 416 Computing in Biomedical and Health Informatics	3
	Domain Area Course	3
	Domain Area Course	3
	Elective	3
Summer	Elective OR PQHS 651	3
	Elective	3
	Thesis: PQHS 651 Master's Thesis OR PQHS 602 Internship/Practicum	3

Academic Advisor

Upon acceptance into the MS program, each student will be assigned an initial academic advisor (usually the Program Director) who will guide the student through department and graduate school regulations, assist him or her in designing their first semester course registration and an initial draft of their program of study. Students will often switch their academic advisor to their track leader or other program faculty, and this is encouraged. This can be done by first contacting the current advisor and then emailing the Administrative Director of Non-Clinical Graduate Education. The academic advisor will track the student's progress toward degree completion, help with selecting electives and provide career advice.

Every semester, each student will automatically get an advising hold placed on their account, preventing them from registering. This hold can be removed in the Student Information System (SIS) by their academic advisor or the program director, once they have been satisfied that the student has received proper advising about what courses to take.

Student Responsibility

Students should consult with their academic advisor to plan their program of study in order to carry out their work in accordance with applicable laws, regulations, and procedures. Nevertheless, it is solely the student's responsibility to become acquainted with and adhere to Departmental and University rules, regulations, and administrative procedures governing graduate study, including the University's Standards of Conduct detailed in the Case General Bulletin, Graduate Student Handbook, School of Graduate Studies Statement of Ethics, University Guidelines on Authorship and Policy on Copyright, and the University Policy on Academic Integrity.

International students have additional requirements in terms of maintaining visa status. International Student Services (ISS) in the Center for International Affairs is a critical resource for our international students. ISS can be contacted either by email at international@case.edu or visited in person at 143 Tomlinson Hall. It is the international student's responsibility to ensure that they are currently adhering to all requirements set forth by ISS.

Accepted Electives

Biomedical and Health Domain Accepted Electives		
EBME 410 – Medical Imaging Fundamentals	Fall	3 Credits
MPHP 406 – History and Philosophy of Public Health	Spring	3 Credits
PQHS 440 – Introduction to Population Health	Fall	3 Credits
PQHS 451 – A Data-driven Introduction to Genomics and Human Health	Spring	3 Credits
PQHS 465 – Design and Measurement in Population Health Sciences	Fall	3 Credits
PQHS 490 – Epidemiology: Intro to Theory and Methods	Fall	3 Credits

Computer and System Design Domain Accepted Electives		
CSDS 410- Analysis of Algorithms	Fall	3 Credits
CSDS 433 - Database Systems	Spring	3 Credits
CSDS 458 - Introduction to Bioinformatics	Fall	3 Credits
CSDS 477- Advanced Algorithms	Spring	3 Credits
CSDS 493 - Software Engineering	Fall	3 Credits
PQHS 427 - Geospatial Analytics for Biomedical Health Applications	Spring	3 Credits
PQHS 471- Machine Learning and Data Mining	Spring	3 Credits

Data Analytics Domain Accepted Electives		
EBME 419 - Applied Probability and Stochastic Processes for Biology		3 Credits
PQHS 426 – An Introduction to GIS for Health and Social Sciences	Spring	3 Credits
PQHS 432- Statistical Methods II	Spring	3 Credits
PQHS 453 - Categorical Data Analysis	Summer	3 Credits
PQHS 459 -Longitudinal Data Analysis	Spring	3 Credits
PQHS 515- Secondary Analysis of Large Health Care Data Sets	Fall	3 Credits

Non-Domain Accepted Electives		
BETH 417 – Intro to Public Health Ethics Duration	Spring	3 Credits
BETH 422 – Clinical Ethics: Theory and Practice	Fall	3 Credits
BETH 503 – Research Ethics and Regulation	Fall	3 Credits
CRSP 401 – Intro to Clinical Research	Summer	3 Credits
CSDS 438 – High Performance Computing	Fall	3 Credits
EECS 494 – Intro to Information Theory	Fall	3 Credits
HSMC 412 – Lean Services Operations	Fall	3 Credits
HSMC 420 – Health Finance	Spring	3 Credits
HSMC 421 – Health Economics and Strategy	Fall	3 Credits
HSMC 456 – Health Policy and Management Decisions	Spring	3 Credits
HSMC 457 – Health Decision Making and Analytics	Spring	3 Credits
NEUR 478 – Computational Neuroscience	Fall	3 Credits
PQHS 457 – Current Issues in Genetic Epidemiology	Spring	3 Credits
SYBB 421 – Fundamentals of Clinical Information Systems	Fall	3 Credits
SYBB 459 – Bioinformatics for Systems Biology	Spring	3 Credits

<h1 style="text-align:center">University and Department Policies</h1>

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.

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. Your email account can be accessed online at webmail.case.edu.

IMPORTANT NOTICE: All correspondence for current students from the PQHS will be sent to students' CWRU email addresses. PQHS will not send this correspondence to personal email addresses. It is the student's responsibility to regularly check their CWRU email account.

Statement on Professional Conduct
The Case Western Reserve University MS in Biomedical and Health Informatics is a graduate degree, focused on preparing students to become experts and leaders in population health sciences. The 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 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 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 https://case.edu/gradstudies/current-students/policies-procedures. All students should become familiar with the Graduate Student Handbook and consider it 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 MS Degree in BHI 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 Internship/Practicum (PQHS 602) and its final comprehensive report satisfies the requirement for a Comprehensive Exam for the degree.

Student Records

The PQHS 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 contact—the ties of trust which bind the university community together.

IRB Approval of all Research and Protection of Data
All dissertation work 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. 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 https://case.edu/gradstudies/sites/default/files/2018-04/SGS-Academic-Integrity-Policies-and-Rules.pdf. 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 AI
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 prior to using AI tools for coursework.

Statement on Plagiarism
Unless specifically stated otherwise, **the faculty of the PQHS 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.

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: https://case.edu/studentlife/university-policies/alcohol-policy-and-guidelines.

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 students 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 hookas, pipes and bongs, 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 will be issued a warning from either their Program Director or in certain circumstances the Vice Chair for Education. Students will receive no more than one

warning from the program/department. 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. Students are not guaranteed to receive a warning prior to other disciplinary action being taken by the department or the University.

Academic Probation:

Students who are in violation of program, department and/or university policies will be placed on academic probation by either their Program Director or in certain circumstances the Vice Chair for Education. Students placed on academic probation will receive a letter from the program/department detailing the reasons for the probation and a course of action (including deadline) for the student to be removed from academic probation. If a student fails to meet the conditions and/or deadline established in the academic probation letter, they can be suspended or separated from the program and/or the University. Any student failing to maintain good standing in their program will automatically be placed on academic probation. Qualifying for a second 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, qualitied 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 PQHS experiences (e.g. practicum, seminar, workshops).

Maintenance of Good Standing

To remain in good standing within the MS in Biomedical and Health Informatics program, students must satisfy the following conditions:

- Complete all 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 "B" in any of the required courses. If illness or other circumstances intervene, the student must notify the course instructor and advisor as soon as possible.
- Receive a grade no lower than a "C" in any concentration/track course or elective. 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 students have 5 years to complete their degrees before needing to petition for an extension.

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.

Additional language for good academic standing:

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.

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)

Grades of I can only be assigned for letter-graded and Pass/No Pass courses for extenuating circumstances and only when a student who is passing the course fails to complete a small, evaluative segment of the course. *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 made up and the change of grade recorded in the **Student Information System (SIS)** by the date specified by the instructor, but no later than the 11th week of class in the semester following the one in which the I grade was received. In exceptional circumstances a student may petition for an extension of the incomplete deadline of no more than one additional semester. The petition should be submitted by the original deadline date, and must contain the reasons for the extension, a proposed new completion date and a letter from the instructor supporting the extension.

When a student fails to submit the work required for removing the Incomplete by the date established, the instructor will enter a final grade that assumes a failing performance for the missing work. In the absence of the assignment of a grade by the instructor, the Registrar will convert the I to F when the deadline for making up Incomplete grades from a previous semester has passed.

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.

Minimum Course Grade Policy – PQHS Graduate Programs

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/Track-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.

	Course Grade	
Course Type	**C**	**D, F, No Pass, U**
Program Required Courses	W, PE	PM, Retake or Substitute
Other Courses		
PQHS/CRSP/MPHP courses:*MS or MPH Program*	GS	PM, Retake or Substitute
PQHS/CRSP/MPHP courses:*PhD Program*	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):
1. 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.
2. 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, and failure to engage promptly or appropriately with the program).

Changing a Course Grade

If a student needs to have a course grade changed from an incomplete, or from no entered grade, 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 fill out and sign a yellow change of grade card, and submit it to the Graduate Program Director for signature and submission to graduate studies.

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 yellow grade change card and submit to the Graduate Program Director for approval, signature, and submission to graduate studies. This request from the instructor must be made within 30 days of the grade posting to SIS, and must be accompanied by an e-mail to the Graduate Program Director explaining why the change is justified.

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 required 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 required 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**.

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**.

Leaves of Absence and Other Time-off

All students who are admitted to the Ph.D. program in the Department of Population and Quantitative Health Sciences are expected to pursue their studies according to a systematic plan. If it becomes necessary for a student to interrupt studies before completion of the degree, the student must request, in writing to the Graduate Program Director, a leave of absence. The leave does not ordinarily extend the time limitation on progress to the degree. Leaves of absence may not exceed two consecutive academic semesters, and the maximum amount of leave permitted per graduate program is four semesters. Petitions for a leave of absence require a form available from the School of Graduate Studies and require the approval of the student's academic advisor, Graduate Program Director, and Dean of Graduate Studies. Leaves of absence may be used for the medical conditions related to pregnancy and childbirth.

Trainees with stipends are eligible for a total of two weeks of vacation per year and University holidays. The period between semesters is considered to be an active time of research and research training and is not considered to be a vacation or holiday. Vacation timing must be approved by the research advisor in advance.

Trainees may receive stipends for up to 10 calendar days of sick leave per year with no year-to-year accrual. Sick leave may be used for the medical conditions related to pregnancy and childbirth. Graduate students are entitled to paid parental leave for the adoption or birth of a child. The primary caregiver is entitled to 6 weeks leave and the other parent or domestic partner is entitled to 3 weeks leave. When both parents are supported graduate students, the leave may be used consecutively or together. The leave must be used within 12 months of birth or adoption. Parental leave must be approved in advance in writing by the Program. It is permissible to add parental leave 2 and sick leave together for the adoption or birth of a child.

Many international students are not eligible to take a leave without jeopardizing their student status; prior approval from International Student Services is required.

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.

Graduation
To receive a degree, the student is required to apply for graduation through the Student Information System (SIS) in the School of Graduate Studies before the posted deadline during the semester the student expects to complete all degree requirements, and must be registered during the semester in which the degree is awarded. It is the responsibility of the student to secure signatures and return the necessary forms to the School of Graduate Studies on time.

Each student who applies for graduation should consult the **calendar** from the School of Graduate Studies for the various deadlines.

It is expected that all students will be supported throughout their graduate tenure at CWRU by a combination of resources, as described above. However, to maintain support students are required to maintain a cumulative grade point average of 3.5.

Tuition

Graduate Students registered will be charged tuition according to the schedule for 2019-2020. Up-to-date tuition information can be found at https://case.edu/studentaccounts/tuition-fees/graduateprofessional-tuition-fees/school-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.

Financial Responsibility Agreement

All incoming students or students seeking a new degree program are required to complete the **Student Financial Responsibility** 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 https://studentaid.gov/h/apply-for-aid/fafsa.
- Complete the CWRU Financial Aid Form available online at https://case.edu/financialaid/myfinancialaid.
- Verify that Memorandum of Assistance (MOA) sent to the Office of University Financial Aid from your academic 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.** Please note that Veale Center will still be free to use with your Case ID card: **https://case.edu/wellness/facultystaff/resources/fitness/veale-recreation-center.**

Support for Students

Graduate study may be a stressful time for students, revealing a need to engage additional resources. It is helpful to set goals and personal deadlines. Students may consider tutoring support for learning disabilities through Student Affairs/Educational services, and/or counseling through University Counseling Services. University Counseling Services (UCS) and the Divisions of Collegiate Behavioral Health (CBH) and Prevention and Recovery Services (PRS) provide individual, group and couples counseling, psychiatric consultation, psychological and learning disabilities testing, and referrals for community services for all students and their spouses or partners.

<div align="center">**Campus Resources**</div>

School of Graduate Studies

203 Tomlinson Hall

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). Full information about the School of Graduate can be found on their website: **gradstudies.case.edu.**

Office of Student Affairs

110 Adelbert Hall, (216) 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, (216) 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: https://case.edu/studentlife/dean/international-student-resources-engagement

University Counseling Services

201 Sears Library Building, (216) 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: https://case.edu/studentlife/healthcounseling/

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: https://case.edu/studentlife/healthcounseling/health-services

Educational Services for Students

470 Sears Library Building, (216) 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: **https://case.edu/studentlife/academicresources/**.

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.

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

220 Sears Library, (216) 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: https://case.edu/financialaid/

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

Tinkham Veale University Center, Room 248, (216)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 https://case.mywconline.com/. 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 **https://case.edu/artsci/writing/resources/writing-resource-center.**

Office of Inclusion, Diversity and Equal Opportunity

315 Adelbert Hall, (216) 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
https://case.edu/diversity/.

Office of Multicultural Affairs

450 Sears Building, (216) 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

- Wood Building Lounge (between EPBI Office and Swetland Center for Environmental Health) - seating for 8 people
- 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 **https://case.edu/studentlife/studentcenters/programming-spaces/thwing-student-center** 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.

Student Information System (SIS)

The Student Information System (SIS) is a secure, flexible, web-based environment for creating and managing academic records at Case Western Reserve University. SIS uses the one-login username and password associated with your CWRU email.

The Student Center section of the SIS is the main launching point for accessing academic, financial and personal information. SIS can be accessed via the "quick link" section at the bottom of the CWRU homepage. The following services are available through SIS:

- Schedule of Classes
- Registration
- Degree Requirements Report and What-if Reports
- Grades and Transcripts
- My Planner
- Financial Account Inquiry
- Payments
- Authorized Users (Parent Access)
- Address and Phone Number Maintenance
- Emergency Contact Maintenance
- Privacy Settings (FERPA)

Students can access training guides, information, references, and FAQs through the **University Registrar**.

This site is updated any time there are changes made regarding the SIS. The University registrar is also available to help with SIS-related