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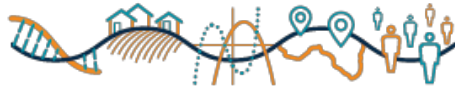
**Department of Population &
Quantitative Health Sciences**

Program Handbook

Ph.D. in Biomedical & Health Informatics



SCHOOL OF MEDICINE
CASE WESTERN RESERVE
UNIVERSITY



**DEPARTMENT OF POPULATION AND
QUANTITATIVE HEALTH SCIENCES**

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www.case.edu/finadmin/security/access/access.htm

Career Center

Sears Building, Room 206 (216)

368-4446

studentaffairs.case.edu/careers

Financial Aid

Yost Hall, Room 417A

(216) 368-4530

finaid.case.edu

Free Computer Support & Service

11424 Bellflower Rd.

(216) 368-4357

help.case.edu

Registrar

Yost Hall, Room 110 (216)

368-4310

www.case.edu/registrar

Center for International Affairs

Tomlinson Hall, 1st Floor, Room 143

(216)368.2517

case.edu/international/international-student-services

Student Affairs

Adelbert Hall, Room 110

(216) 368-2020

studentaffairs.case.edu

University Health Service (Student Medical Center)

2145 Adelbert Rd. (216) 368-

2450

studentaffairs.case.edu/health

University Counseling Services

Sears Building, Room 201 (216) 368-

5872

studentaffairs.case.edu/counseling

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Urgent Matters; Safe Ride; Escort Service: (216) 368-3333

Safe Ride Program (7pm-3am) Security

Escort Service (24 Hours) Security

(Information) - (216) 368-4630

www.case.edu/finadmin/security/

University Circle Police

2100 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-intensive department that investigates a wide range of research questions from community-based public health disparities surrounding tobacco use to the genetic underpinnings of human disease and the environmental, behavioral, and social variables that contribute to these diseases. We are unusual in that we use and integrate 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 quantitative and qualitative data scientists, reflecting the growing demand for professionals trained across disciplines including epidemiology, biostatistics, informatics, genetics, Population Health, Public Health, and Health Services Research. Our goal is to ask important questions and seek answers that help shape best practices within health systems and their surrounding communities.

Our research spans everything from cells to society. 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 getting to know you as you get 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 and proud 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

Table of Contents

A Message from the Department Chair	4
Program Overview	8
Professional Commitment and Culture	8
Planned Program of Study	9
Student Responsibility	9
Academic Advisor	10
Coursework for the Ph.D. Degree in Biomedical & Health Informatics	10
Rotations	12
Research Advisors.....	13
Statement on Professional Conduct.....	28
University Student Code of Conduct	29
Failure to Comply	29
Academic Policies & University Requirements.....	29
Student Records	30
Standards of Conduct	30
Statement on Ethics	30
Academic Integrity.....	31
Statement on Plagiarism	31
Policy of Non-Discrimination	32
Sexual Harassment Policy.....	32
Sexual Assault Policy.....	33
Consensual Relationships	34
Smoking Policy.....	34
Alcohol Usage Policy.....	34

Drug Use Policy.....	34
Grading.....	39
Internal Transfer of Credit	41
Withdrawal.....	43
Tuition.....	43
Memorandum of Assistance.....	44
Financial Responsibility Agreement.....	44
Living Expenses.....	44
Financial Aid.....	44
Medical Insurance Requirement.....	45
Student Wellness Fee.....	45
Campus Resources.....	46
School of Graduate Studies	46
Office of Student Affairs	46
110 Adelbert Hall, 368-2020.....	46
International Student Services	47
143 Tomlinson Building, 368-2517.....	47
University Counseling Services	47
201 Sears Library Building, 368-5872.....	47
University Health Service	47
2145 Adelbert Road, 368-2450.....	47
Educational Services for Students	47
470 Sears Library Building, 368-5230.....	47
University Libraries	47

Access Services	48
18 Crawford Hall, 368-CARD (2273)	48
Office of Financial Aid	48
417A Yost Hall, 368-4530	48
Lesbian, Gay, Bisexual, and Transgender Center	48
Suite 179, Tinkham Veale University Center, 368-LGBT(5428)	48
Flora Stone Mather Center for Women	48
Tinkham Veale University Center, Room 248, 368-0985	48
Writing Resource Center	49
104 Bellflower Hall, 368-3798	49
Office of Inclusion, Diversity and Equal Opportunity	49
315 Adelbert Hall, 368-8877	49
Office of Multicultural Affairs	50
450 Sears Building, 368-2904	50
Student Space on Campus.....	50
School of Medicine Space	51
University-wide Space	51

Program Overview

The Biomedical & Health Informatics doctoral program trains researchers in biomedicine, population health, and clinical care domains. Program trainees will acquire a core set of skills spanning computing, biostatistics, and biomedical research through a combination of course work as well as participation in research in the Population and Quantitative Health Sciences (PQHS) department.

The PQHS department reflects the vision of the next generation of data-driven biomedical research that leverages a unique combination of faculty members who have expertise in basic science, clinical care, computer science, mathematical statistics, community healthcare, and epidemiology.

Current faculty research projects include the analysis of clinical data for early markers of kidney disease, the use of big data technologies for processing streams of seizure data, and applying machine learning to analyze libraries of information to identify new applications for existing therapeutics. This gives students in the BHI program a unique opportunity to define and address highly inter-disciplinary research themes, which is a valuable component of a BHI researcher.

The curriculum for the doctoral program is designed for students to acquire skills in the three areas of concentration:

- **Data Analytics** with a focus on statistics and data wrangling
- **Biomedical Health** with a focus on systems biology, clinical, and health issues
- **Computational and System Design** with a focus on knowledge representation, information retrieval, and Big Data

The core curriculum of the doctoral program involves seven courses – four required courses and three electives. All first-year students admitted to the doctoral program are fully funded by the CWRU School of Medicine, including stipend, tuition, and health insurance. During the first year, students perform research rotations with different faculty members, which helps them select a research advisor. After the conclusion of the first year, students will be supported by their research advisor for the remainder of their doctoral program.

Professional Commitment and Culture

All students in the program are expected to maintain appropriate professional standards. This includes regular and on-time attendance at classes and seminars and participation in a variety of professional development activities. Strong involvement in research, service, and professional social activities is encouraged, with an emphasis on developing exceptional research credentials, independent critical thinking, and problem solving.

Students must recognize that enrollment in this rigorous graduate program may place demands on their time on evenings and weekends,

and may prohibit them from participating in additional time-consuming activities. Pursuit of a doctoral degree takes time and commitment beyond that spent in the classroom, and therefore, it is expected that students will manage their time in accordance with the programmatic demands. Students are expected to display maturity of character, interest in and enthusiasm for the practice of research, excellence in development of interpersonal communication, and high professional commitment to the program of study. The highest degree of integrity, honesty, and courtesy, all important professional values, is expected throughout their courses of study. Through the activities of the Ph.D. student organization, all students are expected to contribute to their own professional development by taking initiative in organizing research seminars, leading journal clubs, organizing student-faculty retreats, and promoting other activities that enhance the stature of the program.

Planned Program of Study

In the first year of study each student will be assigned an academic advisor (see Academic Advisor, below) by the Graduate Program Director (GPD). After the student has chosen a research mentor (by the end of the first year of study) that faculty member will become the academic advisor. In adherence with the School of Graduate Studies' policy, during the first semester of study, all students are responsible for ensuring that they have a Planned Program of Study (PPOS) on file, submitted through the Student Information System (SIS). The PPOS consists of all courses a student plans to take to meet the requirements for his/her degree. This includes all required coursework, electives, and seminars (even if they are for zero credit hours); however, the PPOS does not include registration of 701

credits. The PPOS must be approved by the student's academic advisor and the GPD and should be submitted by October 15 of the first semester of study toward the specified degree. If an update is necessary, it must be approved and submitted by October 1 of each subsequent year in which the student is registered. Students are responsible for discussing their past background and future career goals with their academic advisor so that the best possible plan is developed. A complete [step by step guide](#) on how to submit a PPOS can be found through the University Registrar's webpage.

Student Responsibility

Students should consult with their academic advisor in their first year to develop their PPOS to carry out their work towards the Ph.D. After the first year, consultation will extend to either the mentoring committee or dissertation committee. 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](#). If questions arise about ambiguity or interpretation of the departmental rules, regulations, policies, or procedures, they should be discussed with the Ph.D. program leadership for clarification and resolution. While mutual agreement is desired, in all cases the final decision rests with the Ph.D. program leadership.

It is expected that students in the Ph.D. program will take full responsibility for their academic progress within and beyond the classroom. Although some elements of didactic learning are necessary, emphasis will be placed on synthesizing information across classes, experiential learning, and critical/broad interdisciplinary thinking. This will involve developing increasing independence as young scientists, who consult with their mentors and committee members. The gradual gaining of independence during Ph.D. training represents a critical transition of students into full members of the scientific community, able to respectfully explore/discuss/debate/dispute scientific evidence for and against vital biomedical and population health problems.

It is also expected that all students in the Ph.D. program will maintain the highest level of academic integrity. The expected standards of academic integrity can be found at: <https://students.case.edu/policy/integrity.html>

Academic Advisor

Upon acceptance into the Ph.D. program, each student will be assigned an academic advisor with whom to confer about academic plans. The advisor will help guide the student through department and graduate school regulations, assist him/her in designing a PPOS, and track progress through the first year of the program. During the first year of study this faculty member will be key to ensuring that students make adequate progress in the required Core program of the department. In most cases, the initial academic advisor will be the Graduate Program Director. By the end of the first academic year, each student will select a research advisor who will serve as their academic advisor for the rest of their time in the program. Also, at the same time, in consultation with their new academic advisor each student will propose a mentoring committee followed by a dissertation committee, as described below.

Students are required to meet with their academic advisor or mentoring/dissertation committee prior to registering each semester to discuss course plans for the semester. Once completed, the advisor will remove the “Advisor Hold” on the student’s record within the Student Information System (SIS) so that he/she may register for classes.

During the course of their first year of study, students may request a change in academic advisor to another faculty member who has a primary appointment in the department and an appointment in the Ph.D. program. To change advisors, students must complete and sign the form available on the department’s website and deliver it to the Administrative Director of Non-Clinical Graduate Education. After the first year and in exceptional situation students may change mentors but only through the rules defined by the School of Graduate Studies.

Coursework for the Ph.D. Degree in Biomedical & Health Informatics

All entering students will take a common set of courses in their first and second years. Students entering with prior graduate training may be eligible to enter with advanced standing and their coursework will be adjusted accordingly. Such situations will be handled on a case-by-

case basis, following discussion with the Graduate Program Director.

The Doctor of Philosophy degree in the Department of Population and Quantitative Health Sciences comprises requires 54 total credits (36 credits of coursework and 18 credits of dissertation research).

1. Core Curriculum (12 credits)
 - i. PQHS 416 – Computing in Biomedical and Health Informatics
 - ii. PQHS 431 - Statistical Methods I
 - iii. PQHS 432 – Statistical Methods II
 - iv. MPHP 532/HSMC 432 – Introduction to Health Informatics
2. Concentration Courses (9 Credits)
 - i. Biomedical and Health Informatics (3 Credits)
 - ii. Computation and System Design (3 Credits)
 - iii. Data Analytics (3 Credits)
3. Electives (12 Credits)
4. Required Research Activities (3 Credits)
 - i. PQHS 501 – Research Seminar (0 Credits – must take every semester)
 - ii. PQHS 444 – Communicating in Population Health Science Research (1 Credit – taken twice)
 - iii. IBMS 500 – Research Ethics (1 Credit)
3. Seminar Requirements
4. Passing the General Examination
5. Defending a Dissertation Proposal (including an oral public presentation of the proposal), the “qualifying examination”.
6. Dissertation Research Credits (total of 18 credits)
7. Dissertation Completion (oral public defense and final written dissertation)

Year 1

Year 1, Fall Semester		
PQHS 431	Statistical Methods I	3 Credit Hours
MPHP 532/ HSMC 432	Introduction to Health Informatics	3 Credit Hours
Concentration Elective		3 Credit Hours
PQHS 501	Research Seminar	0 Credit Hours
		9 Credit Hours Total

Year 1, Spring Semester		
PQHS 432	Statistical Methods II	3 Credit Hours
PQHS 416	Computing in Biomedical and Health Informatics	3 Credit Hours
PQHS 444	Communicating in Population Health Sciences Research	1 Credit Hour
Concentration Elective		3 Credit Hours
PQHS 501	Research Seminar	0 Credit Hours
		10 Credit Hours Total

Students are required to enroll in PQHS 501 (Research Seminar) throughout their entire time as students in the program.

Students in their first year will present a paper from the literature. Beginning in their second year, students will be required to present their research at least once per year in PQHS 501. This requirement applies to all students in the program, even those who have completed their PQHS 501 requirement. For more junior students, presentation of their research ideas or directions is expected. For more senior students, presentation of their research progress is expected. These presentations serve multiple purposes. The first is to help the student hone their speaking skills. The second is to encourage open discussion of projects with the hope that input from other department members will ultimately improve the research.

Rotations

In addition to coursework in their first year all students will do three research rotations chosen from an approved list of potential mentors. The purpose of a rotation is to provide students with exposure to the laboratory/scientific culture pervasive in that discipline and research group, and to determine if the student-mentor fit is appropriate. Faculty members conduct their independent research, and run their laboratories using a variety of styles. The rotation gives the student and faculty member an opportunity to determine if they have similar work styles, and if the scientific culture and training will lead to successful training of the student. An approved mentor may not select a student if their areas of interest do not mesh, if they do not have the appropriate background, or if the student does not share training expectations of the faculty. A student should not select a particular research advisor if the research environment is not suitable to their individual growth, or if the research questions do not interest the student. In summary, a rotation should be regarded as a “tasting menu”, with “micro-experiences”, so the student can sample a variety of projects and cultures and select the best for their career and ultimate growth.

Rotations will be at least 8 weeks and may begin the summer prior to matriculating. We discourage protracted projects that linger into the next rotation in order to provide a fresh start with each experience. Students must turn in to the Administrative Director of Non-Clinical Graduate Education a completed [Rotation Notification Form](#) at least one week prior to starting a rotation.

After each rotation both the student and the faculty member will report results of the rotation to the Administrative Director of Non-Clinical Graduate Education by submitting a [Lab Rotation Evaluation Form](#). Topics to be discussed by faculty may include each student's work ethic, skillset, and knowledge. Students may comment on faculty availability, mentoring style, and appropriateness of research projects for a Ph.D. Other relevant comments may also be added. We encourage students to communicate with faculty and the research team very frequently to ensure that their choices for rotation and final research group selection remain open. All evaluations will be available to faculty who are considering having the students enter their research groups. The evaluations of the faculty will only be available to students who are choosing research laboratories.

Research Advisors

At the end of the first academic year, in discussions with the faculty with whom they have rotated, students will choose a research laboratory in which to do their dissertation research. Only a single faculty member with evidence of adequate financial support will be allowed to take students into their laboratory. We discourage partial funding of a student by two principal investigators. However, exceptions may be made if an explicit co-mentoring agreement is authorized by the Graduate Program Director, and endorsed by the Vice-Chair for Education. Only a mentor who is a faculty member with a primary or secondary appointment in the department and is willing to be his/her research advisor may be chosen; secondary faculty members will need to commit to the same level of financial, research, and mentoring support of the graduate student as a primary faculty member. The Ph.D. program leadership reserves the right to determine participation of any faculty member as an advisor in the Ph.D. Program.

The research advisor will then assume the major responsibility for facilitating, guiding, and advising the student in his or her research. The research advisor will also assume financial responsibility for his/her students. This may include funding from other faculty on a collaborative basis so long as it does not detract from the student's major focus – their dissertation research. Such arrangements must be approved by the Ph.D. program leadership. Each year a student support request form will be required from the research mentor and other faculty providing financial support. This form must then be submitted to the Administrative Director of Non-Clinical Graduate Education for approval by the Ph.D. program leadership. If a faculty member's status for funding a student in the program changes, they are responsible for transmitting this information to the Administrative Director of non-clinical educational programs within 30 days.

Mentoring Committee

Following the first academic year and choice of a research laboratory, students will form a mentoring committee. This committee will consist of the research advisor and two other faculty members, at least one of whom who will have a primary appointment in the Department and will serve as the committee chair. This committee will help guide the student through his/her coursework and preliminary research. At the first committee meeting the PPOS will be re-assessed and revised.

The committee will meet at least once per semester until a dissertation committee is chosen (see below), but no longer than 3 semesters. It is expected that all committee members will be present at each mentoring committee meeting. In rare cases, a member may participate via telephone or other electronic means, but he/she must still sign off on the post-meeting report.

After each meeting, a report will be produced that describes the progress and goals for the overall academic and professional development plan, with specific milestones and corresponding timelines. After each meeting the committee is required to assess student progress and make an explicit statement about pace of progress (rated from outstanding to poor as listed on the meeting report form). In the case of a poor or fair evaluation, the committee chair, student, and research advisor will be required to meet with the Graduate Program Director to discuss remedying any issues. This meeting may be held with all parties, or may involve individual meetings, depending on the circumstances. This report must be signed by all committee members. A template for the meeting report can be found [here](#).

Each committee meeting will begin with a brief consultation between the research advisor and the committee members in the absence of the student. Each meeting will also end with a similar consultation prior to reporting recommendations to the student. Finally, after the committee has reported its recommendations to the student, the committee will meet with the student in the absence of the research advisor to discuss either scientific or personal issues.

Year 2

Year 2, Fall Semester		
PQHS 444	Communicating in Population Health Sciences Research	1 Credit Hour
Concentration Elective / Electives as determined by Mentoring Committee		9 Credit Hours
PQHS 501	Research Seminar	0 Credit Hours
10 Credit Hours Total		

Year 2, Spring Semester		
PQHS 445	Research Ethics in Population Health Sciences	0 Credit Hours
IBMS 500	Ethics & Biomedical Research	1 Credit Hour
Concentration Elective / Electives as determined by Mentoring Committee		9 Credit Hours
PQHS 501	Research Seminar	0 Credit Hours
10 Credit Hours Total		

By the end of the Fall semester of the 2nd year, all students will take the departmental general examination, which is a comprehensive oral examination (described below). Students may form their dissertation committee (see below) once they have passed their general examination, but by must do so by the end of the semester following their oral examination

Students who have passed their general examination and have formed their dissertation committee must write and defend a dissertation proposal (the “qualifying examination”) to their committee. This should occur by the beginning of the fall semester of their third year, but no later than midway through this semester. The format of the dissertation proposal is described below.

General Examination

Students are required to sit for the department general examination before the beginning of the spring semester of their second year. This examination will be based on the analyses of a dataset chosen from several available sets given to the students at least 3 weeks prior to the examination. The exam will be an oral exam. The student will perform analyses of the data, interpret the results in light of a defined scientific question, and design a next set of experiments/studies to be performed to follow-up the results. This will include the development of subsequent hypotheses in the area of research.

The examination will test the students' ability to integrate materials and concepts they have learned across the core classes, providing evidence that they can think independently and can understand and apply the broader concepts underlying the core curriculum. In preparing for the examination, students should take the initiative to consider how the concepts and readings for one class apply to other classes and population health research in general. Students are encouraged to form discussion groups with their fellow students, read the relevant literature, and attend seminars to strengthen these skills.

Each student will provide an in-depth oral analysis of the data set. This will include formal analysis and interpretation as well as the strengths and limitations of the provided data set. The student will be expected to provide a research agenda on how they would extend the study from which the data was derived to better address the problem of interest. This exam will be presented orally to the examining committee, who will determine whether the student has adequately analyzed and interpreted the data as well as proposed appropriate additional studies.

The examining committee will consist of at least four but no more than 5 departmental faculty members. Each student will prepare an oral presentation lasting no more than 20 minutes. This will be followed by questioning regarding the analyses, interpretations and research plans going forward. It is expected that each student will be able to develop a cohesive research plan based on the analyses.

The examination may cover any topic covered in the Ph.D. core coursework and contain questions that synthesize content across the different core courses. A student may pass the examination, pass the examination conditionally, or fail the examination. A conditional pass will be deemed appropriate when there exist only minor deficiencies in the examination

that can be addressed by one or a few remedies within no more than one month. Many students who eventually defend their dissertations successfully may receive a conditional pass in the general exam, typically because of the inability to synthesize materials across disciplines during the early phase of training. To pass or receive a conditional pass at least 4 members of the committee must support this decision. A student who fails the examination may retake the examination once no later than two months after the first attempt. A second failure will result in removal from the Ph.D. program. A student who fails the department general examination may be eligible to complete requirements for a conciliatory M.S. degree. The requirements for an M.S. will be decided on a case-by-case basis by the Ph.D. program Internal Advisory Committee.

Dissertation Committee

After successfully passing the general examination and at the end of their second year in the program each student, in consultation with their research mentor (advisor) and approved by the program leadership, will choose a dissertation committee; inviting the committee members to be on their dissertation committee is the responsibility of the student. The committee will consist of at least four University faculty members and must include the research advisor, a committee chair (not the advisor), who must have a primary appointment in the department, a third member from the department, either primary or secondary, and according to Graduate School rules a fourth member from another department within the University. An additional member may be added to the committee but the total number should not exceed five. In exceptional cases committee members may come from outside the University but this requires permission of both the Graduate Program Director and (by petition) the Dean of the Graduate School. The petition is the responsibility of the student and the advisor. The Graduate Program Director will be an *ex officio* member of all dissertation committees.

The dissertation committee will meet at least once per academic year semester throughout the course of graduate study. After each meeting a written report documenting progress and goals to be met prior to the next meeting will be prepared by the committee chair in consultation with the other members and the student. The final report must be signed and approved by all committee members. The report will be provided to the student and the Administrative Director of Non-Clinical Education no more than 2 weeks following the meeting. Progress will be judged in part by the accomplishment of described goals from prior meetings. A template for the meeting report can be found [here](#) or supplied by request from the Administrative Director of Non-Clinical Graduate Education.

The dissertation committee will advise the student on his/her research program, evaluate progress towards the degree, and help in the professional development of the student. In addition, the committee will serve as the primary instrument for mediating any personal or professional issues that arise during the student's tenure at CWRU. This may involve addressing conflicts with the research advisor, timely acquisition of research materials, credit on publications, or acceptable workload. The chair of the committee will ensure that all procedures of the program are followed and that meetings and all interactions between the student and the committee members proceed in a productive and professional manner. The committee chair will also be the first person who will address any issues regarding student

performance or interactions with faculty. In the event that such conflicts arise that cannot be addressed by the committee or the committee chair, the committee chair will approach the Graduate Program Director to resolve the situation.

Each dissertation committee meeting will begin with a brief consultation between the research advisor and the committee members in the absence of the student. Each meeting will also end with a similar consultation prior to reporting recommendations to the student. Finally, after the committee has orally reported its recommendations to the student, the committee will continue to meet with the student in the absence of the research advisor to discuss either scientific or personal issues.

To form a dissertation committee, students must complete the Dissertation Committee Notification form (available on the department website) and submit it to the Administrative Director of Non-Clinical Education. All dissertation committees must adhere to both the requirements of the [School of Graduate Studies](#) and the department and be approved by the Graduate Program Director.

Dissertation Proposal Defense

After passing their general examination, each student will choose a dissertation topic in consultation with their research advisor. Each student will write a dissertation proposal based on this topic. Although the student may receive advice on the dissertation proposal from the research mentor and other faculty, the document is to be written by the student in its entirety following academic integrity standards.

The proposal will be written in the format of an NIH R01 proposal. Each proposal must include a single specific aims page, a background section, and an approach section. The main body of the proposal, not including the specific aims, will be limited to 12 pages. The main body of the proposal will include a literature review delineating the background and significance of the proposed work, which research gaps it will fill and how it will fill them, its innovation, any preliminary data, and the explicit approaches designed to address the aims. The proposal should be written clearly, in English, at a level of understanding suitable for those outside the specialty area. Students who are preparing their dissertation proposal defense should discuss expectations and formats with more senior students. Sample NIH proposals are available planning of dissertation proposals (<https://www.niaid.nih.gov/grants-contracts/sample-applications>). Reviews (critiques) of some proposals are also posted online along with the proposal, indicating positives and negatives of the proposal from reviewer perspective. Other questions regarding the proposal may be taken up with the Graduate Program Director.

The proposal must be defended in a public presentation. All students are encouraged to attend the public presentation and are expected to ask questions at the end of the presentation. At least two weeks prior to the scheduled oral presentation of the proposal, the proposal document must be made available to the entire committee. At that same time, notice of the oral presentation of the proposal (including title, abstract, and official announcement of the proposal) must be submitted to the Administrative Director of Non-Clinical Graduate

Education for public circulation including the departmental faculty and students. The oral presentation will be open to the public with an expected audience of Department faculty and students. All dissertation committee members are required to attend the public presentation. In the unusual circumstance in which there is concern about the dissertation, the committee (by majority vote) may at this point recommend that the defense be postponed.

Following the public proposal presentation and question and answer session, which together should be no longer than 60 minutes, there is a closed oral defense before the committee. Committee members will hold their questions until the closed session. The committee then meets privately to decide on whether to pass, conditionally pass, or fail the defense and decide on any recommended changes to be made to the proposal. The research advisor, optionally with the committee, then meets with the student to share the committee's decision. The committee will then submit to the Graduate Program Director its pass/fail recommendation and a copy of the written (possibly revised) proposal. A student may either pass, pass conditionally, or fail. In the case of a conditional pass the range of changes requested can include minor revisions to the document or a second oral defense of specific aspects of the proposed research; this is to be determined by the dissertation committee. The conditions must be met within four weeks after the proposal defense, unless otherwise specified by the committee and approved by the Graduate Program Director.

In the case of failure, the student will have one more opportunity to defend the proposal. Two members of the committee voting to 'fail' will result in failure, regardless of the number of members on the dissertation committee. Failure may necessitate rewriting of the written document, as determined by the committee, or simply another oral defense. In either case the exam must be retaken within two months of the first attempt. A second failure will result in removal from the Ph.D. program. The student may be eligible to complete requirements for a conciliatory M.S. degree. The requirements for an M.S. will be decided on a case-by-case basis by the Ph.D. program Internal Advisory Committee.

In the case of a pass recommendation by the committee, the Graduate Program Director will review the documentation, materials, and committee recommendation. The Graduate Program Director will advance the student to candidacy except in the rare situations in which the Graduate Program Director deems there to be substantial concerns with the document or the oral defense. In this case, the Graduate Program Director will first consult with the Program Internal Advisory Committee and then meet with the dissertation committee and the student to discuss how to remedy any deficiencies.

Once the proposal is approved, the student may commence independent research on his/her dissertation topic. This will include registration for PQHS 701 credits. To meet requirements for the Ph.D. each student must satisfactorily complete 18 credits of PQHS 701 in addition to the core courses and electives totaling to 42 credits. To register for PQHS 701, students must complete and submit their [Advancement to Candidacy form](#) to the Administrative Director of Non-Clinical Education.

Students will be required to use the approved dissertation proposal as the basis of a grant proposal submission within six months of passing

the proposal defense. For US citizens and permanent residents this will usually be in the form of an NIH Ruth Kirchstein National Research Service Award (F31) application. For students not eligible or for those with topics not appropriate for an NRSA the student, the dissertation committee and Graduate Program Director will determine other appropriate venues for grant proposal submissions. The dissertation committee will monitor proposal submissions at its regular meetings.

Advancement to Candidacy and PQHS 701

Students in the Ph.D. program advance to candidacy after:

1. Completion of all core courses.
2. Passing the general examination.
3. Completion and defense of a dissertation research proposal
4. Submitting the completed and signed advancement to candidacy form to the School of Graduate Studies.

Following admission to candidacy each student will engage primarily in their dissertation research. The Ph.D. dissertation research will be performed while in residence (see below) under the supervision of a faculty member (research advisor) of the department. Students who have advanced to candidacy may register for 1-9 credits of PQHS 701 each fall and spring semester (or up to 6 credits for the summer, when needed). Students should not register for dissertation credits, PQHS 701, until the student has been advanced to candidacy. In rare cases, a student may petition for permission to register for up to a total of 6 credits of PQHS 701 prior to advancement to candidacy. This requires a completed and signed [Pre- Doctoral Standing form](#), approval by the research mentor and the Graduate Program Director and submitted to Office of Graduate Studies. Student should see the Administrative Director of Non-Clinical Graduate Education for details. Pre- Candidacy (Pre-Doctoral Standing) PQHS 701 credit hours can only be taken concurrently with course work upon both academic and research advisor and Graduate Program Director approval and proper form submission. It is expected by both the department and the School of Graduate Studies that any student who applies for Predoctoral Standing, and begins taking PQHS 701 credit hours before advancing to candidacy, will advance to candidacy before the following semester. For permission to take PQHS 701 credits prior to candidacy see: students must compete and submit the Pre- Doctoral Standing form to the Administrative Director of Non-Clinical Graduate Education. In most cases students wishing to conduct research activities prior to advancement may elect to enroll in PQHS 601 Independent Research credits.

A minimum of 18 credit hours of PQHS 701 are required for the Ph.D. degree. Once students have registered for PQHS 701, they must maintain registration (at least 1 credit) in each subsequent semester (fall and spring) until graduation, with the exception of approved leaves of absence. Note that leaves of absence do not extend the maximum 5-year time limit to graduate after first enrolling in dissertation (PQHS 701) credit hours. Also note that there is no provision for “part-time” status during dissertation work. The School of Graduate Studies generally considers even a single credit hour of dissertation research to represent full time student status. All students have a maximum 5-year time limit, including leaves of absence, to complete their degree after registering for dissertation credit hours, unless they obtain

an extension. A petition for extension of the 5-year limit must be approved by the research advisor and the Graduate Program Director, and submitted to the Dean of Graduate Studies. The extension should include a plan with a timeline for completion. If an extension is granted, the student must register for a minimum of 3 credit hours of PQHS 701 every semester.

Research Advisor Responsibilities

Becoming a research advisor and mentor to a Ph.D. student means that a faculty member assumes the commitment to be a life-long mentor to the student with the goal of helping each student to become a successful member of the scientific community. This includes:

- Commitment to the student's research project, helping with setting goals, and establishing research timelines.
- Meeting regularly with the student one-on-one to assess progress and provide guidance, preferably weekly if not more regularly.
- Aid in selecting other mentors, including the mentoring and dissertation committees.
- Help in developing communication skills essential to becoming a successful scientist.
- Provide guidance in the responsible conduct of research, rigor, and reproducibility. This includes issues of authorship, data sharing, ownership, and appropriate study design
- Encourage and support the student's participation in scientific meetings.
- Become an advocate, coach, confidante, and role model for the student and provide career advice.
- Provide an intellectually stimulating and supportive environment in which each student can develop and flourish.

It is recognized that research work that is not the major focus of the student's dissertation may provide extremely useful training and, when possible, is encouraged. However, mentors may not demand that their students perform work that is unrelated to the student's dissertation research project or training unless agreed upon by both the student and the mentor. In the case of possible disagreements, the dissertation committee will attempt to resolve any issues, followed by referral to the Graduate Program Director in difficult situations.

Advanced Standing for Students with a Prior Master's Degree

Some students may enter the Ph.D. program after completing a relevant master's degree, such as a Master of Science (MS) or Master of Public Health (MPH) degree. If the student's MS or MPH degree is from CWRU, core courses that were taken as part of their master's degree need not be taken again as a Ph.D. requirement, unless they were taken more than seven years prior to matriculation as a Ph.D. student. Such courses will be evaluated on a case-by-case basis. Courses for which the student has had the equivalent elsewhere may be replaced (not waived, see below). However, a student entering with a related Master's degree may apply for advanced standing, thereby reducing the number of CWRU didactic credit hours required for the Ph.D.

Students who enter the Ph.D. program with a related Master's degree may apply for advanced standing. Based on courses taken elsewhere but judged by the program leadership to be equivalent to CWRU courses, a student may have the total number of credits required for the Ph.D. reduced. To be granted, the student must have a minimum of 12 credits of equivalent courses and may be granted a reduction in course requirements of up to 18 credits. If the student has fewer than 12 credits of equivalent courses, they may apply to waive or replace a course (see "Waiving or Replacing a Course"). Students who wish to apply for advanced standing may do so any time after acceptance into the program by submitting the appropriate form and attaching the syllabi for all courses being used as the basis for waiving courses. This petition must be signed by the student and Graduate Program Director.

Please note the following rules for a Ph.D. student:

1. A minimum of 24 credit hours of coursework must be taken at CWRU.
2. All core courses (standard core or statistical alternative core) must be taken, except as waived by the Graduate Program Director, following consultation with the instructors of the core courses.
3. The student is responsible for everything covered in the core courses, and will take the full qualifying examination, regardless of whether any courses were waived.
4. An approved Master's degree may qualify for a reduction of 12-18 credits from the full 42 credit requirement. If fewer than 12 credits are considered "waivable", then it will not be deemed an approved Master's and the full 42 credits must be taken at CWRU – though the student may be able to replace courses equivalent to those taken elsewhere.
5. "Waiving" a course means that the student has taken, at another institution, nearly all or all of the material in the course being waived. If a student has taken a course that is deemed to be somewhat similar, but not equivalent, the student may be granted the right to "replace" the course with another course in the same subject area to strengthen the student's knowledge in the area. This will usually be a more advanced course. In this case, there would be no credit reduction.
6. The process for approving a waiver is similar to that of granting transfer credit. The instructor of the equivalent course will provide an evaluation based on materials submitted by the student, including at minimum, the course syllabus, as deemed appropriate by the instructor. In some cases, a short examination may be given to assess competency.

Annual Progress Report

Students are reviewed twice annually (once per semester) by their mentoring or dissertation committees. If progress is deemed adequate by a committee, no other evaluations will be necessary and the reports signed the committee members will stand as the student evaluations. However, if progress is inadequate or marginal as determined by a student's committee, an additional evaluation by the Internal Advisory Committee will be performed in consultation with the student's advisor. A plan will be developed to remedy the problem and progress will be assessed at the next student committee meeting. If progress continues to be an issue, the student will meet with the Graduate Program Director to discuss options for continuation in the program. Options may include dismissal from the program with or without a Master's degree, depending on the stage at which the problem occurs. Such situations will be handled on a case-by-case basis.

The School of Medicine (SOM) requires Ph.D. students after their first year to complete an Individualized Development Plan (IDP) by December 1 of each year. Ph.D. students in their 1st year are asked by the SOM to complete their IDP after completion of their 1st year.

Conciliatory MS Degree

The department awards an MS degree in Biostatistics and a Master's of Public Health. The granting of a conciliatory MS degree option is available for Ph.D. students, based on the University's Plan B model. To be granted a Conciliatory MS degree, students are required to complete 36 credit hours of graduate level course work. The Internal Advisory Committee will review these petitions and based on coursework taken and consultation with the student, create a new 36 credit PPOS. This may require additional courses for the granting of a degree. Courses already taken to fulfill department and concentration core requirements are counted toward the required 36 credit hours. The conciliatory degree is not an alternative terminal MS program, but rather is available for Ph.D. students who are unable to complete their Ph.D. studies.

Dissertation Defense

All candidates for the Ph.D. degree must submit a written dissertation as evidence of their ability to conduct independent research at an advanced level. The written dissertation must conform to the regulations of the School of Graduate Studies. Detailed instructions with regard to formatting and structure can be obtained from the [School of Graduate Studies](#). Following successful defense of the dissertation, an unbound paper copy of the dissertation is to be submitted to the department.

The dissertation must represent a significant original contribution to existing knowledge in the area of research, and at least a portion of the content must be suitable for publication in a reputable professional journal or as a book or monograph.

It is required that prior to the defense at least one paper of original research relevant to the dissertation will be published or accepted for publication in a peer reviewed journal with the student as the first author. This represents a minimum standard and it is expected that each student will publish at least two original research papers during their time in the program. If the minimum requirement is not met, permission to defend will require approval of the Graduate Program Director and the Internal Advisory Committee."

The final oral examination, chaired by the dissertation committee chair, must be widely publicized. A form with the date of defense must be signed, approved and submitted to the School of Graduate Studies (SGS) in time to obtain their approval, at least three weeks prior to the date of defense. Students should endeavor to submit this form well in advance of the three-week deadline. SGS will not approve a defense date that is less than three weeks away. In such a case, the defense will have to be rescheduled. The examination consists of a defense of the dissertation and a final inquiry into the student's capabilities to conduct independent research.

All PQHS faculty members are encouraged to attend and participate in the student's Ph.D. examination. All students are also strongly encouraged to attend. All members of the dissertation defense committee are required to be present. Exceptions to this last rule must be approved by petition to the Dean of Graduate Studies and only under extraordinary circumstances; in any case, no more than one voting member can ever be absent, and the absent member must participate through real-time video or phone conferencing. Ph.D. candidates must submit the schedule for their final oral examination no later than three weeks before the date of the examination to the School of Graduate Studies and to the Administrative Director of Non-Clinical Graduate Education for circulation to the department. The members of the dissertation committee must have copies of this dissertation in hand at least two weeks before the defense. The student must obtain all appropriate dissertation approval forms from the School of Graduate Studies and bring them to the examination.

The student passes the dissertation examination if not more than one member of the dissertation committee dissents. Additional work may be required based on the result of the examination prior to passing the student.

Time Limitation

All students are expected to complete their Ph.D. training within five years of entering the Ph.D. program. In some cases extending into a sixth year may be in the best interests of the student. In any event, all requirements for the doctoral degree must be completed within a maximum of five consecutive calendar years beginning with the semester of the first credited registration in PQHS 701, Dissertation Research, including leaves of absence. Extensions may only be considered through formal petition to the School of Graduate Studies, signed by the research advisor and the Vice Chair for Education. To petition for an extension, students must complete and submit the [Petition for an Extension form](#) to the Administrative Director of Non-Clinical Graduate Education.

Residency Requirement

Graduate students working toward the Ph.D. must meet minimal residency requirements. The intent of residency is to have continuity of the academic program as evidenced by course registration and contact with the program faculty. To fulfill the residency requirement, a student must be registered in at least six academic semesters (fall and spring) or six consecutive terms (fall, spring, and summer) between the time of matriculation and five years after the first credited hour of PQHS 701, Dissertation Research.

It is expected that students will be physically present in the department for the duration of their Ph.D. training. Occasionally it may be advantageous to have extended time off campus while still meeting the residency requirements. If such time will exceed one continuous month, or if a regular schedule of off-campus time is being considered, a written justification must be approved by the academic advisor, the dissertation committee (post-qualifying) and the Ph.D. program leadership. Students are subject to the same work-from-home policies as departmental staff.

A foreign student must be registered for 9 credit hours per semester to maintain INS “residency as a full-time student”. However, once a student has advanced to the dissertation stage, one hour of PQHS 701 per semester may be sufficient for this purpose, but students should check with an international student advisor periodically as the rules are subject to change.

Publication of Electronic Thesis and Dissertation

The School of Graduate Studies partners with OhioLINK to electronically publish master’s theses and doctoral dissertations through their ETD Center--a free, online database of Ohio’s ETDs from participating OhioLINK member schools. It contains the abstract and full-text for all theses and dissertations, giving researchers immediate access to the most current research occurring on Ohio’s campuses.

The ETD Center is freely accessible worldwide to anyone interested in searching, viewing, and downloading the theses and dissertations published in Ohio. Using a standard Web browser, users can search the database using basic keyword searching. Authors, university affiliation, and abstracts are all indexed.

When you submit your ETD to OhioLINK, you are giving OhioLINK and CWRU permission to make your ETD available for open access on the Internet, including access through major Internet search engines. Such permission should be given only after consulting the research advisor to ensure the ability to publish the research findings.

More information about the electronic dissertation process through OhioLINK can be found through the [School of Graduate Studies](#).

Points to Consider Prior to Submitting Your ETD

All copyrighted material (e.g. previously published in a journal, monograph, or chapter) must have permission from the journal, monograph or chapter publisher for reproduction/inclusion in the ETD. If a student has already published part of their ETD in a journal or monograph, and have not retained/negotiated the right to include it again in the completed ETD, students must obtain copyright permission for their own published work. Students cannot alter published figures from themselves or others without copyright release.

Inclusion of any intellectual property as imposed by Material Transfer Agreements or participation of collaborators must appropriately consider legal, collegial, and ethical obligations. In particular, any unpublished data from collaborators should not be included in the ETD unless written consent is demonstrated and appended to the ETD.

All information in the ETD will be published when the ETD is submitted to OhioLINK. If there are near future plans to publish a portion of the ETD in a journal or monograph, submitting the ETD might compromise such future publication(s), unless you have first discussed this with the journal or monograph publisher, or intend to embargo the ETD to allow for future publication. If you have chosen a publisher and plan to publish a portion of your ETD, check the publisher's policy. Since 2004, Elsevier (a major publisher of academic and professional journals) has allowed their authors to retain rights for pre- and post-publication of articles. If you publish with Elsevier in a journal, you can later include the work in your ETD without asking permission from Elsevier.

The ETD may be embargoed (held without release) after submission for up to two years. Petition forms are available on the School of Graduate Studies website. An embargoed ETD is still considered to be a completed work, and may not undergo any modification before release by OhioLINK.

Program Administration

The Ph.D. Program will be administered by the Graduate Program Director in close consultation with an Internal Advisory committee. The Internal Advisory Committee will consist of at least 3 faculty members with primary appointments in the department and one student representative. The Internal Advisory Committee is available to the Program Director for consultation and guidance on the doctoral program, and may make recommendations to the Program Director and the Curriculum Committee as appropriate. The Graduate Program Director will consult the Internal Advisory committee in the case of grievances or other non-standard operational matters such as issues of inadequate student progress. In the case of discussions of individual student issues or other confidential information, the student representative will be excused. Decisions of the committee will be by a majority vote.

The Graduate Program Director will be responsible for overseeing all aspects of the Ph.D. program. He/she will do so in regular consultation with the Vice Chair for Education, the Department Chair, and with guidance from the Internal Advisory Committee as needed. The Graduate Program Director will serve as the official spokesperson for the Ph.D. program and will serve as its representative in matters related to University policy and programs. The Graduate Program Director will be responsible for the maintenance of high standards in the academic program, including the continuing evaluation of all required and elective courses in the program, the qualifications, and diversity of the program faculty. The Graduate Program Director will initiate and coordinate recruitment activities and will also be responsible for identifying and applying for (or assisting others in applying for) internal and external support for graduate training.

Course Load and Financial Aid

Full-time students will normally take at least nine credit hours each semester. However, any time a student is registered for PQHS 701 (dissertation research), even if only for 1 credit hour, the student is considered by the University to be full-time.

All students entering the program as Ph.D. students will be supported for the first year by institutional or departmental funds, unless fully funded through other, external sources. Following the first year, students will be eligible for training grant positions or for support from their research mentor or another faculty member. In addition, as stated above it is expected that students will seek independent funding to support their training; applying for external funding is considered part of the training.

Outside Student Employment

All students entering the program are expected to be full-time students and will receive full-time, 12-month student stipends from entry into the program until the completion of their degrees. Since the stipend covers the students' research activities, no student receiving a stipend will be permitted to be receive additional pay for degree-related research or research not related to their degree; moonlighting on additional research projects or other employment is not permitted. The one exception to this rule is that students may be permitted to serve as teaching assistants as long as this does not entail more than 10 hours per week.

This policy is intended to encourage students to focus full-time on being students so that they can learn and do degree related research without any impediment that another paid position would potentially generate. This provides an environment that encourages intellectual development consistent with that expected as part of Ph.D. training, and degree completion in shorter times with greater productivity.

University and Department Policies

Community of Scholars and Professionals

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

Communication Among Students, Staff, and Faculty

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

Students are responsible for reading the information and content of communications sent to their Case Email account at least once a day. Faculty, students, and staff often use the CWRU email system to communicate information about courses, seminars, events, etc.,

particularly when personal notification (e.g. during class) is not possible. You will be held accountable for missed information if you fail to check your email in a timely manner.

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

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

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

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

University Student Code of Conduct

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

Failure to Comply

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

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

Academic Policies & University Requirements

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

Graduate study assumes a considerable maturity on the part of the student in planning and reaching his or her educational objectives. The effectiveness of the graduate program lies jointly with the individual student and the faculty adviser. The MPH Degree is defined by the University as a Plan B course work degree and does not require students to write a Master's thesis. Successful completion of the Capstone Experience, Essay, and Presentation satisfies the requirement for a Comprehensive Exam for the degree. Further details on requirements for the Master of Public Health degree are available beginning on page 18 of this document.

Student Records

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

Standards of Conduct

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

Interference with freedom of speech or movement, or intentional disruption or obstruction of teaching, research, administration, or other functions on university property

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

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

Statement on Ethics

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

The University's mission rests on the premise of intellectual honesty in the classroom, the laboratory, the office, and the solitary examination desk. Without a prevailing ethic of honor and integrity not only in scientific pursuits but also in all scholarly activity, the very search for

knowledge is impaired. In these respects, each of us—especially but not exclusively faculty — must regard ourselves as mentors for others. These principles we strive to uphold make it possible for the larger society to place trust in the degrees we confer, the research we produce, the scholarship we represent and disseminate, and the critical assessments we make of the performance of students and faculty, as well as judgments of staff and administrators. To safeguard the standards on which we all depend, each of us must, therefore, accept individual responsibility for our behavior and our work and refrain from taking credit for the work of others. The culture of a university also requires that the rights of all be protected, particularly by those entrusted with authority for judgment of the work of others.

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

IRB Approval of all Research and Protection of Data

All 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 <http://case.edu/gradstudies/media/caseedu/grad-studies/documents/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 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: <http://studentaffairs.case.edu/handbook/policy/university/alcohol.html>

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 regard 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 may 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 may 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 cases that are serious breaches of conduct that threaten to compromise the standards of a department or program, or create concern for the safety and welfare of others, a suspension may be implemented. 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, met conditions 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 through the normal application process.

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

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

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

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

Maintenance of Good Standing

To remain in good standing within the PhD in Biomedical & 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 core 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 non-required or course. 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 elsewhere 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.
- 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.
- Pass the General Exam within two attempts. For Full Time students, the first attempt must be before the end of the fall semester of the student’s second year and the second attempt before the end of the spring semester of a student’s second year.
- Pass the Defense of the Dissertation Proposal within two attempts. The second attempt must take place by the deadline set forth in the response letter to the first dissertation proposal defense. The time table for defending your proposal will be determined through consultation with your mentoring committee after passing the General Examination.
- Failure to achieve a quality-point average of 3.25 or higher at the completion of 12 semester hours or 2 semesters of graduate study.
- Failure to achieve a quality-point average of 3.50 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. PhD students must complete their degrees within 5 years of advancing to candidacy before needing to petition for an extension.

- Receiving a P grade in all research courses (601 or 701)

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.

Students who fail to remain in good standing will under normal circumstances be placed on academic probation. Students on academic probation have 1 semester, unless otherwise stipulated in the probation letter, to return to good standing or risk being removed from the program. However, students who fail to pass either the General Exam or the Qualifying Exam (dissertation proposal) within two attempts will be removed from the program unless under rare circumstances, a special petition is granted to allow a third attempt. For the General Exam, a petition would have to be approved by the Graduate Program Director, the Internal Advisory Committee, the Vice Chair for Education, and the Dean of Graduate Studies. For the qualifying exam, the petition must be signed by the research advisor and approved by the Internal Advisory Committee and the Vice Chair for Education.

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.

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

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

Transfer of Credit

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

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

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

Internal Transfer of Credit

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

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

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-of-graduate-studies>.

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

Refer to Student Accounts Receivable Website for more info: <http://www.case.edu/finadmin/controller/bursar/tuition.htm>.

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

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

student ID number of the student for whom payment is made.

Memorandum of Assistance

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

- Details of the degree and program
- Exact number of credit hours and tuition fees charged for the academic year
- Type and amount (if any) of graduate financial assistance being received by the student through the department in question

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

Financial Responsibility Agreement

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

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

Living Expenses

The Office of Financial Aid has information about [living expenses](#) and the cost of living in Cleveland.

Financial Aid

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

- Complete the [Free Application for Federal Student Aid \(FAFSA\)](http://www.fafsa.ed.gov/) available online at <http://www.fafsa.ed.gov/>.
- Complete the [CWRU Financial Aid Form](http://financialaid.case.edu/) available online at <http://financialaid.case.edu/>
- 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: http://athletics.case.edu/facilities/veale_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.

Campus Resources

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, 368-2020

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

International Student Services

143 Tomlinson Building, 368-2517

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

University Counseling Services

201 Sears Library Building, 368-5872

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

University Health Service

2145 Adelbert Road, 368-2450.

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

Educational Services for Students

470 Sears Library Building, 368-5230

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

University Libraries

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

materials. Combined, the university collections number more than 2.75 million volumes.

Access Services

18 Crawford Hall, 368-CARD (2273)

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

www.case.edu/finadmin/security/access/access.htm.

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

Office of Financial Aid

417A Yost Hall, 368-4530

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

finaid.case.edu.

Lesbian, Gay, Bisexual, and Transgender Center

Suite 179, Tinkham Veale University Center, 368-LGBT(5428)

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

Full details about the LGBT Center can be found on their website: www.case.edu/lgbt.

Flora Stone Mather Center for Women

Tinkham Veale University Center, Room 248, 368-0985

The mission of the Flora Stone Mather Center for Women at Case Western Reserve University is to support and empower women through education, advocacy and leadership. The Flora Stone Mather Center for Women serves as a resource to all women at the university by

offering a variety of initiatives focused on leadership development and recognition, gender equity in Science, Technology, Engineering and Mathematics (STEM) fields, and women's health. Additionally, the Project on Men and Gender (PMG) features annual programs and workshops that explore masculinity, men's violence, gender stereotypes, and healthy relationships in the interest of reducing violence against women. Full details about the Flora Stone Mather Center for Women can be found on their website:

www.case.edu/provost/centerforwomen/.

Writing Resource Center

104 Bellflower Hall, 368-3798

The Writing Resource Center (WRC) at Case Western Reserve University provides supplemental, discipline-specific writing instruction to students of all levels at the university. WRC writing consultants work one-on-one with students on a wide variety of projects. The WRC encourage visits from students at any stage of the writing process, from brainstorming and drafting, to revising and organizing, to sharpening expression. While the WRC also works with students on issues of mechanics and grammar, they are not a proofreading service. WRC consultants work collaboratively with students to assist them in becoming better writers. During fall and spring semesters, WRC hours range from 8 a.m. to 5 p.m., Monday through Friday. Students may schedule appointments at any of the WRC locations and online through the online scheduling system at <http://rich37.com/case/>. Online tutoring is also available. Services available to graduate students include:

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

Office of Inclusion, Diversity and Equal Opportunity

315 Adelbert Hall, 368-8877

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

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

The Office of Inclusion, Diversity and Equal Opportunity at Case Western Reserve University also gives awards to members of the university

community in recognition of significant contributions toward enhancing the university's commitment to diversity through inclusive thinking, mindful learning and transformative dialogue.

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

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

Office of Multicultural Affairs

450 Sears Building, 368-2904

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

Building a "Sense of Community"

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

We Value Diversity

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

Multicultural Enrichment

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

Academic Support and Guidance

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

Networking and Mentoring Opportunities

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

Role Model and Mentoring

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

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

Student Space on Campus

Below is a list of space available for students to meet, study, and relax on campus. Please note that some space can be reserved for meetings

and are, thus, subject to availability. Whenever possible, meeting spaces that are available for reservation are indicated.

School of Medicine Space

- 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 <http://studentaffairs.case.edu/thwing/> for more information on the Thwing Center.

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

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 issues. The number to the registrar's office is 216.368.4310.

Acknowledgement

To be eligible for participation in the Ph.D. program, students and faculty must agree to follow the policies, procedures, and guidelines outlined in the student handbook. It is important that you carefully read the student handbook and understand the responsibilities, policies, and procedures that it contains. By checking the boxes and signing below, you acknowledge that you have read and understand the student handbook.

I have read and understand the Department of Population & Quantitative Sciences Ph.D. Program in Biomedical & Health Informaticshandbook.

I agree to follow the policies, procedures, and guidelines as outlined in the handbook.

I understand that in cases of ambiguity or interpretation, the decisions made by the Ph.D. program leadership take precedence.

Student

Signed: _____

Date: _____

Printed Name: _____

Research Advisor

Signed: _____

Date: _____

Printed Name: _____