2026 – 2027

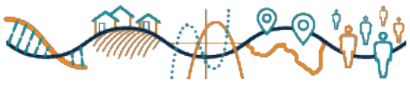
Department of Population & Quantitative Health Sciences

Program Handbook

PhD in Clinical Translational Science

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

SCHOOL OF MEDICINE
CASE WESTERN RESERVE UNIVERSITY



CONTACT INFORMATION

Department of Population & Quantitative Health Sciences
School of Medicine, Wood Building, Room WG-57
Case Western Reserve University
10900 Euclid Avenue Cleveland, Ohio 44106-4945
http://epbiwww.case.edu

Jonathan Haines, PhD
Chair, Mary W. Sheldon Professor of Genomic Sciences
Email: jlh213@case.edu
Phone: (216) 368-2478

James Spilsbury, PhD, MPH
Vice Chair for Education, Department of Population & Quantitative Health Sciences
Email: jcs5@case.edu
Phone: (216) 368-7559

Jin Kim-Mozeleski, PhD
Director, Clinical Translational Science PhD Program
Email: jxk1225@case.edu
Phone: (216) 368-6793

James Spilsbury, PhD, MPH
Associate Director, Clinical Translational Science PhD Program
Email: jcs5@case.edu
Phone: (216) 368-7559

Lauren Mazzagatti, MS
Administrative Director for Clinical Research Education Programs
Email: lxm565@case.edu
Phone: (216) 368-5957

School of Graduate Studies
Tomlinson Hall, Room 203
(216) 368-4390 (phone)
gradstudies.case.edu

Marvin T. Nieman, Ph.D., Vice Provost & Dean
Lynmarie Hamel, JD, Associate Dean of Graduate Studies
Brandon Bowman, Manager of Graduate Academic Affairs

General Inquiries
Email: clinical-research@case.edu

Additional University Offices

Access Services (IDs & Parking)
Tinkham Veale University Center
216.368.6192
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
https://case.edu/financialaid

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

Student Affairs
Adelbert Hall, Room 110
(216) 368-2020
studentaffairs.case.edu

University Health Service (Student Medical Center)
2145 Adelbert Rd.
(216) 368-2450
www.case.edu/studentlife/healthcounseling

University Counseling Services
Sears Building, Room 201
(216) 368-5872
www.case.edu/studentlife/healthcounseling/counseling-services

Police & Security Services

Emergency - 911
Urgent Matters; Safe Ride; Escort Service: (216) 368-3333
Safe Ride Program (7pm-3am) **Security Escort Service** (24 Hours)
Security (Information) - (216) 368-4630 https://case.edu/publicsafety/divisions/campus-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-intense 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

WELCOME!

PhD in Clinical Translational Science / Case Western Reserve University

Welcome to the Doctoral Program in Clinical Translational Science at Case Western Reserve University's School of Medicine! One of the University's newest PhD programs, the program in Clinical Translational Science accepts students from numerous scientific and clinical disciplines interested in patient-oriented research and translation of scientific discoveries from "bench to bedside to curbside (and back) (Figure 1a)."

This handbook is a general summary of academic program information and should be used in consultation with an academic adviser. It is the responsibility of the student to become familiar with the specific rules that apply to the PhD in Clinical Translational Science, as well as any and all rules and regulations of the University (see "Student Responsibility," page 39). If, after reading the Handbook and the University's General Bulletin, a student is uncertain about a requirement or discovers a conflict in requirements, then the student should bring this to the attention of her/his academic adviser.

CONTENTS

Contact Information	2
A Message from the Department Chair	4
Welcome Message	5
Contents	6
Rationale & Mission	9
PhD Program and Requirements	14
General Program	14
Course Load and Financial Support	15
Prerequisites	15
Advanced Standing	16
Waiving Course Requirements	17
Transfer Credit	17
Required Curriculum	18
Research Rotations	19
Required Electives	20
Electives	20
Examples of Program of Study	20
The EMBARK Program	23
Individual Development Plan Requirements	23
Comprehensive Examination	24
Formation of Dissertation Committee	25
Addressing Dissertation Issues	26
Proposal Defense	27
Advancement to Candidacy	28
Dissertation Research	29
Dissertation Defense	30
Dissertation Requirement	31
Publication Requirement	32
Time Limitation	32
Ethics in Conducting Research	32
Publication of Electronic Thesis and Dissertation (ETD)	32
Points to Consider Before Submitting Your ETD	33
Professional Commitment and Culture	34
Travel Funding Policy	35
Graduation	36
Deadlines and Forms	38
Mentoring	38
Program Advisor, Primary, and Co-Mentor	38
Evaluation/Monitoring of Student Progress	39
University and Departmental Policies	41
Community of Scholars and Professionals	41

Student Responsibility	41
Student Information System (SIS)	42
Communication Among Students, Staff, and Faculty	42
Email Policy	43
Statement of Professional Conduct	43
University Student Code of Conduct	44
Academic Policies and University Requirements	44
Student Records	45
Standards of Conduct	45
Statement of Ethics	46
IRB Approval of All Research and Protection of Data	47
Academic Integrity	47
Artificial Intelligence Policy	48
Statement of Plagiarism	48
Policy of Non-Discrimination	49
Harassment Policy	49
Abuse Policy	49
Sexual Harassment Policy	50
Sexual Assault Policy	50
Consensual Relationships	51
Smoking Policy	52
Alcohol Use Policy	52
Drug Use Policy	52
Disciplinary Policy	54
Maintenance of Good Standing	57
Minimum Course Grade Policy – PQHS Graduate Programs	58
Incomplete (I) Grades	60
Pass/No Pass (P/NP) Grades	60
Satisfactory/Unsatisfactory (S/U) Grades	61
Changing a Course Grade	61
Waiving a Course	61
Replacing a Course	62
Repeating a Course	63
Transfer of Credit	64
Internal Transfer of Credit	64
Grievance Procedure	64
Leave of Absence	65
Other Time-off	65
Withdrawal	66
Graduation Application	66
Tuition	66
Memorandum of Assistance	67
Financial Responsibility Agreement	68
Living Expenses	68

Financial Aid	68
Medical Insurance Requirement	69
Student Wellness Fee	70
Support for Students	70
Campus Resources	71
School of Graduate Studies	71
Office of Student Affairs	71
Office of International Student Services	72
University Counseling Services	72
University Health Services	72
Educational Services for Students	73
University Libraries	73
Access Services	73
Office of Financial Aid	74
Lesbian, Gay, Bisexual, and Transgender Center	74
Flora Stone Mather Center for Women	75
Writing Resource Center	75
Office of Inclusion, Diversity, and Equal Opportunity	76
Office of Multicultural Affairs	77
Student Space on Campus	78
Student Information System (SIS)	79
Appendices	80
Appendix 1: CTS Individual Development Plan (IDP) format	80

Rationale & Mission

PhD in Clinical Translational Science/Case Western Reserve University

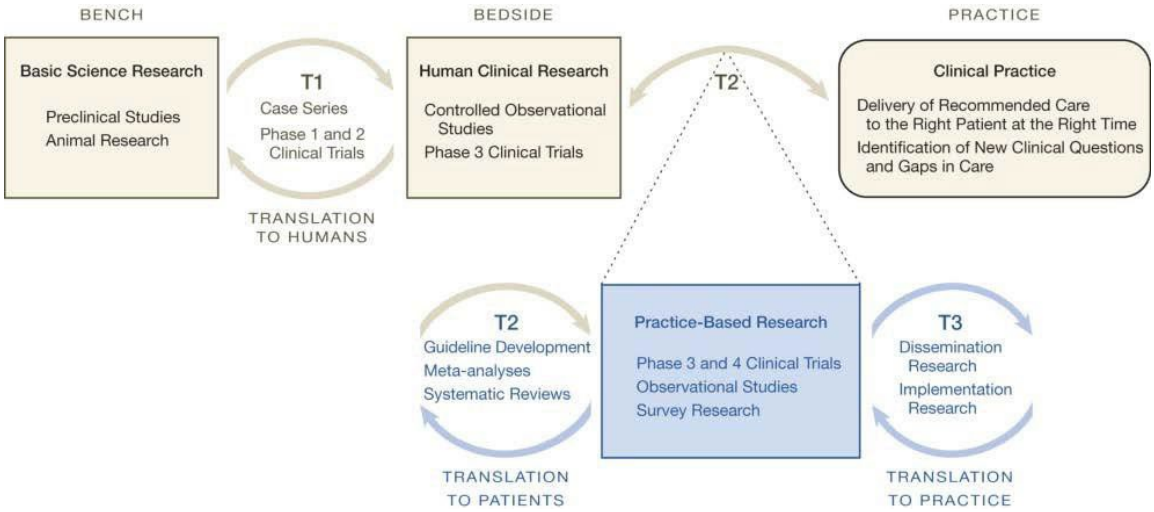
Program Rationale

There is a substantial delay and numerous barriers between biomedical discovery, application of that discovery to clinical practice, and community-wide dissemination of that practice necessary to improve human health. The National Institutes of Health (NIH) and other organizations charged with the nation's health have prioritized the urgent need for a transformed research enterprise in order to accelerate translating discovery into application to benefit the individual patient and population at large. In its funding initiatives, the NIH has also emphasized that the transformed research enterprise must be transdisciplinary and team oriented.

In that context, clinical translational science has emerged as a scientific discipline with a unique theoretical framework and specific repertoire of research methodologies that are necessary for efficient and effective translation of scientific discoveries into effective clinical and community practice. Clinical translational science represents two highly integrated domains: "Clinical Science" and "Translational Science." "Clinical Science" seeks to promote health and to understand, prevent, and treat human disease and illness. "Translational Science" is the field of investigation focusing on the scientific and operational principles underlying the translation or transformation of discoveries made in the laboratory or clinic into new procedures, therapies, medications, and ultimately, into new community-wide practices and policies. Through this process, translational science also brings the wisdom of the practice community into the clinical research process. "Clinical Translational Science" thus represents the field of knowledge that accelerates clinical work "from bench to bedside to curbside" (Figure 1a), or in other words, along the discovery, development, delivery, dissemination, and adoption continuum (Figure 1b). Though initially framed as a

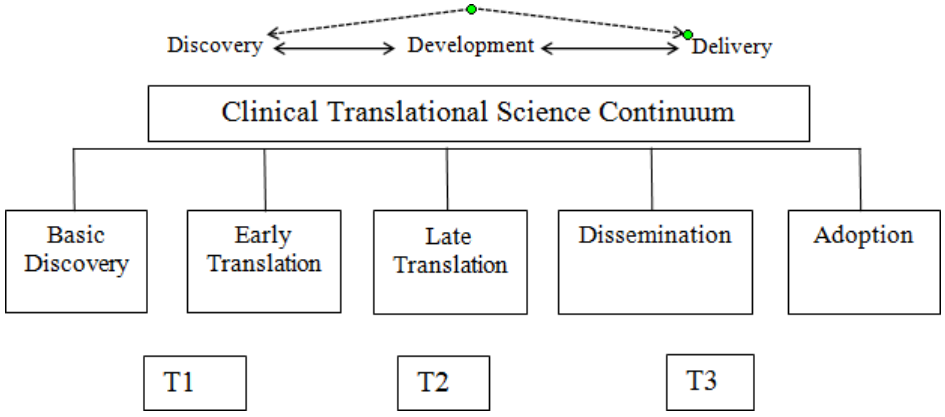
linear process, recent conceptualizations highlight the non-linear, multidirectional nature of the translational process.

Figure 1a: Clinical Translational Process from Bench to Practice



From Mitchell et al. A thematic analysis of theoretical models for translational science in nursing: Mapping the field. *Nurs Outlook*. 2010;58:287-300

Figure 1b: Clinical Translational Science Continuum



From Westfall et al. Practice-based research: Blue highways" on the NIH roadmap. *JAMA*. 2007;297:403-406

Clinical translational science doctoral programs focus on enhancing skills to design and conduct research that is patient-oriented (conducted with humans or materials of human origin, for whom an investigator interacts with subjects, and which includes mechanisms of disease, therapeutic interventions, clinical trials, and the development of new technologies) and translational (applying discoveries generated through laboratory and preclinical studies to the development of trials and studies in humans, and conversely, applying novel observations in clinical settings about disease processes to new laboratory or basic investigations). As such, clinical translational science is distinct from the other established

fields such as epidemiology, public health, and population science, which typically focus on disease etiology, health, illness, and health care on population or community levels.

Mission of the PhD Program in Clinical Translational Science

The mission of the Doctoral Program in Clinical Translational Science is to train and produce successful clinical translational scientists who will lead sustained, innovative research agendas to address the challenging health and medical problems facing the U.S. and world. Students in the program will be trained in the theory and practice of clinical translational science in order to make significant clinical discoveries and to move these discoveries across the translational continuum.

The program is designed for three categories of students:

- Individuals with an advanced clinical degree (e.g. MD, DMD, MSN) seeking rigorous training in clinical translational science
- Individuals enrolled in dual clinical-research degree programs, such as the MSTP-CTSTP and DMD-PhD programs, whose interests and career goals align with the PhD in Clinical Translational Science
- Individuals with an existing MS in a health-related field who seek a PhD in Clinical Translational Science.

The Program's curriculum of the doctoral program is based on a set of nationally-developed core competencies to guide the nationwide training of clinical and translational scientists (Table 1).

Table 1: PhD Program's Core Competencies

Core Domain	Competencies
Theory-Based Problem Assessment & Formulation	• Develop innovative, testable clinical and translational research questions • Formulate sound hypotheses • Frame research questions and hypotheses that engage interest and participation of practice communities and other key players at appropriate translation loci (e.g. T1, T2, T3)
Critical Literature Review & Synthesis	• Conduct comprehensive, systematic, evidence-based critique of the scientific literature, identifying potential sources of bias and knowledge gaps • Synthesize results of scientific literature using meta-analytic and other appropriate techniques • Place studies in context of existing research along a translation continuum (e.g. laboratory to population)

Study Design & Measurement	• Based on assessment of strengths and weaknesses of possible designs, develop all aspects of an appropriate study design to address a testable clinical and translational research question • Determine resources needed to implement the selected study design • Evaluate validity and reliability of all study measures • Identify and minimize threats to study validity • Implement appropriate quality assurance and control systems for a selected study design
Study Implementation	• Utilize design strategies that optimize feasibility, efficiency and ability to derive unbiased inferences from clinical and translational study designs • Assess threats to internal validity in any planned or completed clinical and translational study • Conduct studies that integrate elements of translational research into the protocol that could provide the basis for future research, such as collection of biological specimens, nested studies, and the development of community-based interventions • Secure resources needed to implement the selected study design
Funding	• Demonstrate knowledge of funding agencies and the peer review system • Develop effective applications for funding from appropriate governmental and/or nongovernmental sources
Statistical Approaches	• Determine and justify the appropriate statistical technique(s) for a specific research question and concomitant study design • Build effective statistical expertise into research teams • Develop and use appropriate early stopping rules in clinical trials
Health Informatics	• Identify modern information systems for collecting, organizing, managing, and accessing clinical data • Utilize best practices in informatics for the organization and management of biomedical/health information • Build effective bioinformatics expertise into clinical/translational research teams
Translational and Patient-Oriented Research	• Learn and apply the principles of responsible conduct of research • Learn and apply the principles of IRB review and communication • Develop and implement research designs that account for demographic, cultural, geographic, ethnic features within communities and populations • Articulate the clinical impact of the research on the health of individuals or populations • Understand the intimate relationship between clinical design and translational research related to pathogenesis or etiology
Scientific Communication	• Effectively communicate clinical and translational research findings to different groups of individuals (colleagues, students, lay public, policymakers, mass media) • Translate research findings into effective guides for development of clinical practice and governmental policy • Explain utility and mechanism of commercialization for research findings, patent processes, and technology transfer
Leadership	• Lead a multidisciplinary team in all fiscal, personnel, regulatory compliance and problem-solving aspects • Catalyze innovation and creativity in the research team • Mentor beginning scientists

Team Science	• Create the optimum interdisciplinary/multidisciplinary team for a given research problem • Use group decision-making and conflict resolution techniques in team management • Foster multiple points of view and clarify language differences across disciplines • Understand the language(s) used in other disciplines comprising the research team • Engage practice communities in the choice and framing of research questions, design, conduct, interpretation, implementation, and dissemination of clinical translational research
Cultural Diversity	• Demonstrate sensitivity and professionalism with participants from diverse social and cultural backgrounds • Communicate effectively across cultures, languages, and literacy levels

PhD Program and Requirements

PhD in Clinical Translational Science/Case Western Reserve University

General Program – The general stages of the PhD program are presented in Figure 2.

Credit hour requirements for the program conform to regulations established by CWRU's School of Graduate Studies.

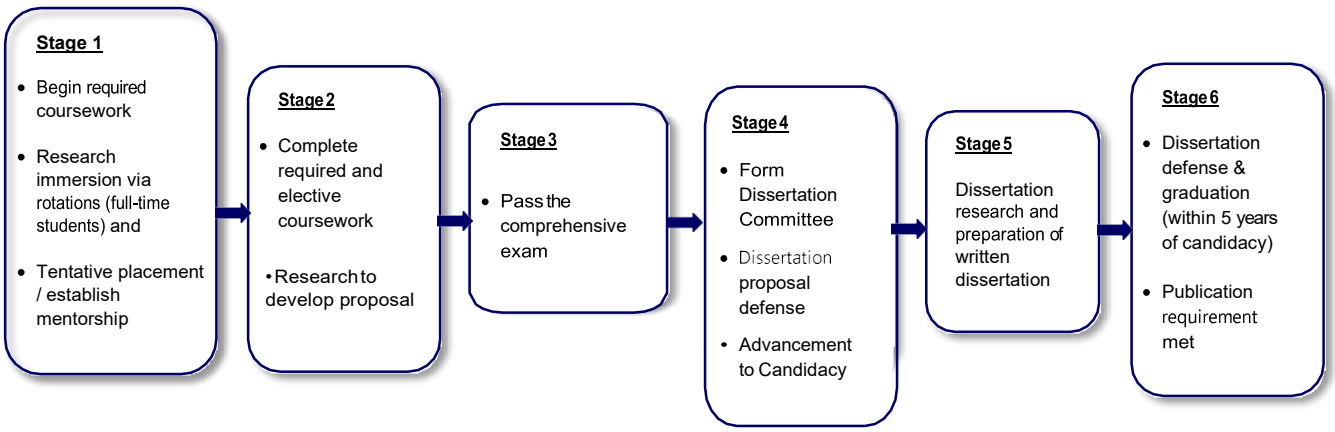


Figure 2

Course Load and Financial Support

Full-time students normally take at least nine credit hours each semester. However, any time a student is registered for at least 1 credit hour of CRSP 701 (dissertation), the student is considered by the University to be full-time. Because of the nature of the PhD in Clinical Translational Science program, funding for students will be varied, based on the mechanisms through which the students entered the program.

Course Load and Financial Support Curricular Provisions for MSTP-CTSTP Students

For individuals simultaneously seeking both a PhD in Clinical Translational Science and an MD, curricula of the two degree programs are integrated. These individuals will take a total of 39 credit hours of coursework: 18 hours of required medical school courses, 16 credit hours of required PhD courses (the 3 credit hour course CRSP 401 "Introduction to Clinical Research" is waived because its material is covered by the medical school curriculum), 2-3 credit hours of required electives, up to 11-12 hours of research practicum (CRSP 601) or electives, 6 credit hours of research rotations, and 18 hours of dissertation credit (CRSP 701).

Prerequisites

Persons applying to the Program must:

- Already have an advanced clinical degree (e.g. MD, DMD, MSN), **OR**
- Be admitted to the Medical Scientist Training Program – Clinical and Translational Scientist Training Program (MSTP-CTSTP) dual-degree programs at CWRU, **OR**
- Already have a Master's degree in clinical research or in another relevant health-related field.

Unless admitted with advanced standing (see page 15), all incoming PhD students are required to take a minimum of 36 credit hours of coursework, of which at least 24 credit hours are graded, and 18 credit hours are "Dissertation Research," CRSP 701 (see Table 2). The 36 credit hours of coursework consist of a minimum of 22 credit hours of required coursework (unless waived by the PhD Program Steering Committee in light of a student's previous or concurrent coursework), 3 credit hours of required electives, and up to 11 credit hours of additional electives.

TABLE 2
PHD IN CLINCIAL TRANSLATIONAL SCIENCE STANDARD CURRICULUM

The curriculum consists of a minimum of 54 credit hours: 36 credit hours of courses (of which at least 24 hours are graded) and 18 credit hours of dissertation research. *

REQUIRED COURSES

Course #	Course title	Units	Grading
CRSP 440	Translational & Patient-Oriented Research Theory	3	Graded
CRSP 550	Meta-analysis & Evidence Synthesis	2-3	Graded
CRSP 401**	Introduction to Clinical Research	3	Graded
PQHS 490	Epidemiology: Introduction to Theory and Methods	3	Graded
CRSP 431	Statistical Methods I	3	Graded
CRSP 432	Statistical Methods II	3	Graded
CRSP 603	Research Ethics & Regulation	2	Graded
	TOTAL GRADED	**19-20**	
CRSP 450	Seminar in Multidisciplinary Clinical & Translational Research	0	P/F
CRSP 501	Team Science	1	P/F
CRSP 412	Communication in Clinical Research – Grant Writing	1	P/F
CRSP 413	Communication in Clinical Research – Oral Presentation, Posters, & the Mass Media	1	P/F
IBMS 500	Responsible Conduct of Research – *Required for NIH-funded students only*	1	P/F
TOTAL P/F	**TOTAL P/F**	**3 (4)*** **	

REQUIRED ELECTIVES

Students must take one of the courses from the list below, depending on their specific needs and mentor approval.

CRSP 500	Design and Analysis of Observational Studies	3	Graded
SYBB 421	Clinical Informatics	3	Graded
PQHS 416	Introduction to Computing in Biomedical Health Informatics	3	Graded
PQHS 426	Introduction to GIS for Health and Social Sciences	3	Graded
PQHS 450	Clinical Trials and Intervention Studies	3	Graded

ELECTIVES

Students will take electives to satisfy the graded and pass/fail course requirements and to advance to candidacy. These courses are selected based on students' needs and mentor approval. Any CWRU credit-bearing course may qualify. The courses could be "field specific" or include other required elective courses not taken as part of the requirement above.

RESEARCH COMPONENT

CRSP 701	Dissertation Research	18	S/U

* Per School of Graduate Studies Guidelines, programs of study for dual clinical-research degree students (e.g., MSTP-CTSTP, DMD-PhD) and for students entering with an approved master's degree may be modified to reflect credit for concurrent and/or previous coursework.
**Waived for MD/PhD students in the CTSTP program or by petition with sufficient background from previous coursework.

Advanced Standing for Students with an Existing MPH or Relevant Research Graduate Degree

Students entering with an MPH or relevant research graduate degree will be considered for advanced standing. Advanced standing is granted if the student has successfully completed (with a grade of B or higher) at least 12 credit hours of relevant course work. *Relevance* will be determined by program leadership and, if necessary, the CTS Steering Committee.

Waiving Course Requirements

If a student has already completed (with a grade of B or higher) comparable coursework applied toward a prior graduate degree, specific course requirements for the PhD may be waived. In such cases, the student may be asked to provide relevant syllabi for review by program leadership. The course should have been taken within five (5) years prior to matriculation at CWRU, and a grade of B or higher must have been received. If a required course or required elective is to be waived, the instructor for that course must provide approval based on review of the syllabus from the previously completed course. Students without advanced standing may substitute additional electives for these waived courses; the total course credit hour requirement will remain 36 (with a minimum of 24 graded*). For students with advanced standing*, the 36 credit hour graduation requirement will be decreased by the number of waived credit hours (not to exceed a total of 18 waived hours). However, the student's dissertation committee may require additional coursework above this new minimum if needed to obtain necessary skills for dissertation work. Please note that the School of Graduate Studies requires a minimum of 18 credit hours of coursework (12 of which must be graded) for advanced standing students, plus the 18 credit hours of CRSP 701, "Research Dissertation." **Students admitted with advanced standing are responsible for all materials covered in the required courses, and will take the full comprehensive examination, regardless of whether any course(s) were waived.**

Transfer Credit

Per School of Graduate Studies policy, students may be granted transfer credit for specific courses if they have previously completed (with a grade of B or higher) comparable graduate coursework which has not been applied toward a prior graduate degree. The course must have been taken within five (5) years prior to matriculation at CWRU. In such cases, the student may be asked to provide relevant syllabi for review by program leadership. If a required course or required elective is to be considered for transfer credit, the instructor for that course must provide approval based on review of the syllabus from the previously completed course. If program leadership (and course instructors as applicable) preliminarily approve transfer credits, the student will be required to petition the Office of Graduate Studies in order to receive transfer credits on their transcript.

Required Curriculum (22 credits hours)

The required curriculum is designed to provide PhD students with a strong foundation in clinical translational theory and practice, research methods, statistical science, and professional development and conduct.

The required curriculum comprises 22 credits hours in the following courses:

CRSP 401: Introduction to Clinical Research (3 credits hours) (Summer)

PQHS 490: Epidemiology: Introduction to Theory and Methods (3 credit hours) (Fall)

CRSP 412: Communication in Clinical Research I – Grant Writing (1 credit hour) (Spring)

CRSP 413: Communication in Clinical Research II – Oral Presentation, Posters, and the Mass Media (1 credit hour) (Fall)

CRSP 431: Statistical Methods I (3 credits hours) (Fall)
CRSP 432: Statistical Methods II (3 credits hours) (Spring)

CRSP 603: Research Ethics and Regulation (2 credits hours) (Fall)

CRSP 501: Team Science (1 credit hour) (Fall)

CRSP 550: Meta-Analysis and Evidence Synthesis (2 credit hours minimum) (Spring)

CRSP 440: Translational and Patient-Oriented Research Theory (3 credit hours) (Fall)

CRSP 450: Seminar in Multidisciplinary Clinical and Translational Research (0 credit hours) (Fall and Spring)

IBMS 500: Responsible Conduct of Research (1 credit) (Spring). ***Only required for students on NIH funding***

CRSP 450, Seminar in Multidisciplinary Clinical and Translational Research:

This seminar is held monthly each spring and fall semester. The research seminar will enable students to see clinical translational science in action and is therefore integral to our graduate program and to students' professional development. **Attendance is required**. Students are required to formally register for the seminar CRSP 450 (0 credits). The seminar consists of a presentation by an invited speaker on a research study or topic involving clinical and translational science, followed by discussion. Presenters come from CWRU and other local institutions (e.g. Cleveland Clinic Foundation, the MetroHealth Medi al Center, University Hospitals Case Medical Center, and Louis Stokes Veterans Administration Medical Center).

Research Rotations:

During the required coursework phase, students may participate in research rotations with the labs or research groups of Principal Investigators at CWRU or its affiliate institutions. These rotations may entail any of a number of research-related activities including assisting with an ongoing study, analyzing data, conducting a literature review, or assisting with the preparation of a scientific manuscript.

- Full-time students are expected to complete three research rotations in the first year of the program. Doing so can serve as an important avenue for solidifying a relationship with a longer-term research mentor. It is expected that research rotations will last for **approximately 9 weeks** and involve **at least 20 hours of project involvement per week**.

Please note: The School of Medicine covers the stipend and tuition costs of PhD students during their first year of study ("The Dean's Support"). One of the most important things a PhD student does in that first year is to complete their rotations successfully and identify a faculty member who agrees to serve as the student's primary mentor and financially support the student during subsequent years of their PhD program. **Students who have not identified a primary mentor by the end of the first year of study risk losing their stipend and tuition support.** Therefore, please be diligent in completing rotations, adding extra rotations as needed, and keeping program leadership up-to-date with your success in identifying a primary mentor. You should also contact program leadership for any questions or concerns about rotations throughout your first year.

Claiming CRSP 601 (Research Practicum) credit for research rotations:

In certain scenarios, a student working with a faculty member on a circumscribed research project may register for 1 or more hours of CRSP 601 in consultation with program leadership. These projects should be unpaid and providing valuable research experience to the student.

- MSTP-CTSTP students may claim CRSP 601 credit for completing research rotations (including rotations in the first year of the PhD program) according to Table 5.

- Full-time, non-MSTP-CTSTP students may claim CRSP 601 credit for completing optional research rotations in the second year and beyond. It is expected that these rotations will be distinct from the student's dissertation research.

- Part-time students working on research rotations which are distinct from their dissertation research may claim CRSP 601 credit.

Program leadership must approve all faculty who host students on research rotations prior to student placement.

Required Electives (3 credits)

The PhD coursework requirement also consists a minimum of 3 credit hours of required electives, a set of courses that consist of a range of specific research approaches and methods. Selection of the specific required elective(s) to be taken will depend on a student's individual needs, with guidance from the student's academic advisor(s).

The Required Elective choices are as follows:

CRSP 500: Design and Analysis of Observational Studies (3 credit hours) (Spring)

SYBB 421: Clinical Informatics (3 credit hours) (Fall)

PQHS 416: Introduction to Computing in Biomedical Health Informatics (3 credit hours) (Fall)

PQHS 426 Introduction to GIS for Health and Social Sciences

PQHS 450: Clinical Trials and Intervention Studies (3 credit hours) (Spring)

Electives

The number of elective course hours taken may vary based on advanced standing status or other factors. Electives are selected based on students' needs and advisor's approval. Any CWRU credit-bearing graduate level course may qualify. The course(s) could be "field specific" or include other course(s) not taken to satisfy the required elective requirement, as well as CRSP 410, Independent Study.

Examples of Program of Study

Each student's program of study is uniquely their own and should be designed around their previous experience/education, research and career goals. The following are examples of programs of study (Tables 3 and 4). These are for illustrative purposes only.

- For those with an advanced clinical degree (e.g. MD, RN, DDS, MBBS, etc.), see Table 3
- For those in the MSTP-CTSTP program, see Table 4

TABLE 3

Sample Program of Study for Matriculant with Advanced Clinical Degree but No Previous Formal Research Training

Curriculum Components	**# of credits**
Exemptions allowed for previous coursework	0
Required coursework*	22-24 (19-20 graded)
Required Electives	3 (graded)
Electives, independent study, pre-dissertation research	12 (6 need to be graded)
PhD Dissertation 701	18
Total minimum # of credits (24 credit hours of coursework must be graded**)	54

Semester & Year	**Course**	**Title**	**Credits**	**Graded or P/F**
Year 1 Summer	CRSP 401*	Introduction to Clinical Research	3	Graded
		Total	**3**	
Year 1 Fall	CRSP 440*	Translational & Patient-Oriented Research Theory	3	Graded
	PQHS 490*	Epidemiology: Introduction to Theory and Methods	3	Graded
	CRSP 431*	Statistical Methods I	3	Graded
	CRSP 450*	Seminar in Multidisciplinary C & T Research	0	P/F
		Total	**9**	
Year 1 Spring	CRSP 432*	Statistical Methods II	3	Graded
	CRSP 412*	Communication in Clinical Research Part I	1	P/F
	CRSP 550*	Meta-Analysis and Evidence Synthesis	2-3	Graded
		Elective	3	P/F or graded
	CRSP 450*	Seminar in Multidisciplinary C & T Research	0	P/F
		Total	**9**	
Year 2 Fall	CRSP 603*	Research Ethics & Regulation	2	Graded
	CRSP 501*	Team Science	1	P/F
	SYBB 421	Clinical Informatics (as required elective)	3	Graded
	CRSP 601	Research Practicum (and/or electives)	2	P/F
	CRSP 413*	Communication in Clinical Research Part II	1	P/F
	CRSP 450*	Seminar in Multidisciplinary C & T Research	0	P/F
		Total	**9**	
Year 2 Spring	CRSP 601	Research Practicum (and/or electives)	6	P/F or graded
	CRSP 450*	Seminar in Multidisciplinary C & T Research	0	P/F
		Total	**6**	
	Examination & Advancement to Candidacy			
Total coursework			**36**	**24 graded**
Year 3 Fall	CRSP 701	PhD Dissertation	4	S/U
	CRSP 450*	Seminar in Multidisciplinary C & T Research	0	P/F
Year 3 Spring	CRSP 701	PhD Dissertation	5	S/U
	CRSP 450*	Seminar in Multidisciplinary C & T Research	0	P/F
Year 4 Fall	CRSP 701	PhD Dissertation	4	S/U
	CRSP 450*	Seminar in Multidisciplinary C & T Research	0	P/F
Year 4 Spring	CRSP 701	PhD Dissertation **(Defense)**	5	S/U
	CRSP 450*	Seminar in Multidisciplinary C & T Research	0	P/F
Total Dissertation			**18**	

* Required courses.

** See http://bulletin.case.edu/schoolofgraduatestudies/academicrequirements/

TABLE 4

Sample Program of Study MSTP-CTSTP Program (Combined MD/PhD)

Curriculum Components	# of credits
Research Rotations	6
Graduate credits for portions of Medical School (IBIS courses)	18 (18 are graded)
Required PhD coursework*	16 (13 are graded)
Required Electives	2-3
Electives or Research Practicums 601	11-12
PhD Dissertation 701	18
Total # of credits	**71-73**

Semester & Year	Course	Title	Credits	Graded or P/F
Year 1 Summer	MSTP 400	Research rotation[1]	0	P/F
Year 1 Fall	IBIS 401	Integrated Biological Sciences I	4	G
	IBIS 411	Clinical Science I	2	G
	MSTP 400	Research Rotation[1]	3	P/F
		Total	**9**	
Year 1 Spring	IBIS 402	Integrated Biological Sciences II	4	G
	IBIS 412	Clinical Science II	2	G
	MSTP 400	Research Rotation[1]	3	P/F
		Total	**9**	
Year 2 Summer	MSTP 400	Research rotation[1] (one or two labs/rotations)	0	P/F
Year 2 Fall	IBIS 403	Integrated Biological Sciences III	4	G
	IBIS 413	Clinical Science III	2	G
	CRSP 440*	Translational and Patient Oriented Research Theory[2]	3	G
	CRSP 450*	Seminar in Multidisciplinary Clinical & Translational Research	0	P/F
		Total	**9**	
Year 2 Spring	CRSP 601	Research Practicum (and/or electives)	6-7	P/F
	CRSP 550*	Meta-analysis and Evidence Synthesis	2-3	G
	CRSP 450*	Seminar in Multidisciplinary Clinical & Translational Research	0	
		Finish Medical School Y2 and complete USMLE Part 1		
		Total	**9**	
Year 3 Summer	RSCH 750	Summer Research	0	P/F
Year 3 Fall	CRSP 501*	Team Science	1	P/F
	CRSP 431*	Statistical Methods I	3	G
	PQHS 490*	Epidemiology: Introduction to Theory and Methods	3	G
	CRSP 603*	Research Ethics and Regulation	2	G
	CRSP 450*	Seminar in Multidisciplinary Clinical & Translational Research (new)	0	
		Total	**9**	
Year 3 Spring[3]	CRSP 601	Research Practicum (and/or electives)	5	P/F or G
	CRSP 432*	Statistical Methods II	3	G
	CRSP 412*	Communication in Clinical Research, Part 1	1	P/F
	CRSP 450*	Seminar in Multidisciplinary Clinical & Translational Research	0	
		Total	**9**	
Complete qualifying examination and thesis proposal by summer following Year 3				
Summer Year 4	RSCH 750	Summer Research	0	
Year 4 Fall[4]	CRSP 701	PhD Dissertation	6	S/U
	CRSP 450*	Seminar in Multidisciplinary Clinical & Translational Research	0	

	CRSP 413*	Communication in Clinical Research, Part II	1	P/F
		Total	**7**	
Year 4 Spring	CRSP 701	PhD Dissertation	6	S/U
	CRSP 450*	Seminar in Multidisciplinary Clinical & Translational Research	0	
		Total	6	
Year 5 Fall	CRSP 701	PhD Dissertation	4	S/U
	CRSP 450*	Seminar in Multidisciplinary Clinical & Translational Research	0	
		Total	**4**	
Year 5 Spring	CRSP 701	PhD Dissertation (Defense)	2	S/U
	CRSP 450*	Seminar in Multidisciplinary Clinical & Translational Research	0	
		Total	**2**	
Additional PhD phase semesters if necessary- schedule as for Year 5				
All PhD requirements must be completed before starting Med Year 3				
Year 6	3rd year Medical School Curriculum			
Year 7	4th year Medical School Curriculum			

* Required Courses for PhD. MD/PhD students will be exempt from taking CRSP 401because this content is covered in Block 1 of the MD Curriculum.

[1]A minimum of 3 research rotations is required.
[2]Research Rotations and Theory course and seminar could be swapped with a research rotation if advantageous to the student.
[3]Spring electives could include (but are not limited to) "field specific" or other required electives, depending on student needs and advisor approval.
[4]Graduate school regulations allow for students to take coursework following their advancement to candidacy. The specific course(s) taken would depend on an individual student's program.

The EMBARK Program

The CWRU Graduate Education Office provides a longitudinal curriculum that guides students through key transitions in career exploration, preparation, and placement. An essential component of EMBARK is to bring cohorts of students together as a community for opportunities to learn from each other. The first two years are designed to prepare students for success in their doctoral experience. In later years, students align with peers who have similar career aspirations. More information about the program can be found on the EMBARK page on the Graduate Education Office website. **Full-time students are required to participate in the EMBARK program.** For purposes of this requirement, full-time student status refers to those students who have taken a full-time courseload during the first year of the program (e.g., those in the Dean's Scholar program). These students will receive announcements about EMBARK sessions.

Individual Development Plan Requirements

CTS students will receive correspondence from the School of Medicine regarding training and completion requirements for Individual Development Plans (IDP). Only CTS students funded by NIH are required to complete the IDP. This includes anyone who has received an NIH F award or K award, anyone on an NIH training grant (e.g., T32 grant), and anyone whose mentor is funding them from a research grant (e.g., R01). If you are uncertain of the source of funds used by your mentor to cover your tuition and any stipend, please discuss

with them to ascertain.

First-year students covered by the Dean's Scholarship are not considered NIH-funded.

The CTS program has opted to be as flexible as possible with regard to requiring IDPs because of the non-traditional nature of many of our students. That said, ongoing professional development and career planning is essential at every level. Whether through an IDP or otherwise, students should be thoughtful in this regard. Some of those not required to complete an IDP may still find the exercise useful, particularly if very early in their career and/or somewhat unsettled on the area of research they wish to pursue. All students should be having periodic conversations with mentors about strategies for expanding their skill sets and collaborations, for ensuring the highest translational impact of their work, for funding, for balancing research and other duties, etc. This exercise should not stop at graduation!

The CTS program has its own format for the IDP (See **Appendix 1**). Students may, but are not required to, use the Mastery Learning Record (MLR) in the Mastery Transcript Consortium (MTC) platform. The MLR will provide an overview of progress and achievements that are not accurately captured in a transcript or CV/resume, and will help guide students through the creation of an IDP. The MLR will demonstrate professional growth highlighted by the evolution of their evidence. Once students begin to pursue prospective employment opportunities, the MLR will provide an in-depth record of experiences and skills that will aid in the creation of a CV/resume. The competencies outlined in the MLR are derived from the CWRU School of Medicine Graduate Education Office. This tool also provides a mechanism to share the completed Individual Development Plan with mentors.

Comprehensive Examination

Per CWRU School of Graduate Studies requirements, after completion of required coursework, students must pass a comprehensive (qualifying) examination, which will assess a student's ability to conduct clinical translational research as defined by the curriculum's core competencies (Table 1). To be eligible to sit for the exam, the candidacy examination, the student should have completed CRSP 401, PQHS 431, PQHS 432, CRSP 440, PQHS 490, CRSP 550, and CRSP 603, and have achieved a GPA of 3.5 or higher. The examination consists of two parts: a closed-book, in-class written examination followed by a presentation. The examination will test the depth and breadth of the student's knowledge of clinical translational theory and practice, and comprehensive ability to synthesis and apply that knowledge. The in-class examination will cover the above required coursework and will contain questions that synthesize content across the different required courses.

The in-class portion of the examination will last approximately 6 hours and will cover fundamental knowledge in the area of clinical translational science. For the take-home portion of the comprehensive exam, students will select a published, quantitative translational research article that will form the basis for a presentation to a committee selected by program leadership. The student will critically review the article in terms of its conceptualization, methodological approach/design, analytic plan, interpretation of results, and discussion of implications; and they will field questions from the committee. More details will be provided upon completion of the written comprehensive exam.

There are 3 possible outcomes of the examination: (1) pass (without revisions); (2) conditional pass (revisions needed); and (3) fail. A "Pass" is given when all questions are answered satisfactorily. The "conditional pass" outcome occurs in a situation where the examination committee feels that the student's responses were acceptable except for a deficiency in a small number of specific questions or domains. In this case, the Program Director and student will develop a remediation plan addressing the specific deficiencies. The student will then prepare a written response to question(s) generated by the committee addressing the deficiency. If the committee deems these responses satisfactory, the student will have passed the examination. A student who fails the candidacy examination outright will be permitted to retake the examination following completion of additional coursework and/or other remedial steps as determined by the examination committee and the student's advisor.

The examination committee will evaluate the student's completed exam and will inform the student of the course of action verbally and in writing. The examination committee chairperson will inform the PhD Program Director in writing of the selected course of action. Students may retake the examination the following semester, and must retake the examination within one calendar year. A student who fails the comprehensive examination twice may not undertake further study for credit toward the PhD. With the approval of both the Program Director and the School of Graduate Studies, such a student may apply course credit hours toward completion of the Master's degree in Clinical Research.

Formation of Dissertation Committee

Per School of Graduate Studies' regulations, each student will form a dissertation committee, consisting of a minimum of four faculty members of the university. At least one member must hold a primary appointment that is outside of the Department of

Population and Quantitative Health Sciences. All committee members must: (1) hold the rank of Assistant Professor or above; (2) be tenured, on the tenure-track, or be a full-time faculty member whose primary duties include research and who is authorized to serve on a PhD dissertation committee by the school or college through which they are affiliated with the university; and (3) have relevant content or methodologic expertise. Expertise is determined by the faculty member's authorship of research publications in refereed journals and recognition by peers as an expert in the student's research area. The student's primary research mentor will serve on the committee. The student and primary mentor will select a committee chairperson who 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 student's primary mentor cannot serve as the chairperson. The Office of Graduate Studies will need to approve the naming of any faculty member as chairperson whose primary appointment is outside of the Department of Population and Quantitative Health Sciences. The student will identify and select at least two additional individuals (besides primary research advisor and committee chairperson) to serve as committee members. Students should consult with program leadership about committee formation as soon as their dissertation topic begins to come into shape. **Program leadership must approve the makeup of the committee.** Persons who are not members of the University faculty may serve as additional members of the defense committee, subject to approval by the School of Graduate Studies. A petition with the rationale for the request must be submitted to the School of Graduate Studies along with the proposed member's CV. Under special conditions, a former faculty member whose time of leaving the university has not exceeded 18 months may be approved as a committee member by the School of Graduate Studies.

Once a committee has been formed, the student is required to meet with their committee members at least once per semester until the final dissertation defense. It is the student's responsibility to arrange said meetings. The student will complete the "PhD COMMITTEE AND STUDENT MEETING FORM" following each full committee meeting.

Addressing Dissertation Issues

The dissertation committee chair will be the first person who will address any issues regarding student performance or interactions with faculty during the dissertation phase. In the event that such conflicts arise that cannot be addressed by the committee or the

committee chair, the committee chair will approach the Program Director to resolve the situation.

Proposal Defense

Before initiating their dissertation research, students will submit to their dissertation committee for approval a detailed, written research proposal in the NIH or NSF style (or style agreed upon by the student and dissertation committee, subject to program steering committee approval) and conduct an oral proposal defense. The typical format of the defense is an approximately 40-minute oral presentation, usually supported with visual aids (e.g., PowerPoint slides) followed by Q&A and discussion with the dissertation committee. **Proposal defenses are to be open to the public.** Please notify the program at least three weeks in advance of the proposed defense data to arrange for reserving a room and creating an announcement to the PQHS community. If you have not done so previously, this is also a good time to confirm with the Program Director the relevance of the proposed dissertation topic to Clinical Translational Science.

For the PhD Dissertation Proposal Defense, it is the responsibility of the student to:

- Arrange the proposal meeting (time and location)
- Write the Dissertation Proposal in either the NIH or NSF style (format decided in consultation with the student's research advisor and committee chairperson)
- To provide to the **entire** dissertation committee the written Dissertation Proposal, and any other supporting documentation, at least 2 weeks prior to the proposal defense date.
- To prepare a well-developed oral defense of the proposal along with any appropriate documents or visual aids (e.g., PowerPoint)

Following the proposal presentation and a question and answer session, the dissertation committee will meet privately to decide on whether to pass, conditionally pass, or fail the defense and decide on changes to be made to the proposal. The primary mentor, optionally with the committee, then meets with the student to share the committee's decision. A proposal is considered "passing" if the committee identifies no significant weaknesses, and only has minor suggestions for improvement which do not require re-evaluation by the committee.

A “conditional pass” will be deemed appropriate when there exist only minor deficiencies in the proposal that can be addressed by one or a few remedies within no more than one month, and which need to be re-evaluated by the committee once addressed. To pass or receive a conditional pass, at least 4 members of the committee must support this decision.

A proposal is considered “failing” if there are substantial issues with study rationale or methodology which require significant restructuring. 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. Timelines for addressing deficiencies in the case of a failure will be decided by the committee and approved by the Program Director.
The committee will then submit to the Graduate Program Director its pass/fail recommendation and a copy of the written (possibly revised) proposal.

Once the proposal is approved, the student may commence mentored research on their dissertation. This will include registration for CRSP 701 credit hours. To register for CRSP 701, students must first complete and submit their Advancement to Candidacy form to the program's Education Administrator.

Advancement to Candidacy

To be considered for advancement to candidacy, students must submit a signed and completed Advancement to Candidacy form to the School of Graduate Studies. Students must complete most doctoral level coursework and pass the comprehensive examination **before** defending a dissertation proposal. Students must advance to candidacy within three semesters of passing the comprehensive exam.

When a student has advanced to candidacy, he or she may begin dissertation research by formally registering for CRSP 701 credit hours. However, with the approval of the academic adviser, research adviser and Program Director, a doctoral student may petition for permission to register for up to a total of 6 credits of dissertation research prior to advancement to candidacy by completing a Predoctoral Standing form. The student is expected to advance to candidacy the semester following the semester in which the

Predoctoral Standing form was submitted.

Once students have registered for “Dissertation Research” (CRSP 701), they must maintain registration (at least 1 credit) in each subsequent semester (fall and spring) until a minimum of 18 credit hours have been satisfactorily completed and the dissertation is finished and defended, with the exception of approved leaves of absence. Students are expected by the School of Graduate Studies to complete their dissertation and defense within five calendar years from the date the first dissertation credit hour is taken. Leaves of absence do not extend the 5-year time limit to graduate after first enrolling in dissertation (CRSP 701) credit hours. Also note that there is no provision for “part-time” status during candidacy. The School of Graduate Studies considers a single credit hour of dissertation research to represent full time student status. All students have a five-year time limit to complete their degree after registering for dissertation credit hours.

Dissertation Research

After successful defense of the proposal, doctoral degree candidates will conduct their dissertation research with guidance from their dissertation committee. Based on this research, they will prepare a dissertation that will: (1) demonstrate a thorough description and critical understanding of the literature in the student’s topic area; (2) clearly describe an original thesis, methods used, results and implications in terms of the thesis/study questions; (3) identify and describe further research or future directions; (4) describe theoretical and clinical translational significance.

Dissertations in the program will be hypothesis driven. The research hypothesis (or hypotheses) will be formulated by the student, based on comprehensive synthesis of the scientific literature, in consultation with committee members for plausibility and feasibility. Dissertation projects will be translational (or have translational implications), clinical and/or population-oriented and will emphasize the process of team science. In general, the dissertation should represent a meaningful contribution to the student’s area of study by filling either a significant methodologic or knowledge gap. The student will be responsible for collecting (if necessary) and analyzing the data to test the hypothesis, developing manuscripts, and will be the lead author for any publication coming out of the thesis research.

In most cases, dissertation research will require institutional review board (IRB) approval. As needed, PhD students will be certified by the Continuing Research Education Credit (CREC)

Program in human subjects research, develop the IRB-required protocols, and obtain IRB approval before initiating their dissertation research.

It should be noted that the length of time to complete the dissertation is likely to be variable: two years is a typical length of time, but students entering the doctoral program with substantial research experience and training may complete the dissertation in a shorter time period. However, per School of Graduate Studies' requirements, students have five consecutive calendar years from the semester of the first credited CRSP 701 registration, including leaves of absence, to complete all requirements for the doctorate.

Dissertation Defense

All candidates for the PhD degree must submit a written dissertation as evidence of their ability to conduct independent research at an advanced level. The dissertation must represent a significant original contribution to existing knowledge or theory in the area of concentration, and, per the School of Graduate Studies, at least a portion of the content must be suitable for publication in a reputable professional journal or as a book or monograph. Detailed instructions with regard to formatting and structure can be obtained from the Office of Graduate Studies at https://case.edu/gradstudies/current-students/electronic-theses-and-dissertation-guidelines.

Per the School of Graduate Studies, each doctoral candidate is required to pass a final oral examination in defense of the dissertation. The chair of the dissertation committee, once the written dissertation is ready, must approve the date of the oral defense. All scheduled defenses are made known through on-campus publication, and any member of the university may be present at the portion of the examination pre-designated as public by the chair of the dissertation defense committee. Others may be present at the formal defense only by invitation of the chair.

All faculty members are encouraged to attend and participate in the student's PhD examination, and all members of the dissertation defense committee are expected 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.

The dissertation committee will insure that the dissertation has the scientific merit and rigor of doctoral-level, reflects mastery of the core competencies in clinical and translational research, and meets all School of Graduate Studies' standards and requirements. Additional work may be required based on the result of the examination.

The student passes the dissertation examination if no more than one member of the dissertation committee dissents.

It is the responsibility of the candidate to:

- Submit the schedule for their defense no later than three weeks before the date of the defense to School of Graduate Studies and to the program's Educational Administrator
- Ensure each member of the dissertation committee receives a copy of their final dissertation at least 10 days before the defense
- Ensure all appropriate dissertation approval forms ("PhD Graduation Packet") from the School of Graduate Studies are complete and on hand at the defense
- Ensure the written dissertation conforms to the regulations of the Office of Graduate Studies.
- Ensure an unbound copy of the dissertation is submitted to the program center

Dissertation Requirement

The format of the dissertation is to be determined by the dissertation committee. A common and recommended format is the following:

- Introductory chapter - This introductory and background chapter should tie all the aims together. The chapter culminates with specific aims or research questions.
- Middle chapters (typically 3 chapters): Each chapter can correspond to a draft manuscript ready for journal submission.
- Final chapter: Summarize research, and include overall results and significance of findings, limitations, translational implications, and future research.

The acceptability of the dissertation is at the committee's discretion, with the primary criterion being that the work should advance the field either methodologically or with significant, novel findings.

Publication Requirement

In order to graduate, a candidate must have at least one first author publication accepted or published in a peer-reviewed journal, and another first author publication at least submitted to a peer-reviewed journal. The articles need not be linked to the dissertation but must involve empirical data (a qualitative study does count, but a case-report or review article does not satisfy the requirement), and the underlying study/analyses must have been conducted while the student was matriculated into the PhD program. Students should alert the program administrator about any publications submitted, accepted, etc.

Time Limitation

All requirements for the doctoral degree must be completed within a total of five consecutive calendar years after the semester of the first credited registration in CRSP 701 Dissertation Research, including leaves of absence. Extensions may only be considered through the Extension Request Form which is signed by the Director of Graduate Studies and Departmental Chair and submitted to the School of Graduate Studies.

It should be noted that extensions may involve significant financial expense in the form of additional required CRSP 701, “Research Dissertation”, credit hours.

Ethics in Conducting Research

As needed, PhD students will be certified by the Continuing Research Education Credit (CREC) Program in human subjects research, develop the IRB-required protocols needed for their dissertation and any other research they initiate while a student, and obtain IRB approval before initiating such research.

Publication of Electronic Thesis and Dissertation (ETD)

The School of Graduate Studies partners with OhioLINK to electronically publish 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. Thus, ETD makes it easier to share knowledge, lower costs, and improve graduate education. 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 permissions should be given only after consiltuing the research advisor to ensure the ability to publish the research findings.

The OhioLINK publication agreement can be found at https://www.ohiolink.edu/ Please take a moment to read and understand it before submitting your ETD. The publication agreement outlines what OhioLINK and CWRU may do with the copy of the ETD published in the ETD Center.

It is a requirement of Case Western Reserve University to publish all doctoral dissertations through UMI/ProQuest. Please note that electronic dissertations will be submitted to UMI/ProQuest on behalf of CWRU by OhioLink. The doctoral graduation packet contains a form which contains detailed information about electronic publishing.

You must have the format of your thesis/dissertation checked and approved by the School of Graduate Studies before you upload to OhioLink. Once the dissertation has the School of Graduate Studies approval, the dissertation may be posted to OhioLink by emailing a copy of the entire PDF file to etdsubmit@case.edu. Include your department or program name and the words "format check" in the subject line. Notice of approval (or corrections) will be sent back via email. *Any ETD uploaded to OhioLink without prior approval will be deleted*.

For more ETD guidelines, please refer to the School of Graduate Studies' ETD Guidelines website at https://case.edu/gradstudies/current-students/electronic-theses-and-dissertation-guidelines.

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 they have already published part of their dissertation 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 (even if from a publication they authored) without copyright release.

Inclusion of any intellectual property must appropriately consider legal, collegial and ethical obligations as imposed by Material Transfer Agreements, patents, copyrights, or trademarks. Any questions concerning intellectual property should be directed to the Technology Transfer Office (https://case.edu/research/faculty-staff/technology-transfer). 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. If you have chosen a publisher and plan to publish a portion of your ETD, check the publisher's policy. The ETD may be embargoed (held without release) *after submission* for up to two years in such circumstances. 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.

Professional Commitment and Culture

Students in the program are expected to maintain appropriate professional standards. This includes regular and on-time attendance of 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 impeccable research credentials, independent critical thinking, and problem solving. Students must recognize that voluntary enrollment in this rigorous graduate program may place demands on their time on evenings and weekends, and may prohibit them from taking on additional

time-consuming activities, such as a second job. Pursuit of a doctoral degree takes time and commitment beyond that spent in the classroom and doing the work supported by a stipend, fellowship, or other form of financial assistance. Students must display maturity of character, interest in the practice of research, excellence in development of interpersonal communication, and high professional commitment to the program of study; they must espouse integrity, honesty and courtesy, all important professional values. Use of equipment, supplies, and materials provided by the Department are for the sole purpose of academics and research and must be approved by the student's academic adviser. Copyright laws must be followed. Students are expected to contribute to their own professional development by fully availing themselves of the range of educational and professional activities and resources offered by the School of Medicine the Department of Population and Quantitative Health Sciences.

Travel Funding Policy

Limited funds are available to students for those needing travel support. Student's funding mentor(s) should be the first line of payment. If the mentor cannot provide sufficient funding AND

- If the student is giving an oral presentation or invited talk, AND
- The student is enrolled full-time and is in good-standing, AND
- If the student demonstrates they have applied to one or more other funding sources within or outside of the university, and there is still a need,

The student may request travel funds from the CTS program of up to $500 for domestic travel and up to $1,000 for international travel.

Students may only avail themselves of this opportunity once in their graduate career. Each request is subject to available funds.

Graduation

To receive a degree, the student is required to complete the School of Graduate Studies online graduation application through SIS before the posted deadline (typically around six weeks after the start of the semester) during the semester the student expects to complete all degree requirements. The student must be registered for at least one credit hour during the semester in which the degree is awarded. It is the responsibility of the student to submit the completed PhD Graduation Packet forms to the Office of Graduate Studies on time. Each student who applies for graduation should consult the calendar from the School of Graduate Studies for the various dates and deadlines.

The Complete School of Graduate Studies' PhD Graduation Packet Includes:

- **Notification for Scheduling the Final Oral Exam —** The Form must be completed and submitted to the School of Graduate Studies at least three weeks before your defense date.
- **Final Certification for the PhD Degree —** Complete the Certification Form with all relevant signatures. Submit the Form to the School of Graduate Studies with other Final Materials.
- **ETD Document Approval Form —**Have this signed by you and your dissertation advisor and submitted to the School of Graduate Studies. Offers important information about the electronic publishing process. (Our office only needs the second page)
- **Online Survey of Earned Doctorates** —The U.S. government compiles higher education statistics based on the information on this Form. As a major research university, CWRU is committed to its representation in this national effort. The aggregated data is used for comparative purposes to be used in planning by the university, as well as used by the government for developing funding initiatives.
- If applicable, **Waiver of Registration Form —** If you cannot meet the deadlines to complete all the requirements to graduate in one term but can finish before the next term begins, you can apply for a waiver of registration for the next term. You must be registered for at least one credit hour in the semester preceding the one for which you intend to use the waiver (includes Summer).

Steps to Completion

1. Complete and submit the Application for Graduation through the **Student Information System** (SIS) by the **posted deadline** for the term.

2. Work with your advisor and committee members to decide on a date, time and place for your final oral exam (defense). Make certain the defense date occurs before the established deadline for the term. Your advisor has to agree that the dissertation is ready to defend.
3. Submit the **Notification for Scheduling the Final Oral Exam** Form to the School of Graduate Studies *at least three weeks prior to your defense date.*
4. Submit copies of your dissertation to the members of your defense committee at least two weeks prior to your defense date.
5. Have all committee members sign the **Final Certification for the PhD Degree** Form at the conclusion of your successful defense.
6. Make corrections, if required, then have your advisor sign the Certification Form where indicated. If no corrections are required, have your advisor sign the form at your defense.
7. Obtain your department chair/program director's signature after your advisor has signed the Certification Form.
8. Submit Final Materials (see below) to the School of Graduate Studies by the **posted deadline**.
9. Submit a completed copy of your dissertation **as a .PDF file** to the School of Graduate Studies (**etdsubmit@case.edu**) for a format check.
10. After your format check is complete, upload the final, approved copy of the completed dissertation as a .PDF file to **OhioLINK**. ***Choose:** 1) Copyright: "Copyright, all rights reserved." and 2) Proquest Permission: "Upload my paper to Proquest..."*

Submit the following to the School of Graduate Studies by the established deadlines:

*(All materials must be received no later than the **posted deadline**)*

Submit the following documents to the Graduate Studies office or by emailing **gradstudies@case.edu**:

- **Final Certification Form** with all appropriate signatures
- **ETD Document Approval Form**
- **Online Survey of Earned Doctorates** confirmation
- **Waiver of Registration Form**, if applicable
- Your completed **ETD uploaded to OhioLINK** - only AFTER it has been approved by your committee AND by Graduate Studies.

Deadlines and Forms

University Calendar of Deadlines: https://case.edu/gradstudies/current-students/dates-deadlines
Commonly Used Forms: https://case.edu/gradstudies/current-students/forms

Mentoring

PhD in Clinical Translational Science/Case Western Reserve University

Program Advisor and Primary Research Advisor

Mentoring is an essential component of the PhD program. The student will be mentored throughout by numerous faculty from multiple disciplines. Two key mentors in the student's journey, however, will be the academic advisor and the primary research mentor.

Academic Advisor:

Upon matriculation into the PhD program, each student will be assigned an academic advisor, who will advise the student over the initial year of the program regarding selection of courses and research rotations. The academic advisor will also assist students in identifying and selecting appropriate research mentors. As a student moves through the program, they will select a primary research mentor based on research and career interests. If the academic advisor's research interests are aligned with those of the

student, the program advisor may become either the student's primary mentor.

The student will meet with the academic advisor at least once per semester during the first year to discuss course plans for the upcoming semester. Once completed, the advisor will remove the "Advisor Hold" on the student's record in SIS to permit course registration.

Primary Research Mentor:

Each student will have a primary research mentor, whose field of interest and area of expertise closely match those of the student's dissertation area. The primary mentor will be selected by the student with guidance form the Program Director. The Program Director will then communicate with the selected mentor to confirm the mentorship. The primary research mentor takes primary responsibility for guiding the student's dissertation research and training. The primary mentor also functions in the role of "advisor" for School of Graduate Studies' purposes (e.g. approving course of study, signing necessary approval documents, etc.). The primary mentor could be faculty from any of CWRU's schools and departments, as well as individuals from the Cleveland Clinic Lerner College of Medicine, MetroHealth Medical Center, University Hospitals, Veteran's Administration Medical Center, or MetroHealth with appropriate faculty appointments.

It is highly recommended that students select a primary mentor by the end of program Year 1. All students are required to have selected a primary mentor by the end of Year 2.

Changing Your Academic Advisor or Primary Research Mentor:

In order to optimize the "fit" between student and advisor/mentor, we recognize that changing a mentor is occasionally necessary. To change an advisor/mentor the student must obtain approval from the PhD Program leadership.

Evaluation/ Monitoring of Student Progress

To help ensure success, students' progress will be monitored. It is the responsibility of the student to meet regularly with the academic advisor and/or primary research mentor, who will monitor the student's progress. Once formed, each fall and spring semester, a student's full dissertation committee will meet formally with the student to assess the student's progress.

During each committee meeting, the chairperson will provide the student the opportunity to speak with the committee without the primary research mentor present in order to

assess progress and the mentor/mentee relationship from the student's prospective. Likewise, an opportunity will be afforded to the primary mentor to speak to the committee without the student's presence.

The committee will generate a report and submit this report to program leadership for its review. If the student's progress is not suitable, program leadership will meet with the student and his/her dissertation committee to identify remedies for identified deficiencies.

University and Department Policies

PhD in Clinical Translational Science/Case Western Reserve University

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.

Student Responsibility

It is the student's responsibility to become acquainted with and adhere to Departmental/Center and University rules, regulations, and administrative procedures governing graduate study, including the University's Standards of Conduct detailed in the CWRU 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.

Student Information System (SIS)

The Student Information System (SIS) is a secure, flexible, web-based environment for creating and managing academic records, and the course catalog at CWRU. Through SIS, students are able to register for courses, view grades, complete financial transactions, and carry out other academic information.

Various links of SIS can be found at:

- SIS can be accessed via the "quick link" section at the bottom of the CWRU homepage at http://www.case.edu, or at http://www.case.edu/sis.
- The SIS Student Guide handbook be found at https://case.edu/projects/erp/learning/student_sis_guide.pdf.
- Students can access SIS training guides, information, references, and FAQs at https://case.edu/registrar/sisresources.

The University Registrar Office, 216-368-4310, is available to help with SIS-related issues.

Communication Among Students, Staff, Faculty

All students enrolled at CWRU 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 the student access to their Case Webmail account, SIS, and any other appropriate University-related login systems. If you use another email account, please ensure that you read both accounts regularly or that you forward your CWRU email to your regular email.

Students are responsible for reading the information and content of communications sent to their CWRU 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.

Students are expected to check their CWRU email daily and will be held responsible both for the information conveyed and for responding promptly and appropriately to all CWRU communication, whether it comes from faculty, instructors, staff, students, or officials of the School of Medicine, School of Graduate Studies, or other University officials.

Statement on Professional Conduct

The Case Western Reserve University PhD in Clinical Translational Science aims to provide students with an environment that is supportive and conducive to learning. 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 PhD 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 PhD 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 and University Requirements

This section includes extractions from School of Graduate Studies Policies and Procedures, available from the School of Graduate Studies and online at

https://case.edu/gradstudies/about-school/policies-procedures. All students should become familiar with the Graduate Student Handbook and consider the Policies and Procedures 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.

Student Records

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

Standards of Conduct

The following rules are designed to preserve freedom of expression and association on the CWRU campus and reaffirm the civil, personal, and property rights of the University and its members. University members who violate one or more of these rules will be subject to disciplinary action. Conduct which is subject to University disciplinary action includes: Interference with freedom of speech or movement, or intentional disruption or obstruction of teaching, research, administration, or other functions on university property

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

weapon with which injury, death, or destruction may be inflicted
- Violations of law on University premises or in connection with university functions
- Violation of published university rules and regulations

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

Statement on Ethics

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

The University's mission rests on the premise of intellectual honesty in the classroom, the laboratory, the office, and the solitary examination desk. Without a prevailing ethic of honor and integrity not only in scientific pursuits but also in all scholarly activity, the very search for knowledge is impaired. In these respects, each of us—especially but not exclusively faculty — must regard ourselves as mentors for others.
These principles we strive to uphold make it possible for the larger society to place trust in the degrees we confer, the research we produce, the scholarship we represent and disseminate, and the critical assessments we make of the performance of students and faculty, as well as judgments of staff and administrators. To safeguard the standards on which we all depend, each of us must, therefore, accept individual responsibility for our behavior and our work and refrain from taking credit for the work of others. The culture of a university also requires that the rights of all be protected, particularly by those entrusted with authority for judgment of the work of others.

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

IRB Approval of all Research and Protection of Data

All dissertation work involving human subjects, even if involving only secondary data analysis, must have IRB approval or a documented IRB determination of exemption. The program advisor, and/or the primary and co-mentors and the student must be involved in this process, with a faculty member noted as the Responsible Investigator. 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

Each student is required to adhere to the standards of academic integrity held by CWRU, the School of Medicine, and the PhD program. As such, students should familiarize themselves with the standards 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.

Any form of academic dishonesty (e.g. forgery, cheating, plagiarism, misrepresentation and obstruction, alteration of University documents, etc.) is a violation of academic integrity standards. Plagiarism includes, but is not limited to, the duplication of another's words, work, or ideas from printed or electronic sources, without proper attribution, and to pass these on as one's own. Note: It is considered plagiarism to submit, without the instructor's consent, a previously submitted assignment from one class to another.

If a student is deemed to have violated the standards of academic integrity, the University's Academic Integrity Board may take one of the following actions to sanction the student's violation:

1. Issuing failure in the work in question,
2. Issuing failure in the course,
3. University disciplinary warning,
4. University disciplinary probation,
5. University disciplinary suspension, or
6. Expulsion.

The University also has guidelines on authorship standards. Further details can be found in the University's policy on Academic Integrity: http://www.case.edu/gradstudies/current/policies.html

Artificial Intelligence Policy

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

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 Use 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 regards to academic matters and interpersonal behavior, as well as meet the expectations that come with being a part of a community of scholars and professionals. This includes respect for all people. Behaviors that interfere with another's well- being or ability to perform their responsibilities, learning, or professional development will be considered especially egregious.

Violations may be subject to disciplinary action on the part of the program or department. The nature of the violation, its severity, and history of prior violations will all be considered in any formal disciplinary action taken. Students will receive a letter from the department detailing the reasons for the disciplinary action and any required steps they must complete to return to good standing in the program. The Dean of the School of Graduate Studies reserves the right to issue discipline even in cases where the Program and Department have chosen not too. Disciplinary actions may include:

Warning:

Students who are in violation of program, department and/or university policies will be issued a warning from either their Program Director or in certain circumstances the Vice Chair for Education. Students will receive no more than one warning from the program/department. Any subsequent violations will result in academic probation, suspension, or separation. Students who are issued a warning will receive a letter from the department detailing the reasons for the warning. Students are not guaranteed to receive a warning prior to other disciplinary action being taken by the department or the University.

Academic Probation:

Students who are in violation of program, department and/or university policies will be placed on academic probation by either their Program Director or in certain circumstances the Vice Chair for Education. Students placed on academic probation will receive a letter

from the program/department detailing the reasons for the probation and a course of action (including deadline) for the student to be removed from academic probation. If a student fails to meet the conditions and/or deadline established in the academic probation letter, they can be suspended or separated from the program and/or the University. Any student failing to maintain good standing in their program will automatically be placed on academic probation. Qualifying for a second academic probation can result in separation from the program and University.

Suspension from the program and University:

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

Separation from program and University:

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

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

Reviews of violations will be made under the direction of the program director. All disciplinary decisions will be certified by the Vice Chair for Education. In certain

circumstances, the review of violations may be overseen by the Vice Chair for Education instead of the program director.

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

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

Maintenance of Good Standing

In order to remain in good standing within the PhD program, students must satisfy the following conditions:

- Register each fall and spring semester unless on an official leave of absence that has been approved by the School of Graduate Studies.
- Achieve a minimum cumulative graduate GPA of 3.25 in all graduate work (including transfer courses).
- Receive a grade no lower than a “B” in any of the required courses. Attend courses and seminars as scheduled. If illness or other circumstances intervene, the student must notify the course instructor and adviser as soon as possible.
- Satisfy all program deadlines and time limits as outlined in the Academic Guide.
- Remove Incomplete (I) grades within one semester, or by the time specified by the course instructor if that is later.
- Failure to achieve a quality-point average of 2.75 or higher at the completion of 12 semester hours or 2 semesters of graduate study.
- Failure to achieve a quality-point average of 3.00 or higher at the completion of 21 semester hours or 4 semesters of graduate study.
- Pass the Comprehensive Exam within two attempts.
- Successfully defend the dissertation **within five years** of advancing to candidacy.
- Completion of the publication requirement

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

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

Minimum Course Grade Policy – PQHS Graduate Programs

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

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

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

Course Grades and Good Academic Standing

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

	Course Grade	
Course Type	**C**	**D, F, No Pass, U**
Program Required Courses	W, PE	PM, Retake or Substitute

Other Courses		
PQHS/CRSP/MPHP courses: *MS or MPH Program*	GS	PM, Retake or Substitute
PQHS/CRSP/MPHP courses: *PhD Program*	W, PE	PM, Retake or Substitute
Courses based outside PQHS	GS	PM, Retake or Substitute

GS = Good Academic Standing
W=Warning mandatory
PE=Academic Probation Eligible
PM=Probation mandatory

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

Probation Eligible – Rubric For Decision

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

1. In isolation, a first "C" grade will typically result in a warning to the student (that does not go to Graduate Studies) stating that a "C" is more serious in graduate school than in undergraduate school, and state the rules and consequences of further "C" or worse grades, and the minimum GPA to avoid probation and be able to graduate.

2. However, the student might be placed on academic probation based on a combination of the "C" grade and other factors relating to the student's past and current performance or behavior (e.g. prior or concurrent poor grades, ethical breach, lack of professionalism, failure to engage promptly or appropriately with the program).

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

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) Grades

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 grade. coursework may be specified by departmental policy.

Satisfactory/Unsatisfactory (S/U) Grades

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.

Waiving a Course

It is expected that all PhD students will take the full 22 credit hours of required coursework unless they have previously completed these courses and/or if they have obtained advanced standing (see page 21).

If a student has taken a course at CWRU or elsewhere that is thought to be equivalent to one of the program's required courses, and has received a grade of "B" or higher, the student may petition for a waiver of the course requirement. If the course is deemed to be equivalent to the required course, the waiver will be granted. However, there is no change in the number of credits required for the degree. In this case, the student will replace the waived course with another course. The only mechanisms to reduce the required number of credit hours for the program is (1) by petition for a transfer of credits in the specific

instance of a course taken elsewhere that was **NOT** used towards a degree; or (2) by being granted advanced standing.

In order to waive a course, the student should first consult with their Program Advisor. Next, the student must petition and provide sufficient evidence to the PhD program Steering Committee. Evidence for a waiver will consist of the student's transcript showing the course and grade received, as well as, the syllabus for the course. The CWRU instructor teaching the course petitioned for waiving will also be consulted as needed.

It is important for the student to note s/he will be held fully responsible for all required coursework on the comprehensive general exam based on how this coursework is taught at CWRU, even if the student received permission to waive the course based on coursework taken elsewhere.

Replacing a Course

If a student is attempting to waive a course deemed equivalent to one taken from another institution, the student may be given the option to replace the required course with another, more advanced one in the same subject area. Similarly, the student may initially request to replace the required course with a more advanced one, rather than to waive out of it. If the PhD program Steering Committee approves the replacement course, it is important to note the replacement course does not need to be taken in the same semester as the course that is being replaced, but there must be a plan identifying the course and when it will be taken. Special attention must be paid to prerequisites for any replacement course and when it is offered.

To request to replace a required course, students may petition the PhD program Steering Committee to obtain a waiver for a required course. The petition must provide documentation of the relevant courses completed, with a grade of "B" or higher, a detailed description of the course(s), and the syllabus.

It is important for the student to note s/he will be held fully responsible for all required coursework on the comprehensive general exam based on how this coursework is taught

at CWRU, even if the student received permission to waive the course based on coursework taken elsewhere.

Repeating a Course

Graduate students may petition the Program Director to repeat a maximum of two courses during their degree program in order to improve their performance. The appropriate form that must be completed, together with details of this policy can be found at http://gradstudies.case.edu/current/forms.html.

When a course is repeated, the first grade will remain visible on the transcript, but will be removed from the calculation of the cumulative grade point average and the grade point average for the semester in which the course was first taken. The new grade will then be used for calculation of the cumulative grade point average and the grade point average for the semester in which it was earned, regardless of whether the new grade is higher or lower than the first grade. The student's transcript will show the comment "Repeated: No credit awarded" directly below the original grade. However, if the first attempt of the course resulted in a passing grade, but the second attempt results in a failing grade, then the original grade will remain. Similarly, if a student withdraws from a course that is being repeated, the Course Repeat Option will not be applied and the original grade will stand. Course repetition may be exercised according to the following conditions:

- The course repeat option can only be used on course in which a C or lower was earned. Courses with a grading basis of P/NP are not eligible under this policy.
- A student may not use the Pass/No Pass Option on a course that is being repeated.
- A student may only use the repeat option on the same course.
- Research based courses, 601 and 701 are exempt from this repeat policy. Dissertation research course 701 grading policy can be found in the General Bulletin at: http://bulletin.case.edu/schoolofgraduatestudies/academicpolicies/
- The course repeat option may not be exercised after a degree has been awarded
- Approval from advisor and program director required. Some departments may also require the signature of the Director of Graduate Studies and/or the Graduate Affairs committee.
- The tuition and associated fees for a repeated course may be the responsibility of the student

Transfer of Credit

In keeping with the School of Graduate Studies' policies, transfer of credit from another university toward 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. No transfer of credit will be awarded towards the PhD degree except by petition, and no credit for dissertation credit hours 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. All transfer of credit requires approval from the student's academic adviser, the departmental chair or graduate committee, and the Dean of the School of Graduate Studies. Such courses must have been taken within five years of first matriculation at CWRU and passed with grades of B or better.

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 grievance should consult for resolution, in order, the academic adviser/primary mentor, committee chairperson or secondary mentor, the PhD Program

Director, School of Graduate Studies Director of Graduate Studies. If an issue arises between the student and primary mentor, the student may always turn to the Dissertation Committee Chairperson or another member of the committee to discuss the issue and identify the next appropriate steps. Furthermore, 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 on the following website: http://studentaffairs.case.edu/handbook/judicial/university/informal.html

Leaves of Absence

All students who are admitted to the PhD program in the Clinical Translational Science 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 from candidacy to completion of 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 adviser, Program Director, and Dean of Graduate Studies. Leaves of absence may be used for the medical conditions related to pregnancy and childbirth.

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

Other Time-off

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.

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 Application

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 full-time 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 current university schedule. 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) available online at http://www.fafsa.ed.gov/.
- Complete the CWRU Financial Aid Form 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

PhD in Clinical Translational Science/Case Western Reserve University

School of Graduate Studies – 203 Tomlinson Hall, 368-4390

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. 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 Services - 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 – Tinkham Veale University Center, 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: https://case.edu/access-services/.

> **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, 216-368-4530

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

Full details about the Office of Financial Aid can be found on their website: www.case.edu/financialaid/.

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

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

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

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

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

Writing Resource Center -104 Bellflower Hall, 368-3798

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

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 https://case.edu/diversity/.

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

APPENDICES

Appendix 1: CTS Individual Development Plan (IDP) format

<NAME> Individual Development Plan

Summarize your career goals. Please comment on both research and clinical goals.

Briefly summarize your key strengths as they relate to your career goals.

Briefly summarize areas that you would like to further develop and your plans to develop these areas.

Describe your goals, plans and progress on grant writing and funding.

Describe your goals, plans and progress for leadership development, teamwork, and networking events.

Describe your goals, plans and activities for supervising and mentoring of others.

Describe plans and progress for attending research conferences, professional development workshops, and giving presentations at local, regional, or national events.

Estimate the average frequency that you have formal or informal face-to-face meetings with your primary PhD mentor where you discuss your research project or progress:

Would you like more, less, or the same frequency of interaction with your PhD mentor?

List your thesis committee (should be formulated by the first fall semester in the PhD phase)

List the dates of your two most recent thesis committee meetings:

List date for your next thesis committee meeting if known:

What additional help do you need from your committee?

Academic and research plans

List the remaining graduate courses that you plan to take (it is not necessary to list 601, 701 or 1 credit courses that represent required participation in seminar series).

List any difficulties that you encountered in your courses in the past year and any strategies that you developed to resolve those difficulties. Are you anticipating any other academic challenges and how will you approach these challenges?

Have you completed IBMS 500? If not, when will you do this?

Have you advanced to candidacy/completed your qualifying examination and thesis proposal? If not, when will that occur, and what hurdles remain to achieve that?

Briefly summarize your current research project and your research goals extending to the end of your MSTP training.

List the research and publication goals from your last IDP version and indicate whether or not these were achieved. (If you are beyond the first year of the PhD phase, indicate tentative goals for manuscript submission, list tentative titles, indicate goals for date of submission).

Peer Reviewed Publications (Include all; may include articles under review)

List your research and publication goals for the upcoming year and your plans to accomplish these goals. Include areas such as establishing collaborations, gathering reagents, learning new techniques, manuscript preparation and submission, etc.