



Clinical & Translational Science Institute  
*of Southeast Wisconsin*



# Master of Clinical and Translational Science

## Student Handbook



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## **Purpose of the CTS Student Handbook**

The CTS Student Handbook provides information for current and prospective students regarding the program's mission, goals, values, plan of study, advising, faculty, and program resources. This handbook is considered a supplement to the MCW Graduate School Student Handbook that provides information such as admission requirements, application and registration procedures, tuition and fees, and all other policies and procedures students need to be familiar with. It is the student's responsibility to be aware of and comply with all requirements, policies, procedures and deadlines in both documents. This Student Handbook is updated as needed and posted on the [CTSI website](#). The Graduate School Handbook can be found on the [Graduate School's website](#), under Current Students, MCW Graduate Student Handbook.

## **Clinical and Translational Science Institute**

This program is operated by the Clinical and Translational Science Institute (CTSI) of Southeast Wisconsin. The mission of the CTSI is to develop an integrated, shared home for clinical and translational research and to establish a borderless, collaborative, and investigator/community/patient-friendly, research environment. The CTS Master's and Certificate degree programs fit with the CTSI's strategic goals of providing quality education and training to cultivate the next generation of clinical and translational researchers.

## **About the CTSI**

Our site is one of over 60 hubs nationwide part of the larger CTSA consortium funded by the NIH through the National Center for Advancing Translational Sciences (NCATS). The Southeastern Wisconsin site is a collaboration between 8 partners, including Children's Hospital of Wisconsin, Froedtert Hospital, and the Zablocki VA Medical Center, Versiti Blood Center of Wisconsin, Marquette University, University of Wisconsin-Milwaukee, Milwaukee School of Engineering, and the Medical College of Wisconsin.

## **Program Personnel**

**Program Director:** Dr. Leonard Egede, MD, MS, [legede@mcw.edu](mailto:legede@mcw.edu)

Dr. Egede is a Professor of Medicine, Eminent Scholar, and Chief of the Division of General Internal Medicine within the Department of Medicine at MCW. He also directs the MCW Center for Advancing Population Science (CAPS). He has over 18 years of experience conducting clinical and translational research, with expertise in a range of research methodologies including clinical trial methodology, qualitative research methods, community based participatory research approaches, behavioral intervention design and implementation science. Dr. Egede's research has focused on developing and testing innovative interventions to reduce and/or eliminate health disparities related to race/ethnicity, socioeconomic status, and geographic location for chronic medical and mental health conditions

**Program Coordinator:** Rebecca Gasper, MPH, [rgasper@mcw.edu](mailto:rgasper@mcw.edu), 414-955-2625

Rebecca Gasper earned her Master's in Public Health from Kansas State University and joined MCW in the summer of 2018. She is responsible for coordinating the program and serves as the initial point of contact for student questions, including course registration, required forms, graduation requirements, etc.



## **Program Overview**

The goal of the Master's in Clinical and Translational Science (MSCTS) degree is to train the next generation of health care professionals, clinical investigators, research scientists, and other individuals working in translational research sciences. The curriculum incorporates the full spectrum of the translational continuum (T0 through T5) and provides training and skills to position candidates to be successful in the growing field of Clinical and Translational Science. Topics covered include foundations of translational research, clinical statistics, epidemiology, ethics and safety, and study designs across the continuum.

The program includes a Master's degree and four Certificates. Candidates seeking a Master's degree will select from one of four emphasis tracks and complete a thesis. Certificate students will select from the same four tracks and complete 4 classes, or 12 credits. The emphasis tracks include: Translational Science, Population Science, Health Systems Science, and Community Based Science.

## **Emphasis Tracks**

### **Translational Science**

This track is focused on the foundational principles of the translational process. This “bench-to-bedside” process involves moving discoveries from their basic foundation to clinical settings. Discoveries of focus include diagnostics, therapeutics, medical procedures, and other interventions. Suggested electives for this program include Translational Genomics and Survey of Biomedical Engineering.

### **Population Science**

There are a variety of factors that can influence health outcomes at a population level, and this track will focus on the relationship between these factors, health, and research. This program will focus on factors such as socioeconomic status, health disparities, social determinants of health, healthcare systems, environment, and policies. Suggested electives include Health Economics, Introduction to Statistics using Stata, Regression using Stata, and Health and Medical Geography.

### **Health System Science**

The focus of this track is on principles and processes within the healthcare system. The topics of focus will include delivery of healthcare, how healthcare professionals work together, and improvements that can be made within the system to improve healthcare delivery. Suggested electives for this program include Health Economics, Health and Medical Geography, Dissemination and Implementation Science, and Qualitative Research Methods.

### **Community Based Science**

This track is focused on engaging the community in research being conducted near the end of the translational spectrum. Emphasis is placed on collaboration with community members and organizations to promote engagement in developing community-wide approaches to improve health for all. Suggested electives include Health Disparities, Health and Medical Geography, Dissemination and Implementation Science, and Qualitative Research Methods.



## **Master's Curriculum**

The Master of Science in Clinical and Translational Science consists of 36 credit hours. 18 credits are required courses, 6-9 credits are from thesis hours, and the remaining 9-12 credits can be chosen from suggested electives based on a student's emphasis track. The program is designed to be completed within two (2) academic years, however students have up to four (4) calendar years to complete all requirements per Graduate School Policy.

### **Core Courses – 18 credits**

- Introduction to Clinical and Translational Science
- Clinical Statistics I
- Introduction to Epidemiology
- Foundations in Health Services Research
- Regulatory Issues in Human Subject Research Protections
- Research Seminar

### **Electives – 9-12 credits**

- Electives are suggested based on student's emphasis track. See Emphasis Track descriptions for more information on course suggestions and offerings.
- Electives can be selected from CTSI courses or courses offered by academic partners, including MCW programs in Public Health and Bioethics and the UWM Zilber School of Public Health
  - Note that a maximum of 12 credits can be taken from outside MCW

### **Thesis – 6-9 credits**

- A thesis is required of all Master's degree seeking students. See the Thesis section for more information on expectations, deadlines, committee proposal and thesis proposal forms.

## **Sample Course Schedule – MSCTS**

### *Fall Year 1: 9 credits*

- Introduction to Clinical and Translational Science
- Clinical Statistics I
- Introduction to Epidemiology

### *Spring Year 1: 9 credits*

- Research Seminar
- Foundations in Health Services Research
- Regulatory Issues in Human Subject Research Protections

### *Summer: Optional 3-6 credits*

- Research Elective (required for MD/MS)

### *Fall Year 2: 9 credits*

- Thesis – 3 credits
- Emphasis Elective (6-9 credits)

### *Spring Year 2: 9 credits*

- Thesis – 3-6 credits
- Emphasis Elective (3-6 credits)



## **Master's Thesis**

All students in the Master's degree program are expected to complete a thesis. Projects will be designed and approved by each student's mentor and thesis committee. The process is outlined below.

1. Identify a Thesis Advisor and 2-3 committee members for a total of 3-4 committee members
  - a. Primary mentor and committee members all need to be appropriately approved graduate faculty. Contact Rebecca Gasper ([rgasper@mcw.edu](mailto:rgasper@mcw.edu)) to verify faculty status.
2. Submit [Committee Approval Form](#) to Rebecca Gasper ([rgasper@mcw.edu](mailto:rgasper@mcw.edu))
3. Submit Thesis Proposal form and project outline to Rebecca Gasper to be reviewed by the Program Director. This should be submitted after completing the core courses during the first two semesters of the program.
  - a. After all signatures are obtained it will be submitted to the Graduate School
  - b. Will ultimately need to be approved by Dean of the Graduate School
4. Complete the Thesis project in collaboration with mentor and committee
  - a. Should be ongoing conversations and meetings to ensure the project stays on track
  - b. Contact Dr. Egede or Rebecca with any questions or issues
5. Schedule Thesis defense
  - a. Should be done in Spring of the second year, at least three (3) weeks before graduation documents are due to the Graduate School
    - i. Contact Rebecca Gasper for assistance with room reservation and other logistics
  - b. All committee members are required to be present
    - i. Optional attendees include the Program Director and Program Coordinator
  - c. Notify Rebecca Gasper once defense has been scheduled
    - i. Other students in the program will be invited and encouraged to attend all defenses
6. Submit preliminary copy of thesis to the Dean of the Graduate School two (2) weeks before the scheduled defense
  - a. The final copy of the thesis will be submitted with the graduation materials after it has been approved by the committee.

Additional information regarding the Thesis committee, proposal, and approval process can be found on the [Graduate School website](#) or in the [Graduate School Handbook](#).



## **Certificate Program**

The CTSI offers four (4) Certificates in addition to the Master’s in Clinical and Translational Science. The certificate program is designed for individuals who want additional training but may not want to pursue a full master’s degree and for those who have already completed professional clinical training but would like additional training in clinical and translational research.

Certificate students are required to select from one of four emphasis tracks. Typically, students will take 2 courses in the Fall and 2 courses in the Spring. The certificate is designed to be completed within one (1) academic year, and students have up to two (2) calendar years to complete all requirements.

Students completing the Certificate will also be able to transfer their 12 credits into the Master’s in CTS degree. Students wishing to take this route will need to apply to the Master’s program prior to the application deadline and would be able to begin in the fall of the following academic year.

## **Certificate Curriculum**

<b><u>Translational Science</u></b>	<b><u>Population Science</u></b>	<b><u>Health System Science</u></b>	<b><u>Community Based Science</u></b>
Introduction to Clinical and Translational Science (Fall)			
Clinical Statistics I (Fall)			
Foundations in Health Services Research (Spring)			
Translational Genomics (Spring)	Implementation Science (Spring)	Health Economics (Fall)	Health Disparities Research (Fall)



## **Graduation Requirements (MS and Certificate)**

### Master's Degree

1. Successfully completed or anticipate completion of all required coursework as outlined by program before degree conferral.
2. Students must remain in good academic standing of a 3.0 or better and an “S” or better performance in other components of the academic program to be eligible for degree award.
3. Complete the [Degree Completion Checklist](#) and submit to Rebecca Gasper one (1) week before the Graduate School deadline (deadlines are listed in the [Academic Calendar](#))

### Certificate

1. Successfully completed or anticipate completion of all required coursework as outlined by program before degree conferral.
2. Students must remain in good academic standing of a 3.0 or better and an “S” or better performance in other components of the academic program to be eligible for degree award
3. Apply for Graduation. Reference Academic Calendar Certificate Diploma Deadlines section to determine your application timeframe [www.mcw.edu/registrar](http://www.mcw.edu/registrar).
  1. Log into MCWconnect: <https://sis.mcw.edu>
  2. On the right side of your home page, click on Student Records. Then click on
  3. Apply for Graduation.
  4. Answer the few questions and submit.
  5. After submitting, your account will be charged a \$25 graduation fee. To view and pay on the right side of your home page, click on Tuition and Financial Aid then My TuitionAccount.



## CTS Course Offerings

Course #	Core Courses	18 Credits	Offered
20101	Introduction to Clinical and Translational Science	3	Fall
20220	Clinical Statistics I	3	Fall
20151	Introduction to Epidemiology	3	Fall
20160	Foundations in Health Services Research	3	Spring
10226	Regulatory Issues in Human Subject Research Protections	3	Spring (online)
20302	Research Seminar	3	Spring
20299	Master's Thesis	6-9	Fall, Spring, Summer
Course #	Suggested Program Electives	6-12 Credits	Offered
20262	Introduction to Health Economics	3	Fall
20120	Introduction to Health Disparities Research	3	Fall
20241	Translational Genomics	3	Spring
20260	Introduction to Dissemination and Implementation Science	3	Spring
20290	Research Elective (required for MD/MS)	3	Summer
20265	Clinical Quality Improvement	3	Spring
Course #	Additional Electives (within MCW)	6-9 Credits	Offered
19225	Introduction to Statistics using Stata (MCW-PhD in CH)	3	Fall
19226	Regression Analysis using Stata (MCW-PhD in CH)	2	Spring
19210	Health and Medical Geography (MCW-PhD in CH)	3	Fall
19230	Qualitative and Mixed Methods (MCW-PhD in CH)	3	Fall
18258	Advanced Epidemiological Methods (MCW-MPH)	3	Every other Spring (even years)
18243	Performance Management & Quality Improvement (MCW-MPH)	3	Fall
14200	Survey of Biomedical Engineering (MCW-Healthcare Technologies Management)	3	Fall
Course #	Additional Electives (outside MCW)	6-9 Credits	Offered
PH 706	Perspectives in Community and Behavioral Health (UWM-Zilber PH)	3	Fall
PH 719	Social Justice in Public Health (UWM-Zilber PH)	3	Every other Spring

Detailed course descriptions are available in the CTS Academic Bulletin on the CTSI website.



## **Registration**

Student self-registration for courses is available through MCWConnect. Details regarding registration dates can be found in the [Graduate School Academic Calendar](#). Registration for the upcoming semester is typically open during the following time frames:

Fall Semester: April-July

Spring Semester: October-December

Summer Semester: October-April

To register for courses through UWM, please contact Brenda Parsons in the Registrar's Office ([bparsons@mcw.edu](mailto:bparsons@mcw.edu)).

## **Academic Advising**

After acceptance into the program, the Program Director serves as the official academic advisor for each student. The Program Director collaborates with the student to develop a customized plan of study based upon program requirements and the student's interests and career goals. Students are encouraged to consult with the Program Director and Program Coordinator as needed. The Program Director is also responsible for monitoring the student's academic progress.

Students are expected to review the program requirements as outlined in this handbook and be proactive in completing all required tasks by the deadlines. Questions or concerns can be directed to the Program Coordinator or Program Director.

## **Academic Standing**

A detailed description of the academic standing requirements can be found in the [Graduate School Handbook](#).

## **Graduate School Forms**

Many forms such as those required to graduate, request a leave of absence (withdrawal form), request transfer of credits, etc. are available through the Graduate School Office. Please visit to the [Graduate School website](#) for additional information and to access all required forms.

## **Disclaimer**

The CTS Handbook is updated as needed and is posted on the CTSI website. The right to alter content at any time is reserved by MCW.



## **Resources and Services**

### **System Requirements for Web-Based Learning**

Students should have access to Brightspace, a PC running Windows OS or a Mac running OSX. Firefox, Safari or Chrome are recommended. Internet 11 and Edge are supported, but Internet Explorer 10 and earlier are not supported and may cause content to load incorrectly. Microsoft Office 2007 or newer and Adobe Acrobat Reader may be required. In addition, Adobe Flash Player may be required to view some content within Brightspace.

[Brightspace](#) is a web-based learning management system where all course materials can be found. With Brightspace, students can take surveys, quizzes and tests, send and receive course mail, post to threaded discussions and chat rooms, upload assignments using drop-boxes, and more. Students can check their progress and grades at any time during the course and create groups and teams for project or committee work.

An office suite such as Microsoft Office and Adobe Reader or other compatible PDF readers are also required. In addition, a current version of the Adobe Flash player for the web browser is required to play some of the lectures. If students have problems accessing courses in Brightspace, please contact [lmshelp@mcw.edu](mailto:lmshelp@mcw.edu)

### **Statistical Software Requirements**

The use of a statistical software package may be required for some courses. Information will be found in the course syllabus.

### **OASIS**

[OASIS](#) is the online evaluation platform for all Graduate School courses. Near the end of each semester students will be required to complete a course and instructor evaluation for all courses in which they were enrolled. Students who fail to complete the evaluations for will no longer be in good standing.

### **Library**

MCW Libraries consist of the central Todd Wehr Library located in the MCW Administrative Building and two branch libraries located at Froedtert Hospital and Children's Hospital of Wisconsin.

Library resources are available to all registered students. Library information can be accessed at [www.lib.mcw.edu](http://www.lib.mcw.edu). Enrolled students are provided remote access to the libraries. This access includes the multitude of library resources, particularly the electronic journals and books.

### **Textbooks**

A list of required textbooks will be emailed to all students. Students may acquire textbooks from any convenient source. Students are advised not to purchase books far in advance of enrollment as texts are frequently published in new editions or courses are revised to newer, more current texts.

### **Student Financial Services**

The [Student Financial Services](#) office is available to assist students with securing financial aid.

### **Career Advising and Employment Opportunities**

Students are encouraged to utilize career advisement resources provided by the Graduate School such as the Graduate School [Career Services](#) office. Students may also seek guidance from the Program Director.



## Contact Information

Topic	Contact Name and Email
Admissions, Registration, Student Affairs, Academic Calendar, Grievances, Academic Standing, Graduation, Career Services	Graduate School: <a href="mailto:gradschool@mcw.edu">gradschool@mcw.edu</a> Angela Backus, Director of Enrollment: <a href="mailto:abackus@mcw.edu">abackus@mcw.edu</a> Sarah Ashworth, Education Program Coordinator: <a href="mailto:sashworth@mcw.edu">sashworth@mcw.edu</a>
Registration, Temporary or Permanent Withdrawal, Transcripts, Name Change, Transfer of Credits, Off-campus classes	Office of the Registrar, <a href="mailto:acadreg@mcw.edu">acadreg@mcw.edu</a> Brenda Parsons, Associate Registrar: <a href="mailto:bparsons@mcw.edu">bparsons@mcw.edu</a>
Tuition and Billing	Office of Student Accounts, <a href="mailto:mcwtuition@mcw.edu">mcwtuition@mcw.edu</a>
Financial Aid	Student Financial Services, <a href="mailto:finaid@mcw.edu">finaid@mcw.edu</a>
Brightspace	LMS Help Desk, <a href="mailto:lmshelp@mcw.edu">lmshelp@mcw.edu</a>
MCW Email and Password Issues	IS Help Desk, <a href="mailto:help@mcw.edu">help@mcw.edu</a>
MCWConnect Credentials	Information Services, <a href="mailto:MCWconnect_support@mcw.edu">MCWconnect_support@mcw.edu</a> MCW Graduate School, <a href="mailto:gradschool@mcw.edu">gradschool@mcw.edu</a>
CTS Program Director	Dr. Leonard Egede, <a href="mailto:legede@mcw.edu">legede@mcw.edu</a>
CTS Program Coordinator	Rebecca Gasper, <a href="mailto:rgasper@mcw.edu">rgasper@mcw.edu</a>
Coursework	Course Faculty (see syllabus for contact information)
Student Governance and Involvement, Graduate Student Association	<a href="#">Graduate School-Graduate Student Association</a>
Course and Instructor evaluations	OASIS, <a href="https://oasis.acad.mcw.edu/index.html">https://oasis.acad.mcw.edu/index.html</a>

	<u>Website</u>	<u>Phone</u>
CTS Program	<a href="http://ctsi.mcw.edu">http://ctsi.mcw.edu</a>	414-955-8200
Graduate School	<a href="http://www.mcw.edu/gradschool">http://www.mcw.edu/gradschool</a>	414-955-8218
MCW Library	<a href="http://www.mcw.edu/mcwlibraries">http://www.mcw.edu/mcwlibraries</a>	414-955-8302
MCWConnect	<a href="https://sis.mcw.edu">https://sis.mcw.edu</a>	414-955-4357
OASIS	<a href="https://oasis.acad.mcw.edu/index.html">https://oasis.acad.mcw.edu/index.html</a>	