



Clinical & Translational Science Institute
of Southeast Wisconsin



Master of Science in Clinical and Translational Science

Student Handbook



2026-2027

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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](#).

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 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. Margaret Samyn, MD MBA msamyn@childrenswi.org

Dr. Margaret Samyn serves as Assistant Dean for Scholarly Activities and Program Director for the Master of Science in Clinical and Translational Science (MSCTS) degree program. She holds both an MD and an MBA and is a Professor of Pediatrics in the Division of Cardiology at the Medical College of Wisconsin. Dr Samyn's research focuses on cardiovascular magnetic resonance imaging assessment of pediatric heart transplant recipients; she also participates in multi-center research for pediatric patients with congenital heart disease.

Dr. Samyn provides academic and strategic leadership for the MSCTS program, overseeing curriculum development, faculty engagement, and student mentorship. She is deeply committed to graduate education and scholarly development, guiding students through research training, thesis completion, and professional growth in clinical and translational science.

Project Manager: Angie Holtz aholtz@mcw.edu

Angie Holtz joined the Medical College of Wisconsin in June 2015 and currently serves as Project Manager within the Clinical and Translational Science Institute, CTSI. In this role, she oversees the coordination and day to day operations of the program, ensuring alignment with Graduate School policies and CTSI priorities.



Angie serves as the primary point of contact for students and supports them throughout the lifecycle of the program, from admissions and onboarding to course registration, required documentation, thesis milestones, and graduation requirements. She works closely with program leadership, faculty to facilitate course planning, instructor coordination, compliance processes, and overall program administration, helping ensure a seamless and supportive experience for students.

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 three Certificates. Candidates seeking a Master's degree will select from one of three emphasis tracks and complete a thesis. Certificate students will select from the same three tracks and complete 4 classes, or 12 credits.

The MSCTS emphasis tracks are designed to help students tailor their elective coursework to align with their research interests and career goals within clinical and translational science. Each track provides focused training in a key area of clinical and translational science while maintaining a shared core foundation.

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 Introduction to Health Economics, Introduction to Statistics using Stata, Regression Analysis 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 Introduction to Health Economics, Health and Medical Geography, Introduction to Dissemination and Implementation Science.



Master's Curriculum

The Master of Science in Clinical and Translational Science consists of 36 credit hours. 18 credits are required core 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 students' emphasis track.
- Electives can be selected from CTSI courses or courses offered by academic partners, including MCW programs in Public Health, Bioethics, Precision Medicine.
 - Note that a maximum of 12 credits can be taken from outside MCW
 - When interested in taking an elective outside of the MCW elective offerings, the student will:
 - Send an email requesting this exception to the project manager Angie Holtz (aholtz@mcw.edu).
 - The email will include:
 - ❖ Request to take (course name, institution, department, credits, brief description)
 - ❖ Why student is making the request and how this course is relevant in student's chosen emphasis track and area of interest

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.

Master's – Sample Course Schedule

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

- Master's Thesis (optional 3 credits)



Fall Year 2: 9 credits

- Master’s Thesis: (3-6 credits)
- Emphasis Elective (3-6 credits)

Spring Year 2: 9 credits

- Master’s Thesis: 3-6 credits
- Emphasis Elective (3-6 credits)

CTS Course Offerings 36 Credits Needed Total

Core Courses 18 Credits Needed			
Course #	Course Name	Semester	Credits
20220	Clinical Statistics I	Fall	3
20101	Introduction to Clinical and Translational Science	Fall	3
20151	Introduction to Epidemiology	Fall	3
20160	Foundations in Health Services Research	Spring	3
20302	Research Seminar	Spring	3
BIOE10226	Regulatory Issues in Human Subject Research Protections	Spring	3
Electives 9-12 Credits			
Course #	Course Name	Semester	Credits
20253	Methods of Grant Preparation	Spring	3
20241	Translational Genomics	Spring	3
20120	Introduction to Dissemination and Implementation Science	Fall	3
Master’s Thesis 6-9 Credits			
Course #	Course Name	Semester	Credits
20002	Master’s Thesis Continuation	All year	Thesis
20299	Master’s Thesis	All year	Thesis

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

Master’s

Students earning a Master’s degree must declare their emphasis track by the end of their first year in the program (~May). The selected emphasis track will influence which elective(s) the student will take in the upcoming fall semester. Declarations should be made via email to the Program Director and Project Manager. Students will be contacted in March/April if no formal declaration has been submitted yet.

Master’s Program Timeline

In addition to completing the courses in the curriculum according to the Sample Course Schedule, students will also complete the following activities in the designated semester throughout their 2-year MS program.

Fall Year 1

- Attend Orientation (late July/early August)
- Complete baseline surveys (will be sent via email)

Spring Year 1



- March 30 – Thesis Outline and Committee Approval due along with Thesis Proposal in accordance with provided template.
- April 30 – Declare Emphasis Track (*if entered the program Undecided*)

Summer

- Work on Thesis project with committee. May enroll in up to 3 Thesis credits.

Fall Year 2

- November 30 – Deadline to complete Progress Presentation
- November 30 – submit application for graduation

Spring Year 2

- Attend graduation forms meeting (February)
- April 15 – Deadline for Thesis Defense
- April 30 – Submit graduation paperwork to MCW Graduate School
- May before Spring graduation– Complete CTS post-program assessments

Master's Thesis

All students in the Master's degree program are expected to complete a thesis. Projects will be designed with and approved by each student's mentor and thesis committee. All students must complete the 3-step process as outlined below.

Step 1 Approval of Thesis Proposal and Thesis Committee – Spring, 1st year

- During spring semester of your first year, you will be expected to assemble a committee and submit a 2–3-page proposal outlining your proposed thesis project.
 - A Thesis Proposal template and the Committee Approval and Dissertation or Thesis Proposal Approval forms found under the [Preliminary Requirements](#).
 - The student will complete the Student Information section, committee members complete the middle section and then the Primary Mentor will complete the Final Approval section as the Mentor (Committee Chair)
- Committees must contain a minimum of 3 individuals with terminal degrees. The primary mentor must have a full-time faculty appointment and be credentialed as a QPTM with the Graduate School. At least one Committee member must be a Biostatistician.



- The 3 required committee members must be MCW faculty. Faculty outside of MCW can be added as the 4th committee member if desired. Outside faculty can be added by submitting a copy of their CV to the Graduate School along with the signed approval forms.
- Contact the Project Manager for any clarification regarding eligibility of Thesis Committee members and whether they are approved thesis mentors.
- The following is due by **March 30**:
 - Signed Committee Approval Form including student chosen committee member's signatures
 - Signed Dissertation or Thesis Proposal Approval Form including student chosen committee member's signatures
 - Initial draft of Thesis Proposal (using provided template)
- Once submitted, the proposal will be reviewed by the CTS Thesis Review Council. Council members will review the project to ensure it is a thesis-level project, clarity of research question, clarity and appropriateness of hypothesis, statistical plan, power analysis/sample size calculation is included, committee members have related expertise and include a Biostatistician. They will classify your project in one of four categories:
 - *Approve* – no revisions: Your project is approved to proceed as-is.
 - *Approve with revisions*: You need to work with your committee to incorporate some feedback, but do not need to resubmit those revisions to the CTS Committee
 - *Revisions needed*: You need to work with your committee to incorporate the CTS committee's feedback. Revisions are due back to the CTS Committee within 30 days.
 - *Deny*: The CTS Committee determined that your proposed project is not suitable for a Master's Thesis. You will need to work with your committee to develop a different project that is within program criteria
- When the proposal is approved, the project manager will obtain the Program Director's signature and send back to you.
- Once your proposal is approved, you will be responsible for submitting your thesis proposal, dissertation or thesis proposal approval, and committee approval forms to the Graduate School gradschool@mcw.edu
 - When submitting, please also cc the Project Manager aholtz@mcw.edu
- The student and committee are responsible for obtaining regulatory approvals (i.e. IRB/IACUC), if needed, and completing any additional trainings per IRB and MCW policies. Documentation of regulatory approval must be submitted to the Project Manager after the Proposal has been approved.
- The student may begin work on the thesis project with oversight and guidance from the committee after all appropriate forms, committee and regulatory approvals are complete.

Step 2 Progress Presentation – Fall, 2nd year

- During fall of the student's second year, they will give a progress presentation update to the CTS Thesis Review Council. This presentation needs to be completed by November 30, if you are on an alternate completion timeline, you will work with the Project Manager to identify a completion date. Each student



will have 30 minutes (15 minutes to present and 15 minutes of discussion with the CTS Thesis Committee) and include the sections listed below. A template will be provided for a power point presentation along with additional resource documents. If the student would like any of their chosen thesis committee members to attend, the student may share the invite with them, but their committee are not required to attend.

- Background and Significance
- Innovation
- Specific Aims
- Study Approach (*including study design, study population, study approach/measures, and power calculation/statistical analyses*)
- Preliminary results
- The student will work with the Project Manager to select the date/time of the presentation from a list of available 30-minute slots based on CTS Council availability.
- After the presentation is complete, the CTS Council will classify your progress:
 - *Acceptable Progress*: You will continue working on your thesis project and finalizing the manuscript with your committee. Apply for spring graduation via MCWconnect.
 - *Insufficient or Unacceptable Progress*: The CTS Council and Program Director will recommend next steps.
- If progress is deemed acceptable, the student submits their application for graduation through the MCWconnect. After submitting the application for graduation in MCWconnect, students complete the Application for Graduation Program Approval. This form can be found under [Degree Completion](#). Students complete the Student Information section then submits it to the MS CTS Project Manager, Angie Holtz aholtz@mcw.edu to obtain Program Director's signature. Student must submit this to gradcompletion@mcw.edu prior to the start of student's last semester.

Step 3 Oral Defense and Final Thesis Submission – Spring, 2nd year

- Students will be contacted by the Project Manager early in the semester to schedule a date/time for your defense as well as a Graduation Forms/Thesis Defense review meeting. The defense should be no later than April 30, contacting the PM with any scheduling challenges.
 - Note that in order to defend, you will need to have submitted an application for graduation with the Graduate School, using MCWconnect, based on the deadline in the Graduate School Application for Graduation and Degree Completion Deadlines found [here](#). Additionally, the Application for Graduation Program Approval, with all required signatures must have been submitted prior to the start of the spring semester.
 - The mandatory Graduation Forms/Thesis Defense review meeting will be held prior to the student's thesis defense. This meeting will review all forms found [here](#), on the Graduation Checklist, that must be submitted to the Graduate School after completing the Thesis Defense, before student graduation. In addition, students may choose to review or ask questions in preparation of the upcoming defense.



- Students must submit a preliminary copy of their final thesis document to the MSCTS program via (aholtz@mcw.edu) and the Dean of the MCW Graduate School via (gradcompletion@mcw.edu) a minimum of 2 weeks before the scheduled defense date.
- Defenses will include a presentation no longer than 45 minutes, with the remaining 15 minutes for discussion with their committee.
 - After the presentation, audience members will be excused, and your chosen thesis committee will meet with you for 15 minutes to discuss your project and presentation and share feedback with the student. This committee will determine whether the student has completed the thesis portion of the MS program.
 - The CTS Project Manager will also be in attendance during this time, to note the outcome.
- Defenses are open to the public and all students are encouraged to attend.
 - In person attendance is required for the student and if possible, the Primary Mentor.
 - Students will be provided with a Zoom link for attendees unable to attend in person.
- Revisions of the thesis document, suggested by the student's thesis committee after the defense, are to be completed within 2 weeks of the Thesis Defense presentation. The final document will be submitted to the Graduate School (gradcompletion@mcw.edu) with all other forms after it has been approved by the committee.
 - All students defending a thesis must submit a copy of their power point presentation to be retained by the MSCTS program along with a digital final copy of the thesis document to be retained by the MSCTS program.
- Documents requiring signatures of the Program Director, are submitted to the CTS program (aholtz@mcw.edu) a minimum of 2 weeks before they are due to the Graduate School. This time is allotted to obtain the Program Director's signature. Deadlines can be found in the Application for Graduation and Degree Completion Dates and Deadlines found <https://www.mcw.edu/graduatestudentforms> under Degree Completion, All Degrees & Programs Application for Graduation and Degree Completion Dates and Deadlines.

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 three (3) Graduate 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 three 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. The courses identified for each emphasis track are below.

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

Translational Science	Population Science	Health System Science
Introduction to Clinical and Translational Science (Fall)	Introduction to Clinical and Translational Science (Fall)	Introduction to Clinical and Translational Science (Fall)
Clinical Statistics I (Fall)	Clinical Statistics I (Fall)	Clinical Statistics I (Fall)
Foundations in Health Services Research (Spring)	Foundations in Health Services Research (Spring)	Foundations in Health Services Research (Spring)
Translational Genomics (Spring)	Introduction to Dissemination and Implementation Science (Spring)	Principles of Public Health Data and Epidemiology (Fall MCW MPH)

Graduation Requirements

Master’s Degree

1. Successfully completed or anticipated 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 all forms listed in the [MS Degree Completion Checklist](#), Degree Completion, Master of Science. Forms requiring signature from the Program Director should be submitted to the Project Manager a minimum of two (2) weeks before the Graduate School deadline (deadlines are listed in the All Degrees & Programs application for Graduation and Degree Completion Dates and Deadlines under Degree Completion <https://www.mcw.edu/graduatestudentforms>)

Certificate

1. Successfully completed or anticipated 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 the academic bulletin in the Graduate School Handbook. Certificate Request section to determine your application timeframe
 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 Tuition Account.

Registration

Student self-registration for courses is available through MCWConnect. Details regarding registration dates can be found by referencing the academic bulletin in the Graduate School Handbook. Registration for the upcoming semester is typically open during the following time frames:

Fall Semester: April-July 1st

Spring Semester: October-December 1st

Summer Semester: October-April 1st

To register for courses through UWM, please contact Brenda Parsons in the Registrar's Office (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 Project Manager 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 Project Manager 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 or [webpage](#).

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

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](#) 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. 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
Academic Affairs, International Student Services, Data, Registration, Commencement	Graduate School: gradschool@mcw.edu Angela Backus, Director of Enrollment: abackus@mcw.edu Allison Schneider, Education Program Coordinator II: allischneider@mcw.edu



Student Affairs, International Student Services, Orientation, Admissions	Skylar Eisman, Education Program Coordinator II: seisman@mcw.edu
Admissions, Academic Affairs, Student Affairs, Data Analytics, International Student Services, Orientation	Angie Backus, director of Enrollment & Student Services: abackus@mcw.edu
Academic Affairs, Registration, Degree completion, International Student Services	Sarah Ashworth, Education Program Coordinator III: sashworth@mcw.edu
Office of the Registrar (OTR): Transcript Requests (Request through MCWconnect), Enrollment Verification, BME registration assistance, Loan deferments	Office of the Registrar: acadreg@mcw.edu Brenda Parsons, Associate Registrar: bparsons@mcw.edu
Tuition and Billing	Office of Student Accounts, mcwtuition@mcw.edu
Financial Aid	Student Financial Services, finaid@mcw.edu
Brightspace	LMS Help Desk: lmshelp@mcw.edu
MCW Email and Password Issues	IS Help Desk: help@mcw.edu
MCWConnect Credentials	Information Services: MCWconnect_support@mcw.edu MCW Graduate School: gradschool@mcw.edu
CTS Program Director	Dr. Margaret Samyn, MD, MPH msamyn@childrenswi.org
CTS Project Manager	Angie Holtz, aholtz@mcw.edu
Student Governance and Involvement, Graduate Student Association	Graduate School-Graduate Student Association
Course and Instructor evaluations	OASIS, https://oasis.acad.mcw.edu/index.html