



Clinical & Translational Science Institute
of Southeast Wisconsin



Certificate in Clinical and Translational Science

Program Guide



2025-2026

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June 2023
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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. Ocatavian Ioachimescu, MD, PhD, MBA, oiachimescu@mcw.edu

Dr. Ioachimescu is an experienced Physician with a demonstrated history of working in medicine and the health care industry. Skilled in System Operations, Clinical and Translational Research, Implementation Science, Medical Education and Clinical Care in the field of Internal medicine, Pulmonary, Critical Care and Sleep medicine, Strong Healthcare Services Professional with Fellowship training in Pulmonary, Critical Care and Sleep medicine from the Cleveland Clinic. Member of the American Society of Quality (ASQ), with special interests and skills in Lean Six Sigma (Green Belt Six Sigma ASQ), strategy and healthcare systems.

Program Education Coordinator: Mary Jane LaTona, MA, mlatona@mcw.edu

Mary Jane LaTona earned her Master's in Education from Silver Lake College and has been involved in education since 2009. She joined MCW in the January of 2022 and 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.



CTS Certificate Program Overview

The 12-credit Certificate in CTS 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. 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 select from one of four emphasis tracks to complete: 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.

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.

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.

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.



Certificate Curriculum

<u>Translational Science</u>	<u>Population Science</u>	<u>Health System Science</u>	<u>Community Based Science</u>
Introduction to Clinical and Translational Science (Fall)	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)	Clinical Statistics I (Fall)
Foundations in Health Services Research (Spring)	Foundations in Health Services Research (Spring)	Foundations in Health Services Research (Spring)	Foundations in Health Services Research (Spring)
Translational Genomics (Spring)	Implementation Science (Spring)	Principles of Public Health Data and Epidemiology (Fall)	Community Health Assessment and Improvement (Fall)

Degree Completion

Additional information regarding the Thesis committee, proposal, and approval process can be found on the [Graduate School website](#) , additional important links, graduate school academic bulletin, graduate school handbook.

Graduation Checklist (Certificate)

Submit application for graduation in MCWconnect according to Application for Graduation and Degree Completion Deadlines



Course Descriptions

20101 Introduction to Clinical and Translational Science

3 credit hours. Fall

The course will provide the student with a broad understanding of clinical translational science. By the end of the course the student will be able to understand key concepts underlying translational research including methods used to move basic science discoveries to clinical practice and enhancing the health of the public through the provision of evidence-based care. Coursework will include weekly reading of peer reviewed manuscripts, assignments, and a final project. Weekly classes will include discussion of reading and assignments are designed to allow practice of critically reading and planning translational science projects. The course will meet once per week for a total of 18 weeks.

20220 Clinical Statistics I.

3 credit hours. Fall

This is an introductory course in evidence discovery that demonstrates the concepts and application of statistical techniques/tools, given the role of statistics as an information science. The course is intended to inform and provide quantitative skills for graduate students interested in undertaking research in clinical medicine, epidemiology, public health, translational and biomedical sciences. This course emphasizes the basic dogma of statistics namely the central tendency theorem as well as sampling as the core of statistics. With the characterization of statistics as descriptive and inferential, the descriptive arm of statistics is stressed in this course namely summary statistics. Basic probability concepts are covered to stress the importance of sampling prior to reliable inference from the sample data. Sample estimation of the population and the precision (confidence interval) are described as well as the hypothesis testing notion in inferential statistics. The parametric and non-parametric methods are introduced with the intent to describe the methods as applicable to continuous (ratio, interval, cardinal) and discrete (categorical binary, dichotomous) data.

20160 Foundations in Health Services Research.

3 credit hours. Spring

The course will provide the student with a broad understanding of health services research design and methodology, as well as provide the student with the opportunity to engage in a mentored, individualized, in-depth study experience. By the end of the course the student will be able to understand key theories that serve as the foundation of health services research and understand the process of developing a research idea and translating it into an R-series level NIH proposal. Coursework will include weekly reading of peer-reviewed manuscripts, one introductory textbook on health services research, and one introductory textbook on designing clinical research. Weekly classes will include discussion of reading and assignments are designed to allow practice of critically reading and planning health services research projects.

20241 Translational Genomics.

3 credit hours. Spring

The primary goal of this course is to teach students how to develop a research program to ask relevant genetic questions in the clinical setting utilizing the molecular genetics toolbox. To this end, students will be provided with background in molecular genetics strategies and study designs as well as an understanding of common genetics questions emanating from the clinic so that they will be better able to make connections between bench and bedside. In addition, they will be challenged to think creatively and through a translational focus during course-long case studies and group projects.



20260 Introduction to Dissemination and Implementation Science.

3 credit hours. Spring

The course is an introduction to dissemination and implementation and science research methods both theoretical and applied. By the end of the course the student will be able to understand the science of dissemination and implementation, and applied methods for dissemination and implementation. Coursework will include weekly reading of peer-reviewed manuscripts and one introductory textbooks on dissemination and implementation science. Weekly classes will include discussion of reading and course projects are designed to allow practice of critically reading and planning implementation research.

18209 Community Health Assessment and Improvement

3 credit hours. Fall

This course offers a comprehensive exploration of the community health assessment and community health improvement planning process. Students will: 1) gain knowledge and skills needed to conduct systematic assessments, 2) identify key health needs, and 3) create data-driven health improvement plans. Students will understand the importance of multisector collaborations, broad community engagement, and the use of evidence-based interventions as integral components of the Mobilizing for Action Through Planning and Partnerships (MAPP) framework. By the end of the course, students will be well-prepared to drive positive change in their community of interest, enhance coordination, and contribute to the promotion of public health and overall community well-being.