M.S. IN CLINICAL AND TRANSLATIONAL INVESTIGATION

Curriculum Requirements

Code	Title	Credit Hours
Core Courses		
CTI 605	Introduction to Team Science and Entrepreneurship	2
CTI 602	Writing for Translational and Clinical Science	2
CTI 603	Research Ethics	3
CTI 805	Capstone Project / Master's Thesis	6
EPH 604	Clinical Trials	3
EPH 621	Fundamentals of Epidemiology	3
HGG 630	Variation and Disease	2
Electives		**9**
Bioinformatics (One of the Following)		
BTE 685	Topics in Business Technology	
EPH 751	Survival Analysis in Clinical Trials	
EPH 651	Research Methods	
HGG 660	Bioinformatics Theory and Practice	
Biostatistics (One of the Following)		
EPH 601	Medical Biostatistics I	
EPH 602	Biostatistics II	
BST 625	Survey of Statistical Computing	
BST 665	Design and Analysis of Clinical Trials	
EPH 703	Advanced Statistical Methods I	
Cultural Diversity and Community Engagement (One of the Following)		
EPH 647	Community Based Participatory Research and Social Network Analysis	
EPH 617	Disease Prevention and Health Promotion	
EPH 612	Global Health	
EPH 632	U.S. Health Systems	
Total Credit Hours		**30**

Program Plan for Part-time Professional Students

Year One		
Fall		**Credit Hours**
CTI 605	Introduction to Team Science and Entrepreneurship	2
EPH 621	Fundamentals of Epidemiology	3
EPH 601	Medical Biostatistics I	4
	Credit Hours	**9**
Spring		
CTI 602	Writing for Translational and Clinical Science	2
HGG 630	Variation and Disease	2
	Credit Hours	**4**
Summer I		
EPH 604	Clinical Trials	3
	Credit Hours	**3**
Year Two		
Fall		
CTI 805	Capstone Project / Master's Thesis	6
EPH 647	Community Based Participatory Research and Social Network Analysis	3
	Credit Hours	**9**

Spring		
CTI 603	Research Ethics	3
EPH 603	Medical Biostatistics	3
	Credit Hours	**6**
	Total Credit Hours	**31**

Program Plan for Full-time Students

This plan is ideal for students who want to complete the program full-time as well as students on F-1 visas.

Year One		
Fall		**Credit Hours**
CTI 605	Introduction to Team Science and Entrepreneurship	2
EPH 601	Medical Biostatistics I	4
EPH 621	Fundamentals of Epidemiology	3
EPH 617	Disease Prevention and Health Promotion	3
	Credit Hours	**12**
Spring		
CTI 602	Writing for Translational and Clinical Science	2
CTI 805	Capstone Project / Master's Thesis	6
HGG 630	Variation and Disease	2
	Credit Hours	**10**
Summer		
EPH 604	Clinical Trials	3
	Credit Hours	**3**
Year Two		
Fall		
CTI 603	Research Ethics	3
EPH 751	Survival Analysis in Clinical Trials	3
	Credit Hours	**6**
	Total Credit Hours	**31**

Mission

Drawing upon the University of Miami Miller School of Medicine's mission to educate the next generation of medical leaders and to lead life-changing discoveries that transform patient care through innovative research, the Master of Science in Clinical and Translational Investigation (MSCTI) degree program's mission is to educate the next generation of investigators who demonstrate the core competencies necessary to review, design, and conduct high-quality, multidisciplinary clinical and translational research independently.

Goals

Our educational objective is to provide an instructor-led educational curriculum that introduces students to key areas of clinical and translational research, and to produce graduates who demonstrate core competencies in clinical and translational research. Students will learn how to design independent and collaborative research projects and become well-versed in key aspects of clinical and translational investigation.

Student Learning Outcomes

- 100 % of students who complete CTI 605 Introduction to Clinical and Translational Research' should demonstrate the following competencies with at least intermediate proficiency:
  - Summarize evidence from the literature on a translational research problem;
  - Critique clinical and translational research questions using data-based literature searches;
  - Assess the strengths and weaknesses of possible study designs for a given clinical or translational research question; and
  - Describe future implications of published studies on team science and translational science.
- Students who complete CTI 602 Writing for Clinical and Translational Research' should demonstrate the following competencies:
  - Write introduction to a translational research manuscript or a grant specific aims page;
  - Understand the grant review process from the perspective of an applicant and a reviewer; and
  - Understand the key components of how to put together an NIH-style grant.

- The overall goal of the Capstone Project is to provide students with an opportunity for hands-on exposure to clinical/translational research. Students who complete the CTI 805 'Capstone Project/Masters Thesis' of the MSCTI Program will demonstrate the following competencies:
  - Ability to plan a research activity;
  - Ability to prepare, draft, finalize, and submit all sections of a grant application;
  - Knowledge and motivation to carry out the planned research activity;
  - Ability to analyze the results of the research;
  - Ability to complete a written description of the work in the form of a well-written, properly organized thesis;
  - Ability to complete a thesis with potential for presentation at and/or participation in professional meetings and/or publication in scholarly journals; and
  - Ability to identify and work with a mentor on their project.