

Graduate Student Handbook

Clinical & Translational
Research Training Program

2022-2023

Welcome to the Clinical & Translational Research Training Program!

The Clinical & Translational Research (CTR) graduate education program offers two Master of Science (MS) degree tracks (Principal Investigator and Clinical Research Professionals tracks) and a Graduate Certificate in CTR. The CTR graduate education program falls under the [Center for Clinical & Translational Science & Training](#) (CCTST), and its academic home is the Division of Epidemiology, Department of Environmental & Public Health Sciences within the University of Cincinnati (UC) College of Medicine (COM).

The [Master of Science in Clinical & Translational Research - Principal Investigator \(MSCTR-PI\)](#) track is designed to provide clinical practitioners and biomedical researchers with a terminal degree with the necessary preparation for successful career development and tools to conduct independent clinical and/or translational research. The MSCTR-PI track offers training in epidemiology, biostatistics, clinical effectiveness, molecular epidemiology, clinical trials, quality improvement, informatics, grant writing, and translational research that will enable translation of scientific advances into applications for improved clinical practice and human health.

The [Master of Science in Clinical & Translational Research - Clinical Research Professionals track \(MSCTR-CRP\)](#) is designed for clinical research professionals who coordinate, manage, and lead collaborative research projects and clinical trials. The program provides a strong foundation in research methodology and program/project management, including training in research ethics and the Institutional Review Board (IRB) process. The disciplinary purpose and ultimate goal of the program is to provide clinical professionals with the necessary preparation for successful careers in clinical research.

The [Graduate Certificate in Clinical and Translational Research](#) program gives students an introduction to the field of CTR, with basic coursework in epidemiology, statistics, and research ethics.

Please contact us with any questions or concerns:

Scott Langevin, PhD, MHA, CT(ASCP)

Associate Professor of Epidemiology
Co-Director, Clinical & Translational Research Graduate Education Program
Office: Kettering Lab Complex 243
langevst@uc.edu
PH: 513-558-1066

Patrick Ryan, PhD, FACE

Professor
Department of Pediatrics, University of Cincinnati, College of Medicine
Division of Biostatistics and Epidemiology, Cincinnati Children's Hospital Medical Center
Co-Director, Clinical & Translational Research Graduate Education Program
Office: CCHMC T10.384
patrick.ryan@cchmc.org
PH: 513-803-4704

Elizabeth Niehaus (Virant)

Program Coordinator
Kettering Lab Complex 112
virantem@ucmail.uc.edu
PH: 513-558-5736

Table of Contents

Advisors & Course of Study 3

Clinical and Translational Research Curriculum..... 5

1. CTR-GC, Graduate Certificate..... 6

2. MS-CTR, Principal Investigator (MSCTR-PI) Track 7

3. MS-CTR, Clinical Research Professionals (MSCTR-CRP) Track 13

Statement of Intent & Master’s Thesis Guidelines..... 15

 Master of Science Thesis Requirement..... 15

 Master of Science Capstone Requirement:..... 19

Academic Policies for the MS & Certificate Programs..... 21

 Credit Hours 21

 Grades 22

 Research Credits..... 22

 Minimum Academic Performance 23

 Academic Misconduct 23

 Maintaining Active Student Status..... 23

 Time Limitations..... 23

 Graduation 24

Frequently Asked Questions 25

Center for Clinical & Translational Science & Training (CCTST) 28

 CCTST Resources..... 28

Academic Resources 29

 How to Register for Classes..... 29

 Canvas Course Management..... 29

 Fellowships and Scholarships 29

 Graduate Student Research Forum..... 30

 Libraries..... 30

 Technology Resources..... 31

 University Resources 32

 University Health Insurance 32

 Mental Health Services 32

 Parking..... 33

 Campus Security..... 33

 How to Contact the Police..... 33

Master of Science in Clinical & Translational Research

The educational objective of the Master of Science in Clinical & Translational Research (MSCTR) is to train the clinical research workforce of the future, preparing graduates for careers in academic health centers, private clinical research organizations, research non-profits, or government agencies. The MSCTR offers two-degree tracks: one for principal investigators (MSCTR-PI) who design and conduct clinical studies in their areas of practice and special interest and a second designed for clinical research professionals (MSCTR-CRP) who coordinate, manage, and lead collaborative research projects and clinical trials. Both tracks emphasize team science, research integrity, and provide a strong foundation in research methodology and management, culminating in a capstone or thesis project.

Advisors & Course of Study

Our program's academic advisors are assigned to students by last name:

Matriculated prior to Fall 2022		Matriculated in Fall 2022 or later	
Student's Last Name	Advisor	Student's Last Name	Advisor
A-M	Dr. Scott Langevin	A-L	Dr. Scott Langevin
N-Z	Dr. Patrick Ryan	M-Z	Dr. Patrick Ryan

Upon matriculation to the program, you are required to meet with your Academic Advisor within your first semester to discuss introduction to our program, curriculum, and expectations. After your meeting, please complete the Academic Advising Agreement, found on our [Student Resources](#) page, and submit to [Beth Virant](#), CTR Program Coordinator.

If appropriate, a different advisor may be requested at a later date. In the event of a change in advisor, the student shall send a communication to the department's Graduate Studies Office that includes the signatures of both the assigned and proposed advisor, as well as the program director indicating concurrence. The Change of Advisor form can be found on our [Student Resources](#) page, and should be submitted to [Beth Virant](#), CTR Program Coordinator.

Curriculum Advisory Committee

This committee meets biannually to discuss current trends and developments within the clinical research field. From their discussions, they analyze our current curriculum and implement changes that better equip our students to become successful clinical and translational researchers.

[Roman A. Jandarov, PhD](#) is an Associate Professor of Biostatistics and Bioinformatics in the Department of Environmental & Public Health Sciences at the University of Cincinnati. His focus on the committee is related to advisement of Biostatistics in clinical research projects.

[Dan Woo, MD](#) is Vice Chair of Clinical Research and Professor in Neurology and Rehabilitative Medicine in the College of Medicine at the University of Cincinnati. Additionally, he is a Neurologist for UC Gardner Neuroscience Institute and UC Health. He is on the committee to provide perspective and advice for our Principal Investigator Track.

[Andrew F. Beck, MD, MPH](#) is an Attending Physician in the Division of General & Community Pediatrics as well as the Division of Hospital Medicine at Cincinnati Children's Hospital Medical Center. He is also an Associate Professor for the University of Cincinnati Department of Pediatrics. His involvement on the committee is dedicated to improving the needs of our Principal Investigator Track.

[Michelle Marcum, MS, CCRP](#) is the Director of the Cancer Clinical Trials Office at the University of Cincinnati Cancer Center. Her focus on this committee is developing our Clinical Research Professional Track.

Brittany Spicer, BS, CCRP is the Senior Specialist for Education and Outreach in the Office of Research Compliance and Regulatory Affairs and current Education Subcommittee Chair for the Clinical Research Professionals group at Cincinnati Children's Hospital Medical Center. She will be supporting the needs of our Clinical Research Professional track.

Clinical and Translational Research Curriculum

1. Graduate Certificate (GC) in Clinical and Translational Research

The GC program is intended to provide fellows, junior faculty, graduate students in other programs, basic science researchers, and other health science professionals foundational knowledge in clinical and translational research. The Graduate Certificate program consists of 10 credit hours. Students in the GC program are required to take Introduction to Epidemiology, Introduction to Biostatistics, and either Scientific Integrity or Ethics in Research. Students can enroll in any term to complete the program at their own pace. The Certificate can also be earned in an 8-week summer session.

2. MS-CTR, Principal Investigator (MSCTR-PI) Track

The MSCTR-PI program trains clinical practitioners and biomedical researchers with a terminal degree to become independent investigators in clinical and/or translational research and to provide them with training necessary for successful career development and tools to conduct independent clinical and/or translational research. The purpose and ultimate goal of the program is to move graduates from the realm of personal clinical experience to objective evidence. Successful graduates of the program will acquire the methodological skills to conduct independent and collaborative clinical studies in their special areas of practice and interest.

3. MS-CTR, Clinical Research Professionals (MSCTR-CRP) Track

Students with or without experience in clinical research who enroll in the MSCTR-CRP track will gain formal training in the management of clinical research, improving their abilities to coordinate and lead studies in a variety of settings, including academic health centers and clinical research organizations. The CRP core curriculum consists of coursework in research ethics, research methods, program/project management, and a thesis or capstone project.

**Please note the program's Curriculum Advisory Committee examines and evaluates all courses regularly, so changes may occur.*

Graduate Certificate in Clinical & Translational Research



Effective Spring 2022-Present

Course Number	Course Title	Credits	Required or Elective	Semester Offered
BE-7022	Introduction to Biostatistics	3	Required	Fall Spring/Summer*
BE-7076	Introduction to Epidemiology	3	Required	Fall/Spring Summer*
Research Ethics (choose one) - 1-2 credit hours			Required	
BE-7067	Scientific Integrity	1-2		Summer*
GNTD-7003	Ethics in Research	1		Spring
Electives - 2-3 credit hours				
TOTAL CREDIT		10		
HOURS				
				<i>*Course is offered online</i>
<ul style="list-style-type: none"> • 3.0 GPA (B average) or higher required for graduation. • "I" (Incomplete) or "NG" (Not Graded) grades must be addressed prior to applying for graduation 				

The CTR Graduate Certificate can be completed fully online during our summer semester, or stretched out over 2-3 semesters. Any BE listed course can be counted toward the elective requirement. Students also have the option of completing up to 2 credit hours of non-thesis research. Below is a list of online course offerings:

Course Number	Course Title	Credits	Required or Elective	Semester Offered
BE-7011	Statistical Computation & Software	1	Elective	Summer/Fall*
BE-7034	Data Collection and Storage with REDCap	1	Elective	Fall*
BE-7071	Quality Improvement & Patient Safety	1	Elective	Fall*
BE-7081	Institutional Review Board (IRB) Process for Researchers	1	Elective	Summer*
BE-8076	Successful Scientific Writing	2	Elective	Summer/Fall*
BE-9064	Clinical Research Professionals Seminar	2	Elective	Fall*
BE-9066	Clinical Research Scholars Seminar	1	Elective	Spring*
ENV-8091	Non-Thesis Research	1-2	Elective	Summer/Fall/Spring

**Course is offered online*

Master of Science in Clinical & Translational Research
Principal Investigator Track



Effective Spring 2022-Present

Course Number	Course Title	Credits	Required or Elective	Semester Offered
Core Courses - 9 credit hours				
BE-7022	Introduction to Biostatistics	3	Required	Fall Spring/Summer*
BE-7076	Introduction to Epidemiology	3	Required	Fall/Spring Summer*
BE-9066	Clinical Research Scholars Seminar	1	Required	Spring
BE-9075	Design & Management of Field Studies	3	Required	Spring
Research Ethics (choose one) - 1-2 credit hours			Required	
BE-7067	Scientific Integrity and Research Ethics	1-2		Summer*
GNTD-7003	Ethics in Research	1		Spring
Statistical Programming (choose one) - 3 credit hours			Required	
BE-7024	Computational Statistics (R)	3		Spring
BE-8083	Data Analysis with R & SAS	3		Spring
PHDD-8060	Statistical Principles in Clinical Research (JMP)	3		Fall
Regression Analysis (choose one) - 3 credit hours			Required	
BE-7023	Advanced Biostatistics	3		Fall
BE-7088	Regression Analysis (SAS)	3		Spring
Advanced Methods (choose one) - 2-3 credit hours			Required	
BE-7025	Comparative Effectiveness Research/Patient-Centered Outcomes Research	2		Fall
BE-7066	Principles of Clinical Trials	3		Fall
BE-7068C	Decision & Cost-Effectiveness Analysis	3		Spring
BE-8062	Introduction to Medical Informatics	3		Fall
BE-9061C	Meta-Analysis	3		Fall
<i>or any advanced methods course offered under the BE course code</i>				
Culmination: 2 credit hours			Required	
ENV-7091	Master's Thesis Research	2		Fall/Spring/Summer
Electives: 8-10 credit hours				
<i>Students may fulfil the remaining elective course credit hours by completing an optional focus area, additional elective courses of choice, and/or a maximum of 6 credit hours of non-thesis research (ENV-8091). Elective courses outside of the department need to be approved by the Program Director.</i>				
TOTAL CREDIT HOURS		30		
<i>*course is offered online</i>				
<ul style="list-style-type: none"> • 3.0 GPA (B average) or higher required for graduation. • Minimum B- grade required for all core courses • "I" (Incomplete) or "NG" (Not Graded) grades must be addressed prior to applying for graduation. • Students must take a minimum of one graduate credit that contributes to degree requirements per academic year (fall-summer) to maintain active status. • All requirements for the master's degree must be completed within five consecutive academic years of the date of matriculation into the program. 				

MSCTR-PI Track Focus Areas

If PI Track students desire, they can choose to narrow their studies towards an approved focus area to fulfill their elective credits. Additional coursework is required for each of these Focus Areas (see below). These tracks were designed by clinical research experts to provide specialty training in six focus areas: Clinical Epidemiology & Clinical Effectiveness, Translational Research, Molecular Epidemiology, Clinical Trials, Research Informatics (T1 or T2), or Quality Improvement.

Students do not have to choose a focus area to complete the MS program. If students wish to 'specialize' in a particular focus area, they are encouraged to meet with their program advisor, Drs. Langevin or Ryan, to discuss courses, research opportunities, and career pathways. An Advising Meeting Form is on our [Student Resources](#) web page to help provide structure to your academic and/or career goals. The student's program is subject to approval by the program faculty and must show a reasonable degree of concentration on interrelated subjects.

1. Clinical Epidemiology & Clinical Effectiveness

Using a combination of didactic material and seminars, the Clinical Epidemiology/Clinical Effectiveness Focus Area enables participants to develop the analytic and quantitative skills necessary to conduct clinical research. The required courses will provide training in traditional epidemiologic research methods including study design and analysis. Additional courses will address the relative merits of various designs; the design and conduct of clinical trials; the health decision sciences; health services research; informatics; questionnaire development; and other clinical and outcomes research topics. Didactic sessions will be supplemented by small discussion groups, practical exercises, and invited guest speakers.

Additional Required Courses for Clinical Epidemiology/Clinical Effectiveness (10-12 credits):

Course #	Course Title	Credit Hours	Offered
BE-7066	Principles of Clinical Trials	3	Fall
BE-7088	Regression Analysis	3	Spring
<i>Choose two:</i>			
BE-8062	Introduction to Medical Informatics	3	Fall
BE-7071	Quality Improvement & Patient Safety	1	Fall*
BE-7068	Decision & Cost-Effectiveness Analysis	3	Spring

2. Translational Research

The Translational Research Focus Area is intended for physicians who plan to be involved in developing IND- type early phase clinical trials. This area includes preclinical and early phase clinical testing of new therapeutic or diagnostic reagents, as well as collection and handling of patient specimens. Students will take courses in the College of Pharmacy geared towards clinical trials and regulatory affairs and in Developmental Biology, Disease and Development. To gain a more solid understanding of the molecular mechanisms underlying diseases, trainees may fill the elective hours with the molecular biology series offered at UC each year. Ideally, research projects will encompass late preclinical or early clinical projects.

Additional Required Courses for Translational Research (13 credits):

Course #	Course Title	Credit Hours	Offered
PHDD-8060	Statistical Principles in Clinical Research	3	Fall
PHDD-8030	Pre-Clinical/Non-Clinical Studies for IND Approval	3	Spring
BE-9073C	Molecular Epidemiology	2	Spring
DB-9087	Disease & Development	2	Spring (even years)
BE-8062	Introduction to Medical Informatics	3	Fall

3. Molecular Epidemiology

We define molecular epidemiology as the use of biological markers in epidemiologic research to evaluate events occurring at the physiologic, cellular, subcellular, and molecular levels. The Molecular Epidemiology Focus Area encompasses biomarker, cancer, and genetic epidemiology. The overall objective of the Molecular Epidemiology Focus Area is to establish an interdisciplinary training program in molecular epidemiology for clinicians seeking an advanced degree (MS or PhD). With the requisite didactic coursework students will develop the knowledge base and conceptual framework of scientific inquiry to foster independent research careers in molecular epidemiology. The Molecular Epidemiology Focus Area builds on research, teaching, and mentoring strength within the Center for Environmental Genetics, comprised of interdisciplinary investigators of world-class scientists in the Department of Environmental & Public Health Sciences.

Additional Required Courses for Molecular Epidemiology (11 credits):

Course #	Course Title	Credit Hours	Offered
BE-9073C	Molecular Epidemiology	2	Spring
GC-7020	Human Genetics	3	Fall
BE-7088	Regression Analysis	3	Spring
<i>Choose one:</i>			
MG-8011	Advanced Fundamentals in Human Genetics	2-3	Fall
GNTD-8001C	Introduction to Functional Genomics	3	Fall

4. Clinical Trials

The overall objective of the Clinical Trials Focus Area is to train clinical researchers interested in clinical trials and translational research. Trainees concentrating in Clinical Trials will learn the fundamentals of clinical trials and the drug/device development process, including the responsible conduct of research, the phases of clinical trials, and regulatory affairs. A unique aspect of the curriculum is that UC professors team with industry leaders to teach several of the courses, so that students get a “real world” experience. The electives for this Focus Area are taught through the College of Pharmacy.

These trainees gain the skills required to effectively complete investigator-initiated, IND-directed early phase clinical trials. Trainees learn critical aspects of study design and conduct, mechanisms of financial support, and data analysis and publication. A basic understanding of laboratory methods, data analysis,

and the molecular basis of disease is critical to bridge laboratory and clinical research and is therefore included in the training. The curriculum covers training in pre-clinical efficacy and toxicology studies that are required to support early phase clinical trials. In addition, regulatory affairs issues unique to translational research are covered.

Additional Required Courses for *Clinical Trials* (15 credits):

Course #	Course Title	Credit Hours	Offered
BE-7066	Principles of Clinical Trials	3	Fall
PHDD-8010	Global Regulatory & Development Strategies of Drugs & Medical Devices	3	Fall*
PHDD-8050	Phase I/II Clinical Trials Research & Design	3	Fall*
PHDD-8070	Phase III/IV Clinical Trials & Research	3	Spring*
PHDD-8040	Development & Manufacturing of Drug Products & Medical Devices	3	Spring

5. Research Informatics

The Research Informatics Focus Area has itself been divided into two separate areas of focus. The first focuses on the translation of basic science findings to clinical research studies and is titled: the *Translational Research Informatics Focus*. The second focuses on the translation of research findings into clinical and community practice and is titled: the *Clinical Research Informatics Focus*. While we specify required and elective courses below, our intent is that the student work closely with her/his advisors and mentors to select the appropriate courses. In consultation with advisors, students may also wish to take additional courses not listed on the track descriptions below.

Additional Required Courses for *Translational Research Informatics* (Minimum 13-14 Credits):

Course #	Course Title	Credit Hours	Offered
BE-8062	Introduction to Medical Informatics	3	Fall
GNTD-8001C	Introduction to Functional Genomics	3	Spring
Choose three:			
BE-7099	Introduction to Bioinformatics	3	Spring
BE-7068	Decision & Cost-Effectiveness Analysis	3	Spring
IS-7030	Data Modeling (<i>first 7 weeks of the semester</i>)	2	Fall
IS-7032	Database Design (<i>second 7 weeks of the semester</i>)	2	Fall

Additional Required Courses for *Clinical Research Informatics* (Minimum 11-14 Credits):

Course #	Course Title	Credit Hours	Offered
BE-8062	Introduction to Medical Informatics	3	Fall
BE-7068	Decision & Cost-Effectiveness Analysis	3	Spring
Choose three:			
BE-7071	Quality Improvement & Patient Safety	1	Fall*
IS-7030	Data Modeling (<i>7-week term</i>)	2	Fall

IS-7032	Database Design (<i>7-week term</i>)	2	Fall
CS-6033	Artificial Intelligence	3	Spring
CS-6052	Intelligent Data Analysis (<i>odd years</i>)	3	Spring

6. Quality Improvement

The Quality Improvement Focus Area prepares trainees to transform health and healthcare delivery by creating effective healthcare delivery system interventions that can be disseminated into real-world practice settings, resulting in improved health outcomes. The coursework in this focus area will provide strong methodologic training in health services research and quality-improvement methods. Trainees will take coursework in both quantitative and qualitative methods to improve effectiveness, efficiency, and safety of healthcare delivery processes.

Additional Required Courses for *Quality Improvement* (13 Credits):

Course #	Course Title	Credit Hours	Offered
BE-8062	Introduction to Medical Informatics	3	Fall
BE-7066	Principles of Clinical Trials	3	Fall
BE-9061C	Meta-Analysis (<i>permission required</i>)	3	Fall
BE-7068C	Decision & Cost-Effectiveness Analysis	3	Spring
BE-7071	Quality Improvement & Patient Safety	1	Fall*

**Courses with an asterisk indicate that the class is online*

Master of Science in Clinical & Translational Research
Principal Investigator Track



Approved Electives

Effective Fall 2021-Present

*Approved courses that can be used to count towards elective credit hours include:

-Any BE listed course

-Any course listed on the curriculum, but not used to fulfil a curriculum requirement

*The table below lists suggested BE courses and other approved electives outside of the department.

Course Number	Course Title	Topics/Areas of Focus	Credits	Semester Offered
BE-7034	Data Collection and Storage with REDCap	General Elective	1	Fall
BE-7040	Collaboration & Team Science	General Elective	2	Spring
BE-7071	Quality Improvement & Patient Safety	Clinical Epi/Clinical Effectiveness	1	Fall*
BE-7099	Introduction to Bioinformatics	Research Informatics	3	Spring
BE-8076	Successful Scientific Writing	General Elective	2	Fall*/ Summer*
BE-9073C	Molecular Epidemiology	Multiple	2	Spring
CS-6033	Artificial Intelligence	Clinical Research Informatics	3	Fall
CS-6052	Intelligent Data Analysis (odd years)	Clinical Research Informatics	3	Spring
DB-9087	Development & Disease (even years)	Translational Research	2	Spring
GC-7020	Human Genetics	Molecular Epidemiology	3	Fall
MG-8011	Advanced Fundamentals in Human Genetics	Molecular Epidemiology	3	Fall
GNTD-8001C	Introduction to Functional Genomics	Translational Research Informatics	3	Spring
IS-7030	Data Modeling (7-week term)	Clinical and Translational Research Informatics	2	Fall
IS-7032	Database Design (7-week term)	Clinical and Translational Research Informatics	2	Fall
PHDD-8010	Global Regulatory & Development Strategies of Drugs & Medical Devices	Clinical Trials	3	Fall*
PHDD-8030	Pre-Clinical/Non-Clinical Studies for IND	Translational Research	3	Spring
PHDD-8040	Development & Manufacturing of Drug Products & Medical Devices	Clinical Trials	3	Spring
PHDD-8050	Phase I/II Clinical Trials Research & Design	Clinical Trials	3	Fall*
PHDD-8060	Statistical Principles in Clinical Research	Translational Research	3	Fall
PHDD-8070	Phase III/IV Clinical Trials & Research	Clinical Trials	3	Spring*

Master of Science in Clinical & Translational Research
Clinical Research Professionals Track



Effective Spring 2022-Present

Course Number	Course Title	Credits	Required or Elective	Semester Offered
Core Courses - 12 credit hours				
BE-7022	Introduction to Biostatistics	3	Required	Fall/Spring/Summer*
BE-7066	Principles of Clinical Trials	3	Required	Fall
BE-7076	Introduction to Epidemiology	3	Required	Fall/Spring/Summer*
BE-7081	Institutional Review Board (IRB) Submission Process for Researchers	1	Required	Summer*
BE-8082	Research Methods for Human Population Studies	3	Required	Fall
BE-9064	Clinical Research Professionals Seminar	2	Required	Fall
Research Ethics (choose one) - 1 credit hour			Required	
BE-7067	Scientific Integrity and Research Ethics	1		Summer*
GNTD-7003	Ethics in Research	1		Spring
Project/Data Management (choose one) - 2 credit hours			Required	
BE-7033	Project Management & Evaluation	2		Spring
BE-7050	Clinical Data Management	2		TBD
Regulatory Affairs (choose one) - 2-3 credit hours			Required	
BE-7035	Preclinical Regulatory Overview	2		TBD
BE-7036	Clinical Research Regulatory Overview	3		Spring
Culmination (choose one) - 2 credit hours			Required	
ENV-7091	Master's Thesis Research	2		Fall/Spring/Summer
BE-7092	CRP Capstone Project	2		Fall/Spring/Summer
Electives: 10-11 credit hours				
<i>Students may fulfill the remaining elective course credit hours by completing an optional focus area, additional elective courses of choice, and/or a maximum of 6 credit hours of non-thesis research (ENV-8091). Elective courses outside of the department need to be approved by the Program Director.</i>				
TOTAL CREDIT HOURS		30		
<i>*Course is offered online</i>				
<ul style="list-style-type: none"> • 3.0 GPA (B average) or higher required for graduation. • Minimum B- grade required for all core courses • "I" (Incomplete) or "NG" (Not Graded) grades must be removed from academic record prior to applying for graduation. • Students must take a minimum of one graduate credit that contributes to degree requirements per academic year (fall-summer) to maintain active status. • All requirements for the master's degree must be completed within five consecutive academic years of the date of matriculation into the program. 				

Master of Science in Clinical & Translational Research
Clinical Research Professionals Track



Approved Electives

Effective Fall 2021-Present

*Approved courses that can be used to count towards elective credit hours include:

- Any BE listed course
- Any course listed on the curriculum, but not used to fulfil a curriculum requirement

*The table below lists suggested BE courses and other approved electives outside of the department.

Course Number	Course Title	Credits	Semester Offered
BE-7025	Comparative Effectiveness Research/Patient-Centered Outcomes Research	2	Fall
BE-7034	Data Collection and Storage with REDCap	1	Fall
BE-7040	Collaboration & Team Science	2	Spring
BE-7071	Quality Improvement & Patient Safety	1	Fall
BE-8076	Successful Scientific Writing	2	Summer, Fall
EDST-7045	Community-Based Participatory Research	3	Summer
HCA-7041	Evidence-Based Decision Making	3	Fall
PHDD-8010	Global Regulatory & Development Strategies of Drugs & Medical Devices	3	Fall
PHDD-8040	Development & Manufacturing of Drug Products & Medical Devices	3	Spring
PHDD-8080	Pharmaceutical Economics & Management	3	Spring

Statement of Intent & Master's Thesis Guidelines

Master of Science Thesis Requirement

(Required for MSCTR-PI track. MSCTR-CRP track requires either a thesis or a capstone.)

The MS thesis requirement is intended to demonstrate the student's ability to conduct, evaluate, and communicate clinical research. Information concerning the [thesis format](#) and mechanics of preparing the final document can be found online. Thesis research may be part of the ongoing work of the thesis laboratory, but it must be separately identifiable, and it needs to be the result of independent research. Additionally, the thesis should reflect advisor/mentor guidance, but must also be the independent work of the student.

A thesis may be written in the form of a publishable research paper, conforming to the publication guidelines of the student's journal of choice (e.g., Journal of the American Medical Association, The Journal of Pediatrics, American Journal of Epidemiology, etc.). The research must be conducted while the student is enrolled in the program and the student must be the first author of the manuscript. Students must place an embargo on the thesis if they submit it prior to publication of the manuscript (see below for further instructions).

The Graduate Studies Office requires each student to submit their Thesis Committee Request Form at the beginning of the semester PRIOR to the one in which you intend to graduate. This helps to ensure that your committee members are on file with the University in advance so there are no discrepancies when you apply to graduate. You will not be able to complete an ETD submission if your committee members are not on file. If you wish to have someone who has never served on a committee before, you will need to complete the Thesis External Committee Member Request Form. Upon completion, please email any completed forms to [Beth Virant](#), CTR Program Coordinator. Please see our [Student Resources](#) page to obtain the most recent copy of each form.

The Statement of Intent (SOI) declares your original thesis topic and its approval by your thesis committee. You will need to complete the SOI Approval Form on the [Student Resources](#) page, and submit to [Beth Virant](#), CTR Program Coordinator, by the last day of the semester preceding the one you intend to graduate in. After approval of the original topic by the Thesis Committee in the form of the SOI, any major change from one thesis topic to another is not permitted without approval of the new thesis topic by the Thesis Committee. In agreement with the function of the Thesis Committee, as specified by the rules of the University of Cincinnati Graduate School, any decisions about the quantity and quality of the work done are the responsibility of the Thesis Committee.

Once the SOI is approved, students should make continuous progress on the thesis research towards graduation. Thesis Committee members should have ample opportunity to review student thesis work at all stages to ensure the project is on track; students should be meeting with their thesis committee at least twice per year. *final draft of the thesis should be submitted for Thesis Committee review at least 1 month before the [graduation deadline](#).*

After the student leaves the University, the thesis research results may be used as the basis for continuing investigations by the student and/or by the laboratory in which the thesis research was done. The student and the laboratory are entitled to retain copies of the data and analyses for their use.

The University of Cincinnati Electronic Thesis or Dissertation (ETD) website has all the details you'll need to submit your final thesis: [ETD Formatting Guide](#). In short, you will need to submit your full thesis in PDF form to OhioLINK following the directions on the ETD website, along with a scanned PDF of your fully signed Committee Approval form. Please see the [Graduation Deadlines](#) website for thesis submission deadlines by semester. The uploaded thesis also must be approved online by the Thesis Committee chair before the ETD deadline.

If a student has not published their thesis prior to graduating, they are strongly recommended to embargo their thesis. The student can request an embargo on the thesis for two years initially, with the option of extending the embargo a third year. An embargo is simply a hold on publishing your thesis in the Ohio library system (OhioLINK). If the plan to submit your thesis in part or whole for publication in a journal, it is vital that you embargo your work for a period of time. Some journals still consider a thesis that is published online a "publication." In order to avoid the fact or appearance of a duplicate publication, it is important to embargo your document. You may request an embargo electronically when you upload your thesis for final approval by your chairperson. As a further protection, you should acknowledge in any submitted manuscripts based upon your graduate research that the work was completed in partial fulfillment of the requirements for the MS in Clinical and Translational Research (see suggested acknowledgment below). See your advisor if you have any questions regarding the embargo of your work.

Students are strongly encouraged to publish their theses. Publication of the thesis can occur at any time during the program. **If you publish part or all of your thesis in a journal you should add the following acknowledgement to your publication:**

"This work was completed in partial fulfillment of the Master of Science degree in Clinical and Translational Research in the Division of Epidemiology, University of Cincinnati College of Medicine."

Thesis Committee

The members of your Thesis Committee must be discussed and approved by your Academic Advisor. According to the rules of the Graduate School, the Thesis Committee should be composed of at least two full-time faculty members with professorial rank, at least one of whom is a member of the All-University Graduate Faculty. Committee members outside of the University are subject to review and approval by the Graduate School, which is why it is important to communicate with the Graduate Studies Office at your earliest convenience

Please review our [Student Resources](#) web page for the Thesis Committee Request Form, which is due at the beginning of the semester PRIOR to applying for graduation. This also means that you will submit your Thesis Committee Request Form prior to submitting your SOI. You are also highly encouraged to meet as necessary with your committee, and you can utilize the Thesis Committee Meeting Report Form to help structure and document your progress.

Typically your academic advisor will serve the chair and voting member of your Thesis Committee. Additional members should include your primary research mentor and the biostatistician on your thesis project. The final judgment on acceptability of the thesis will be made by the Thesis Committee: a unanimous vote is required if there are only two members, or else with no more than one dissenting vote.

Thesis Statement of Intent (SOI)

The Statement of Intent (SOI) serves as the initiation proposal for your thesis project. You should work with your research mentor to choose an appropriate thesis research project. As soon as you have selected your thesis project, you should submit your SOI to your Thesis Committee, typically via email. Your Thesis Committee should review your SOI for appropriateness of methods, feasibility, and suitability for publication. The SOI should be submitted for the Thesis Committee's review early in the thesis project's timetable (i.e., before the majority of the data are collected). A majority of the Thesis Committee members must approve of the SOI and sign the SOI Approval Form, found on the [Student Resources](#) page.)

The SOI should be a brief description of the proposed thesis (not to exceed three single-spaced pages excluding signed SOI approval form, references, and time table). **The SOI will be based on NIH guidelines and requirements for margins and font (11 pt. Arial font, single-spaced, ½" margins). The following headings need to be used when writing the statement.**

A) *Significance*

- *Explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses*
- *Explain how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.*
- *Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved*
- *Incorporate your relevant literature review as background and supporting information in this section.*
- *Address the scientific premise of the study.*
- *State clearly the public health significance of your proposal and once successful how your project will positively impact/improve public health.*

B) *Innovation*

- *Explain how the application challenges and seeks to shift current research or clinical practice paradigms*
- *Describe any novel theoretical concepts, approaches or methodologies, instrumentation or interventions to be developed or used, and any advantage over existing methodologies, instrumentation, or interventions*
- *Explain any refinements, improvements, or new applications of theoretical concepts, approaches or methodologies, instrumentation, or interventions*

C) *Approach*

- *Clearly state the hypothesis and specific aims.*
- *A clear description of the study design. Describe the overall strategy, methodology, and analyses to be used to accomplish the aims of your project*
- *A clear description of the study population including inclusion/exclusion criteria*
- *A clear definition of outcome and predictive variables*
- *Describe the methods taken to ensure scientific rigor, i.e., descriptions of research tools and their reliability/validity, and methods to address quality control and quality*

assurance. Include information on how the data will be collected, analyzed, and interpreted. Point out any procedures, situations, or materials, if any, that may be hazardous to personnel and precautions to be exercised.

- Include statistical analysis, including sample size
- Include a limitations section: description of potential bias – stating potential confounders, such as sex, age, weight, and other underlying health conditions and how these will be handled.
- Discuss potential problems, alternative strategies, and benchmarks/timelines for tasks to be completed to achieve the aims.

D) Timeline

E) IRB approval, if applicable

F) References

The statement should indicate that the work will demonstrate your powers of critical evaluation. The SOI must include a cover memo providing details on your name, the project title, and members of the Thesis Committee with signatures. A copy of the signed SOI Approval Form must be filed with the Graduate Studies office; please copy the CTR Program Coordinator, [Beth Virant](#), upon submission to your advisor.

SOI Submission Deadline

Ideally, your SOI should be approved and submitted by the end of your first year in the MS program (after approximately two semesters of coursework).

At the very latest, the **SOI must be approved and submitted by the last day of the term preceding the semester in which you plan to graduate**, via email to [Beth Virant](#), CTR Program Coordinator. This is a hard deadline, so please copy the [Graduate Studies Office](#) so as not to miss the deadline.

Graduation Semester	Statement of Intent Deadline
Fall	Last day of Summer Semester
Spring	Last day of Fall Semester
Summer	Last day of Spring Semester

Suggested ETD Timeline

Your ETD submission has specific requirements, so please refer to the Graduate School's [Electronic Thesis/Dissertation Information](#) web page for more information on a recommended timeline to help you plan accordingly.

Master of Science Capstone Requirement:

(MSCTR-CRP Track only)

Students enrolled in the MSCTR-CRP track may either complete a thesis (following the identical requirements of the MSCTR-PI track) OR choose to complete a capstone project. The Capstone requirement is intended for MSCTR-CRP students to complete their culminating experience in clinical research management and to demonstrate the student's ability to synthesize and integrate knowledge of the MSCTR-CRP core learning outcomes. The Capstone project may take many forms including practice-based, evaluation of processes, or training development.

Students choosing to complete a Capstone are required to produce a high-quality written product that is appropriate for their educational and professional objectives. Written products may include the following: program evaluation report, expanded project proposal, grant proposal, training manual, policy statement, clinical trial protocol, etc. Ideally, the written product is developed and delivered in a manner that is useful to external stakeholders. The project must be the independent work of the student, not a product of the student's work environment.

Students are eligible to register for the Capstone course credits after completing 15 credit hours of MSCTR-CRP courses. Students completing a Capstone will demonstrate their ability to understand a problem, articulate solutions, think critically about a clinical and translational research project or issue, and demonstrate learning in written form.

Examples of a capstone project include:

- Evaluating clinical staff's knowledge of purpose and requirements for clinical trials and improving awareness with clinical staff
- Improving participant understanding of study requirements and follow up
- Creating tools to assist CRPs on investigator initiated trials; provide info to participants that is at the correct reading level and compliant with the study
- Cultural awareness in clinical trials
- Educational program event for CRPs (e.g., presentation of a half-day topic on advances and innovations in clinical trials)
- Electronic consent development
- Promoting cost recovery in clinical trials (e.g., best practices, evaluation of process at site and improvements to process)
- Improving CRP's understanding of implications of genetics and genetic testing in clinical trials
- Data management best practices (e.g., issues related to double data entry, setting up databases for auditing, and error prevention)
- Handling co-enrollment in studies
- Strategies for Exemption from Informed Consent (EFIC)

Capstone Proposal

The Capstone Proposal should be a brief description of the proposed Capstone project (not to exceed two single-spaced pages excluding the signature section, references, and time table). Please follow NIH requirements for margins and font (11 pt. Arial font, single-spaced, ½" margins). The following headings and elements should be included in the proposal:

A. Project Description/Summary

- a. *State the importance of the problem or critical barrier to progress in the field that the proposed project addresses*
 - b. *Incorporate your relevant literature review as background and supporting information in this section*
 - c. *Clearly state the overarching goal of your proposal*
 - d. *Address the scientific or pragmatic premise of the project*
 - e. *Explain how the proposed project may impact internal and external stakeholders*
 - f. *Describe how the proposed project aligns with your professional objectives*
 - g. *Provide a clear description of the proposed Capstone project and the approach that you will take. Describe the overall strategy, methodology, and analyses to be used to accomplish the aims of your project, where applicable.*
 - h. *Discuss potential problems, alternative strategies, and benchmarks/timelines for tasks to be completed to achieve the aims*
- B. *Timeline of the proposed Capstone project*
 - C. *IRB approval, if applicable*
 - D. *References*

The proposed Capstone project should entail work that demonstrates the student’s ability to synthesize and integrate MSCTR-CRP core learning outcomes in a manner that is appropriate for his/her educational and professional objectives. A copy of the signed Capstone Approval Form must be filed with the Graduate Studies office; please email to [Beth Virant](#), CTR Program Coordinator.

Timeline:

MSCTR-CRP required dates for Capstone Submission:

Beginning of Semester	Submit Capstone Form and proposal
4 weeks before classes end	Submit first draft via Canvas for Director to review
2 weeks before classes end	Drafter returned to student for final revisions
1 week before classes end	Student must submit final documents via Canvas for Director final evaluation and grading
Last day of Semester	Student must submit final Capstone project with signature page via Canvas

**Due dates for required documents and assignments will be posted on Canvas.*

Academic Policies for the MS and Certificate Programs

Credit Hours

To graduate with a **Master of Science degree in CTR**, students must complete a minimum of 30 graduate credit hours (including 2 thesis credits for MSCTR-PI track, and 2 thesis or capstone credits for MSCTR-CRP track). Credits earned in a degree higher than the one the student is completing at UC cannot be transferred. This means that credits taken towards a PhD degree cannot be applied towards the MSCTR degree programs.

Master of Science in Clinical and Translational Research	
Origin of Credits/Student Status	Max Number of Credits Transferred
Previous credits were taken at UC when student was non-matriculated	10 <i>*Pending Program Director approval</i>
Previous credits were taken at UC when student was matriculated into another program	Up to 1/3 of MSCTR requirements <i>*Pending Program Director approval</i>
Previous credits were taken at another institution when student was non-matriculated or matriculated	Up to 1/3 of MSCTR requirements <i>*Pending Program Director & Graduate School approval</i>
Credits earned in a certificate program while matriculated in a degree-seeking program	Any earned credits while matriculated in certificate program will count as credits matriculated in a degree
Credit for course required in two separate curricula (certificate and MS/PhD)	Single course can be applied to multiple certificates but only to ONE Master's or Doctoral degree

To graduate with a **Certificate in CTR**, students must complete a minimum of 10 graduate credit hours. Students within the Department of Environmental and Public Health Sciences who are enrolled in another Master's or PhD program are not eligible for this certificate.

Students outside the department are not encouraged to complete curriculum requirements prior to being matriculated in the certificate program, so please contact [Beth Virant](#) with questions about transfer credits prior to applying as you are not guaranteed to be awarded a certificate. Credits will be evaluated and subject to Program Director approval.

Students who want to continue from the Certificate and earn their MSCTR must formally apply and be accepted into one of the MSCTR programs. Once accepted, the Certificate credit will be automatically applied towards the chosen MSCTR program.

Graduate Certificate in Clinical and Translational Research	
Origin of Credits/Student Status	Max Number of Credits Transferred
Previous credits were taken at UC when student was non-matriculated	3 <i>*Pending Program Director approval</i>
Previous credits were taken at UC when student was matriculated into another program	Up to 1/3 of Certificate requirements <i>*Pending Program Director approval</i>
Previous credits were taken at another institution when student was non-matriculated or matriculated	Up to 1/3 of Certificate requirements <i>*Pending Program Director & Graduate School approval</i>
Credit for course required in two separate curricula (certificate and MS/PhD)	Single course can be applied to multiple certificates but only to ONE Master's or Doctoral degree

Grades

DEPHS requires students to achieve a B minus (B-) grade or better in all program **required/core** courses. If you obtain a C+ grade or lower in any class required by your track, you will be required to re-take the course under department rules. There is no grade replacement at the Graduate level, so both grades will appear on your transcript and count towards your GPA.

If you receive a "C" level grade in an elective course, you will not be required to re-take it, unless otherwise stated on the course syllabus. Please see the [grading scale definition](#) for Graduate grades.

Research Credits

Students matriculated into the MS or Certificate programs can earn academic credit for their independent research projects. Independent research projects must be documented and pre-approved, then verified, in order to receive credit. Typical projects completed for credit include:

- preparing and presenting an abstract or poster at a national conference,
- writing and/or submitting a manuscript for publication,
- writing and/or submitting a grant proposal,
- preparing and/or submitting an IRB submission, and
- ongoing work related to a student's Master's thesis

Other projects with deliverables could be acceptable provided they are relevant to the nature of the research project and approved by a research mentor and/or academic advisor.

The purpose of the process outlined below is to ensure student research meets the legitimacy and quality standards that merit graduate academic credit. The required forms outline the research project plan, document the number of academic credit hours requested, and must be signed by the student, Research Mentor, AND Academic Advisor. The Research Mentor is selected by the student, and is responsible for monitoring the progress of the research over the semester. The Research Mentor is responsible for approving the research plan, reviewing the student's work, and providing a grade at the end of the semester.

Students who wish to earn academic credit for their independent research projects must:

1. Complete a Research Credit Pre-Approval Form and obtain the signatures of BOTH their Research Mentor monitoring the project AND their assigned Academic Advisor within the CTR program. Submit this form to [Beth Virant](#) in the Graduate Studies Office to get permission to register for the credits in Catalyst.
2. Register for the Research credits using the following course codes:
 - ENV-7091: Thesis Research
 - ENV-8091: General (non-thesis) Research

3. Complete a Research Credit Verification Form signed by BOTH the Research Mentor AND the Academic Advisor listed on the Pre-Approval Form submitted earlier in the semester, by the end of the term in order to receive a grade. Submit the sign form to [Beth Virant](#) in the Graduate Studies Office; failure to do so before the provided grading deadline may result in an incomplete grade.

Both forms are available on [our website](#). Students are responsible for documenting their work during the semester in which they are registered for research credits.

If there is any question about the quality of work completed for research credit, the academic advisor is responsible for evaluating the student's work and providing an appropriate grade at the conclusion of the semester.

Minimum Academic Performance

Students are considered full-time when they are registered for 10-18 graduate credits per semester. If a student is registered for at least 1 graduate credit, he or she will maintain graduate student status throughout the entire academic year, fall through summer.

In order to obtain a MS or Certificate, a student must maintain a B average (3.0) or better. In addition, at least 2/3 of the minimum graduate credits necessary for the degree must be at a level of B or higher. Students cannot graduate with I or NG grades in graduate level courses on their records. They should keep their advisors and the program office well-informed of their degree intentions.

Academic Misconduct

Students in the CTR programs are held to the highest code of academic conduct. Academic misconduct or dishonesty is defined in the University of Cincinnati Student Code of Conduct and includes, but is not limited to, acts of cheating, plagiarism, falsification, and misappropriation of credit. The [Student Code of Conduct](#) defines behavior expected of all University of Cincinnati students. It is each student's responsibility to know and comply with the University's Student Code of Conduct. Disciplinary procedures are explained in a step-by-step manner, and the procedures for appeal of decisions are stated.

Maintaining Active Student Status

To [maintain status](#) as a graduate student and thus be eligible for a graduate degree, students must register for at least 1 credit each academic year. In addition, students are required to register for at least 1 credit during each semester that they wish to use University resources (excluding summer semester). If you do not maintain active status, you will have to follow the University's [reinstatements](#) process, of which there are potential financial implications.

Time Limitations

A student pursuing a program leading to a Master's degree must complete all requirements no later than 5 years from the date of matriculation in that degree program. Under extenuating circumstances, students may petition the Associate Dean of the Graduate School, through their program, for an extension of the time limit. Petitions must be submitted on the Reinstatement/Extension form available on the [Student Resources](#) page. Students who have not been enrolled in classes for more than three

years are not eligible for reinstatement and must reapply for admission to the University using the Reinstatement/Extension form.

Graduation

Any student intending to receive a graduate degree is responsible for completing their Graduation Checklist on the Graduate School's [Graduation](#) page and ensuring that the procedures are carried out and the indicated forms are submitted electronically to the Graduate School.

- **Cap and Gown** - may be purchased or rented at the University Bookstore.
- **Incomplete (I)** and **“No Grade” (NG) Grades** - Notification of removal of all **I** and **NG** grades must be submitted prior to the student's graduation.
- **Credit Hours** - Completion of the required semester credit hours for the degree.
- **Transcripts** – Your official transcripts from previous degrees are required to be submitted to the Graduate School within the first semester of study. If this has not been done, you will be not be able to graduate.
- **Departmental Requirements** – Students must complete all departmental requirements for the degree. Any graduate student who expects to receive a degree at any of the three University commencements must make a formal application for the degree. Check the [Graduation Deadlines](#) page for deadlines for each semester.

Frequently Asked Questions

Q. Can I take courses without officially entering the program as a degree-seeking student?

A. Yes, you can take courses as a non-matriculated student. Step-by-step directions on how to do this can be found [here](#). Please note that only 10 non-matriculated credits can be applied to the MSCTR programs and 3 to the Certificate once you are accepted into a program. *Please note: Non-matriculated students cannot earn Mentored Research credits (ENV-7091 or ENV-8091).*

Q. How do I register for courses before I am officially accepted into the program?

A. If you want to take courses before you are officially accepted, you should register as a non-matriculated student. Step-by-step directions can be found on the registrar's [Basic Data Form](#) page. Please note that the Graduate School will only accept 1/3 of the degree requirements upon matriculating into the chosen degree program. This means that you can only transfer up to 10 credits in to MSCTR and 3 credits into the certificate program.

Q. Can I take courses online?

A. We currently offer several classes online throughout the year. Please review to the curriculum sheet or contact the CTR Program Coordinator, [Beth Virant](#) with questions. We continue to revise and adapt courses to online learning as necessary, but there are components of our programs that are required to be in person.

Q. I missed the application deadline listed on the Graduate School website. Can I still apply?

A. The Certificate and the MSCTR programs review applications on a rolling basis throughout the year, so you can apply at any time following the next semester's deadline. For the MS program, you can take up to 10 credits as a non-matriculated student; for the Certificate, you can take up to 3 credits as a non-matriculated student, and these will transfer in pending program director review, if you're officially accepted.

Q. Do you require English Proficiency for International Students?

A. We require proof of English Proficiency by one of the following methods:
TOEFL: minimum of 80 (internet-based test) or a score of 20 or higher on each of the three components of the new "paper-delivered test"
IELTS: minimum of 6.5 overall band score
Duolingo: minimum score of 105
Please refer to the Graduate School's [English Proficiency Requirements](#) for further information.

Q. Can I waive the English Proficiency Requirement? HOW?

A. The proof of English Proficiency requirement can be waived for applicants who have passed the USMLE and send steps 1 and 2 to the [Graduate School](#). It will also be waived for applicants with a bachelor's degree or higher earned from a country on the automatic waiver list on the Graduate School's [English Proficiency](#) page, or for US citizens who earned their degree at an accredited international institution; please contact [Beth Virant](#) with any questions.

Q. Which transcripts are required for the application?

A. Both the MS-CTR and CTR-GC programs will accept an unofficial transcript for admission consideration; however, you must submit them from all prior institutions where you received a degree.

If you are offered and accept admission into one of our programs, please review the Graduate School's [Policy on Transcript Submission](#). You will not be eligible to graduate if your official transcripts have not been received directly by the Graduate School.

Q. How much does the program cost?

A. To view UC tuition costs for the current academic year, visit the [Bursar's Office](#) web page. Individuals enrolling in the Graduate Certificate Distance Learning program have their own tuition rate and fees listed for them. All other CTR programs are considered College of Medicine Standard Programs.

Q. How many credits are required for graduation?

A. To graduate from the MSCTR programs, students must complete 30 credits total (including 2 hours of thesis research for the MSCTR-PI track, and 2 hours of thesis research or capstone project for the MSCTR-CRP track). To graduate from the Certificate program, students must complete 10 semester credits.

Q. Where can I find the class call numbers I need for registration?

A. Go to UC's [Onestop page](#), and click on "View Class Offerings." Choose the term, college, and discipline in which you are interested, and you should see information on all the classes currently offered, including course number, call number, and number of credits.

Q. What are the Graduation Certificate in CTR requirements?

A. Please review the curriculum in this handbook or on our [Student Resources](#) page for the most current information.

Q. Can I complete the Graduate Certificate in CTR online?

A. Although the Certificate can be completed entirely online, summer semester is the only term in which we currently offer a full online curriculum. Not all CTR classes are offered online throughout the academic year. In general, one or two online classes are offered in the fall and spring semesters. Students are welcome to take a mix of both online and in-seat classes to best fit their schedule, interests, and timeline for completion.

Q. How do online classes work?

A. All online classes are housed on [Canvas](#), UC's online learning management system. Students should log in to Canvas using their UC central log in (6+2) and check their course sites daily for course announcements, assignments, and other postings. Most online classes are made up of a series of modules and lectures with accompanying PowerPoints, audio, and/or video.

Q. Can my independent research count toward the Graduate Certificate in CTR?

A. Yes, some students may be eligible to register for up to 2 credit hours of Mentored Research, which will count toward their Certificate electives. The Mentored Research course requires students to submit a pre-approval form before registering and a verification form at the end of the semester. Mentored Research projects must be supervised by the student's research advisor. Please see the research forms section for further information.

Q. What is the summer term?

A. Our summer term is held during the second half session in which students can complete all required 10 credit hours of the Certificate entirely online.

Q. Do I have to complete the Graduate Certificate in CTR in one semester?

A. No, students are welcome to sign up for as few or as many classes as they can accommodate each semester.

Q. How do I set up bill payment for my employer-sponsored aid or tuition remission benefit?

A. Students whose fellowship programs or employers are paying their tuition or who are eligible for tuition remission can contact the Bursar's Office at bursar@uc.edu or visit the [Bursar's website](#) to set up a payment plan.

Q. How do I apply to graduate?

A. Students should first complete their Graduation Checklist which can be found on the [Graduate School's Graduation](#) page. Instructions on how to complete the graduation application can be found on the [Registrar's](#) or the [Graduate School's](#) graduation page. At the end of the term, applications will be reviewed and if approved, the Certificate will show up on the students' official UC transcripts. Students can request transcripts on the [Transcript ordering](#) page. Diplomas and certificates can be ordered through the [Diploma](#) page.

Q. Can I transfer credits to the CTR Training programs?

A. Yes. Please refer to page 21 for the Credit Hours section under Academic Policies for MSCTR and Certificate Programs.

Center for Clinical & Translational Science & Training (CCTST)

The CTR graduate programs were created and partly supported by the Center for Clinical & Translational Science & Training (CCTST). The CCTST was established in 2005 as the academic home for clinical and translational research at the University of Cincinnati College of Medicine. The CCTST mission is to accelerate the development, dissemination, and implementation of innovative biomedical research discoveries that drive improvements in health and health care delivery. The CCTST intends to provide “one-stop shopping” for investigators across the Academic Health Center and beyond in need of guidance, information, support, resources and training.

The CCTST is funded by the National Institutes of Health (NIH) Clinical and Translational Science Award (CTSA) program, grant UL1TR001425. CCTST offices are centrally located in the CCHMC “Location S” research building, directly across the street from UC’s Medical Sciences Building.

Investigators may request services through the CCTST’s online [Research Central](#) portal. The CCTST website also features service descriptions, videos, a searchable database of intramural funding opportunities, news, and a comprehensive AHC calendar of on-campus workshops, conferences and lectures of interest to clinical/translational researchers. Faculty, trainees and community/industry partners can establish free CCTST membership online, required to obtain access to consultation services through Research Central as well as special funding, training and networking opportunities. In return, members help promote CCTST goals and services, collaborate and share expertise with fellow researchers, cite CCTST assistance in publications as appropriate, and provide information for surveys and reports. To date, approximately 4,200 members have joined the CCTST, including over 400 community representatives.

CCTST Resources

With CTSA and institutional funding, the CCTST provides resources through multiple Cores and programs including:

- Acute Care Research Core (ACRC)
- Biomedical Informatics (BMI)
- Biostatistics, Epidemiology, and Research Design (BERD)
- Center for Improvement Science (CIS)
- Community Engagement
- Ethics, Regulatory Knowledge, and Support (ERKS)
- KL2 / CT2 Research Scholars Career Development Award
- Learning Health Systems to Accelerate Translation and Implementation
- Lifespan Data Integration
- Pilot Translational and Clinical Studies (PTC)
- Schubert Research Clinic (SRC)
- Translational Workforce Development (TWD)

A complete description of the cores, programs, and additional resources provided by the CCTST is available at <https://www.cctst.org/>.

Academic Resources

How to Register for Classes

[Catalyst](#) is the UC Web site where you can register for classes, accept your aid award, pay your bill, check your grades, request a transcript, and more. The One Stop Student Service Center is located on the second floor of the University Pavilion.

Phone: 513-556-1000

Office hours: Monday - Thursday, 8:00 – 5:00pm and Friday 9:00am – 5:00pm

Graduate Student Resources

Our Graduate School website has a wealth of information for [new students](#) and [current students](#) alike. Please take a look at these resources and reach out to [Beth Virant](#), CTR Program Coordinator, with any questions you may have.

Canvas Course Management

All online courses are accessed through the [Canvas](#) course management system. Most in-person courses will also have a Canvas course that houses various documents such as course syllabi.

Fellowships and Scholarships

CCHMC fellows are eligible to apply for tuition funding through CCHMC's Clinical Research Fellowship program.

The Clinical Research Fellowship Program has been established to support an intensive clinical research training program for physicians interested in pursuing a research career in a subspecialty of pediatrics. The Cincinnati Children's Hospital Medical Center and UC Departments of Pediatrics and Environmental & Public Health Sciences offer this two-year program from the University of Cincinnati College of Medicine.

The goal is to train research-oriented faculty in the areas of outcomes research, epidemiology, healthcare delivery and patient-oriented research for pediatric departments. The program emphasizes the conduct of independent research, mastering writing skills for grant proposals and publication and learning to present scientific data. Participants are expected to devote at least 80 percent of their time to the didactic and research portions of the curriculum. Up to 20 percent of time may be devoted to clinical care in a pediatric subspecialty.

After completion of one year of clinical training in a subspecialty, a candidate is eligible for this program.

For more information about the Clinical Research Fellowship Program, visit the Cincinnati Children's Hospital [Clinical Research Fellowship](#) page or contact Sandy Geideman, 513-636-9776, or sandra.geideman@cchmc.org.

Our CTR program does not offer any other scholarships or assistantships to prospective/current students.

Graduate Student Research Forum

The Annual College of Medicine Graduate Student Research Forum is an opportunity for students to gain experience in presenting research findings. The purpose of this annual event is to promote scientific communication among students and their research advisors in our various graduate divisions, as well as to inform the scientific community about current graduate student research activities at the College of Medicine. Every graduate student should consider presenting their research poster at this forum. Monetary awards are given to the students with the most outstanding poster presentations. For more information, please visit their [website](#).

Libraries

University of Cincinnati Libraries offer access to an outstanding research library collection of 2.8 million volumes and a wide range of services to help students with their research needs. Students have access to the University of Cincinnati Libraries' online library catalog and information about resources and services through these main web portals: [University Libraries](#) or the [Health Sciences Library](#). The libraries' web sites serve as local gateways to OhioLINK, which includes a statewide library catalog of over 38 million items from 83 other academic libraries across Ohio as well as over 4700 electronic journals.

Each University of Cincinnati library is home to a knowledgeable staff eager to assist students, faculty, and staff with their research and service needs. Among the most important services provided by our staff are instruction in library research, assistance with the appropriate use of electronic resources, and help creating electronic Dissertations and Theses.

The Health Sciences Library is located on the E level of the Medical Sciences Building/CARE building. information and directions follow:

Circulation Desk: 513-558-0127

Reference: 513-558-5628

Technology Support: 513-558-4173

The entrance to the Health Sciences Library is in the Medical Sciences Building on the E level across from MSB E351 and between Kresge Auditorium and the bank of passenger elevators.

Technology Resources

Your UC Username & Password

Most UC services use your UC Login, also called your UC Central Login, or your “6+2”. You can reset your UC Login using UC’s [Password Self-Service](#) website.

Many UC services also use “Two-Factor Authentication” to help protect your account. IT@UC uses the Duo app, which can be installed on your phone, [how to Enroll or Manage your devices with Duo](#).

If you need assistance with your UC Login or Duo, please contact the IT@UC service desk at 513-556-HELP (4357).

Getting Connected

IT@UC maintains a campus-wide wireless network available to all students. [How to connect to the UC Secure wireless network](#).

Software & Services

IT@UC offers students various software and services at no cost or a discounted rate. Visit IT@UC’s [Software](#) and [Services](#) for students page for an up-to-date, complete list.

Popular applications and services provided through IT@UC include:

- Microsoft Office 365 (no cost)
- OneDrive Cloud Storage (Up to 1TB of cloud storage at no cost)
- Student E-Mail (no cost)
- Statistical software, such as SAS and SPSS (Available for a discounted rate)
- Zoom web conferencing (no cost)

Computer Labs

Additional software (including paid software) can be accessed from any device using IT@UC’s MyDesk Virtual Lab. [How to access the MyDesk Virtual Lab](#).

College of Medicine students also have access to the [Health Science Library computer lab](#) (Medical Campus) and the [Langsam Library computer lab](#) (Main Campus).

Printing

Wepa Print stations are available for student printing throughout campus. See [IT@UC’s Student Printing page](#) for locations, how to print, and pricing.

University Resources

University Bookstores

The University of Cincinnati Bookstore is your source for all of your textbook, apparel, and supply needs. They have the largest selection of used textbooks in the community. If you have any questions, contact them at (513) 556-1400 or visit the [Bookstore Website](#).

University Health Insurance

The Mission of University Health Services is to provide superb health care and health education in a compassionate and caring environment, to assist the University in providing a safe environment for students and employees, and to provide wellness in a Just Community.

All students are required to be covered by health insurance, either by the Student Insurance Program or another policy, which must be at least as comprehensive as the University policy. Full-time, co-op, and part-time students taking six or more credit hours are all eligible for coverage and will be automatically charged unless they have previously waived coverage during the current academic year. Graduate students enrolled in less than six (6) credit hours may purchase coverage with: 1) an Insurance Action Form; 2) written certification of matriculation from your academic department; and 3) payment.

Contact the U.C. Student health insurance office by phone at 513-558-7333, or visit the [U.C. Student Health Insurance Office](#) website for the latest in health care information.

Mental Health Services

The UHS Mental Health Clinic provides professional, confidential mental health services for UC students with Student Health Insurance. Students can find a list of services provided on the [UHS Mental Health](#) website, but can also call 513-556-2564. Services include counseling for situational stress, anxiety, depression, relationship issues, grief and loss, sexual abuse, bipolar disorders, and personality disorders. They also perform psychological assessments.

Another resource for all students is the University of Cincinnati Counseling and Psychological Services ([CAPS](#)). Their services include mental health and wellness, counseling, and crisis support. You can contact them at 513-556-0648 during business hours to schedule a free consult or appointment, or for crisis support or after hours care.

Title IX

The University encourages all individuals to report potential incidents of sexual harassment to the University's Title IX Coordinator who works within the Office of Gender Equity & Inclusion (OGEI). Individuals [can make a report](#) and/or seek guidance from the Title IX Coordinator and OGEI staff by email (titleix@uc.edu), by phone (513-556-3349), [online](#), or in person at our office at 225 Calhoun Street.

ID Badges/Keys

Access Control is responsible for the physical security of the University, as well as providing photo identification for all employees and students; you can access the list of provided services on the [Access Control](#) website. Services include:

- Control and service for the over 50,000+ locks in use at the University.
- Issuance of keys to students, faculty, and staff.
- Production of photo ID badges for all University employees and students.
- Control access to areas using a card access system. This system allows access via the University photo ID card.

General Information:

Badge and Key Office: 4 Edwards Center
513-556-4925 or 513-558-4998 ;Fax 513-556-4940

Parking

All students are eligible to purchase a parking permit. To park on campus, one must have a Parking Services issued permit or use a parking garage and pay the hourly rate. Permits are issued on a semesterly or academic year basis and are most easily purchased through the Parking Services' web site during priority registration prior to the start of each semester. The priority registration dates coincide with those for priority class registration. Internet access for priority parking registration is available in the parking Offices and in some computer labs on campus. Contact the Parking Office at 513-556-2283 Edwards Four, or visit the [Parking Services](#) website for further information.

Campus Security

The Department of Public Safety is comprised of four distinct, but interrelated units – University Police, Emergency Preparedness, Parking Services, and Support Services. Visit the [Public Safety](#) website for more information.

How to Contact the Police

Police Headquarters: 3 Edwards Center 51 West Corry Street Cincinnati, Ohio 45221

Primary contacts:

- Emergencies 911
- To contact UC Police 911 from a non-university phone or cell phone dial, 513-556-3911
- Non-Emergencies 513-556-1111, 513-558-1111
- Office 513-556-4900
- Email: ucpd@uc.edu