Weill Cornell Medicine
Clinical & Translational Science Center

Clinical & Translational Science Center

A Weill Cornell Medical College Multi-Institutional Consortium with:

Weill Cornell Graduate School of Medical Sciences / New York Presbyterian Hospital / Cornell University, Ithaca / Cornell University Cooperative Extension, New York City / Memorial Sloan-Kettering Cancer Center / Hospital for Special Surgery / Hunter College of the City University of New York / Hunter-Bellevue School of Nursing / Hunter School of Urban Public Health / Hunter Center for Translational and Basic Research / Animal Medical Center / Cornell College of Veterinary Medicine

1300 York Ave, Box 149, New York, NY 10065 • Tel: 646-962-8302 • Fax: 646-962-0534 • www.med.cornell.edu/ctsc

2024 CTSC Career Enhancement Application

The Clinical and Translational Education Program (CTEP) offers the Career Enhancement (CE) track to allow enrollment in specific didactic clinical and translational investigation courses to fulfill applicants' self-identified educational needs. When enrolling in this track, you will earn course credit and have a grade recorded on an official WCGS transcript. You are expected to have at least an 80% attendance rate and fulfill all course requirements. **Course auditing is strictly prohibited**.

Trainees who wish to pursue additional training may do so once matriculated into either the Advanced Certificate or Master's Degree in Clinical and Translational Investigation Programs. Please note, failing to complete coursework or withdrawing from a course without giving written notification to the CTSC Education Program office will result in a grade of 'F' on your academic transcript and ineligibility for registration the following semester.

TO START YOUR APPLICATION PROCESS SELECT THE LINK BELOW

Initiate a Notification of Intent

Then, to complete your submission please login to the Electronic Protocol Authoring and Review System (ePAR) and refer to the Application Instructions and checklist below

1. Trainee Application Form • **Click on** your current citizenship status to proceed. • Personnel and demographic information. Valid institutional or employer issued email is required. • **Please complete the impact question:** briefly discuss why you wish to enroll as a non-matriculated, CE trainee, and how this opportunity would impact your career development, and if applicable, clinical & translational research goals. **2. Course(s) Requested –** check the "Requested?" Box, click on the "Details of Request" link, click on [add/remove] to make your course selection. ○ Use the **Search** tool to find and select the course(s) you wish to enroll. ○ Finalize your request by checking the "This request is finalized" box. **Note:** CE trainees may enroll for a maximum of 6 core course credits. **Enrollment in courses selected is not guaranteed and must be approved by the CTSC Education Program.**	☐ ☐
3. Required Supporting Documents: Upload as individual PDF files in the order indicated below. ○ **Weill Cornell Graduate School (WCGS) Non-Degree Form:** Click on the [More info] link, copy, paste Qualtrics link into your browser. Fill out survey. Once survey is completed, save response as a PDF, upload into Supporting Documents. ○ **Career Enhancement Enrollment Contract:** Upload the signed and dated downloadable document as a pdf.	☐ ☐
4. Non-Refundable $175 application processing fee. Payable by Paypal. **Note**: Graduate and Medical students from Weill Cornell CTSC consortium please email ctsc-education@med.cornell.edu before making payments.	☐

Questions? Email: ctsc-education@med.cornell.edu

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Master's Degree in Clinical & Translational Investigation Program
Spring 2024 Course Offerings

Core Course	Instructor(s)	Core / Elective	Credits	Dates	Days (Times)	Classroom
Participatory Design for Digital Making [1] CTIV 5052 **Deadline to apply: 01/11/2024**	Parikh	Elective	3	Start: 1/23/2024 End: 5/17/2024 **NO CLASS: 2/27, 4/2 & 4/4**	Tuesdays and Thursdays (11:40am–12:55pm)	MakerLAB at Cornell Tech Campus
Intermediate R Programming for Clinical & Translational Investigation [2] CTIV 5056 Intro to Biostatistics or Intro to R programming Pre-req. **Deadline to apply: 01/11/2024** **Prerequisite Submission Deadline: 01/08/2024**	An	Elective	1	Start: 1/23/2024 End: 2/27/2024	Tuesdays (4:00 – 6:05pm)	WCM Campus: 1300 York Ave. Classroom pending
Advanced Statistical Methods for Observational Studies[3] CTIV 5030 Intro to Biostatistics Pre-req. **Deadline to apply: 01/11/2024** **Prerequisite Submission Deadline: 01/08/2024**	Christos	Elective	2	Start: 01/25/2024 End: 5/2/2024 **NO CLASS: 3/28**	Thursdays (3:30 – 5:15pm)	Fully Remote
Foundations of Epidemiology CTIV 5013 **Deadline to apply: 01/11/2024**	Cassano Du	Core	3	Start: 2/9/2024 End: 5/10/2024 **No Class 3/29**	Fridays 3:45 – 5:00pm Wednesdays *2/28, 3/13, 4/10* 3:45pm - 5:00pm	Fully Remote
Data Management in Clinical Research CTIV 5008 **Deadline to apply: 01/11/2024**	Wood Lee	Core	2	Start: 2/12/2024 End: 5/13/2024 **No Class 2/19 & 4/22**	Mondays 4:00 – 6:00pm	WCM Campus: 1300 York Ave. Classroom pending
Sociocultural Barriers in STEM CTIV 5055 **Deadline to apply: 01/24/2024**	Mukherjee Guzman	Elective	1	Start: 2/21/2024 End: 4/17/2024	Wednesdays (3:30-5:00pm)	WCM Campus: 1300 York Ave. Classroom pending

[1] Course meets in-person at CornellTech campus

[2] Must have already taken pre-req CTIV 5019: Intro to Biostatistics, Intro to R programming or equivalent

[3] Must have already taken pre-req CTIV 5019: Intro to Biostatistics or equivalent

Course Descriptions:

Participatory Design for Digital Making: This is a collaborative workshop where participants (seniors and graduate students from Cornell Tech and Weill Cornell CTSC) work on a prototype for a real-world problem that is worth investigating around digital fabrication. This workshop is an introduction to concepts and methods in design and making with digital fabrication tools while working in intergenerational and intercultural teams. The ability to digitally fabricate parts and whole pieces directly from our computers or design files used to be an exotic and expensive option, but 3d printing has fast become the preferred medium to allow easily adaptable ideas to develop from concept to creation quickly, at a relatively low cost. Not limited to just 3d Printing this course will focus in the area of materials and making, simulation, computational design and abilities to co-create in a team of diverse disciplinary backgrounds.

Intermediate R-programming for Clinical & Translational Investigation

Prerequisites: Introduction to Biostatistics or Introduction to R programming

This is an elective course for students seeking to gain intermediate-level skills in the R programming language and environment, with focus on using tidyverse functionality. The course will cover how to perform statistical analyses such as hypothesis testing, regression and model building, and survival analysis. Students must have taken an introductory R course as well as an introductory biostatistics course as we will be covering biostatistical methods only in the context of their application in R. Applications of skills learned in this course are geared towards clinical research, but these skills are transferrable to many projects outside the scope.

Advanced Statistical Methods

Prerequisite: Introduction to Biostatistics or similar course is required prior to enrollment.

This course will provide trainees with an overview of statistical methods and issues related to the design and analysis of observational studies. Course objectives are as follows: understand the value of observational study design and the background for causal inference; analyze data (using Stata software) with multiple regression analysis to adjust for confounders; introduce observational study design analysis techniques including survival analysis, longitudinal data analysis, and propensity score adjustment methods; application of complex survey analysis and meta-analysis for observational studies (with its reporting standards); and statistical applications for imaging data.

Foundations of Epidemiology: This course is designed to train students to analyze and conduct epidemiologic research. Through lectures, classroom discussion, and project-based work, students will: 1. learn the principles of epidemiology, 2. evaluate evidence from epidemiologic studies and, 3. design epidemiologic studies to investigate hypotheses of interest. Students will apply epidemiologic approaches to questions in health-related specialties including clinical medicine, health services and health care management, and nutritional sciences. The course will provide students with the foundation for further work in epidemiology either as practicing epidemiologists or as sophisticated users of epidemiologic information.

Data Management in Clinical Research: This course is designed to give participants an understanding of selecting, accessing, and retrieving information from web-based quality information resources for clinical research. They will also learn importance of properly designed data collection instruments to the quality of study results. Participants will be able to differentiate between spreadsheets, desktop databases and server-based databases, as well as learn the pros and cons of each. Students will also learn the definition and fundamental features of a relational database and the structure of Web-based data management systems. Participants will learn importance of securing your data, and the different mechanisms used to achieve this. At the end of this course trainees will gain knowledge of the current government standards related to data sharing, and practices that promote data interchange. They will be taught HIPAA considerations in clinical research data management as well as the importance to clinical research of the medical record, clinical data warehousing, and the use of national standards for data representation.

Sociocultural Barriers to STEM: In this seminar course we will discuss the historical context of bias and exclusion in science, read from and discuss the primary literature to understand the science of bias and why it is present and how it has continued to persist across the Science, Technology, Engineering, and Mathematics (STEM) fields, and identify actionable items to address and overcome these issues. By the end of this course, students will have learned:

- To identify types of systemic inequities in STEM
- To understand and analyze how sociological theory and principles intersect with the higher educational system and scientific workforce.
- Terminology, trends, resources, and tools for understanding sociocultural barriers.
- To identify and propose actions that can be implemented as individuals, as well as steps institutions can take, to decrease bias and promote equity and inclusion.