

### **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 and Cornell College of Veterinary Medicine

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

# CTSC MASTER'S DEGREE IN CLINICAL & TRANSLATIONAL INVESTIGATION

Request for Applications

DUE BY 5PM ON WEDNESDAY, MARCH 19, 2025 Courses Begin in September 2025 CLICK TO INITIATE APPLICATION View Eligibility Requirements and Application Instructions

The CTSC Master's Degree Program is comprised of a didactic curriculum of <u>core</u> and <u>elective</u> courses and a mentored clinical research project. During the first year, trainees work with their mentors to develop and refine their research project. In the second year and third year (if needed), trainees will utilize the skills acquired from the didactic curriculum to conduct their research project, **at 75% time and effort (50% minimum for surgeons and other specific clinical specialties).** 

Research projects require a translational or clinical research focus. Projects with a focus on translational science are particularly encouraged. Emphasis is placed on the following priority areas:

precision medicine, drug discovery, targeted therapeutics, biomarkers, device development, novel technologies, LGBTI health needs, underserved populations, community health outcomes,

pediatric and women's health, life course studies of diseases, studies incorporating biostatistical methodologies and design, and inclusion of dissemination and implementation strategies. *Purely basic research proposals will not be funded*. Pre-clinical studies should *have near-term potential to translate into patient-oriented research*.

*What is Translational Science*? Translational science is the field that generates innovations that overcome longstanding challenges along the translational research pipeline. These include scientific, operational, financial, and administrative innovations that transform the way that research is done, making it faster, more efficient, and more impactful. Read more about the stages of translational science <u>here</u>.

**Dissemination and Implementation science (D&I)** is a crucial component of innovating and overcoming challenges in translational science. Accordingly, we are introducing D&I frameworks and methods into the TL1 Training Award review, placing D&I within the overarching discussions of the proposed research question, design, methodology, and potential impact(s) of the research findings. To learn more, please refer to the <u>CTSC</u> <u>D&I Science Lecture Series</u>.

### To complete the MS degree program, the following are required:

- 75% time and effort (50% minimum effort for individuals in surgical specialties) devoted to performing and completing a mentored clinical & translational science research project during the training period
- 30 credits of didactic curriculum (22 Core and 8 Elective)
- Master's Degree Thesis (Written Thesis and Oral Presentation)
- A clinical and translational science research grant submission (*in revision or funded*) to a federal institution (e.g. K awards, RO1, R21, or other NIH funding mechanisms, AHRQ, PCORI) or other foundation/industry research funding requiring peer-review with the scholar is named as Principal Investigator; <u>or</u> a first author scientific article (*in press or in suitable format for submission*) to a high-quality scientific journal
- A presentation of the mentored research project at a Research-in-Progress forum

• A presentation of the mentored research project at a local, national, or international scientific conference

#### **REVIEW CRITERIA**

Upon submission to the online application module <u>ePAR</u>, your application will undergo review based on <u>several</u> <u>Application Review Criteria</u>.

#### **APPLICATION PROCESS & TIMELINE**

**Applications are due by 5pm on Wednesday, March 19, 2025.** Candidates will be notified by **June 2025** of their applications final disposition. At that time, if selected, the applicant will complete additional required enrollment, regulatory, and compliance documents within 30 days.

Questions? See CTEP FAQs, or email CTSC-Education@med.cornell.edu

The mission of the Weill Cornell Medicine Clinical Translational Science Center (WCM CTSC) is to rapidly advance translational science discovery with the ultimate goal of getting more treatments to all patients more quickly. To achieve this mission, the CTSC Education Program (CTEP) aims to educate and train a diverse and empowered group of clinical and translational scientists who are prepared to advance translational science discovery to practice, public health, and public policy thereby improving health and enhancing the quality of life by reducing disability and death from disease. The WCM CTSC is committed to ensuring that the translational science workforce is broadly representative across racial, ethnic, sex, gender, age, socioeconomic, geographic and disability status (See <u>NIH's Interest in Diversity Statement</u>). We seek students who represent and embody the wide range of lived experiences and backgrounds of the US population.



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### ELIGIBILITY REQUIREMENTS

Applications must comply with eligibility and submission requirements Documents or information that are missing or incomplete will disgualify application for review

### **Program Eligibility - All Candidates**

Must be a **US Citizen, Non-Citizen National,** or **Permanent Resident** (residency status must be met at time of application; proof of residency status required in order to be appointed) Must have the ability to devote full-time **75% effort** (50% for surgeons) to the MSCTI Must have **primary appointment** or be **employed** at a **Weill Cornell CTSC partner institution** Only 2 resubmissions are allowed by an individual applicant (whether or not the projects are different) Medical students and Medical Doctors **(MDs), MD/PhDs**, senior residents, fellows Veterinarians (**DVM**), Osteopaths (**DO**), Dentists (**DDS, DMD**), or Physical Therapists (**DPT**) **Post-doctoral PhDs** seeking a career in clinical and translational research Faculty members from any of the **partnering Weill Cornell CTSC institutions PhD** candidates in Nursing School, those with Bachelor of Science in Nursing (**BSN**), Master of Science in Nursing (**MSN**), and Doctorate of Science in Nursing (**DNS**) degrees Certified Physicians' Assistants and Clinical Research Project Coordinators/Aides with a bachelor's degree

Questions? See CTEP FAQs, or email CTSC-Education@med.cornell.edu

## Weill Cornell Medicine Clinical & Translational Science Center

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### APPLICATION INSTRUCTIONS

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Documents or information that are missing or incomplete will disqualify application for review

Application Instructions and Checklist			
To access your application login to WebCAMP. Click on Protocol Authoring and Review. Under the Abbreviated Title			
column click on Your Master's Research Project Title to access your application.			
Tra	ainee Application Form	Completed	
٠	A valid <b>employer issued/institutional email</b> is required to initiate an application.		
٠	Is this a re-submission? Answer 'yes' if the current application is a re-submission of a prior	_	
	application that was not selected for funding/admissions. Resubmissions must outline/highlight		
	changes from previous submission. No more than 2 resubmissions are allowed, whether or not the		
	projects are different.	_	
•	Click on your current Residency Status. Residency status must be met at time of application; proof of		
	residency status required in order to be appointed.		
٠	Has there been any <b>disadvantage</b> in your life or training that you have had to overcome?		
•	If you are not selected for the MS Degree program and wish to be considered for the Advanced		
	Certificate program, please select the appropriate check-box. A letter of support from your		
	department chair/division chief is required.		
•	Proposed Research Study:		
	a. Is this project covered under mentor's IRB/IACUC? Answer 'yes' or 'no'		
	b. If research study is covered under multiple IRB or IACUC protocols, please click on the "Other		
	IRB/IACUC numbers" link to enter in additional protocol numbers.		
•	Project Summary: Briefly (250 word or less) describe your project written in plain language so even a		
	non-scientist can understand the importance of the project. Include the project's broad, long-term		
	objectives, specific aims, research design, methods, significance, and innovation.		
•	Multidisciplinary Integration: Briefly (250 word or less) describe how a multidisciplinary approach is		
	integrated into this proposal. A multidisciplinary approach is one that brings experts from biomedical		
	or physical sciences with non-biological disciplines including biostatistics.		
•	Mentors - Click on [add], fill in required information. Two mentors are required, but list no more than		
	3 mentors. A Primary Mentor must be designated, each mentors' role must be defined. All mentors		
	must have active or recent (federal or foundation) funding. Mentors cannot be listed on more than 2		
	active CTSC applications or current awards (including CTSC Seed Awards). Of the mentors:		
•	One must be designated to serve as a Clinical research mentor and one a Basic Science or Public		
	Health mentor		
•	At least one mentor must have active NIH funding.		
•	Both must have a strong history of mentorship and a clear collaboration/mentoring plan.		
•	At least 2 mentors, <i>including the primary mentor</i> , must be from different Weill Cornell <b>CTSC partner</b>		

institutions and from different disciplines. NIH definition of different disciplines will have priority	
(areas outside biology, e.g., computer science, imaging, chemistry, mathematics, informatics,	
engineering, behavioral science, health services/ outcomes research, and biostatistics). A mentor's	
institution will be determined by their primary appointment.	

Biographical Sketches	Completed		
Upload individual MS Word files for the applicant and mentors; <u>current NIH Biosketch format</u> is required.			
Supporting Documents – Please Upload Attachments as individual PDF files.	Completed		
Research Proposal: Projects must have a translational or clinical research focus. Pre-clinical studies			
should have near-term potential to translate into patient-oriented research. Clinical Trials (phases I or II)			
are permitted. Emphasis is placed on drug discovery, targeted therapeutics, biomarker or device			
development and novel technologies; projects focusing on health needs of LGBTI and underserved			
populations and/or directly impacting health outcomes in the community; pediatric and women's health			
studies; life course studies of disease; and studies incorporating biostatistical methodologies and design.			
Limited to <b>3 single-spaced</b> pages (at least ½ inch margins, no smaller than 11pt Arial font) to include:			
Hypothesis and specific aims			
• Scientific background for the study, citing appropriate references of work in the area by the			
investigator(s) and others			
• Research Plan (research team to be involved, experimental design, methods, statistics, timeline,			
innovation, human subjects and animal issues, if applicable)			
<ul> <li>References and supporting tables, figures, (2-3 additional pages are allowed)</li> </ul>			
First Name, Last Name in the upper left-hand corner			
Career Statement (1 page or less) – Discuss short and long-term goals, how this award would impact your			
career & professional development. Include your First Name, Last Name in the upper left hand corner.			
Letters - address to the Admissions Committee, on departmental letterhead, sign, and send from the			
department to <a href="mailto:ctsc-education@med.cornell.edu">ctsc-education@med.cornell.edu</a> with candidate's name in the subject header.			
a. Department Chair/Division Chief Letter: must state a guarantee of 75% protected time & effort			
(50% for surgeons).			
b. Mentors Letters: Required from all mentors and the designated primary mentor's letter must			
include a mentoring plan (click link for instructions).			
Transcripts and Test Scores – Upload digital copies of test scores and transcripts with application			
submission. Upon program acceptance, official documents will be required in hardcopy. Test scores			
include: MCAT, GRE. Transcripts from Undergraduate, graduate and/or medical school.			
Non-Refundable Application Processing Fee (\$175): A non-refundable Application Processing Fee of			
\$175 payable by a departmental account or by PayPal must accompany all applications.			
Please contact ctsc-education@med.cornell.edu to set up a departmental transfer. For PayPal, please use			
the link below to pay the application fee: <a href="https://www.paypal.com/cgi-bin/webscr?cmd=_s-">https://www.paypal.com/cgi-bin/webscr?cmd=_s-</a>			
xclick&hosted_button_id=963CRYNF9QTVA. Once you have successfully completed the payment, please			
upload a photo of the receipt to your WebCAMP application as proof of payment.			
*Medical/Graduate students and Current CTSC Advanced Certificate students, please email ctsc-			
education@med.cornell.edu <i>before</i> proceeding to make payment.*			
How to Submit Your Application			
1. Return to the Application Status Page (link in the upper left-hand side of the page), click on the blue Submit			

Application button.
If you do not see the Submit Application, please click the Run Detailed Completeness Check link to display items missing, or incomplete.



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## **MENTORING PLAN INSTRUCTIONS:**

### (Each mentor's letter not to exceed 3 pages, excluding table of current and past trainees)

Please provide a detailed mentoring plan for the Candidate that describes the approaches to be used such as frequency of one-on-one and group meeting; oral scientific presentations; instruction on how to critically evaluate the literature and experimental design; training in scientific writing (e.g., grant proposal preparation, manuscripts, and abstracts); designing experiments, etc.

Plans to enhance the candidate's research capabilities should include:

- 1. Describe how the Candidate will be supported and guaranteed protected time, and how it will be ensured that the project is completed in a timely manner
- 2. Specific skills to be acquired during the mentoring experience
- 3. Milestones that will be reached during the mentoring experience (e.g., acquisition of preliminary data, new research skills, presentation of research findings at local/national meetings, and publications)
- 4. Opportunities to interact with research team; The role of other investigators who will contribute to the research mentoring should be described in the application
- 5. The mentoring plan must include instruction in the ethical conduct of research (including training in animal and human subjects' protection, if applicable)
- 6. A plan to acquire presentation and publication skills, and presentation of at least one poster or oral presentation at a national or international scientific meeting during the award period
- 7. A plan on how opportunities will be provided for the Candidate to participate in writing and publishing scientific papers
- 8. Describe any planned outside laboratory experiences or collaborations for the Candidate
- 9. How this experience will help the candidate move toward achieving her/his stated career goals
- 10. Mentors and candidate must provide a projected timeline delineating specific research milestones and other activities that will be undertaken to secure independent research funding (i.e., anticipated publications, training in grantsmanship, timeframe for grant submissions and type of independent research support the candidate seeks)
- Mentors should provide evidence of mentoring experience and success. Please provide a table containing:

   Current Trainees, (2) Past Trainees (≤ 10 years). For each of the individuals listed, please provide their current positions and name of institution, outcomes of the prior trainees. Describe how these prior mentoring experiences influenced the development/mentorship plan proposed for the current candidate

Reference NHLBI (7.1.8. MENTORING PLAN)



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## CTSC MASTER'S DEGREE IN CLINICAL & TRANSLATIONAL INVESTIGATION APPLICATION REVIEW CRITERIA

Similar to the NIH process, each proposal is carefully reviewed by at least two independent evaluators for scientific merit based on translational focus and significance. The following criteria are taken into consideration:

- Overall Impact Score Reviewers should provide their assessment of the likelihood that the proposed career development and research plan will enhance the candidate's potential for a productive, independent scientific research career in a health-related field, taking into consideration the criteria below in determining the overall impact score.
- ✓ Candidate: Does the candidate have the potential to develop to be an independent and productive researcher? Is the candidate's prior training and research experience appropriate for the proposed project? Is the candidate's academic, clinical (if relevant), and research record of high quality? Is there evidence of the candidate's commitment to meeting the program objectives to become an independent investigator in research? Do the letters of reference address the above review criteria, and do they provide evidence that the candidate has a high potential for becoming an independent investigator?
- Career Development Plan/Career Goals & Objectives What is the likelihood that the plan (the award) will contribute substantially to the scientific development of the candidate and lead to scientific independence?
- Research Proposal Is there a strong scientific premise for the project? Are the proposed research question, design, and methodology of significant scientific and technical merit? Has the candidate presented strategies to ensure a robust and unbiased **approach**, as appropriate for the work proposed? Is the research plan of high quality, and does it have potential for advancing the field of study with **innovation**? Is the scientific and technical merit of the proposed research plan of significance? Will the proposed research lead to an independent line of research for the candidate?
- ✓ Mentors and Mentoring Plan At least 2 mentors are required. Primary and Secondary mentors must be from CTSC partner institutions. Additional mentors may be from any institution. Are the qualifications of the mentor(s) in the area of the proposed research appropriate? Does the mentor(s) adequately address the candidate's potential and his/her strengths and areas needing improvement? Is there adequate description of the mentor's proposed role in providing guidance and advice to the candidate? Is there evidence of the mentors' current research productivity and peer-reviewed support? Is there evidence of the mentors' active/pending research funding? Do the letters from mentors document their willingness to participate in the award program? Is the proposed Mentoring plan likely to contribute substantially to the scientific and professional development of the candidate, and facilitate his/her successful transition to independence? (see Instructions for Mentoring Plan)
- ✓ Environment & Departmental Commitment: Is there a strong statement of commitment by the department to the levels of effort required to devote directly to the research and career development

activities described in the application? Is the environment for scientific and professional development of the candidate of high quality? Is there assurance that the department intends the candidate to be an integral part of its research program as an independent investigator?

### The following areas receive additional priorities for their special relevance to the CTSC mission:

- Translational and Clinical Research Focus Projects aimed at improving research methods and/or incubating novel technologies to accelerate multidisciplinary clinical and translational research.
   Projects with a focus on translational science are particularly encouraged.
- Pre-clinical studies should have near-term potential to translate into patient- oriented research, and clinical trials (phases I or II) are permitted.
- Emphasis is placed on:
  - Drug discovery, targeted therapeutics, biomarker or device development and novel technologies
  - Comparative effectiveness and health disparities research: Projects focusing on health needs of underserved and special populations such as children, the elderly, vulnerable, and disabled populations, and LGBTI communities, and/or directly impacting health outcomes in the community, as well as health disparities research
  - **o** Pediatric and Women's Health Studies
  - Life course studies of disease
  - Studies incorporating Biostatistical Methodology and Design
  - Inclusion of **Dissemination and Implementation strategies.** To learn more, please refer to the <u>CTSC D&I Science Lecture Series</u>.

Questions? See <u>CTEP FAQs</u>, or email <u>CTSC-Education@med.cornell.edu</u>