CLINICAL INVESTIGATION (MS)

Department Website (https://med.nyu.edu/departments-institutes/clinical-translational-science/education/degree-programs/ms-clinical-investigation/)

NYSED: 29502 **HEGIS:** 1299.00 **CIP:** 51.9999

Program Description

The MS in Clinical Investigation (MSCI) at NYU Grossman School of Medicine's Clinical and Translational Science Institute prepares investigators with the knowledge, skills, and experience necessary to succeed in academic careers in clinical research. The program is overseen by program director Michael H. Pillinger, MD (https://nyulangone.org/doctors/1811927338/michael-h-pillinger/).

This two-year program is open to individuals planning to be clinical and translational investigators. The program is intended for students, residents, postdoctoral fellows, and junior faculty engaged in clinical and translational research at NYU Langone Health or its affiliates. Physician applicants are expected to be board-eligible or -certified in a clinical specialty, and licensed to practice medicine in New York State.

Our teaching faculty come from all branches of the university, with extensive experience in various forms of research. An even larger pool of mentoring faculty are selected for their experience in mentoring and career development, as well as their own deep knowledge of the MSCI program.

All students are provided with a team of "meta-mentors" who meet with each student and their principal investigator at least twice yearly to confirm that the student is meeting course requirements, that their research is going smoothly, and that they are on track to meet milestone expectations. All members of our teaching and mentoring faculty are committed to supporting the career success of our trainees.

Students also derive extensive benefit from being in a community of learners who share experience and resources. Peer-to-peer mentoring occurs in weekly integrative seminars, and we frequently receive feedback that this is one of the most valuable experiences in the program.

Admissions

Applicants to the MSCI program who wish to specialize in any of the above listed concentrations apply to NYU Langone's Clinical and Translational Science Institute. Applicants must complete the appropriate concentration-specific online application and upload the following documents:

- your CV
- transcript
- a personal statement that addresses your career goals and plans beyond the master's program
- a research plan
- three letters of recommendation
- a recent photograph (optional)

Access the online application for the MSCI program. Incomplete applications are not accepted. For more information, email us at msciprogram@nyulangone.org.

Program Requirements

Translational Research Concentration

Course	Title	Credits
Required Courses		
Clinical Research Methods		3
Introduction to Biostatistical Analysis		3
Scientific Integrity and the Responsible Conduct of Research		0
Integrative Seminar		4
Grant Writing		1
Introduction to Health Informatics		3
Independent Mentored Research		10
Advanced Epidemiology or Drug Development in a New Era		3
Biomolecular Medicine or Health Services Research		3
Clinical Trials Design		3
Total Credits		**33**

Biomedical Informatics for Clinical Investigators Concentration

Course	Title	Credits
Required Courses		
Clinical Research Methods		3
Introduction to Biostatistical Analysis		3
Scientific Integrity and the Responsible Conduct of Research		0
Integrative Seminar		4
Grant Writing		1
Introduction to Health Informatics		3
Independent Mentored Research		10
Advanced Epidemiology or Drug Development in a New Era		3
Advanced Biostatistical Analysis		3
Health Services Research or Biomolecular Medicine		3
Machine Learning		3
Programming for Data Analysis		2
Total Credits		**38**

Comparative Effectiveness and Implementation Research Concentration

Course	Title	Credits
Required Courses		
Clinical Research Methods		3
Introduction to Biostatistical Analysis		3
Scientific Integrity and the Responsible Conduct of Research		0
Integrative Seminar		4
Grant Writing		1
Introduction to Health Informatics		3
Independent Mentored Research		10
Advanced Epidemiology		3
Advanced Biostatistical Analysis		3
Economic Evaluation in Health and Medicine		3
Meta-Analysis and Systematic Reviews		3

Introduction to Dissemination and Implementation Science	3
Total Credits	**39**

Health Disparities and Health Equity Research Concentration

Course	Title	Credits
Required Courses		
Clinical Research Methods		3
Introduction to Biostatistical Analysis		3
Scientific Integrity and the Responsible Conduct of Research		0
Integrative Seminar		4
Grant Writing		1
Introduction to Health Informatics		3
Independent Mentored Research		10
Advanced Epidemiology		3
Advanced Biostatistical Analysis		3
Health Disparities & Health Equity in Community Health		3
Health Services Research Methods		3
Healthcare Delivery Science		3
Principles of Population Health		3
Total Credits		**42**

Health Innovations and Therapeutics Concentration

Course	Title	Credits
Required Courses		
Clinical Research Methods		3
Introduction to Biostatistical Analysis		3
Scientific Integrity and the Responsible Conduct of Research		0
Integrative Seminar		4
Grant Writing		1
Introduction to Health Informatics		3
Independent Mentored Research		10
Biomolecular Medicine		3
Clinical Trials Design		3
Drug Development in a New Era		3
Electives		
Select two courses from the following:		6-7
Biotechnology Industry: Structure and Strategy		
Introduction to Biomedical Entrepreneurship		
Translating Cancer Discovery into Clinical Practice		
Total Credits		**39-40**

Healthcare Delivery Science Concentration

Course	Title	Credits
Required Courses		
Clinical Research Methods		3
Introduction to Biostatistical Analysis		3
Scientific Integrity and the Responsible Conduct of Research		0
Integrative Seminar		4
Grant Writing		1
Introduction to Health Informatics		3
Independent Mentored Research		10
Advanced Epidemiology		3
Advanced Biostatistical Analysis		3
Analytic Techniques for Healthcare Delivery Science		3
Health Services Research Methods		3
Healthcare Delivery Science		3
Principles of Population Health		3
Total Credits		**42**

Sample Plan of Study

Translational Research Concentration

Course	Title	Credits
1st Semester/Term		
Clinical Research Methods		3
Introduction to Biostatistical Analysis		3
Advanced Epidemiology or Drug Development in a New Era		3
Integrative Seminar		1
Grant Writing		1
Scientific Integrity and the Responsible Conduct of Research		0
Independent Research		1
	Credits	**12**
2nd Semester/Term		
Clinical Trials Design		3
Biomolecular Medicine or Health Services Research		3
Integrative Seminar		1
Independent Research		1
	Credits	**8**
3rd Semester/Term		
Introduction to Health Informatics		3
Integrative Seminar		1
Independent Research		3
	Credits	**7**
4th Semester/Term		
Integrative Seminar		1
Independent Research		5
	Credits	**6**
	Total Credits	**33**

Biomedical Informatics for Clinical Investigators Concentration

Course	Title	Credits
1st Semester/Term		
Clinical Research Methods		3
Introduction to Biostatistical Analysis		3
Advanced Epidemiology or Drug Development in a New Era		3
Integrative Seminar		1
Grant Writing		1
Scientific Integrity and the Responsible Conduct of Research		0
Independent Research		1
Machine Learning		3
	Credits	**15**
2nd Semester/Term		
Advanced Biostatistical Analysis		3
Biomolecular Medicine or Health Services Research		3
Integrative Seminar		1
Independent Research		1
	Credits	**8**
3rd Semester/Term		
Programming for Data Analysis		2
Introduction to Health Informatics		3

Integrative Seminar	1
Independent Research	3
Credits	**9**
4th Semester/Term	
Independent Research	1
Independent Research	5
Credits	**6**
Total Credits	**38**

Comparative Effectiveness and Implementation Research Concentration

Course	Title	Credits
1st Semester/Term		
Clinical Research Methods		3
Introduction to Biostatistical Analysis		3
Economic Evaluation in Health and Medicine		3
Advanced Epidemiology		3
Integrative Seminar		1
Independent Research		1
	Credits	**14**
2nd Semester/Term		
Advanced Biostatistical Analysis		3
Grant Writing		1
Scientific Integrity and the Responsible Conduct of Research		0
Integrative Seminar		1
Independent Research		1
	Credits	**6**
3rd Semester/Term		
Introduction to Health Informatics		3
Introduction to Dissemination and Implementation Science		3
Meta-Analysis and Systematic Reviews		3
Integrative Seminar		1
Independent Research		3
	Credits	**13**
4th Semester/Term		
Integrative Seminar		1
Independent Research		5
	Credits	**6**
	Total Credits	**39**

Health Disparities and Health Equity Research Concentration

Course	Title	Credits
1st Semester/Term		
Clinical Research Methods		3
Introduction to Biostatistical Analysis		3
Advanced Epidemiology		3
Integrative Seminar		1
Independent Research		1
Introduction to Health Informatics		3
	Credits	**14**
2nd Semester/Term		
Grant Writing		1
Scientific Integrity and the Responsible Conduct of Research		0
Advanced Biostatistical Analysis		3
Health Services Research		3
Integrative Seminar		1
Independent Research		1
	Credits	**9**
3rd Semester/Term		
Healthcare Delivery Science		3
Principles of Population Health Science		3
Integrative Seminar		1
Independent Research		3
	Credits	**10**
4th Semester/Term		
Health Disparities & Health Equity in Community Health		3
Integrative Seminar		1
Independent Research		5
	Credits	**9**
	Total Credits	**42**

Health Innovations and Therapeutics Concentration

Course	Title	Credits
1st Semester/Term		
Clinical Research Methods		3
Introduction to Biostatistical Analysis		3
Drug Development in a New Era		3
Integrative Seminar		1
Grant Writing		1
Scientific Integrity and the Responsible Conduct of Research		0
Independent Research		1
	Credits	**12**
2nd Semester/Term		
Biotechnology Industry: Structure & Strategy and/or Introduction to Biomedical Entrepreneurship and/or Translating Cancer Discovery into Clinical Practice		6-7
Biomolecular Medicine		3
Clinical Trials Design		3
Integrative Seminar		1
Independent Research		1
	Credits	**14-15**
3rd Semester/Term		
Introduction to Health Informatics		3
Integrative Seminar		1
Independent Research		3
	Credits	**7**
4th Semester/Term		
Integrative Seminar		1
Independent Research		5
	Credits	**6**
	Total Credits	**39-40**

Healthcare Delivery Science Concentration

Course	Title	Credits
1st Semester/Term		
Clinical Research Methods		3
Introduction to Biostatistical Analysis		3
Advanced Epidemiology		3
Integrative Seminar		1
Independent Research		1
	Credits	**11**
2nd Semester/Term		
Advanced Biostatistical Analysis		3
Health Services Research		3
Grant Writing		1
Scientific Integrity and the Responsible Conduct of Research		0
Integrative Seminar		1
Independent Research		1
	Credits	**9**
3rd Semester/Term		
Healthcare Delivery Science		3
Principles of Population Health		3

Introduction to Health Informatics	3
Integrative Seminar	1
Independent Research	3
Credits	**13**
4th Semester/Term	
Analytic Techniques for Healthcare Delivery Science	3
Integrative Seminar	1
Independent Research	5
Credits	**9**
Total Credits	**42**

Learning Outcomes

Upon successful completion of the program, graduates will:

1. Develop expertise in designing and implementing effective clinical research studies.
2. Apply critical thinking skills to navigate challenges in translational investigations.
3. Acquire and apply statistical methods essential for analyzing biomedical data.
4. Utilize statistical software to interpret and present research findings accurately.
5. Apply health informatics tools to optimize data management and analysis.
6. Understand fundamental epidemiological concepts and their application in translational research.
7. Evaluate and interpret disease patterns, risk factors, and health outcomes using epidemiological approaches.
8. Develop a strong ethical framework for conducting research, emphasizing responsible and ethical research practices.
9. Evaluate and address ethical considerations in the research process.
10. Effectively communicate research findings through the development of a grant-application-style thesis and the publication of manuscripts.

Policies

NYU Policies

University-wide policies can be found on the New York University Policy pages (https://bulletins.nyu.edu/nyu/policies/).

Grossman School of Medicine Policies

A list of related academic policies can be found on on the Grossman School of Medicine Academic Policies page (https://bulletins.nyu.edu/graduate/medicine-grossman/academic-policies/).