INTREPID PROGRAM

Program Curriculum

The INTREPID curriculum comprises a core of 3 for credit courses whose interrelated content addresses patient-oriented translational research, along with course in the Ethical Conduct of Research offered via the Sackler Institute of Graduate Biomedical Sciences of NYU School of Medicine. The ethics coursework fulfills the NIH mandate that investigators on NIH-sponsored grants complete formal training in research ethics. Each for-credit course will meet for a total of 35 hours of classroom instruction; the Ethical Conduct of Research course will meet for 10 hours of classroom instruction. Homework and self-study materials will be assigned each evening and over the weekends.

Required Courses
Introduction to Clinical Research Methods (3 credits)
Introductory Biostatistics (3 credits)
Introduction Medical Bioinformatics and Computing (3 credits)
Ethical Conduct of Research

Course Descriptions:

1. Introduction to Clinical Research Methods
   *Course director: Claudia S. Plottel, MD, MSc, Division of Translational Medicine, Department of Medicine*

   Beginning with the formulation of a research question, Introduction to Clinical Research Methods addresses the planning and performance of clinical research. This course will review specific study designs and highlight the elements of protocol development, with an emphasis on methodologies and regulatory requirements in human subject research. Topics include: selection of relevant study cohorts and controls; study interventions; trial registration; randomization; confounders; bias and blinding; data collection; safety and monitoring; endpoints; and presentation and communication of results.
   *Credits: 3*

2. Introductory Biostatistics
   *Course director: Yongzhao Shao, PhD, Division of Biostatistics, Department of Population Health*

   Introductory Biostatistics will include instruction and training in statistical methods relevant to clinical and translational research. Topics will center on fundamental elements of study designs, such as randomization, sample selection and size, and power analysis. The course will also cover specific methods in depth, such as data summarization, analysis and inference, including
numerical summarization and graphical display, evaluation of medical diagnostic tests, estimation with confidence and hypothesis testing, correlation and regression, and survival analyses. Hands-on instruction in using a statistical software package will also be provided.

Credits: 3

3. Introduction to Medical Bioinformatics and Computing

Course director: Yindalon Aphinyanaphongs, MD, PhD, NYU Center for Health Informatics and Bioinformatics (CHIBI)

Introduction to Medical Bioinformatics and Computing will introduce informatics programming, selected topics in medical informatics, and case studies of an informatics analysis. Topics will include data management, clinical decision support, health information exchange, natural language processing, biomedical vocabularies, meaningful use, and clinical information systems.

Credits: 3

4. Ethical Conduct of Research

Course director: Keith J. Micoli, PhD, Sackler Institute of Graduate Biomedical Sciences

Ethical Conduct of Research focuses on ethical considerations for human and animal subjects and scientific integrity in data management, analysis, authorship, and publication. Topics will include peer review, scientific fraud, conflict of interest, mentoring, intellectual property, collaborations (including industry) and the role of scientists in society. This course is required for all individuals who need to meet their NIH-mandated ethics training at their current career level. Those who have already met their NIH requirement who can provide current appropriate documentation, may request to opt-out from the program, with permission of the program directors.

Credits: 0