

The Tufts Certificate Program in Clinical Research is designed to provide a basic foundation in clinical research for physicians, and other doctorally-trained clinicians who are unable to devote two or more years of full-time study to obtain an MS or PhD degree. The Program is designed to be compatible with a part-time commitment for one academic year. It is intended for fellows in training and for mid-career clinicians who are considering a career change and want to strengthen their clinical research skills.

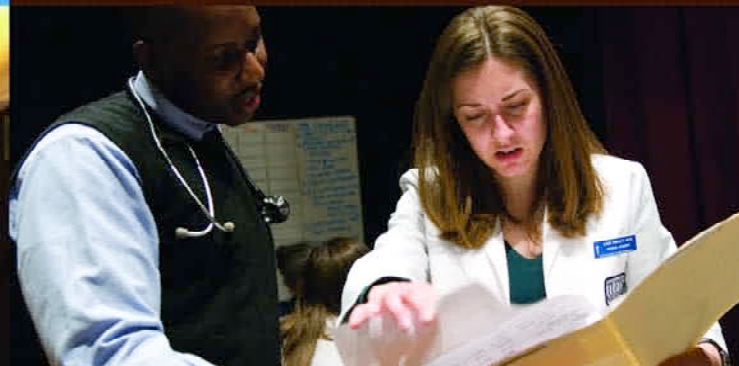
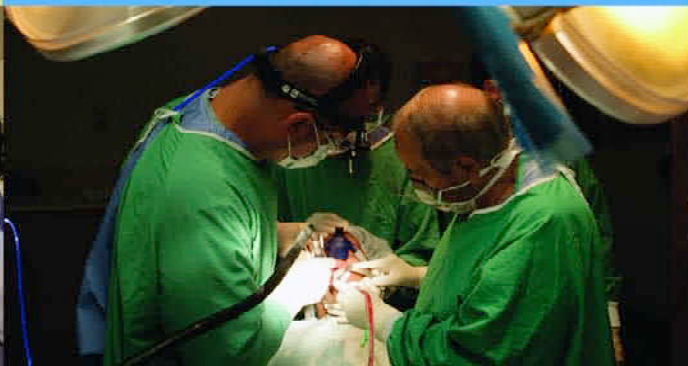
The Clinical Research Graduate Programs at the Sackler School of Graduate Biomedical Sciences are part of the Tufts Clinical and Translational Science Institute (Tufts CTSI), funded through the National Center for Research Resources (NCRR) within the National Institutes of Health (NIH). Tufts CTSI is one of 39 universities in 23 states participating in a national consortium, funded through Clinical and Translational Sciences Awards (CTSAs), with the goal to transform how clinical and translational research is conducted throughout the country. NCRR's plan is to have approximately 60 institutions linked together by 2012 in this unique endeavor to change the production and dissemination of new knowledge to improve the public's health.

Tufts CTSI unites eight Tufts Schools (Arts & Sciences, Citizenship and Public Service, Dental Medicine, Engineering, Graduate Biomedical Sciences, Medicine, Nutrition, and Veterinary Medicine), eight Tufts-affiliated hospitals, the Tufts Center for the Study of Drug Development, the USDA Human Nutrition Research Center on Aging at Tufts, and Tufts Medical Center. Tufts CTSI leverages Tufts University's traditions of multidisciplinary collaboration, generation of novel research methods, and academic innovation to promote collaborative cross-disciplinary full-spectrum translational research. Tufts CTSI provides education, training and research support to investigative teams across the spectrum of health-related research, from bench laboratories to clinical research to healthcare delivery and public policy.

Tufts | **CTSI** Tufts Clinical and Translational Science Institute

Certificate Program in Clinical Research

TUFTS UNIVERSITY
SACKLER SCHOOL OF GRADUATE
BIOMEDICAL SCIENCES



The Program is based on the MS/PhD Graduate Training Program in Clinical Research at the Tufts University Sackler School of Graduate Biomedical Sciences.

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ELIGIBILITY

The Tufts Certificate Program is intended for individuals already trained in the medical sciences, primarily fully-trained physicians, but also others with analogous backgrounds (e.g., D.D.S., D.V.M.) who want further training for research careers. The Program specifically targets junior faculty of Tufts-affiliated hospitals, as well as fellows in training, or mid-career clinicians who are considering a career change and want to strengthen their clinical research skills.

CURRICULUM

For those unable to devote two years of full-time study to obtain the Sackler Clinical Research MS degree, the Certificate Program, which has much of the same course work, is compatible with a part-time commitment of one academic year.

The Certificate Program in Clinical Research builds on the infrastructure and courses of the existing Sackler MS/PhD in Clinical Research and the topics covered are those believed to be essential for any researcher. There are no elective courses in the Certificate Program; although the tailored mentored research project is intended to provide some flexibility for the student to individualize the educational experience. Plus, many courses leverage the students' individual research interests and projects.

The Certificate Program begins with a summer program that combines the Introduction to Clinical Care Research with a newly designed course specific to the Certificate Program: Introduction to Biostatistics and Quantitative Reasoning. This course in quantitative reasoning is tailored to clinicians and is unique in the Tufts campus. It includes both basic statistical concepts and principles, and an introduction to the interpretation of data from clinical studies, with special attention to issues of bias and confounding in the medical literature. In addition to these courses, the students also complete Ethics of Clinical Investigation and a mock IRB and Scientific Review at the end of the summer.

All students are responsible for developing a brief research protocol during the summer semester, which frequently forms the basis for the student's mentored research throughout the year. The remainder of the curriculum is outlined in the Table below.

TUFTS SACKLER SCHOOL CERTIFICATE PROGRAM IN CLINICAL RESEARCH CURRICULUM OVERVIEW

YEAR BY YEAR

SUMMER SEMESTER | CORE COURSES:

- CRES 525** Introduction to Clinical Care Research (2)
- CRES 540** Ethics of Clinical Investigation (.5)
- CRES 504** Basic Biostatistics / Quantitative Reasoning (1)

FALL SEMESTER | CORE COURSES:

- CRES 523** Introduction to Clinical Epidemiology (1)
- CRES 500** Study Design Seminar (.5)
- CRES 561** Introduction to Clinical Trials (0.5)

FALL SEMESTER | OTHER:

Biostatistics online refresher module (0)

SPRING SEMESTER | CORE COURSES:

- CRES 500** Study Design Seminar (.5)
- CRES 566** Introduction to Health Services Research (.5)
- CRES 581** Introduction to Systematic Review and Meta-analysis (.5)
- CRES 515** Mentored Research (1)

ADDITIONAL REQUIREMENTS

- > Participation in Spring Clinical Research Symposium: Poster Presentation
- > Customized final project agreed upon at the beginning of spring semester (examples include: Publishable Manuscript/Brief Report, Proposal for Pilot Project, etc.)
- > Mentoring: Potential mentors will be identified during the recruitment/admissions period and during the summer semester.
- > Statistical Software: SPSS
- > Total Credits: 8 credits (All credits may be applied toward 19.5 credits required for the Master of Science Degree, for those electing to continue their studies.)

FACULTY

The Sackler MS/PhD Clinical Research Program faculty includes a broad range of experts in clinical investigation, clinical epidemiology, health services research, outcomes research, meta-analysis, biostatistics, and drug development, and many related fields drawn from the Tufts University and Tufts Medical Center community. This highly productive and committed faculty makes the Certificate Program an excellent opportunity for broad and deep training in clinical research. The faculty is drawn from this group and will direct the Certificate Program courses.

In addition to the course directors, other faculty from the MS/PhD program will be called upon to lecture in individual courses. For the mentored research course, students can draw from the wider Clinical Research program faculty, and may have mentors from the broader Tufts community (including faculty from affiliated hospitals in collaboration with Clinical Research program faculty).

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CRES525

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CRES581

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