Elective Options for MS in Clinical and Translational Sciences Program

NOTE: ALL ELECTIVES MUST BE GRADUATE LEVEL COURSES AND APPROVED BY A MS CTS PROGRAM DIRECTOR IN ORDER TO RECEIVE CREDIT TOWARDS MCTS DEGREE.

NOTE: Courses offerings are subject to cancellation and course schedules are subject to change

☐ Special Topics in Clinical Research CTSC5107S

This course is a 2 credit elective for the Clinical and Translational Science Masters Program. Students enrolled in the course participate in clinical research activities in the Clinical Research Center (CRC) and/or the Pediatric Clinical Research Center (PCRC) of RWJMS under the guidance of Dr. Vivien Hsu or Dr. Mark Sturgill, respectively (the Course Directors). Students are exposed to all aspects of developing, implementing, and conducting clinical trials in the CRC and/or PCRC. In addition to the Course Directors, each student is paired with a research coordinator/nurse in the CRC/PCRC who helps develop a plan for the student. Students must spend at least 30 hours per semester in the CRC or PCRC to earn 2 credits; however, hours are flexible and scheduled by agreement between the instructor and each student enrolled in the course. This course has two pre- or co-requisites. Students must be enrolled in or have successfully completed CTSC5101S, Ethics and Regulations in Clinical Research, and CTSC5102S, Practical Aspects of Clinical Trial Design and Conduct before enrolling in CTSC5107S. Prospective Students must contact the course director(s) individually prior to enrolling in the course to determine the study opportunities and schedule for the planned semester.

☐ Systems Research Methods MSBS 5030S (Spring )*

This 2-credit literature-based course uses methods and content from primary sources to provide instruction on laboratory and clinical research methodology. Each week a different research article is used to cover topics ranging from methods used in research on inflammation, metabolism, circadian rhythms, and microbes and pathogens. Special topics include cell culture methodologies and genome targeting. Each article is covered in two 2-hour sessions, the first of which provides the necessary background information regarding the techniques used and the field of study. While the bulk of the content is geared towards dissecting the methods used to investigate key research questions, this format also provides students with insight into critical evaluation of stated conclusions.

* Must be at least 5 students enrolled for course to proceed
Cell and Molecular Research Methods MSBS 5035S (Spring)

This 2-credit literature-based course uses methods and content from primary sources to provide instruction on laboratory and clinical research methodology. Each week a different research article is used to cover topics ranging from basic molecular biology and biostatistics to state of the art genomics and proteomics. Each article is covered in two 2- hour sessions, the first of which provides the necessary background information regarding the techniques used and the field of study. While the bulk of the content is geared towards dissecting the methods used to investigate key research questions, this format also provides students with insight into critical evaluation of stated conclusions.

*check catalog at RU to see if this course is being offered*

Courses with CANCER focus offered through GSBS:

1) MICR-5008S – Fall Semester -- TOPICS IN MOLECULAR MEDICINE (1 credit)
   Instructor: Dr. Sunita Chaudhary and Program Faculty

2) PHAR-5581S – Spring Semester/every other year -- GENOMICS IN CANCER THERAPEUTICS (3 credits)
   Instructors: Drs. Debabrata Banerjee,

For More Information and to determine course availability, Visit:

http://rarwjms03.umdnj.edu/education/gsbs/programs/pharmacology/curriculum/subsequent/specialized.html

Other Courses of Special Interest offered through GSBS:

MICR-6060S – Fall Semester -- TOPICS IN THE TRANSLATION OF RESEARCH TO MEDICINE (1 credit)

Topics in the Translation of Research to Medicine is a graduate course that focuses on the interfaces between basic, translational and clinical research. The course includes an introduction to the translational research problem, and discussion of papers in the area of basic science but have the opportunity to be translational or clinical/translational papers that would benefit from understanding the basic science behind the work.

Instructor: James Millonig
MICR-5585S – Spring Semester -- CANCER MOLECULAR BIOLOGY (3 credits)


Instructor: David Axelrod

Note: this course fills quickly; register early if you plan to enroll.

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MICR-6006S – Spring Semester – INTRODUCTION TO MOLECULAR MEDICINE (3 credits) Application of molecular and cell biology to a wide variety of human diseases; recent advances in understanding basic mechanisms.

Instructors: Debu Banerjee/Emine Abali

PHAR-5605S – Fall Semester -- CELLULAR AND MOLECULAR PHARMACOLOGY: PRINCIPLES OF DRUG ACTION AND TARGETING (3 credits)

Instructors: Victor Jin

BMEG-5509S – Spring Semester -- MEDICAL DEVICE DEVELOPMENT (3 credits)

Instructors: Fred Silver

Courses Offered Through Rutgers Professional Science Masters Program (PSM)-

Drug Discovery & Development Track**:

http://psm.rutgers.edu/content/drug-discovery-development
1) 16.137.502 Principles of Communication & Professional Development for Science & Technology Management (3 credits) Fall/Spring -- Tuesdays, 6:40pm-9:30pm, SEC207, Busch Campus

2) 16:137:510 Drug Development from Concept to Market (3 credits), Fall – Thursdays 6:40-9:30pm, Busch Campus NH-A237

3) 16:137:615 Concepts in Biotechnology (3 credits), Fall – Wed, 5:55pm-8:35pm, NB D/C FOR-138A

4) 16:137:511 Drug Discovery Through Preclinical Development (3 credits), Spring – Mondays 6:40-9:30pm, Busch NH-A237

5) 16:340:616 Animal Pharmaceuticals: From Discovery Through Market, Spring 2011 (offered every 3 years) – date/location TBD

Upcoming PSM Courses:

1) 16:137:501 Fundamentals of Intellectual Property (3 credits) – TBD

2) 16:137:582 Regulatory Writing for Submissions and Approvals (3 credits) -- TBD

** Requires completion of a Cross Registration form with RU. Please ask MCTS leadership for cross registration form if you are interested in taking a PSM course. Additional elective courses may be selected from other graduate programs offered through GSBS at RWJMS and in some cases Rutgers University. Rutgers courses are made available to MCTS students through appropriate course sharing agreements between Rutgers and GSBA at RWJMS. Therefore, not all Rutgers graduate courses are available to MCTS students.

ALL electives must be approved by one of the MS CTS Program Directors before a student registers for a course. Rutgers courses may require completion of a cross registration form available from the GSBS or your program leadership.

To Find Additional Courses through the Rutgers Portal, Please Visit:

http://www.acs.rutgers.edu/soc

Instructions Follow:

Elective Options for MS in Clinical and Translational Sciences Program
1) For Campus Location select “New Brunswick”

2) For Level of Study select “Graduate”

3) Choose Semester Term

4) Click Submit

5) On Subject Selection Screen, choose from the following disciplines:

115: Biochemistry

125: Biomedical Engineering

148: Cell & Developmental Biology

681: Micromolecular Genetics

710: Neuroscience

718: Pharmacology

761: Physiology

963: Toxicology