

Physician-Scientist Program



In 1964, **Rensselaer** and the Albany Medical College were pioneers in initiating an **accelerated degree program** that enabled qualified individuals to complete requirements for both the B.S. and M.D. degrees in an accelerated time frame. Now, 45 years and more than 750 graduates later, we are expanding on our innovative approach and are offering a program that will graduate physicians who are intensively trained in medical research.

The comprehensive nature of the program prepares students for careers in medical research and instills an end-to-end knowledge of clinical research and patient care.



Qualified applicants who are accepted into the Rensselaer-Albany Medical College seven-year program will benefit from a unique science-based program built upon the rich tradition of Rensselaer's 185 years of technological innovation and Albany Medical College's tradition of leadership in health-care research. While research is the cornerstone of the program, we offer a well-rounded perspective that prepares future practitioners and physician-scientists to perform with confidence and care in a technologically changing environment.

Research that is initiated in the spring of the third year continues through the summer before and the summer following the first year at Albany Medical College (approximately 8 months in the laboratory). During this time, students will also take a didactic course in the principles of research. At this point, students are uniquely positioned to continue their research projects through elective time and graduate with an M.D. Degree With Distinction in Research.

The comprehensive nature of the program prepares students for careers in medical research and instills an end-to-end knowledge of clinical research and patient care. A solid knowledge of scientific research allows a physician-scientist to comprehensively understand the tools with which s/he works in the

diagnosis and treatment of patients as well as to contribute to the innovations that will become a part of medicine in the future.

The Albany Medical College curriculum recognizes the new demands that the health environment will require in the next decade and prepares graduates for this reality.

AN INTEGRATED APPROACH

An integrated approach using organ systems for learning the basic sciences is used to demonstrate the relationship between scientific knowledge and clinical problem solving. Students study case presentations and see patients throughout all four years of medical school with intensive and broad-based clinical experience during the third and fourth years of medical school. In addition, three innovative courses assure that students are prepared for a patient-centered professional career:

- *Health, Care, and Society* introduces students to psychological, humanistic, ethical, and legal aspects of care.
- *Comprehensive Care Case Study* emphasizes managed care, the health care system, and prepares students for life-long learning.
- *Clinical Skills Laboratory* teaches patient interviewing skills, physical diagnostic skills, routine medical procedures, and clinical laboratory tests.



ACCELERATED MEDICAL CLASS

The class entering Rensselaer Polytechnic Institute each year is selected from a pool of more than 350 applicants. After careful review of applications at Rensselaer Polytechnic Institute and Albany Medical College, students are selected for further review and are interviewed at the medical college. Academically, most applicants invited for an interview have combined critical reading and math SAT scores of 1400 or greater.

More detailed examination of the group of exceptional and promising young men and women beginning their first year of studies at

Rensselaer in a recent class shows that their combined critical reading and math SAT scores averaged 1447. Of equal importance to their demonstrated academic ability is their distinctly superior level of maturity and motivation.

For more information, you may write us:

Office of Undergraduate Admissions
Rensselaer Polytechnic Institute
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Troy, NY 12180-3590

Phone: (518) 276-6216

Fax: (518) 276-4072

E-mail: admissions@rpi.edu

Web: <http://admissions.rpi.edu/>

ADMISSION TO ACCELERATED STUDY

Admission to the Accelerated Physician-Scientist Program at Rensselaer is limited to individuals who display the motivation, maturity, and intellectual capacity necessary to pursue the accelerated course of study with a special focus on biomedical research. Students in the Accelerated Physician-Scientist class must not yet have initiated full-time undergraduate study. Candidates must complete secondary school with superior scholastic credentials and must meet these basic requirements before applying to Rensselaer:

- SAT I and SAT Subject Tests in mathematics; and biology, chemistry, or physics
- ACT—must include the optional writing component—may be substituted for the SAT
- All tests must be completed by December test date
- Four years of science (including biology, chemistry, and physics)
- Four years of mathematics (algebra through pre-calculus)
- Four years of English
- Two years of social studies/history
- Deadline for applications is November 1 of the student's senior year of high school
- No early decision options are available

Applicants under serious consideration for the Accelerated Physician-Scientist Program will be interviewed by Albany Medical College in January, February, and March. Students who are admitted to the program are not required to submit an application to the medical school and are not required to take the Medical College Admissions Test (MCAT).

ACCELERATED PHYSICIAN-SCIENTIST PROGRAM CURRICULUM

YEAR I

FALL
Calculus I
Chemistry I
Introduction to Biology
Introduction to Biology Lab
Humanities & Social Sciences

SPRING
Calculus II
Chemistry II
Introduction to Cell & Molecular Biology
Humanities & Social Sciences

YEAR II

FALL
Organic Chemistry I
Physics I
Genetics & Evolution
Humanities & Social Sciences

SPRING
Organic Chemistry II
Physics II
Molecular Biology
Humanities & Social Sciences

YEAR III

FALL
Molecular Biochemistry I
Human Physiological Systems
Humanities & Social Sciences
Elective

SPRING
Embryology
Principles of Research
Seminal Development in Biomedical Research
Biomedical Research
Humanities & Social Sciences

SUMMER*
Research Project

YEAR IV

Cellular and Molecular Biology
Musculoskeletal System I
Neuro Sciences I
Cardiovascular System I
Acid/Base Balance and the Respiratory and Renal Systems

YEAR IV (cont)

Gastrointestinal System I
Reproduction and Integrative Metabolism
Health, Care, and Society I
Evidence Based Health Care
Clinical Skills I
Nutrition I
LaGrange Medical Informatics

SUMMER
Research Project
Research Presentations

YEAR V

Disease and Defense
Introduction to Oncology
Principles of Drug Therapy
Introduction to Infectious Disease
Lymphohematopoietic System
Human Development
Cardiovascular System II
Endocrine System II
Respiratory System II
Renal System II
Gastrointestinal System II

YEAR V (cont)

Neuro Sciences II
Integument, Musculoskeletal System II
Psychobiology and Behavior Pathology
Reproductive System II
Health, Care, and Society II
Evidence Based Health Care II
Clinical Skills II
Nutrition II
LaGrange Medical Informatics II

YEAR VI & VII

Clinical Studies

*Studies continue at Albany Medical College

Rensselaer Polytechnic Institute admits qualified applicants without regard to gender, sexual orientation, age, race, color, religion, national or ethnic origin, marital status, or disability.

<http://admissions.rpi.edu/>



Rensselaer