

# 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, 49 years and more than 800 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 189 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 475 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 (on the 1600 scale).

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 1471. Of equal importance to their demonstrated academic ability is their distinctly superior level of maturity and motivation.

For more information, you may write us:

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Rensselaer Polytechnic Institute  
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Troy, NY 12180-3590

Phone: (518) 276-6216

Fax: (518) 276-4072

E-mail: [admissions@rpi.edu](mailto:admissions@rpi.edu)

Web: [admissions.rpi.edu](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 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  
Organic Chemistry Lab I  
Physics I  
Genetics & Evolution  
Humanities & Social Sciences

#### SPRING

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

### YEAR III

#### FALL

Molecular Biochemistry I  
Human Physiology  
Humanities & Social Sciences  
Elective

#### SPRING

Developmental Biology  
From Neuron to Behavior  
Seminal Development in Biomedical Research  
Biomedical Research  
Humanities & Social Sciences

#### SUMMER\*

Research Project

### YEAR IV

Molecular Cell Biology and Genetics  
Musculoskeletal System  
Nervous System  
Cardiovascular System  
Acid/Base and Renal System

### 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 Systems  
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 complies with all federal, state, and local nondiscrimination laws and provides equal opportunities for all persons regardless of race, color, religion, sex, sexual orientation, gender identity, gender expression, age, marital status, national origin, citizenship status, disability, military status, veteran status, or any other basis prohibited by law.

[admissions.rpi.edu](http://admissions.rpi.edu)



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