

# Physician-Scientist Program

AT RENSSELAER



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, 42 years and more than 709 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. Qualified applicants who are accepted in the Rensselaer-Albany Medical College seven-year program will benefit from a unique science-based program built upon the rich tradition of Rensselaer's 182 years of technological innovation and Albany Medical College's 167-year tradition of leadership in health-care research. And while research is the cornerstone of the program, we offer a well-rounded education that prepares graduates to practice as physician-scientists 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 didactic courses 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 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 ENTERING IN 2006

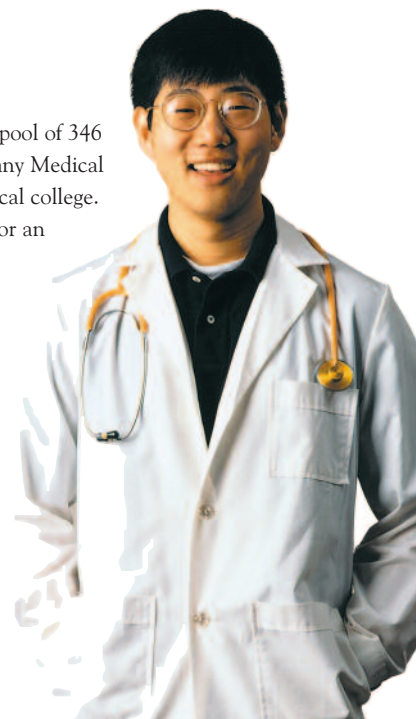
The class entering Rensselaer Polytechnic Institute in September 2006 was selected from a pool of 346 applicants. After careful review of applications at Rensselaer Polytechnic Institute and Albany Medical College, 173 students were selected for further review and 85 were interviewed at the medical college. Female applicants accounted for 42% of this group. Academically, most applicants invited for an interview had combined critical reading, math, and writing SAT scores of 2134 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 September 2006 shows that their combined critical reading, math, and writing SAT scores averaged 2161. 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  
110 8th Street  
Troy, NY 12180-3590

Phone: (518) 276-6216  
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E-mail: [admissions@rpi.edu](mailto:admissions@rpi.edu)  
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# Rensselaer



# ADMISSION TO ACCELERATED STUDY AT RENSSELAER

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; applicants must also demonstrate a readiness to benefit from the medical research experience that is a cornerstone of this unique program.

Please make sure you meet our basic requirements for fall 2007 before applying to Rensselaer:

- SAT (critical reading, math, and writing) and SAT Subject Tests in mathematics and science
- ACT (which must include the optional writing component) may be substituted for the SAT
- All tests must be completed by the 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
- The deadline for all applications is November 1 of the student's senior year of high school; no early decision/action 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).

## Curriculum for Accelerated Physician-Scientist Program

### 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  
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  
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.