



New Paltz
STATE UNIVERSITY OF NEW YORK

THE
SCHOOL
OF
SCIENCE &
ENGINEERING



A DEGREE...AND AN EDUCATION®

REAL WORLD LEARNING EXPERIENCE COMBINED WITH A SOLID FOUNDATION

IN THE LIBERAL
ARTS ENABLE OUR
STUDENTS TO GROW
INTELLECTUALLY AND
MEET THE CHALLENGES
OF CONTINUALLY
EVOLVING FIELDS.

THE SCHOOL OF SCIENCE & ENGINEERING

prides itself in offering opportunities for hands-on undergraduate research, supported by the kinds of modern research facilities found at large universities. It does so while preserving the high teaching standards and personal contact with our excellent faculty typical of small, liberal arts colleges. Each program description in this book gives some examples of the wide variety of career paths and graduate and professional programs chosen by our students in recent years.

There are four basic components of an undergraduate degree in the School of Science and Engineering: first, a strong grounding in core math and science subjects that forms the basis for a lifetime of learning in science and engineering fields; second, a focused education in the technical aspects of your field; third, a focus on the liberal arts that provides the communication skills, understanding of people and society, and global awareness needed to succeed in our increasingly complicated and interconnected world; and lastly, the many opportunities to apply your knowledge and skills on real-world projects

Our math, science, and engineering programs are demanding. We maintain high standards in order to provide you with the best opportunities when you graduate. We do so in a supportive environment that gives you the help that you need to succeed.

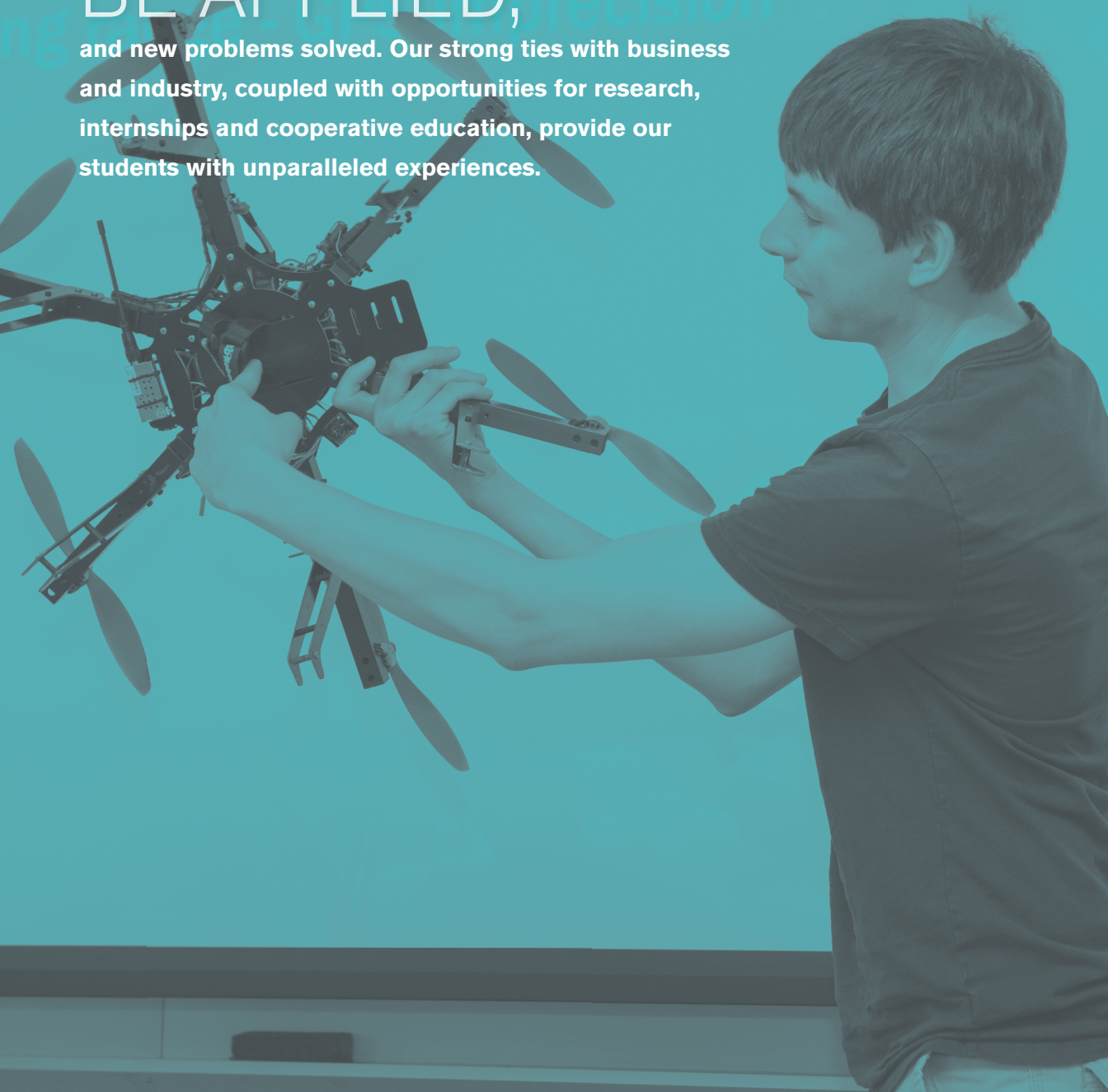


Your research is sound and your lab time has been intense. Working collaboratively with your professor, you have identified the basic cell structure of the fungi and how it inhibits the growth of other fungi. Your excitement builds as you realize just how close you are to proving your hypothesis.



IN THE SCIENCES AND ENGINEERING, NEW **KNOWLEDGE** MUST BE APPLIED,

and new problems solved. Our strong ties with business and industry, coupled with opportunities for research, internships and cooperative education, provide our students with unparalleled experiences.



Assistant Professor, Department of Food Science, UMass-Amherst (**Dr. David Sela '03**, Biology)

Assistant Professor of Mathematics at Duquesne University (**Dr. Anna Haensch '07**, Mathematics, 2007)

Chief Data Scientist/Director of Analytics at US Environmental Protection Agency (**Robin Thottungal '08**, Computer Engineering)

THE SCHOOL OF SCIENCE & ENGINEERING

WHAT WILL YOU BECOME?

Venture Manager, Kurdistan, Exxon-Mobile (**Drew Goodbread, '76** Geology)

Regional Innovation Specialist, Hudson Valley Technology Development Center, Vice-President and Co-founder of Plasmaco Inc. (**Everton Henriques '78, '83g**, Chemistry)

Distinguished Research Staff Member and Senior Manager, Watson Labs, IBM (**Dr. Michael Hind '85**, Computer Science/ Mathematics)

Development Engineer for zSeries mainframes, IBM (**Olga Stulov '12**, Electrical Engineering)

DO YOU LIKE **SOPHISTICATED EQUIPMENT** AND ENJOY MAKING IT WORK TO OPTIMAL CAPACITY?

DO YOU LIKE RESEARCH AND WANT TO WORK CLOSELY WITH **ENTHUSIASTIC AND EXPERT** FACULTY?



THE ACADEMIC YEAR UNDERGRADUATE RESEARCH EXPERIENCE (AYURE) PROGRAM PROVIDES FUNDS FOR RESEARCH AND SUPPLIES

TO STUDENTS INTERESTED IN DOING THEIR OWN RESEARCH. IT IS JUST ONE OF A NUMBER OF WAYS THE SCHOOL OF SCIENCE & ENGINEERING SUPPORTS ITS STUDENTS, AND STANDS AS AN EXAMPLE OF OUR COMMITMENT TO TEAMING STUDENTS WITH FACULTY TO WORK ON CUTTING-EDGE RESEARCH PROJECTS OUTSIDE THE CLASSROOM.

SCHOOL WEBSITE

www.newpaltz.edu/sse

MAJORS

Astronomy
Biology
Biochemistry
Chemistry
Computer Science
Environmental Geochemical Science
Computer Engineering
Electrical Engineering
Geology
Mathematics
Mechanical Engineering
Physics

ACCREDITATIONS

ABET (Electrical & Computer Engineering)
American Chemical Society



The School of Science & Engineering has experienced a growth of 52% in the last five years.

With a remarkable natural environment close to campus, students have access to a range of diverse environments for field study. Many faculty members conduct research locally, strengthening ties between the region's educational and environmental institutions.



The Computer Science Department has two Distinguished SUNY Research Professors on staff (one of whom is also an IEEE Fellow), a high honor for faculty which indicates a stellar reputation for scholarship.

Many opportunities for faculty-mentored projects and research.



CONTACT

The School of Science & Engineering
State University of New York at New Paltz
1 Hawk Drive
New Paltz, NY 12561-2443
p: (845) 257-3728
f: (845) 257-3730



41.7039° N, 74.3447° W

IN, AND BEYOND, THE CLASSROOM

ECOLOGY CLASS IN THE
SHAWANGUNK MOUNTAINS



DEPARTMENTS AND PROGRAMS

www.newpaltz.edu/sse

BIOLOGY

www.newpaltz.edu/biology

Major Tracks:

Cellular & Molecular

Organismal & Environmental

Secondary Education-Biology

- Excellent preparation for employment in industry, teaching, research, government
- Excellent preparation for graduate, medical, dental, and other allied health fields
- Many opportunities for faculty mentored undergraduate research and presentations
- Faculty research interests include: development, cancer, molecular signaling, environmental conservation, neurophysiology, animal behavior

- Modern, research-quality instrumentation that undergraduate students use in courses and research

Recent Undergraduate Research Projects:

- Rock snot, a nuisance algae in Catskills streams
- Effects of xenoestrogens on regenerating planaria
- Investigating compounds that affect the human estrogen receptor
- Neuroendocrine regulation of nutrient utilization in the house fly
- Microbial ecology in coral reef live rock
- Identifying protein interactions in yeast
- Cytotoxic effect of ruthenium compounds on cancer cells

- Electrophysiological response of crabs to *Aplysia's* defensive ink
- Fungicidal effects of arjuna tree extracts
- Effects of fire on the ecophysiology of dominant forest tree species
- Impacts of urbanization on songbird behavioral ecology

Recent graduates are:

- Attending graduate school/post-doctoral training at: Northern Arizona University, University of Nevada, Tufts, Brandeis, George Washington, UC San Diego, UC Davis, University of Florence, UT Austin, Case Western, Boston University
- Working in pharmaceutical/ biotechnology/ university research at: Regeneron, Discovery Labs, Cell Gene, NYU
- Attending medical school at: Temple, Stony Brook, Einstein, NYU, Tulane, SUNY Upstate, University of Vermont, NY College of Osteopathic Medicine, Lake Erie College of Osteopathic Medicine
- Attending veterinary school at: Tufts, University of Missouri, Ohio State
- Attending other graduate allied health programs at: Long Island University, Albany College, Boston University, NYU, SUNY Optometry
- Teaching high school at school districts throughout the Hudson Valley and Long Island

BIOCHEMISTRY

www.newpaltz.edu/biochemistry

A degree in biochemistry can lead to:

- Bachelors-level positions at pharmaceutical, chemical, or biotechnology firms
- Bachelors-level positions in laboratories, research facilities, and private industry
- Dental, medical, optometry, veterinary or pharmacy school
- Law school
- Graduate school in Biochemistry

Recent Undergraduate Research Projects:

- DNA bar coding
- Nuclear receptor-ligand interaction
- Isolation and characterization of a novel furanocoumarin from *Heracleum maximum*

- and its antimicrobial potential
- Isolation of insecticidal compounds from ethanolic bark extract of *Terminalia arjuna*
- Electron transfer in laccase catalysis
- Engineering laccase scaffolds into artificial blood

What do our graduates do?

- Attend medical school (SUNY Upstate, University of Iowa), veterinary school (Colorado State Univ.),
- Research assistants (Georgetown University, Univ. of Mass., Amherst)
- Technicians in biotechnology (Regeneron) or sales and marketing in healthcare

CHEMISTRY

www.newpaltz.edu/chemistry

Major Tracks:

ACS Certified Chemistry/Biochemistry

emphasis/Chemistry/Secondary

Education-Chemistry

- Excellent employment potential in industry, teaching, research, and government
- American Chemical Society (ACS) approved curriculum
- Many opportunities for students interested in undergraduate research
- Excellent preparation for graduate and pre-health programs
- Modern, research-quality instrumentation is used in research and has been incorporated into undergraduate student courses
- Faculty with established research programs and expertise in many areas of chemistry including biochemistry, environmental, and nanoscience

What do our graduates do?

- Attend medical school (Tufts University, U. Iowa Carver College of Med., NY Institute of Technology College of Osteopathic Med., Temple University Med. School, Rutgers Med. School) or other schools that prepare students in health professions (U. Texas, San Antonio, Optometry).
- Pursue a Ph.D. in chemistry at schools such as Stanford University, UC San Diego, University of Rochester, University of

Minnesota, Northwestern Univ., and Georgia Tech.

- Work in biotechnology (Regeneron, Plexikon, Novartis), semiconductor industry (Global Foundries) or pharmaceuticals (Albany Molecular Research), sales in technology companies, teach in high schools

Some Recent Undergraduate Research Projects:

- Probing the surface chemistry of P. putida using atomic force microscopy
- Determination of acylhydrazone formation constants by UV spectroscopy
- Nicotine analogues: phenyl azetidines and azetidines as insecticidal agents
- Interactions between oligonucleotides and quaternary ammonium salts
- Advanced photoresists for extreme ultraviolet lithography
- Paramagnetic NMR of the trinuclear copper cluster in multicopper oxidases



DIVISION OF ENGINEERING PROGRAMS

www.newpaltz.edu/engineering/

Resnick Engineering Hall 102

SUNY New Paltz

1 Hawk Drive

New Paltz, NY 12561-2443

Phone: 845-257-3720

Fax: 845-257-3730

Email: enr@enr.newpaltz.edu

Degrees Offered:

BS in Electrical Engineering

BS in Computer Engineering

BS in Mechanical Engineering

MS in Electrical Engineering

5-Year BS/MS Programs

Engineering at New Paltz

- An intimate engineering program by intent.
- Small classes and labs resulting in personalized attention – from freshman through senior year.
- Quality faculty interaction with students – advising, mentoring, collaborating.
- Real world experience opportunities – internships and mentored research.
- A well-rounded education based on a firm grasp of engineering fundamentals as well as a broad general education experience.
- An innovative integration and collaboration between engineering and the fine arts, providing additional opportunities for creative work.
- Cutting edge technical facilities, including student use of comprehensive 3-D Design, Fabrication and Printing lab.
- Graduates who are well prepared for life after graduation – entering the nation's finest graduate programs and employed by top regional and national industrial firms.

From the latest Engineering Accreditation Commission of ABET report:

- **Students in the program benefit from small class sizes. This enhances the interaction between students and the faculty and provides a good learning environment for the students. Many of the students interviewed during the visit indicated that this was one of the reasons they chose to attend SUNY New Paltz**
- Graduates of the program are placed at well-known national engineering firms and are admitted into highly ranked graduate schools. The program is highly regarded among local industry and graduate schools.
- Senior design projects are comprehensive and of high quality. Typically seniors solve important problems which often come from industry.

What do our graduates do?

Electrical, computer, and mechanical engineers can be found in almost all sectors of the workforce, including research and development, product design, manufacturing operation, service, technical sales and marketing, consulting, patent law, medicine,



DEDICATED FACULTY

HAVE YOU EVER CONSIDERED WHAT IT WOULD BE LIKE TO WORK ON A REAL-WORLD, INTERDISCIPLINARY PROBLEM? OPPORTUNITIES FOR EXPERIENCES LIKE THIS ARE AVAILABLE IN EVERY PROGRAM.



VIEW PROFESSOR REENA DAHLE'S VIDEO AT WWW.NEWPALTZ.EDU/ADMISSIONS



Velisha Guillaume

Biology/Psychology

Hometown: White Plains, N.Y.

RA in College and Deyo Halls, takes Zumba classes, co-president of MAPS (Minority Association for Pre-Med Students), hiker

48
9/15

NIC OP A flavus ~~in~~ w/metabolite (light: 6/13)

pre-incubate spores @ 5×10^4 spores/ml

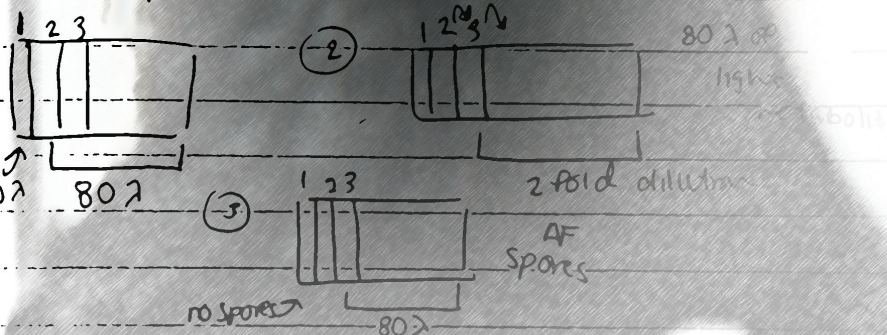
- 9 ml OP PD

9 ml (5×10^4 spores/ml) = 0.45 ml = 450 μ l

(1×10^6 spores/ml)

pre-incubate at 37°C at 3:08 PM - 6:15 PM

plate set up



incubate plate at 37°C at 6:18 PM - 5:24 PM

added 80 μl OP 100 ml XTT - 5 μl menadione to each well

at 5:25 PM - 9:24 PM

obs of mycelial growth: none

had just start w/fresh

I applied to the AMP-CSTEP program on campus, got accepted, and was teamed with Dr. Morrow, who was also my adviser. We worked together over the summer. It was great because we started building a relationship outside of the classroom. Then, I continued my research into the fall with her, at which point she was not only my adviser, but my professor and faculty mentor!

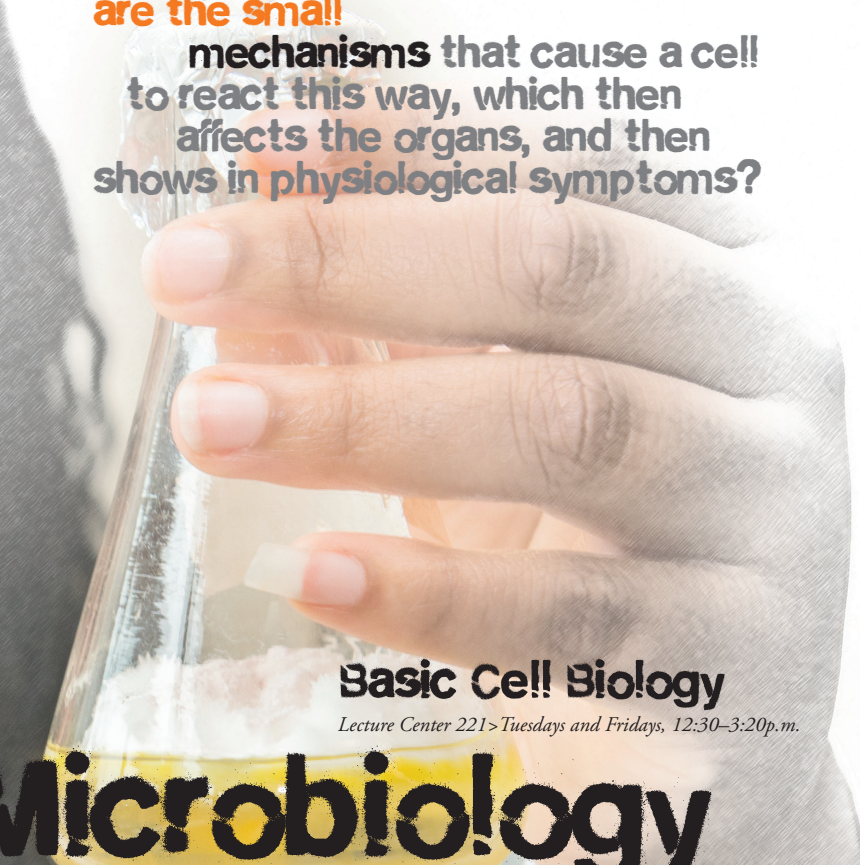
To have a professor know you and care about you is amazing.

You get to do research with them, be their assistant in the lab. You're here to learn, and there are a lot of other activities here beyond the classroom that you can get involved with alongside your professors.

I wanted to be a doctor before I even applied to SUNY New Paltz. When I started here, I began to get involved more in the research aspect of things and I thought that I could do something with a blend of science and medicine. I came to college with a desire to pursue medicine, but it changed into something else.

It's interesting to me to think about why cells react the way they do. What are the small!

mechanisms that cause a cell to react this way, which then affects the organs, and then shows in physiological symptoms?



Basic Cell Biology

Lecture Center 221 > Tuesdays and Fridays, 12:30-3:20p.m.

Microbiology

Coykendall Science Building 222 > Mondays and Thursdays, 9:30-10:45a.m.

Evolutionary Science

Lecture Center 102 > Mondays and Thursdays, 12:30-1:45p.m.

Immunology

Coykendall Science Building 221 > Mondays, 5-7:50p.m.

Clinical and Counseling Psychology

Humanities 312 > Wednesdays, 5-7:50p.m.



SEE VELISHA'S STORY AT
WWW.NEWPALTZ.EDU/ADMISSIONS



41.8439° N, 74.0822° W



THE NEW PALTZ GEOLOGY DEPARTMENT STANDS OUT IN COMPARISON TO OTHER GEOLOGY PROGRAMS BY OFFERING HANDS-ON, FIELD-BASED LEARNING EXPERIENCES AS A PART OF NEARLY EVERY CLASS.

and public police. The average starting salary for a graduate with a BS in these disciplines is \$65,000.

Recent Senior Design Projects

- Design of a Droid app controller for use on a wheelchair
- Design of a wireless Liquid Crystal Display (LCD) system
- Conversion of a 1987 Audi Quattro 4000CS gasoline car to an electric vehicle
- Design of an electronic board to monitor the power of a solar cell and send it to a base station over bluetooth
- Design of a temperature control system for an industrial kiln used to manufacture igniters

GEOLOGY

www.newpaltz.edu/geology

Major Tracks

Geology - General Geology

Geology - Environmental Geoscience

Environmental Geochemical Science

(Interdisciplinary)

Secondary Education - Earth Science

Elementary Education – Earth Science

- Excellent employment potential in industry, teaching, research, government
- Salaries and demand for geologists continue to climb (geology.com, U.S. Bureau of Labor Statistics)
- Geology core curriculum excels at national standards
- Many opportunities for undergraduate research
- Excellent preparation for graduate school
- Modern facilities for undergraduate students to use in courses and research

Recent Undergraduate Research Projects

- Climate effects on tree ring widths in the Champlain Valley
- Post-glacial history and modern atmospheric lead deposition from the sedimentary record in Louisa Pond, Esopus, N.Y.
- Experimental reconstruction of an early arthropod trackway from the Middle Devonian Catskill Delta

- The significance of fold interference patterns and fabric elements for the deformation history of the Taconic Allochthon
- A record of post-glacial relative lake level fluctuation in the Seneca Lake basin
- Kinematic analysis of the Rosendale, N.Y. thrust fault, Appalachian fold-thrust belt (2012 Sigma Gamma Epsilon National Best Student Poster Award)
- A test of the analytical Wellman and mean polygon moment ellipse methods of strain analysis (2013 National Sigma Gamma Epsilon Best Student Poster Award)
- Cephalopod diversity in the lower Devonian Schoharie formation: a unique opportunity for reassessment of diversity from glacial erratics
- An investigation of tree-ring response to extreme flood events along the Schoharie Creek, central New York
- Evidence from joint sets and shear zones in the Catskill Mountains for two orogenic events (2014 National Sigma Gamma Epsilon Best Student Poster Award)
- Assessing the impact of groundwater and heterogeneous glacial deposits on stream bank erosion in the Catskill Mountains New York City watershed
- Geochemical and microstructural evidence for the mantle origin of Olivine-rich troctolites, Dinaride mountains, Bosnia
- Design of a 3D Chocolate Printer

What do our graduates do?

Graduate Schools:

University of Cincinnati, University of Vermont, Boston University, SUNY Stony Brook, SUNY Binghamton, University of Utah, Pace University, Western Kentucky University, University of Georgia, University of Brussels, Texas A&M University, University of Illinois Urbana-Champaign, University of Illinois Carbondale, University of Connecticut Storrs, University of Massachusetts Amherst, University of Arkansas, University of Idaho, Idaho State University, University of Arizona, Northern Arizona University, City College of New York, Vermont Law School, American Museum of Natural History Graduate School,

Kent State, University of Maine Orono, University of New Hampshire, University of California Santa Barbara

Environmental Consulting and Industry:

Griggs-Lang Consulting Geologists, Tectonic Engineering, Dames and Moore Environmental Consulting, YEC Environmental Engineering, Chazen Environmental, EEC Consulting, Washington Group International, Envirocare of Utah, Geotechnical Systems, EOG Resources, Natural Currents Energy Services, C2G Environmental Consultants, Halcyon Asset Management, Atlantic Testing Laboratories, Gayron de Bruin Surveying & Engineering, EWMA Environmental Consultants, Freeport-McMoRan, Exxon-Mobil

Government and Agencies and NPOs:

United States Geological Survey, United States Environmental Protection Agency, New York City Department of Environmental Protection, New York State Department of Transportation, New York State Department of Environmental Conservation, New York State Museum, New York State Department of Health, United States Military Academy West Point, Minnesota Geological Survey, Student Conservation Association

Academia and Teaching:

Vassar College, Union College, Florida Gulf Coast University, CUNY Baruch, Ulster County Community College, Kingston School District, Saugerties School District, Monroe-Woodbury School District, Newburgh School District, Hyde Park Central School District, Poughkeepsie City School District, Brewster Central School District, Valley Central School District, Highland Central School District, KIPP Gaston College Preparatory, ACLD Learning and Developmental Disabilities, Mad Science Education

MATHEMATICS

www.newpaltz.edu/math

Major Tracks

Mathematics major

Adolescence Education Mathematics

concentration (for high school teachers)

Elementary Education Mathematics

concentration

Actuarial Sciences concentration

- Mathematics major accommodates both applied and theoretical interests
- Good preparation for law, medicine or business
- Small classes
- Many opportunities to work closely with faculty
- Preparation for work as insurance actuaries
- Good employment prospects for high school math teachers

Faculty research areas

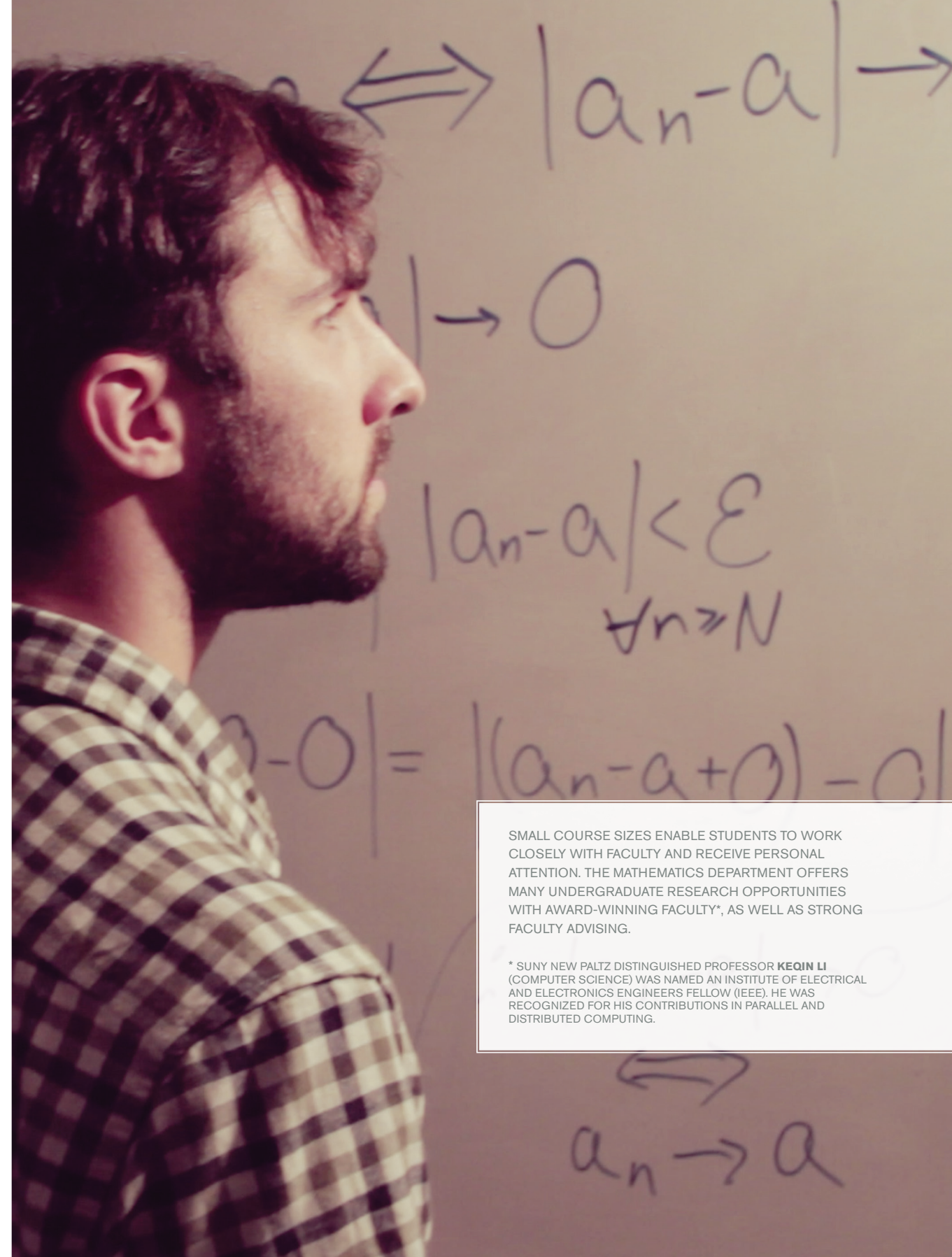
- Mathematical physics
- Partial differential equations
- Asymptotic analysis
- Special functions
- Algebraic combinatorics
- Linear algebra
- Universal algebra
- Dynamical systems
- Lie groups

Recent undergraduate research projects

- Discrete equi-affine invariant variational problems in the plane
- Classifications of Darboux transformations for super KdV
- Complex dynamics for symbolic sequences of quadratic maps
- Analysis of a spark gap Tesla coil
- Exploring squares in different basis
- Using Bessel functions to understand the physics of the rainbow
- A short study of Mobius forms
- Invariance of Maxwell's equations under Lorentz transformations

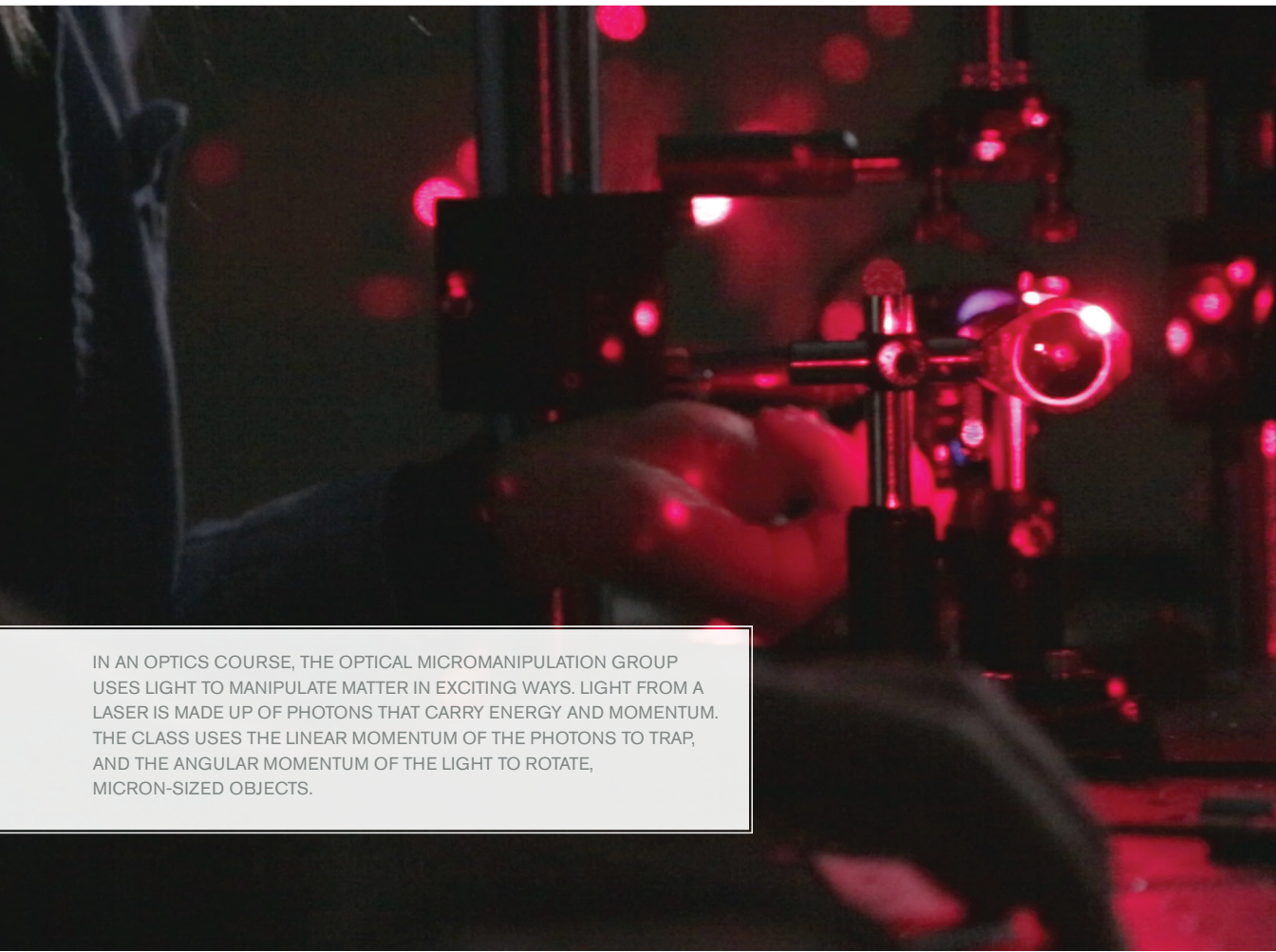
What do our graduates do?

- Mathematics PhD programs at Wesleyan, CUNY, SUNY Stony Brook, Arizona State, University of Massachusetts, Amherst



SMALL COURSE SIZES ENABLE STUDENTS TO WORK CLOSELY WITH FACULTY AND RECEIVE PERSONAL ATTENTION. THE MATHEMATICS DEPARTMENT OFFERS MANY UNDERGRADUATE RESEARCH OPPORTUNITIES WITH AWARD-WINNING FACULTY*, AS WELL AS STRONG FACULTY ADVISING.

* SUNY NEW PALTZ DISTINGUISHED PROFESSOR **KEQIN LI** (COMPUTER SCIENCE) WAS NAMED AN INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS FELLOW (IEEE). HE WAS RECOGNIZED FOR HIS CONTRIBUTIONS IN PARALLEL AND DISTRIBUTED COMPUTING.



IN AN OPTICS COURSE, THE OPTICAL MICROMANIPULATION GROUP USES LIGHT TO MANIPULATE MATTER IN EXCITING WAYS. LIGHT FROM A LASER IS MADE UP OF PHOTONS THAT CARRY ENERGY AND MOMENTUM. THE CLASS USES THE LINEAR MOMENTUM OF THE PHOTONS TO TRAP, AND THE ANGULAR MOMENTUM OF THE LIGHT TO ROTATE, MICRON-SIZED OBJECTS.

- Faculty at Hofstra, Duquesne University, and other colleges
- Actuarial Analyst for a subsidiary of Safeco Insurance
- Teaching mathematics at many high schools in the region
- Biostatistician, Mount Sinai Preventive Medicine Department
- Financial Analyst, Wall Street
- President, Microsoft for South America

PHYSICS & ASTRONOMY

www.newpaltz.edu/physics

Major Tracks

Physics

Adolescent Education – Physics

Astronomy

- Small class size and individualized attention
- Excellent employment potential in industry, teaching, research, government
- Capstone experience – choose a senior project, senior paper or internship experience
- Excellent preparation for graduate programs
- Access to 14-inch Celestron Schmidt reflecting telescope at the Smolen Observatory and state-of-the-art digital planetarium projector at the John R. Kirk Planetarium
- Access to research-quality equipment in the Optical Micromanipulation Laboratory

Recent Undergraduate Research Projects

- Endogenous biogenic electric currents in early planarian regeneration
- Effectiveness of computational methods in modeling ruthenium (II) iso-thiocyanate linkage isomers
- The utilization of electro-active polymers for robotics
- A deviation from NFW dark matter halo projections in elliptical galaxies

What do our graduates do?

- Ph.D. programs in Physics at Stony Brook University, Syracuse University and University of Connecticut
- M.Sc. in Medical Physics from Columbia University

- MAT programs in physics and mathematics at Brooklyn College and Bard College
- High-school teachers in a number of districts in the region
- Employment with IBM, Indian Point Nuclear Facility, and the Army Corp of Engineers



The Muriel and Jack Smolen Observatory (above) on the New Paltz campus has attracted interest from students as well as members of the local community. More than 150 people of all ages attended the Observatory's first recognition of "International Observe the Moon Night."

The Smolen Observatory houses a 14-inch Celestron Schmidt Reflecting telescope on a Paramount mount. The observatory also has two smaller 8-inch Dobsonian telescopes and a 10-inch telescope.

www.newpaltz.edu/observatory

The John R. Kirk Planetarium

The Planetarium is an indoor domed theater that seats 44. The projection system was upgraded in 2013 with the installation of a fish-eye lens projector that can display digital simulations of the sky and mimic celestial motions. It allows the audience to see and zoom in on images of stars, constellations, planets, galaxies and other deep sky objects. It also allows the audience to view the sky as seen from different planets and moons, and has many other features.

www.newpaltz.edu/planetarium/about.html



A RESEARCH EXPERIENCE
STANDS OUT ON A RÉSUMÉ
OR GRADUATE PROGRAM
APPLICATION.

THE COYKENDALL SCIENCE BUILDING GREENHOUSE CONTAINS A DIVERSE PLANT COLLECTION AND SUPPORTS RESEARCH, TEACHING, AND CAMPUS SUSTAINABILITY PROJECTS.

RESEARCH OPPORTUNITIES

Research experience improves students' problem-solving and communication skills, both of which are necessary in all types of jobs. Additionally, it has been shown that research experience results in greater independence and self-confidence.

Undergraduate research is education for a lifetime. Learning by doing allows students to apply classroom knowledge to unexplored problems. The research experience not only provides the excitement of generating new knowledge, but also prepares students for life-long independent learning.

A core value of the School of Science and Engineering at New Paltz is to work with students on research and projects outside the classroom. Our professors want to partner with you.

Students who are interested in a research project at New Paltz have a number of opportunities. A New Paltz student's first opportunity is often through the Academic Year Undergraduate Research Experience (AYURE) program, which provides funds for research supplies. AYURE can be followed with a more intense experience: the Summer Undergraduate Research Experience (SURE). SURE students are paid to work full-time on a project during the summer months. **Students who participate in the SURE program are routinely accepted into prestigious graduate schools.**

AYURE and SURE students present the results of their research at a variety of venues. Each spring, the Student Research Symposium features the work of student research projects. For students who are ready to attend professional conferences, the Student Travel Award covers the cost of travel to a conference.

From the initial idea to the public presentation of research results, SUNY New Paltz provides research students with opportunities and support. Explore the possibilities.

“WHEN I ARRIVED AT NEW PALTZ, I KNEW THAT I WANTED TO FIND A LIFE PATH THAT WOULD **ENABLE ME TO MAKE A POSITIVE IMPACT IN THE WORLD.** PERFORMING UNDERGRADUATE RESEARCH, UNDER THE GUIDANCE OF THE NEW PALTZ CHEMISTRY FACULTY, PUT ME ON THAT PATH AND HELPED ME TO FIND THE DIRECTION I NEEDED TO FIND THE CAREER THAT IS RIGHT FOR ME.”

— Matthew McLaughlin, Chemistry '06, University of Rochester, Ph.D., Chemistry, 2012 National Academies Research Fellow, University of North Carolina

DEGREE... TO PROFESSION

A BRIEF LISTING OF PROFESSIONS AVAILABLE TO A STUDENT WITH A SCIENCE/ENGINEERING/ ENVIRONMENT DEGREE FROM SUNY NEW PALTZ:

Actuary / Aerospace Tester / Agriculture Scientist / Air Traffic Controller / Architect / Astronomer / Astrophysicist / **Atomic Physicist** / Automotive Engineer / Aviation Electronics Designer / Biomedical Equipment Designer / Biophysicist / Biotechnologist / Cardiac Imaging Researcher / Chemical Physicist / Children Science Museum Director / College Professor / Communication Systems Designer / **Computer Game Designer** / Computer Hardware Designer / Computer System Engineer

/ **Conservation Biologist** / Consulting Geologist / Data Communications Manager / Data Security Manager / Database Administrator / Dentist / Drug Sales Representative / Economic Geologist / Economist / Engineer / **Engineering Geologist** / Environmental Geologist / Environmental Health Specialist / Financial Analyst / Fluids Physicist / Forensic Scientist / Geochemist / Geochronologist / Geomorphologist / High School Science Teacher / Hydrogeologist / Industrial Hygienist / Intelligence Analyst / Laboratory Manager / Laboratory Technician / **Marine Biologist** / Marine Geologist / Mathematician / Medical Devices Designer / Medical Physicist / Medical Products Designer / Meteorologist / Molecular Biology Lab Director / Molecular

Physicist / Museum Curator / **Nanotechnology Researcher** / Neuroscientist / Nuclear Physicist / Nutritionist / Occupational Safety Specialist / Oceanographer / Optometrist / Paleontologist / Patent Lawyer / **Pediatrician** / Petroleum Geologist / Pharmaceutical Researcher / Pharmacist / Physical Therapist / Physician / Physiognomist / Planetary Geologist / **Plasma Physicist** / Process Engineer / Quality Control Chemist / Quality Control Manager / Radiological Laboratory Director / Research & Development / **Robot Designer** / Sales / Satellite Data Analyst / Satellite Missions Analyst / Science Media Correspondent / Science Teacher / Science Writer / **Scientific Photographer** / Scientist / Seismologist / Software Designer / Solid Earth Physicist / Statistician / Stratigrapher / Structural Geologist / Systems Analyst / **Systems Programmer** / Technical Consultant / Technical Illustrator / Technical Salesperson / Technical Writer / Television Chief Engineer / Test Engineer / Volcanologist /

Web Site Manager / Zookeeper



AT A GLANCE

Character: Very selective, 4-year, co-ed, residential, regional, state assisted university, liberal arts/ professional studies.

Location: New Paltz, NY, a small, historic village (population of 14,000) in New York State's Hudson Valley region, midway between Albany and New York City.

Faculty: 357 full-time and 301 part-time with 82% of faculty holding a Ph.D. or terminal degree.

Campus: 257 acres and 49 buildings.

Enrollment: 6,642 Undergraduates (6,167 full-time and 549 part-time), and 1,050 graduate students (484 full-time and 566 part-time).

Academic Structure: College of Liberal Arts and Sciences; School of Business; School of Science and Engineering; School of Education; School of Fine and Performing Arts; The Graduate School.

Average Class Size: 75% of our classes have fewer than 30 students; 92% of classes are fewer than 40 students.

Female/Male Ratio: 63% female, 37% male.



**EXPERIENCE
NEW PALTZ VIDEO:**
[www.newpaltz.edu/
admissions](http://www.newpaltz.edu/admissions)



APPLYING:
[www.newpaltz.edu/
admissions](http://www.newpaltz.edu/admissions)

FINANCIAL AID:
[www.newpaltz.edu/
financialaid](http://www.newpaltz.edu/financialaid)

VISITING:
[www.newpaltz.edu/
visitus](http://www.newpaltz.edu/visitus)

INTERACTIVE MAP:
[http://www.newpaltz.edu/
map](http://www.newpaltz.edu/map)



New Paltz

STATE UNIVERSITY OF NEW YORK

41.7436° N / 74.0839° W



The School of Science & Engineering
State University of New York at New Paltz
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