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MODERN VISION
BIOLOGY ALUMNI
CLASH OF
RESEARCH

UNIVERSITY
AT ALBANY

State University of New York

THE WORLD WITHIN REACH



DISCOVERY. INNOVATION. PARTNERSHIP. IMPACT.

UNDERGRADUATE
RESEARCH

PHYSICS
CHEMISTRY

AND SCHOLARSHIP
AR BIOLOGY



Welcome to the exciting world of research.

At the University at Albany, research is a central part of our mission. For students, this means an expansive world of opportunities. In UAlbany's classrooms and in the field, students work with researchers on multi-disciplinary, groundbreaking inquiries.

These opportunities are found across the University in the remarkable range of studies and explorations undertaken by UAlbany scholars.

Our faculty are shedding new light on weather phenomena around the globe. They are studying the genetic mechanisms of cancer and investigating the growing threat of cybercrime. They are probing the structure and nature of terrorist organizations and providing strategic trade control assistance around the world.

Students work alongside our faculty on these projects and many others.

We welcome undergraduates into the research process, so that they can share in the excitement of discovery and innovation, and see its impact on our world. Students have the opportunity to work with faculty, local businesses and government agencies which provide training and guidance.

We invite you to learn more about the role research can play in your education at the University at Albany and how you can get involved.

A photograph of three men standing in front of a large weather map. The man on the left is wearing a dark plaid shirt. The man in the middle is wearing a red and white striped polo shirt and glasses. The man on the right is wearing a yellow and blue plaid shirt with his arms crossed. The weather map behind them shows a large, intense storm system over the Atlantic Ocean, with colors ranging from blue to red and yellow, indicating different levels of cloud cover and precipitation. The text "DISCOVERY. INNOVATION. PARTNERSHIP. IMPACT." is overlaid in white, bold, sans-serif font across the bottom of the image.

DISCOVERY. INNOVATION. PARTNERSHIP. IMPACT.

What is research?

Research at UAlbany is characterized by discovery, innovation, partnership, and impact.

DISCOVERY. Research is a creative activity that leads to the discovery of something new. Through research, you can unravel mysteries and seek answers to questions that have not been answered before.

INNOVATION. Discovery can spur innovation. When you address challenges with creativity and an innovative spirit, your work may lead to new ideas, processes, or technologies.

PARTNERSHIP. Discovery often involves complex tools and varied expertise. Innovative ideas are often born of collaborative thinking. At UAlbany, you can be a part of research teams that include business and community partners.

IMPACT. Research addresses the major issues of our time and helps to shape solutions that make a real difference for our society. At UAlbany, you can be a part of research efforts that have an extensive impact on our world.



RESEARCH

WHY SHOULD I GET INVOLVED WITH RESEARCH?

Research is an exciting way to learn about a field or career path, and to gain valuable preparation for future success. It will expose you to the inner workings of a field of study, to see if you are truly interested in pursuing a career in that area. You can "try on" a discipline before committing to it as a career, to see if it is a good fit for you.

Research helps you develop skills in critical thinking, problem solving, analysis, time management, and teamwork, as well as skills specific to your field of research. All of these skills will benefit you in your coursework and career, and will prove your dedication and interest to future employers and graduate schools.

Research allows you to contribute to the larger intellectual community of explorers, scholars, and entrepreneurs. Working on a research project allows you to have an impact on a field of study, the environment, people's daily lives, and sometimes our broader society. It is an exciting endeavor!



Scholar-athlete Fanning investigated the effects of antibiotics on hearing loss and co-authored an article in the *Journal of Neuroscience*. "Working in a professional setting as a scientist has better prepared me for a career in medicine."

— Kathryn Fanning, Biology and The RNA Institute

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Discover UAlbany Research at albany.edu/research



Sanchez's research seeks to tackle the world's biggest problems, including poverty and environmental disasters. "I want to be part of moving our species into the third millennium, and part of the process of fixing the problems of past centuries."

— Luis Gabriel Sanchez, Latin American Studies and Globalization Studies

RESEARCH

WHAT KINDS OF RESEARCH PROJECTS ARE THERE?

Research projects, and their methods and approaches, vary broadly.

Faculty in the sciences, arts, humanities, social sciences and business have projects that are appropriate for undergraduate researchers. You can become a part of a research team in most majors and departments. Many faculty at UAlbany are conducting research that is relevant to multiple disciplines.

Research opportunities abound.

You may be involved in:

- Working in a laboratory in psychology, biology, or many other fields.
- Investigating a historic event, period, or trend.
- Creating computer code to support the needs of a scholarly project.
- Gathering data on people's lives, experiences, or opinions.
- Creating new works in the performing or visual arts.
- Building mathematical models of terrorism and cybercrime.
- Investigating investment strategies and their outcomes.

Students work alongside faculty as

apprentices on specific research projects. Your research mentor will help you understand the research projects currently underway, craft a research question and methods, or help you advance a research question you have developed on your own. Your mentor will also make sure you receive the special training and approval required for safe and ethical research, and will help you learn about fellowships and other funding opportunities.

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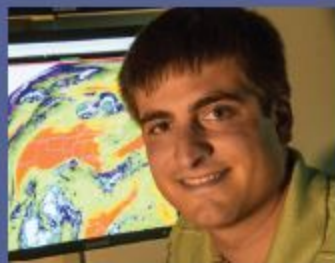
RESEARCH

WHAT IS IT LIKE TO WORK ON A RESEARCH PROJECT?

Research is integrated throughout our curriculum. Students are exposed to ideas from research starting in their introductory courses and are guided into interpreting and conducting more sophisticated research as they progress throughout their academic program. Some departments offer courses that specifically teach research methods appropriate for that field of study. In some majors, students complete independent research as a capstone project.

Research engages you with the world outside the classroom, not only for your own advancement but also for the betterment and benefit of others. Through research, you can expand on what you are learning in the classroom by applying that learning to important and current issues in your field and in society at large. Research is aimed at expanding the frontiers of human understanding, with the ultimate goal of improving the world.

Research experiences include seminars or other research courses that you can take for academic credit. For example, you can sign up for an Independent Study to conduct research on a selected topic. Some laboratories or other projects hire work-study or other students to assist with research. You might do a thesis through The Honors College that involves you in a research project. In some disciplines, there are summer research programs either on campus or at other universities across the country. Some students volunteer for research projects.



Schiraldi's research investigated interactions between weather in the tropics and over the U.S. It was "the most enriching experience of my undergraduate career. This research cemented my passion for applied research and has opened doors for my future."

— Nicholas Schiraldi, Atmospheric and Environmental Sciences



De Palma is focusing on trends in the use of emerging technologies by governments to better serve citizens and businesses. "This is an exciting opportunity for me to develop my skills as a researcher under the guidance of one of the top scholars in the field."

— Katie De Palma, Political Science and Music

RESEARCH

WHERE WILL RESEARCH LEAD ME?

Research will lead you to places you haven't thought of before.

By working on a research team, you will gain real-world experience posing, investigating, and solving important and meaningful problems. Whether you pursue a career in research or not, your research will open doors to many new career options that require problem-solving, analytical thinking, and teamwork. The contacts and relationships you build with faculty, members of the business community, and other students all become valuable connections.

Research will give you a "flavor" of what it means to be a scholar, doing authentic work alongside researchers in the field. This experience will help you decide which direction you want to take in your education and career.

In exceptional cases, your research may lead to publications in academic journals or presentations at local or national conferences. Presentations and publications should be included on your resume or any graduate school applications—they are important and impressive credentials, as is research in general.

Some research projects can lead directly to entrepreneurial applications with local start-up or other businesses and can lead to genuine advances in society, economics, science, or business.

Research, above all, is the pursuit of your intellectual passions. Who knows where that could lead?

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HOW DO I GET STARTED?

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Visit the Advising Plus website at
albany.edu/advisingplus

Start by visiting the Advising Plus website (albany.edu/advisingplus), where you can see the variety of opportunities available in different academic departments. You can also contact the advisors in Advising Plus at advisingplus@albany.edu. In addition:

- Talk with your advisor about research opportunities.
- If you have taken a course that really captured your interest, approach the professor and ask if she or he knows of any ways you can get involved.
- **Network!** Visit professors, talk with your friends, and ask lots of questions.
- Check out The Honors College at albany.edu/honorscollege.
- Visit the undergraduate director in your department.
- Read department webpages.
- Many departments have bulletin boards describing major research projects. Drop by various departments and look for those displays, and then contact the researchers for projects that interest you.
- Don't restrict yourself to the department where you are majoring—you may find interesting opportunities anywhere on campus.
- To learn more about research at UAlbany, visit albany.edu/research.