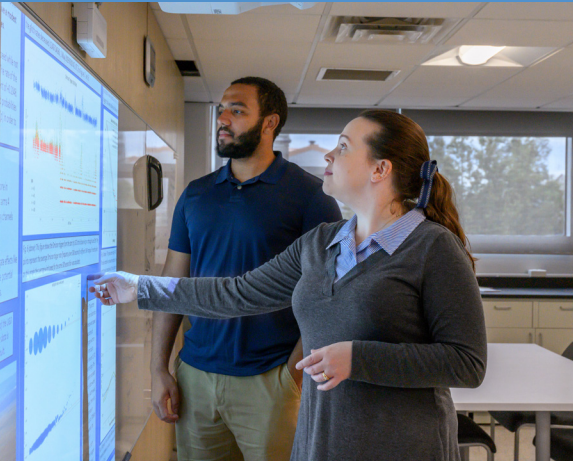




VILLANOVA  
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# RESEARCH EXPERIENCES FOR UNDERGRADUATES (REU) AT VILLANOVA UNIVERSITY

## PHYSICS AND ASTROPHYSICS

Villanova faculty are teacher-scholars—conducting nationally distinguished research and inviting undergraduate students to be partners in their lab. Supported by a REU grant from the National Science Foundation, professors in the Departments of Physics and Astrophysics and Planetary Science are looking for promising undergraduate students from other institutions to participate in hands-on research with them in summer 2021.

**A**pplicants don't need to have the best grades or go to the best schools—you just need passion!

## ASTROPHYSICS

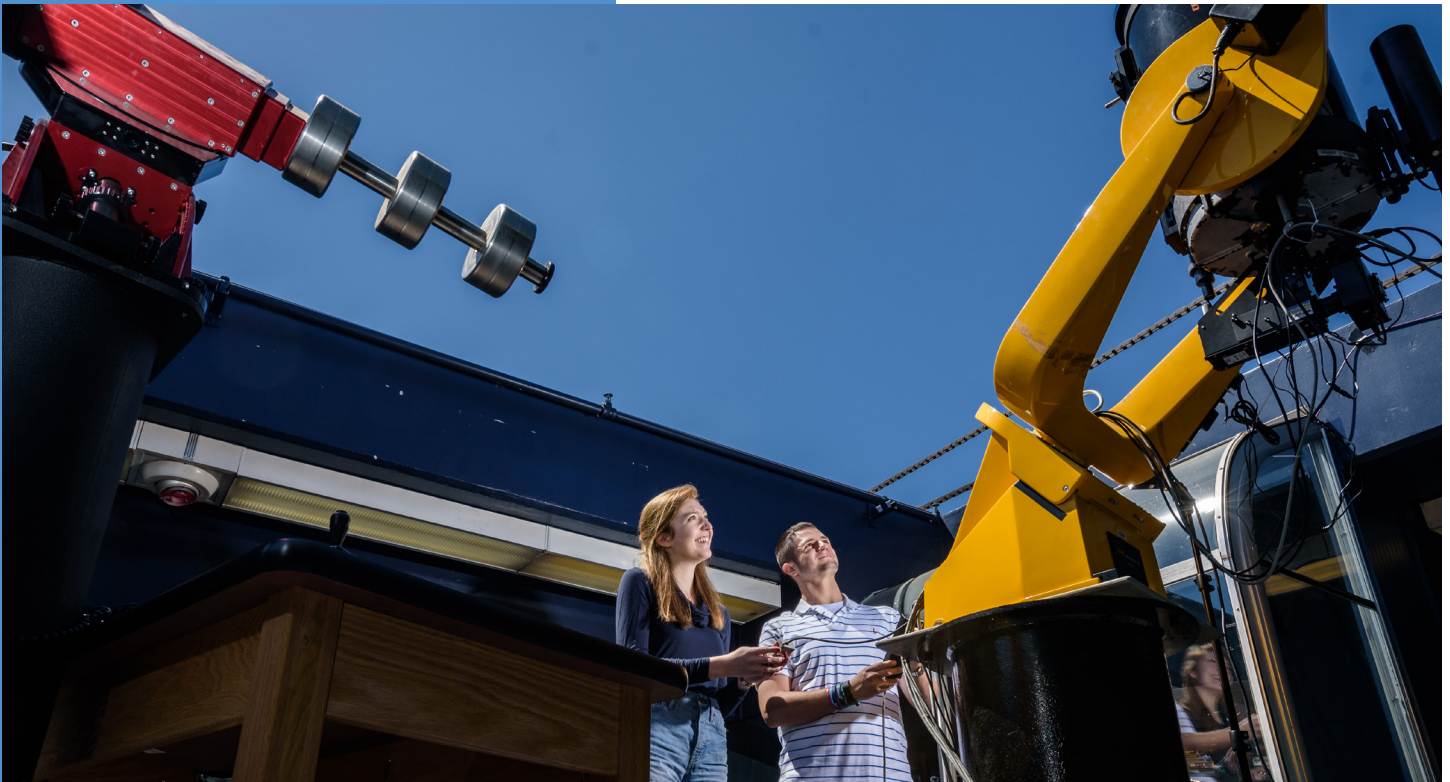
- Gravitational wave data analysis with LIGO
- Make your own astrophysical observations to go hunt for exoplanets
- Develop new polarizers to study the cosmic microwave background
- Study black holes through X-ray spectroscopy with NICER
- Analyze photometric and spectroscopic observations of eclipsing binaries to extract fundamental stellar parameters
- Investigate potential habitability of planets hosted by solar-like stars

## CONDENSED MATTER PHYSICS

- Study engineered human ferritins with Mössbauer spectroscopy
- Synthesize and characterization of magnetically frustrated materials
- Create and study graphene samples to customize its electrical properties.

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The 10 week program runs from May 24–July 30, 2020. Students will receive a \$6000 stipend, round-trip travel from their home to Villanova and free room and board on campus.



Once you do research with us at Villanova, you are a member of our community. We are wholly invested in your future success and will continue to mentor you long after the summer ends.

## BENEFITS OF THE PROGRAM

- Professional training in conducting responsible research, delivering elevator pitches for your work, and developing effective research posters
- A trip to Goddard Space Flight Center and the Smithsonian Air and Space Museum in Washington, D.C.
- An opportunity to present your research at a local symposium
- Up to \$1500 to present your research at a professional conference of your choice during the next school year—which can cover registration, airfare, hotel, meals, etc.

For more information about the program and how to apply, visit [villanova.edu/REU-physics-astro](https://villanova.edu/REU-physics-astro)



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