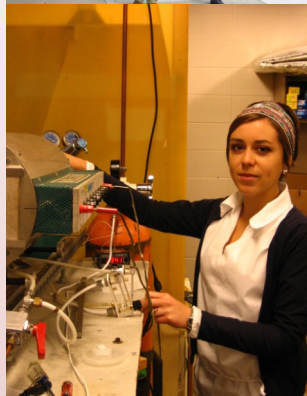




# WRIGHT STATE UNIVERSITY

In Top 5 of Small Research Universities  
2005 Faculty Scholarly Productivity Index



## Department of Physics

### *World of Opportunities*

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Wright State University  
3640 Colonel Glenn Hwy  
Dayton, OH 45435

Phone: 937-775-2954  
Fax: 937-775-2222  
E-mail: [physics@wright.edu](mailto:physics@wright.edu)

## Department of Physics

# Graduate Program

Wright State University offers the only graduate program in Physics in Dayton. Programs include M.S. (Physics) and a unique Master of Science in Teaching degree, M.S.T. (Physics). Students can also join an Interdisciplinary PhD program in Biomedical Sciences, Engineering or Environmental Sciences and be advised by a physics faculty.

There are 16 full-time faculty and four research faculty. This includes: an American Geophysical Union fellow, an NSF CAREER recipient, two APS fellows, and one IEEE fellow. All full-time faculty have PhD's and over 30% of faculty are female. The department has one of the world's few research clusters in terahertz science and technology.

There are both full-time and part-time students, most of whom are on assistantships and scholarships. Opportunities exist for research at the neighboring Air Force Research Lab at Wright-Patterson AFB, opening the door to dozens of world-class physicists and state-of-the-art research equipment.

## Research Areas

The main research areas within the Department are

- Materials and Solid State Physics

Electron irradiation, defects in semiconductors, electrical and optical characterization, fabrication of metallic and semiconducting nanoparticles, computational materials, and solid-state electronics.

- Geophysics

Mathematical and nonlinear dynamical studies of geophysical processes, hydrology. Computational models of planetary atmospheres.

- Spectroscopy

NMR, optical, and terahertz spectroscopy.

- Biophysics

Computational biology, medical imaging.

- Physics Education

Calculus-based introductory physics sequence, K-12 teacher preparation.

Research equipment includes, e.g., an atomic force microscope, a clean room, electron accelerators, ultrafast lasers, and a 64GB RAM workstation.

## Life After WSU

About half of our graduates join a PhD program at schools such as MIT, Ohio State and Stanford. Examples of what our alumni do: consultant for Union Carbide, research scien-

tists at Los Alamos National Lab, NASA Glenn and Wright-Patterson AFB, high-school teachers, systems analyst at The Boeing Company, and university professors.

## Centers of Excellence

The department is associated with the following centers:

- Institute for the Development and Commercialization of Advanced Sensor Technology (IDCAST)
- Semiconductor Research Center (SRC)
- West Central Center of Excellence (WeEXCEL)

## Admission

Address admission inquiries to: School of Graduate Studies, E344 Student Union.

Documentation required: application form, official transcripts from all colleges or universities previously attended except WSU, and at least two letters of reference if applying for assistantships (please so state on your application form). Additionally, for international applicants: official TOEFL or IELTS test scores. Graduate application fee required: \$25.

Admission requirements: For admission to the graduate programs, a Bachelor's degree in physics or closely related field is required with a minimum undergraduate GPA of 2.7/4.0, or a GPA of 2.5 but with a 3.0 or better in the major field or in the latter half of undergraduate work. The GRE is not required but recommended. International applicants are required to demonstrate proficiency in English via either the TOEFL or IELTS exam. Minimum acceptable score for admission is 213 (TOEFL) or band 6 (IELTS). Those applying for teaching assistantships are also required to take the TSE or OPT exam.

Applicants are encouraged to visit and the department will contribute towards the travel costs of admitted students.

## Financial Support

Opportunities exist for internships at Wright-Patterson AFB and with area companies. Teaching and research assistantships, and tuition scholarships are available for qualified graduate students.

## Sample Curriculum

	Fall		Winter		Spring		Summer	
<b>Year 1</b>	Theoretical I	4	Theoretical II	3	Theoretical III	3	Ind. Study	4
	Mathematical		Statistical Mechan-		Ind. Study	4	Research	4
	Physics	3	ics	4	Seminar	1		
	Seminar	1	Seminar	1				
<b>Year 2</b>	Quantum I	3	Quantum II	3	Quantum III	3		
	Seminar	1	Seminar	1	Seminar	1		
	Research	4	Research	4	Research	4		

*Sample M.S. (Physics) curriculum*

## Useful Web Sites

- Wright State University: <http://wright.edu/>
- School of Graduate Studies: <http://wright.edu/sogs>
- Department of Physics: <http://www.wright.edu/academics/physics>