Department of Physics and Astronomy, 666 W. Hancock, Detroit, MI 48201

Why should I study Physics?

Curiosity. You like to know how things really work.

Analytical thinking. Physics provides one of the best training grounds to learn how to think analytically, a skill very much needed in many disciplines, including Engineering, Medicine and Law.

Preparation for other disciplines.

- ***Medical School***: Stand out from the crowd and bolster your Medical School application with a Physics degree! *Note:* Physics is on the MCAT.
- ***Medical Physics:*** Get the right preparation to become a Medical Physics major at Wayne State.

What does a Physicist do?

Fundamental and Applied Research

- What is the universe made of, where does it come from and what is its future?
- Physics of "stuff" like nanoscience, molecules, crystals, semiconductors
- Development of new instruments to probe the universe and matter

Medical Physics: Medical imaging and therapy

Engineering: New electronic devices, optics, nanotechnology, new materials, energy sources

Science Education, ***Patent Law, Policy: Energy, Environment, etc.***

Our Academic Programs

- Bachelor of Science in Physics with options in *General* and *Applied* Physics
- Bachelor of Arts in Physics
- Honors option available for the B.A. and B.S. programs
- Minor in Physics

Other Programs We Offer

- ***AGRADE Program (4+1):*** Add one more year of study and earn a Master's degree in Physics, or in Materials Science.
- ***Senior Rule:*** Take graduate courses as an undergraduate toward a graduate degree.
- ***Advanced Placement***
- ***Courses for Non-Science majors***

(REU) Research Experience for Undergraduates

Dedicated undergraduates may participate in cutting edge research projects with a faculty mentor. These unique research opportunities include paid summer and year long projects.

Graduate School

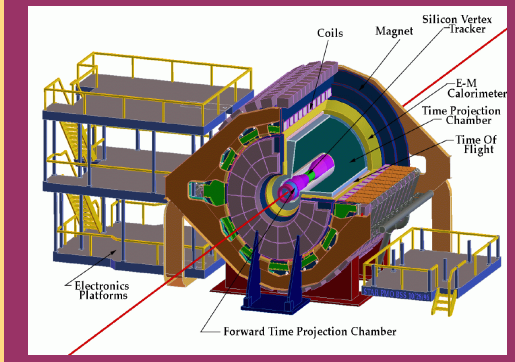
A **Bachelor of Science in General Physics** is the *best* preparation for **Graduate School** in Physics and in related disciplines.

Low Faculty-Student Ratio ensures our students receive individual guidance.

Faculty and Research

World-class research. WSU Physics is ranked in the top 50 nationwide for research expenditure. Our Faculty conduct ***experimental*** and ***theoretical*** research in:

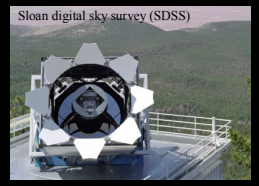
- **Applied Physics & Optics**
- **Astrophysics**
- **Atomic Physics**
- **Biomedical Physics**
- **Condensed Matter and Materials Science**
- **High Energy Particle Physics and Nuclear Physics**



Above is a **detector** used by Wayne State Physicists to study the *quark-gluon plasma*, a state of matter that existed only for a short time right after the Big Bang. This research aims at finding answers of how our universe evolved.

Physics is the Science that describes the workings of the physical world. It is the most fundamental of the sciences and supports many other disciplines, such as medicine or engineering.

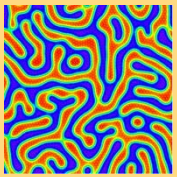
To learn *Physics* is to learn how to think analytically – to analyze situations, and to understand, predict, design and control physical phenomena.



In the Department of Physics and Astronomy at Wayne State University we take pride in the education and research experience we offer our students.

HOW CAN I FIND OUT MORE?

- Contact our Undergraduate Advisor, ***Professor Sean Gavin: sean@physics.wayne.edu***
- Go to our website ***www.physics.wayne.edu***
- ***Contact any of our faculty*** (see our website for contact information)
- ***Arrange a visit*** and come to see us!
- ***Take a Physics class*** and talk to your instructor.



Simulation of phase separation and defect structure in strained alloy film.

Aerial view of CERN and surrounding area.

"Physics intrigued me as an undergraduate student because it did not offer me 'what to remember', but instead offered to teach me 'how to think.' Answers didn't contain itemized trivia, but rather the student's own intellectual striving. This is the point of origin for anyone interested in finding an answer that is not already known." - ***Prof. Jay Burmeister, Director Medical Physics Graduate Program, Wayne State University School of Medicine.***

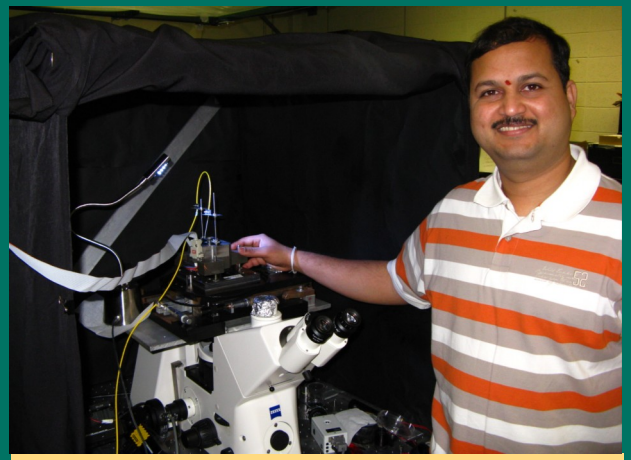
"During my undergraduate years as a Physics student, I was introduced to a most extraordinary way of perceiving the world through science. It wasn't just that things exist, but I learned how and why they exist. These experiences created an inexhaustible curiosity and a way of looking at the world that drives everything I do in my adult career." - ***Prof. Gregory Auner, Electrical Engineering, Director of Smart Sensors and Integrated Microsystems, Wayne State University***

College of Liberal Arts and Sciences

WAYNE STATE UNIVERSITY

Department of Physics and Astronomy

BACHELOR OF SCIENCE IN PHYSICS



www.physics.wayne.edu