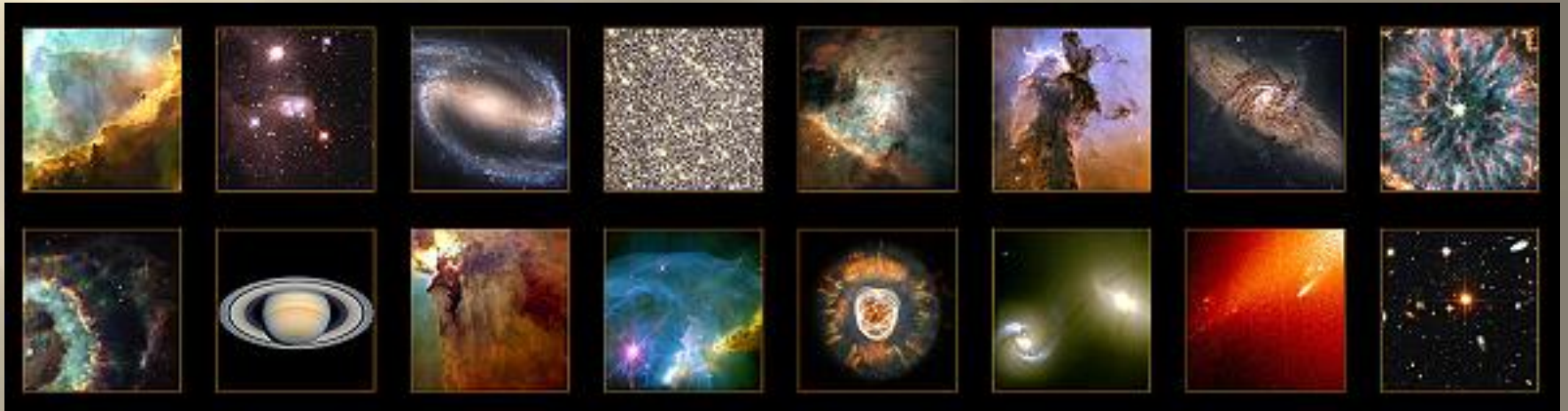


What is Astronomy?

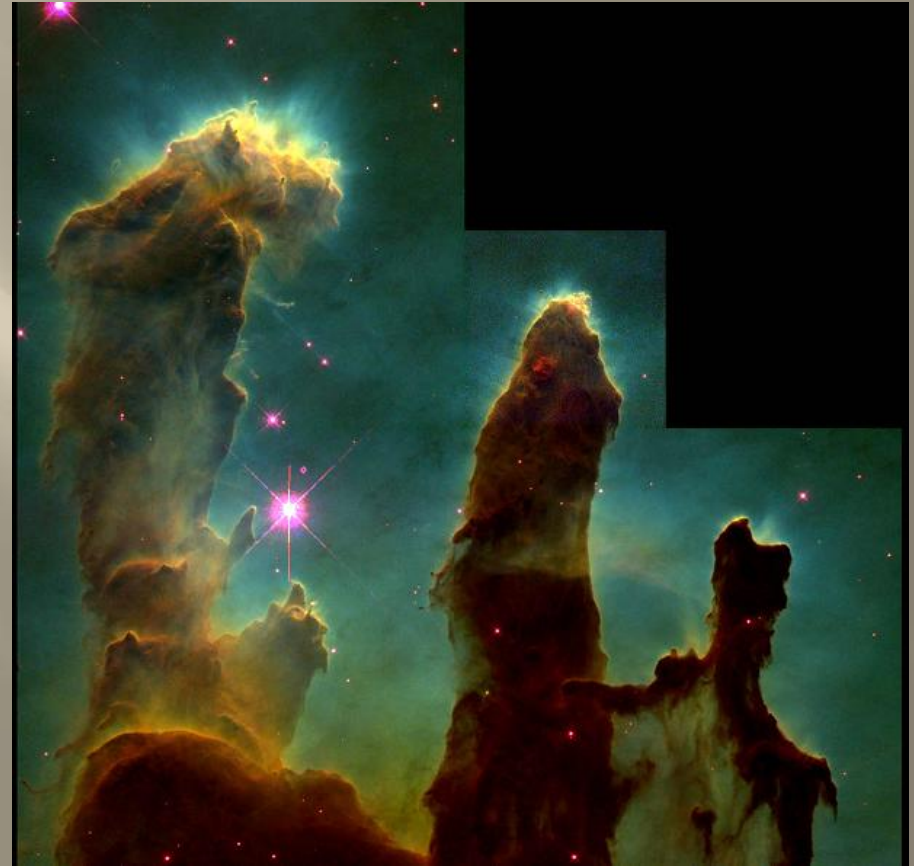
Astronomy is the study of the universe, namely the objects we observe, like the Moon, Sun, and planets in our Solar System; stars; our Milky Way Galaxy, and other galaxies; and, a host of other celestial objects and phenomena, like nebulae, and black holes!



Hubble Space Telescope Images
<http://hubblesite.org/gallery/>

...What is Astronomy?

- Astronomy is a multidisciplinary science. It is intertwined with the study of physics, chemistry, mathematics, computer science, geology and biology.
- Astronomy deals with the composition and distribution of celestial objects and phenomena.



Gas pillars in the star forming region of the Eagle Nebula
<http://hubblesite.org/gallery/>

What does an Astronomer do?

- Astronomers make observations, perform experiments, and collect data.
- Astronomers use physics and other sciences to interpret the data they collect.
- Astronomers are interested in the evolution of our universe and how it was created. They want to understand the objects in our Solar System and elsewhere in the cosmos, and how these objects and phenomena will change over time.

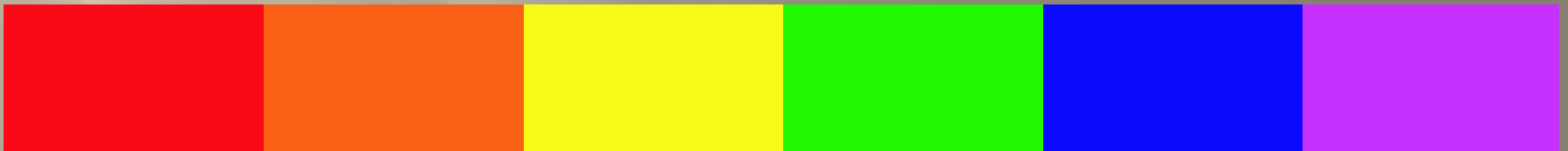
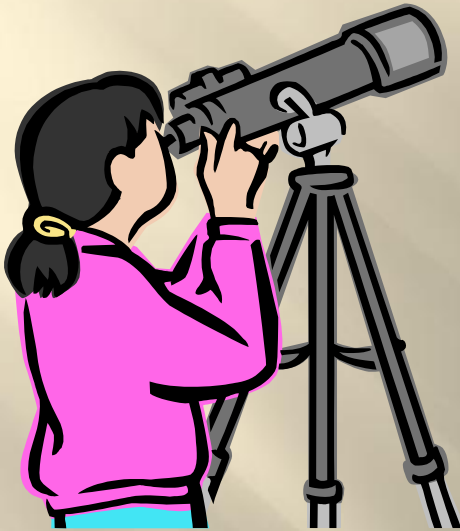


Infant stars in the Small Magellanic Cloud; <http://hubblesite.org/gallery/>

...What does an Astronomer do?

•Astronomers use many tools to observe and interpret celestial objects and phenomena. These tools include:

- Telescopes, to collect light and other forms of electromagnetic radiation, and resolve images.
- Electronic detectors like CCDs (charge-coupled devices) to catch photons and produce images.
- Spectroscopic methods to observe and analyze the emission and absorption spectra from light and other forms of electromagnetic radiation.
- Photometry to measure the changes in the brightness of stars over time.
- Computers and specialized software to perform calculations and data analysis.



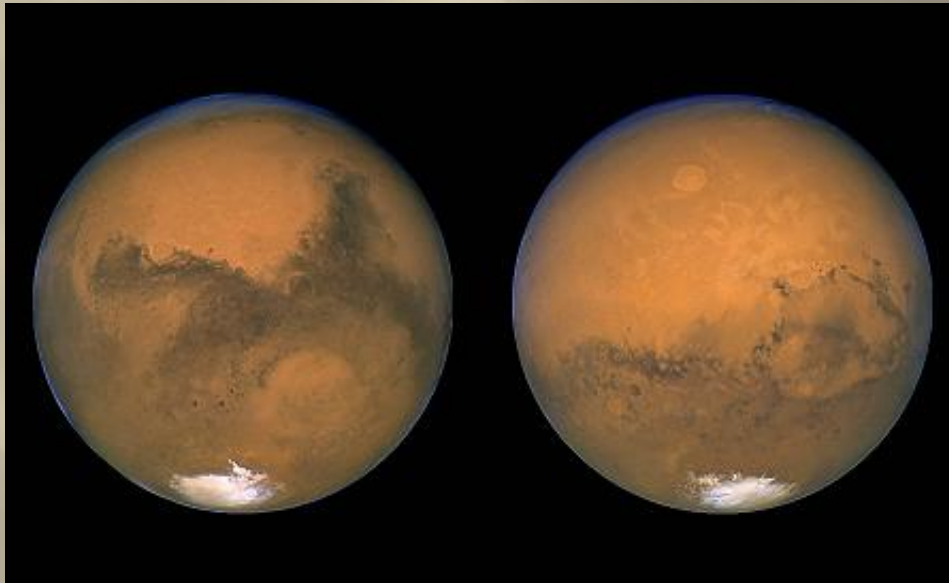
Why should I study Astronomy?

- We are all natural scientists - we are observers and collectors.
- We contemplate the mysteries and vastness of space.
- We wonder why things are the way they are and what makes them work.



...Why should I study astronomy?

If you are naturally curious and interested in areas such as planetary geology, the Solar System, space exploration, telescopes, stars, galaxies and cosmology, you should study astronomy!



The two faces of Mars
<http://hubblesite.org/gallery/>

B.A. in Astronomy, a *new* degree program...

The Department of Physics & Astronomy is currently offering classes toward this program. The program officially begins Fall Term, 2010.



A multitude of distant galaxies
<http://hubblesite.org/gallery/>

SUGGESTED COURSE SEQUENCE

FRESHMAN YEAR

Fall

CHM1220/1230: General Chemistry 1 + Lab
MAT2010: Calculus I
English (BC)
University Group Requirement

Winter

PHY2170/2171: General Physics I + Lab
AST2010/2011: Descriptive Astronomy + Lab
MAT2020: Calculus II
English (IC)
University Group Requirement

SOPHOMORE YEAR

Fall

PHY2180/2181: General Physics II and Lab
MAT2030: Calculus III
AST4100: Astronomical Technique
AST4200: Astronomical Laboratory
University Group Requirement

Winter

PHY3300/3310: Introductory Modern Physics and Lab
MAT2150: Differential Equations & Matrix Algebra
College Foreign Language I
College Group Requirement
University Group Requirement

JUNIOR YEAR

Fall

CHM2220/2230 or 2280/2290
Elective I
Elective II
College Foreign Language II
University Group Requirement

Winter

AST4300 Planetary Astronomy and Space Science
Elective III
College Foreign Language III
College Group Requirement
University Group Requirement

SENIOR YEAR

Fall

AST5010 Astrophysics and Stellar Astronomy
Elective IV
Elective V
College Group Requirement
University Group Requirement
Seminar

Winter

Elective VI
AST5100 Galaxies and the Universe
College Group Requirement
University Group Requirement

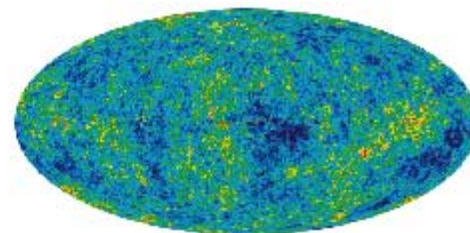
For more information, please contact Professor David Cinabro, Undergraduate Student Advisor,
cinabro@physics.wayne.edu

Department of Physics & Astronomy
135 Physics Bldg., 666 W. Hancock,
Detroit, MI 48201

<http://www.elas.wayne.edu/physics/>

WAYNE STATE UNIVERSITY

New Bachelor of Arts Degree in Astronomy



AIM HIGHER
wayne.edu (877) WSU-INFO

B.A. IN ASTRONOMY

This new 120 credit program provides an introduction and foundation in modern astronomy.

The program covers topics in

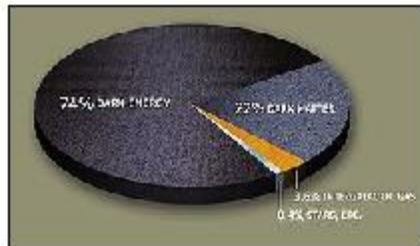
- Astronomical techniques
- Cosmology
- Planetary astronomy
- Space science
- Galaxies, the Universe

The New Program

This program combines classes in physics and astronomy, with optional courses in other disciplines, to prepare students for the job market of tomorrow. It is intended for liberal arts majors interested in science but wanting a lighter load of mathematically intensive courses than a B.A./B.S. physics major.

This program is *unique*, and is not offered at any other university in Michigan.

The program provides entry to a full spectrum of job and further education options for liberal arts majors in law, business, education, graduate programs in social and physical sciences. A B.A. degree in astronomy can lead to exciting and rewarding careers at NASA, in education, scientific journalism, as well as advanced studies in astronomy and physics.



ASTRONOMY COURSES

The following courses, some of which are new courses in the Department of Physics and Astronomy, provide the backbone of the new B.A. in Astronomy.

- AST4100 Astronomical techniques (3 Cr)
- AST4200 Astronomical laboratory (2 Cr)
- AST4300 Planetary Astronomy and Space Science (3 Cr)
- AST5010 Astrophysics and Stellar Astronomy (3 Cr)
- AST5100 Galaxies, the Universe (3 Cr)

ELECTIVE COURSES

- PHY3700 Mathematics for Biomedical Physics (4 Cr)
- PHY5100 Methods of Theoretical Physics (3 Cr)
- PHY5200 Classical Mechanics I (3 Cr)
- PHY5210 Classical Mechanics II (3 Cr)
- PHY5340 Optics (3 Cr)
- PHY5341 Optics Laboratory (2 Cr)
- PHY5620 Electronics and Electrical Measurements (5 Cr)
- CHM5160 Instrumental Analytical Chemistry
- HIS5407 The Scientific Revolution

UNIVERSITY/COLLEGE REQUIREMENTS

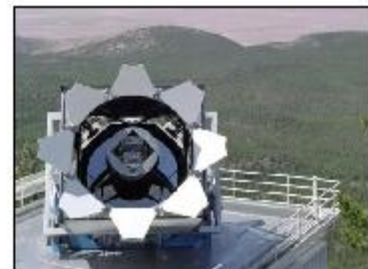
Students must also fulfill the University General Education requirements as well as the College of Liberal Arts and Science language and science requirements.



Modern Planetarium



Roof top Observatory



Faculty participation in SDSS and LSST collaborations

Want to learn more about the B.A. Astronomy program?



Contact

**Professor David Cinabro,
Astronomy Undergraduate Advisor,
cinabro@physics.wayne.edu**

**Globular star cluster omega centauri
<http://hubblesite.org/gallery/>**



Stephan's Quintet
Hubblesite.org/gallery/printshop/