AST 101
Introduction to Astronomy
(Stars & Galaxies)

Prof. Rosalba Perna

TA: Cameron Clarke
TTH 8:30-9:50am, Javits 101
Outline of Today’s Class

- Course goals
- Course overview
- Course information
Why Are You Taking This Course?
A. Just because I need to satisfy my science core requirement (no particular interest)

B. Because of A. + my fascination with the Universe

C. I have satisfied my core requirements. I am taking this course just out of interest

D. Other reasons
Course Goals

To develop a **broad view** of what we know about the Universe

To understand the **forces** that shape the Universe and its history

To help you understand how we figured all this out

To learn how **science** works
Course Overview: What we shall study

• What is our place in the Universe?
Light (Electromagnetic Radiation)

- **What is light?**
- **How do we use it to find out what and where things are?**
- **Waves vs particles**
Telescopes (Tools of the Trade)
Our Nearest Star: The Sun

Star in middle of its life
STARS of very many sizes and colors

Evolution path and color / brightness depends sensitively on MASS
STELLAR Birth and Life

The Orion Nebula

HUBBLE'SITE.org
STAR DEATH: white dwarfs, neutron stars and black holes
OUR GALAXY: The Milky Way

200+ billion stars in the Milky Way
Exploring a Universe of GALAXIES

Billion+ galaxies!
GALACTIC evolution

Galaxy collisions, quasars
Dark matter, dark energy and fate of universe
Big Bang: The Beginning
What is this course NOT?

Astrology ≠ Astronomy
Who should take this course?

• No prerequisites, aimed at non-science majors

• Moderate amounts of quantitative work (algebra)

• More quantitative course
  - AST 203

Prior astro course?
Course Information

COURSE WEB PAGE:
http://amalfi.astrosunysb.edu/rosalba/ast101/ast101.html

You can find announcements, reading assignments, syllabus, lecture notes and other useful things there.
Required Text

The Cosmic Perspective

by Bennett et al.

Older Edition is fine, though reading assignments based on chapters from latest edition.
Clickers: 10%

Quizzes (last 10-15min on most Thursdays): 20%

Midterms (3 of them): 40%

Final exam: 30%
Clickers

• Required-- bring to each class!
• Register your clicker to your name
• Used for reading quizzes, in-class discussion questions, feedback - favors peer learning
• Write your name on a piece of tape on the back of your clicker!
More on clickers

• Credit starts next week

• Graded 2 pts for correct answer, 1 pt for wrong answer, 0 pts for no answer

• Discussion with neighbors is encouraged
Come talk with us

• **Prof. Rosalba Perna’s** office hours:
  TTh: 10:00-11:30am; in ESS 461
  rosalba.perna@stonybrook.edu

• **TA Cameron Clarke’s** office hours:
  MWF 2-3:00pm in Physics B119
  cameron.clarke@stonybrook.edu

• Or email (any of us) to make an appointment!
Welcome to a discovery of the Universe!

“Not everything that can be counted counts, and not everything that counts can be counted”

- Albert Einstein