



**AST1002**  
**Discover the Universe**

John Oliver  
Associate Professor of Astronomy




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**Discover the Universe**

❖ An introductory physical science course. This course aims to provide the student with an introduction to the methods and practice of a physical science, as well as an overview of the Astronomical universe with an emphasis on current topics.

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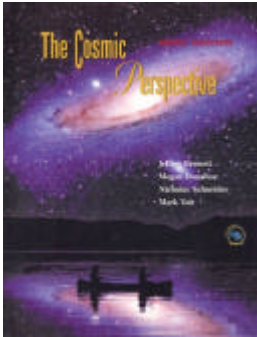


**Textbook**


**The Cosmic Perspective:**  
*Brief Edition*

Bennett, Donahue, Schneider, Voit

Available in bookstores,  
both on and off campus



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**Developing Perspective**

- ❖ C1: Our Place in the Universe
- ❖ C2: Discovering the Universe for Yourself

**Key Concepts for Astronomy**

- ❖ C3: The Science of Astronomy
- ❖ C4: A Universe of Matter and Energy
- ❖ C5: Universal Motion
- ❖ C6: Light, Telescopes, and Spacecraft

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**Learning from Other Worlds**

- ❖ C7: Formation of the Solar System
- ❖ C8: The Terrestrial Worlds
- ❖ C9: Jovian Planet Systems
- ❖ C10: Remnants of Rock and Ice: Asteroids, Comets, and Pluto
- ❖ C11: Earth and Lessons on Life in the Universe

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**Stellar Alchemy**

- ❖ C12: Our Star
- ❖ C13: Stars
- ❖ C14: Star Stuff
- ❖ C15: The Bizarre Stellar Graveyard

**Galaxies and Beyond**

- ❖ C16: Our galaxy
- ❖ C17: A Universe of Galaxies
- ❖ C18: Dark Matter
- ❖ C19: The Beginning of Time
- ❖ C20: Interstellar Travel

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## ***Exams and grades***

- ❖ Three hour tests plus final exam (each test has 40 multiple choice questions)
- ❖ 90% of grade: Best three grades from three tests and (optional) final
- ❖ 10% of grade: Other activities in and out of class
- ❖ Typical (approximate) grading scale:  
A 90-100%; B+ 83-87%; B 78-82%; C+ 73-77%  
C 68-72%; D+ 63-67%; D 58-62%; E 0-57%

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## ***Sources of Course Information***

- ❖ Syllabus
- ❖ Office Hours: see the syllabus
- ❖ Course e-mail mailing list: see the syllabus
- ❖ Course Web Page  
<http://www.astro.ufl.edu/~oliver/ast1002/>
- ❖ e-mail to me: [oliver@astro.ufl.edu](mailto:oliver@astro.ufl.edu)
- ❖ Web site for our text  
[www.astropot.com](http://www.astropot.com)

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## ***Office Hours for John Oliver***

- ❖ Where ? 211D BRT (2nd floor) Bryant Space Science Center (across street from the "Hub")
- ❖ When? See the syllabus



- ❖ Can't make those times ? See me before or after class to make an appointment for some other time

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## ***Ways to reach me***

- ❖ office phone: (352) 392-2052 x 206  
If I am not there, leave a message; *please* say your name and number clearly
- ❖ e-mail: [oliver@astro.ufl.edu](mailto:oliver@astro.ufl.edu)

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## ***About Me***

- ❖ B.S. Physics; Rensselaer Polytechnic Institute
- ❖ Research Assistant; Lick Observatory
- ❖ M.S. & Ph. D. Astronomy; UCLA
- ❖ Member Tech. Staff; Aerospace Corporation
- ❖ Associate Professor of Astronomy; UF
- ❖ NASA Faculty Fellow; Jet Propulsion Labs
- ❖ Associate Chairman
- ❖ Undergraduate Coordinator/Advisor

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## ***My Research Interests***

- ❖ Astronomical Instruments
  - ❖ Computer controlled instruments
  - ❖ Automated Telescopes
    - ❖ ZL-4 Zodiacal Light Telescope
    - ❖ SPOT (South Pole Optical Telescope)
    - ❖ 18 inch Rosemary Hill Observatory



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 **My Research Interests (cont)**

- ❖ Interplanetary Dust and Orbital Debris
  - ❖ LDEF (Long Duration Exposure Facility)
  - ❖ Clementine Interstage Adapter Satellite
- ❖ Co-Author: JPL's Meteoroid Engineering Model






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 **Other Interests**

- ❖ Archeoastronomy
  - ❖ Teotihuacan
  - ❖ LELO (Lunar Eclipse Longitude Observation)






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 **Other Interests (Continued)**

- ❖ Changes in the way Mathematics and Sciences is Taught K-16
  - ❖ Higher Education Consortium for the Teaching of Mathematics and Science
  - ❖ Area Center for Educational Enhancement (Crown Region)
  - ❖ CASM (Conversations about Science and Mathematics)


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 **Some Tips for Success**

*Professors notice — actions do influence grades*

- **Attend — be on time . . . stay to end**
- **If need to leave early — tell me & sit near door**
- **Sit near front of room**
- **Get to know someone in class (for notes/study with)**
- **Get to know professor — seek help early**
- **Do not talk, sleep, read newspaper, eat, etc.**


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 **How to Study for this Class**

Read “How to Succeed in your Astronomy Course” in the text pp. *xiii-xiv*

- ❖ Read the chapter before class - at least look at the figures and read the captions
- ❖ Come to every class - the lectures define the course – bring your book
- ❖ Take notes in class - you can not possible understand and remember everything presented

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 **How to Study for this Class**

- ❖ Review your notes every day after class. Many find it useful to re-write the notes (see comments in the syllabus)
- ❖ Read the text after class. Relate the text to the class notes.
- ❖ At the end of each chapter, take the chapter quiz at [www.astrospot.com](http://www.astrospot.com) .
- ❖ Expect to spend about 3-4 hours a week keeping up with the material plus time studying for tests

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**A Few Note Taking Tips**

- ❖ Do not . . .
  - ❖ In Text: Paint all text with highlighter pens
  - ❖ In Class: Scribble frantically to record all spoken words
- ❖ Do record *selectively* . . . emphasize
  - ❖ Key ideas
  - ❖ Details & examples . . .  
... to make ideas easier to understand



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**Other classes in the department**

- ❖ **AST1022L Astronomy Laboratory**
  - ❖ Do astronomical experiments
  - ❖ Observe the Sun and stars
  - ❖ Get a laboratory science credit
    - ❖ 1 credit
    - ❖ meets 2 hours a week in BRT 401 (10 computers, solar telescope)
    - ❖ meet at campus teaching observatory for telescope lab sessions during the semester

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**Other classes in the department**

**Classes with no prerequisites (except basic algebra)**

- ❖ **AST2004 Cosmology**
- ❖ **AST2007 Intro. To the Solar System**
- ❖ **AST2008 Intro. To Stars and Galaxies**
- ❖ **AST2037 Life in the Universe**
- ❖ **AST2039 Exploration of the Universe**
- ❖ **AST3043 History of Astronomy**

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**Other classes in the department**

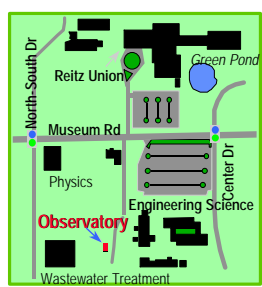
**for serious science majors (require Physics w/calculus)**

- ❖ **AST3018/19 General Astronomy**
- ❖ **AST4722/23 Techniques of Observational Astronomy**

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**Campus Observatory Public Viewing**

- ❖ Open Friday Nights
  - ❖ If classes in session
  - ❖ Weather permitting (call 392-5294 after 7PM to check)
- ❖ Hours: 8:30 – 10:00 p.m.
- ❖ Location: South of Union & West of Eng. Science



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**Please . . .**

**No food or drinks permitted in this classroom**



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**Questions and/or Comments?**

**Let me know at [oliver@astro.ufl.edu](mailto:oliver@astro.ufl.edu)**

**or visit <http://www.astro.ufl.edu/~oliver/>**