Welcome to Phys133-18f

*Introduction to Astronomy*

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http://www.bartol.udel.edu/~owocki/phys133
Course Theme

• **We are the part of the universe** we are “star stuff”... or “cosmic ash”

• The physical **laws** and forces that **govern our lives**...
  - e.g. gravity, electricity & magnetism, nuclear binding

• **Also govern the cosmos**...
  - planets, stars, galaxies, even the universe itself

• **But the Scale** is much different
  - “Mind bogginglingly” **BIGGER**

• This all challenges our intellect...
  - but also is **humbling** and **uplifting** to our human spirit...
"The most incomprehensible thing about the universe is that it is comprehensible."

- Albert Einstein (1879-1955)
Why am I taking this class??

Should I take this class?
Alt. astro courses this semester

- **PHYS139**
  - Star and Constellation Identification
  - Thurs. 8:00PM - 8:50PM SHL131 (1 credit)
  - Hank Bouchelle

- **PHYS146**
  - Quarks, Gluons and the Big Bang (3 credits)
  - TR 11:00AM – 12:15PM SHL130
  - Prof. Frank Schroeder

- **PHYS169**
  - Perspective on Physics and Astronomy (1 credit)
  - MW 3:35-4:45PM SHL105
  - Prof. Ed Nowak
Phys133: Science & Math Disclaimer

- This is a **Lab Science** course
- Language of Science is **Math**
- Science of Astronomy is **Physics**
  - **Not** just “Descriptive” Astronomy

- Those suffering from “Math/Physics anxiety” are **WELCOME**
- **But** have to be willing to **work**
Good news: **Work can be fun!**

- But the universe is **really** big
- There’s a **lot** to cover in one semester
- So you need to **keep up**
- Or you’ll soon be “light-years” **behind**
Chinese Proverb

I hear
    and I forget
I see
    and I remember
I do
    and I understand
My Instructor’s Pledge

- I will **try** to be...
  - available
  - helpful
  - clear
  - fair
  - open
  - **fun**
My Expectations of you...

• I expect you to be:
  – present!
  – courteous
  – honest
  – punctual
  – responsible
  – studious
  – engaged
Course web page

http://www.bartol.udel.edu/~owocki/phys133
Syllabus

• 2 mid-terms + 1 final: 15%-15%-20%
• HW 15%: web (~every class) + 1 written
• due classtime on date; NO LATE
  – drop 2 tutorial grades
• class participation (including i-clickers) 15%
  – no credit for forgetting i-clicker
  – will drop 3 lowest class scores (including absences)
• lab 20% -- start week of Sept. 10
• Any questions??
The sun sets in the...
**i>clicker sample question:**

The sun sets in the...

A. North
B. South
C. East
D. West
Where does your “Sun” or “Zodiacal” Sign come from?

To see this, let’s review the sun’s apparent path through the sky...
Path of the Sun through the Zodiac
<table>
<thead>
<tr>
<th>Astrology</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aries</td>
<td>March 21–April 20</td>
</tr>
<tr>
<td>Gemini</td>
<td>May 22–June 21</td>
</tr>
<tr>
<td>Leo</td>
<td>July 23–August 21</td>
</tr>
<tr>
<td>Libra</td>
<td>Sept. 24–Oct. 23</td>
</tr>
<tr>
<td>Sagittarius</td>
<td>Nov. 23–Dec. 22</td>
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<tr>
<td>Capricorn</td>
<td>Dec. 23–Jan. 20</td>
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<tr>
<td>Aquarius</td>
<td>Jan. 21–Feb. 19</td>
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<tr>
<td>Pisces</td>
<td>Feb. 20–Mar. 20</td>
</tr>
<tr>
<td>Taurus</td>
<td>April 21–May 21</td>
</tr>
<tr>
<td>Cancer</td>
<td>June 22–July 22</td>
</tr>
<tr>
<td>Virgo</td>
<td>Aug. 22–Sept. 23</td>
</tr>
<tr>
<td>Scorpio</td>
<td>Oct. 24–Nov. 22</td>
</tr>
</tbody>
</table>
1. Our Place in the Universe
Me and my Dad, ca. 1959...

Hagar the Horrible

Looking at the stars sure makes you think, doesn't it, Dad?

Yeah, it does.
Me and my Dad, ca. 1959...

Hagar the Horrible

Looking at the stars sure makes you think, doesn’t it, Dad?

Yeah, it does.

They’re so little and puny and we’re so big!
Homework for Friday’s class

• Assignment for Fri:
  – Read the Syllabus carefully
  – Read Ch. 1 of “Cosmic Perspective”
  – set up account on textbook website: MasteringAstronomy.com
  – join class # Phys133F18
  – Do “Online Quiz 00 (for practice only)
  – bring your personal i-clicker to class