Professor Chris Sorensen  
Office: Cardwell 325A  
Office hours: Open door  
The purpose of this course is to develop your awareness and understanding of the universe of which you are a sentient part. You will also use and learn the scientific method; you will “know how we know”.

<table>
<thead>
<tr>
<th>Week (Monday)</th>
<th>Subjects</th>
<th>Reading</th>
<th>Studio</th>
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<tr>
<td>Jan. 18</td>
<td>Introduction, the night sky</td>
<td>Chapter 1</td>
<td>Motions in the Sky</td>
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<td>Jan. 25</td>
<td>Motion, starlight</td>
<td>Chapter 2</td>
<td>Construction and use of a Simple Spectroscope</td>
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| Feb. 1        | Understanding motions | Chapter 3 | Kepler’s Laws  
Begin: Observation of a Lunar Month (ca. one month) |
| Feb. 8        | **Exam I – Feb. 10**  
The Solar System | Chapter 4 | Measuring the Earth  
Begin: Observation of Jupiter in Retrograde (through May 6) |
| Feb. 15       | The Solar System, The Earth | Chapters 4, 5 | Angular Measurements |
| Feb. 22       | Terrestrial planets | Chapter 6 | Measuring the Moon |
| Feb. 29       | **Exam II – Mar. 2**  
Gas planets | Chapter 7 | Measuring Distance with Parallax |
| March 7       | Life beyond Earth | Chapter 8 | Telescopes |
| March 14      | Spring Break! | | |
| March 21      | The Sun | Chapter 9 | Discovering the Nature of Stars |
| March 28      | **Exam III – Mar. 30**  
Stars | Chapter 10 | Predicting Eclipses |
| April 4       | Star life | Chapter 11 | Observing the Sun |
| April 11      | Star death  
Galaxy | Chapter 12 | Measuring the Milky Way |
| April 18      | The Milky Way  
**Exam IV – April 20** | Chapter 13 | Telescope viewing night |
| April 25      | Galaxies | Chapter 14 | Measuring Galactic Distances and the Age of the Universe |
| May 2         | The Universe | Chapter 15 | Scales of the Universe |

**May 9, Monday**  
**Final Exam 4:10 to 6:00 pm in Cardwell 102**
Homework. Homework problems will be assigned for each chapter of Slater and Freedman. They are internet problems via Sapling Learning. Access your Sapling homework by following the instructions here: http://bit.ly/saplinginstructions. You can purchase access directly from the website using a credit card for $40. Homework will account for 200 points (20% of the semester grade).

Studios. In studio you will learn to think like a scientist. You will learn how, through systematic, quantitative measurements, one can understand how the world works. All studios will begin with a short, ca. 5 minute, quiz to test whether you read the studio description before you come to studio. The studio activities will be assessed by the record you keep in your studio book and a few observing programs. You will be taught how to keep an accurate and realistic lab book as well as how to make good scientific judgment for the activities. Each studio is worth approximately 20 points and the total point value for the Studio is 300 (30% of your total semester grade, same as the hour exam total). Every week the studio book will be graded.

Exams. There are 4 exams worth 100 points each. If you miss an exam for any reason, your score for that exam will be zero. The best 3 exams count towards the final grade. An exam can go on the road for a university activity. This must be prearranged before the original exam date and coordinated with a faculty representative or coach of the activity. The final exam is mandatory and will be comprehensive. It is worth 200 points. All these exams are multiple-choice, short answer and fill-in-the-blanks. There will be questions on the reading, homework problems and on class demonstrations.

Final assessment. Total points possible = homework (200) + studio (300) + best 3 hour exams (300) + final exam (200) = 1000. The final letter grade for the semester will be based on a percentage of your total exams plus studio. The grading scale for the class is as follows:

- A: ≥ 90%
- B: 80 to 90%
- C: 70 to 80%
- D: 60 to 70%
- F: < 60%

If you have any condition such as a physical or learning disability, which will make it difficult for you to carry out the work as I have outlined it or which will require academic accommodations, please notify me and contact the Disabled Students Office (Holton 202), in the first two weeks of the course.

Plagiarism and cheating are serious offenses and may be punished by failure on the exam, paper or project; failure in the course; and/or expulsion from the University. For more information refer to the “Academic Dishonesty” policy in K-State Undergraduate Catalog and the undergraduate Honor Systems Policy on the Provost's web page at <http://www.ksu.edu/honor/>.

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