This is a sample syllabus for AST1002. Students should reference the section syllabus provided at the beginning of the semester for specifics regarding assignments and grade assignments.
Instructor:
Email:
Office:
Phone:
Office Hours:

Course Website: Canvas

Course Description
This course provides general acquaintance with some of the facts, concepts, and scientific methods of astronomy. As a liberal studies course, our goals are to help you learn about the current understanding of the universe, including its history and its future, and gain an appreciation of astronomy as a science.

Course Objectives
To learn something about astronomy! The universe is a wonderful place, we are part of it, and it’s probably a good idea to know something about where you live.

By the end of the course, if you attend class and do the readings and assignments, you will be able to:

• have a greater understanding of how humanity pursues knowledge and truth (Some call this the Scientific Method as if there is actually a clear-cut, monolithic strategy),
• read “popular” articles about astronomy and talk about astronomy with your friends, your parents, and your children (some day, if not now!)
• explain how the motions of celestial bodies affect us and our perspectives through seasons, moon phases, and tides
• explain how Astronomers learn about the rest of the Universe by using light
  • explain the purpose and utility of telescopes
  • understand how astronomers use light to infer the composition of stars, etc.
• explain the limitations of telescopes
• explain the importance of telescopes in space
• explain how astronomers measure distances
• explain how astronomers measure motions
• understand the birth, life, and death of stars:
  • explain the role of nuclear fusion in stars in making the elements
  • describe what is the dominant characteristic that determines the fate of stars
  • understand the explosive deaths of stars, supernovae
  • define the densest objects in the Universe: white dwarfs, neutron stars, and black holes
• understand the evolution and composition of the Universe, including:
  • describe the histories and futures of the Earth, the Solar System, and the Universe
  • explain evidence for the expansion of the Universe
  • explain evidence for Dark Energy
  • explain evidence for Dark Matter

Liberal Studies
This course has been approved as meeting the Liberal Studies requirements for Natural Sciences and thus is designed to help you become a critical analysts of claims about the natural world. By the end of the course, you will: 1) Pose questions or hypotheses based upon scientific principles; 2) Use appropriate scientific methods and evidence to evaluate claims or theoretical arguments about the natural world; 3) Analyze and interpret research results using appropriate methods. See the Liberal Studies website for more information http://liberalstudies.fsu.edu/

The Course
Classes will consist of lectures, movies, slides, and demonstrations. Lectures will concentrate on the critical issues; you are expected to study the text to obtain a better understanding of astronomy. The subject matter discussed in class will generally follow the text, with additional (recent) material presented from information not available in the textbooks.

It is in your interest to study the text as well as attend class to obtain a better understanding of astronomy, and you are strongly encouraged to do both. We highly recommend that you read the relevant chapter before the corresponding lecture, in order to familiarize yourself with the material and to make the time spent in class more
profitable. You will have reading assignments to help guide your reading. Homework will be assigned each week.

**Course Materials**

**Access Book and Materials on Canvas**

You automatically have access to the text book, Smartwork (the homework app), and lots of other supplementary material. You access all through links on the class Canvas site. The cost of this access is a fee that is included in your tuition bill. You may choose to opt out of this access. The packaged bundle is much cheaper than buying the book and access to Smartwork separately. If for some reason you opt out of this bundled package, then you can get the book and Smartwork separately.

**Textbook and Homework Website**
*Understanding Our Universe, S. Palen et al. 4th edition, W. W Norton Publishers.* The ebook is on our canvas course site; you may find it in the Modules tab.

**Homework Website**

You will access homework from the Canvas course site. Technically, your homework is part of the Smartwork package offered by Norton, but accessing it is simple; just go to the Canvas course website and follow the links. If you do not purchase the IncludEd package, then you will need to purchase a separate Smartwork subscription. For ease of use, I highly recommend taking advantage of the IncludEd package.

**Class participation**

The “lecture” times will regularly include student participation. This participation is crucial both for your education and as a means of feedback on lecture material. At times this participation will be graded and at other times it will not. In either case, the subject matter will appear either on your homework or your exams.

**Course Assignments and Evaluation**

**Homework**

There will be weekly web-based homework assignments. In general, they are due 5pm on Friday.

**Reading Assignments**

You will have regularly scheduled reading assignments (see the schedule below). For each reading, please summarize the main theses and conclusions of the text. These reading assignments will be due at 10:00 am on the morning of the corresponding lecture.
Exams
There will be three mid-term exams and one final exam. The second and third exams will be cumulative, with an emphasis on the material covered since the previous exams. The final exam will be cumulative, with an emphasis on material covered since the second exam. The exams will be multiple-choice tests, and these will be more concerned with conceptual understanding than with memorization. The Final Exam is the Tuesday of Final Exams week (May 2) from 12:30 pm to 2:30 pm. The location will be HCB 101.

Grading
Homework Assignments 25%
Reading Assignments 10%
Class Participation 5%
Exams 60%
  Midterm Exam 1 15%
  Midterm Exam 2 15%
  Midterm Exam 3 15%
  Final Exam 15%

Attendance
You are required to attend all class lectures. The lectures will primarily be used to present new concepts and experimental demonstrations to illustrate key ideas. There is a strong correlation between lecture attendance and student performance.

Final Grades
The following table provides a mapping between your percentage grade and the final letter grade. In general, the grades will be distributed directly as shown below. If, however, the overall class grades are much lower than expected, then I will adjust this mapping so that a lower percentage grade will satisfy a higher letter grade. In order to fulfill FSU’s Natural Sciences requirement, you must earn a “C-“ or better in the course.

A   >= (greater than or equal to) 93.33%
A-  >= 90%
B+  >= 86.67%
B   >= 83.33%
B-  >= 80%
C+  >= 76.67%
C   >= 73.33%
<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture #</th>
<th>Topic</th>
<th>Reading</th>
<th>Homework (Due at 5pm on Friday)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 9</td>
<td>1</td>
<td>Welcome</td>
<td></td>
<td></td>
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<tr>
<td>Jan. 11</td>
<td>2</td>
<td>Scientific Method &amp; Our perspective</td>
<td>Ch. 1</td>
<td></td>
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<tr>
<td>Jan. 16</td>
<td></td>
<td><strong>Holiday</strong></td>
<td></td>
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<tr>
<td>Jan. 18</td>
<td>3</td>
<td>Motions</td>
<td>Ch. 2</td>
<td>HM1 (Ch. 1)</td>
</tr>
<tr>
<td>Jan. 23</td>
<td>4</td>
<td>Motions of Earth and Moon</td>
<td>Ch. 2</td>
<td></td>
</tr>
<tr>
<td>Jan. 25</td>
<td>5</td>
<td>Laws of Motion</td>
<td>Ch. 3</td>
<td>HM2 (Ch. 2)</td>
</tr>
<tr>
<td>Jan. 30</td>
<td>6</td>
<td>Laws of Motion</td>
<td>Ch. 3</td>
<td></td>
</tr>
<tr>
<td>Feb. 1</td>
<td>7</td>
<td>Light and Telescopes</td>
<td>Ch. 4</td>
<td>HM3 (Ch. 3)</td>
</tr>
<tr>
<td>Feb. 6</td>
<td>8</td>
<td>Light and Telescopes</td>
<td>Ch. 4</td>
<td></td>
</tr>
<tr>
<td>Feb. 8</td>
<td></td>
<td><strong>Exam 1</strong></td>
<td></td>
<td>HM4 (Ch. 4)</td>
</tr>
<tr>
<td>Feb. 13</td>
<td>9</td>
<td>Formation of stars and planets</td>
<td>Ch. 5</td>
<td></td>
</tr>
<tr>
<td>Feb. 15</td>
<td>10</td>
<td>Terrestrial Worlds &amp; Atmospheres</td>
<td>Ch. 6 &amp; 7</td>
<td></td>
</tr>
<tr>
<td>Feb. 20</td>
<td>11</td>
<td>The Giant Planets &amp; small bodies of Solar System</td>
<td>Ch. 8-9 (Focus on 8 and skim 9 if you find it interesting)</td>
<td></td>
</tr>
<tr>
<td>Feb. 22</td>
<td>12</td>
<td>Measuring the Stars</td>
<td>Ch. 10</td>
<td>HM5 (Ch. 5)</td>
</tr>
<tr>
<td>Feb. 27</td>
<td>13</td>
<td>Our Star: The Sun</td>
<td>Ch. 11</td>
<td></td>
</tr>
<tr>
<td>Mar. 1</td>
<td>14</td>
<td>Evolution of Low-Mass Stars</td>
<td>Ch. 5,12</td>
<td>HM6 (Ch. 10)</td>
</tr>
<tr>
<td>Mar. 6</td>
<td>15</td>
<td>Evolution of Low-Mass Stars</td>
<td>Ch. 12-13</td>
<td></td>
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<tr>
<td>Mar. 8</td>
<td></td>
<td><strong>Exam 2</strong></td>
<td></td>
<td>HM7 (Ch. 12)</td>
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<tr>
<td>Mar. 13-17</td>
<td></td>
<td><strong>Spring Break</strong></td>
<td></td>
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<tr>
<td>Mar. 20</td>
<td>16</td>
<td>Evolution of High-Mass Stars</td>
<td>Ch. 13</td>
<td></td>
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<tr>
<td>Mar. 22</td>
<td>17</td>
<td>Relativity, Black Holes</td>
<td>Ch. 13</td>
<td></td>
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<tr>
<td>Mar. 27</td>
<td>18</td>
<td>Relativity, Black Holes</td>
<td>Ch. 13</td>
<td></td>
</tr>
<tr>
<td>Mar. 29</td>
<td>19</td>
<td>Measuring Galaxies</td>
<td>Ch. 14</td>
<td>HM8 (Ch. 13)</td>
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</tbody>
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University Policies

University Attendance Policy
Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

Academic Honor Policy
The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to "...be honest and truthful and...[to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at http://fda.fsu.edu/academic-resources/academic-integrity-and-grievances/academic-honor-policy)

Academic Success
Your academic success is a top priority for Florida State University. University resources to help you succeed include tutoring centers, computer labs, counseling and health services, and services for designated groups, such as veterans and students with disabilities. The following information is not exhaustive, so please check with your advisor or the Department of Student Support and Transitions to learn more.

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</thead>
<tbody>
<tr>
<td>Apr. 3</td>
<td>20</td>
<td>Measuring Galaxies wrap-up Our Galaxy: The Milky Way</td>
<td>Ch. 15</td>
<td></td>
</tr>
<tr>
<td>Apr. 5</td>
<td>21</td>
<td>Our Galaxy: The Milky way &amp; The Evolution of the Universe</td>
<td>Ch. 16</td>
<td>HM9 (ch. 14)</td>
</tr>
<tr>
<td>Apr. 10</td>
<td>22</td>
<td>The Evolution of the Universe</td>
<td>Ch. 16</td>
<td></td>
</tr>
<tr>
<td>Apr. 12</td>
<td>23</td>
<td>Early Universe &amp; Formation of Structure</td>
<td>Ch. 16-17</td>
<td>HM10 (ch. 15)</td>
</tr>
<tr>
<td>Apr. 17</td>
<td>24</td>
<td>Formation of Structure</td>
<td>Ch. 17</td>
<td></td>
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<tr>
<td>Apr. 19</td>
<td></td>
<td>Exam 3</td>
<td></td>
<td>HM11 (ch. 16)</td>
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<tr>
<td>Apr. 24</td>
<td>25</td>
<td>Are We Alone?</td>
<td>Ch. 18</td>
<td></td>
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<tr>
<td>Apr. 26</td>
<td>26</td>
<td>Are We Alone?</td>
<td>Ch. 18</td>
<td>HM12 (ch. 17-18)</td>
</tr>
<tr>
<td>May 2</td>
<td></td>
<td>Final Exam (12:30 pm -2:30 pm)</td>
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</table>
Americans with Disabilities Act
Florida State University (FSU) values diversity and inclusion; we are committed to a climate of mutual respect and full participation. Our goal is to create learning environments that are usable, equitable, inclusive, and welcoming. FSU is committed to providing reasonable accommodations for all persons with disabilities in a manner that is consistent with academic standards of the course while empowering the student to meet integral requirements of the course.

Students with disabilities needing academic accommodation should:
(1) register with and provide documentation to the Office of Accessibility Services; and
(2) request a letter from the Office of Accessibility Services to be sent to the instructor indicating the need for accommodation and what type; and,
(3) meet (in person, via phone, email, skype, zoom, etc...) with each instructor to whom a letter of accommodation was sent to review approved accommodations.

Please note that instructors are not allowed to provide classroom accommodations to a student until appropriate verification from the Office of Accessibility Services has been provided.

This syllabus and other class materials are available in alternative format upon request.

For the latest version of this statement and more information about services available to FSU students with disabilities, contact the:
Office of Accessibility Services
874 Traditions Way
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167
(850) 644-9566 (voice)
(850) 644-8504 (TDD)
oas@fsu.edu
https://dsst.fsu.edu/oas

Confidential Campus Resources
Various centers and programs are available to assist students with navigating stressors that might impact academic success. These include the following:

Victim Advocate Program
University Center A, Rm. 4100
(850) 644-7161
Available 24/7/365
Office Hours: M-F 8-5
https://dsst.fsu.edu/vap
Counseling and Psychological Services  
Askew Student Life Center, 2nd floor  
942 Learning Way  
(850) 644-8255  
https://counseling.fsu.edu/

University Health Services  
Health and Wellness Center  
(850) 644-6230  
https://uhs.fsu.edu/

**Free Tutoring from FSU**  
On-campus tutoring and writing assistance is available for many courses at Florida State University. For more information, visit the Academic Center for Excellence (ACE) Tutoring Services' comprehensive list of on-campus tutoring options - see http://ace.fsu.edu/tutoring or contact tutor@fsu.edu. High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.

**Syllabus Change Policy**  
Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.

**Recording Class**  
In this class, consistent with state law and university policy, students are permitted to make recordings of class lectures for personal use only. As noted, sharing, posting, or publishing classroom recordings may subject you to honor code violations and legal penalties associated with theft of intellectual property and violations of other state law. Moreover, students and educators have expressed concern that recording classroom activities may negatively impact the learning experience for others, especially in classes that involve questions, discussion, or participation. To promote a learning environment in which everyone is free to experiment with ideas, we ask you to have consideration when recording so that others have comfort to ask questions, explore new ideas, or otherwise participate in class. Students must monitor their recording so that they do not include participation by other students without permission. Students with disabilities will continue to have appropriate accommodations for recordings as established by the Office of Accessibility Services.