AST 110  Introduction to Astronomy  3 credits

I. **Catalog Description:** A beginning course in star types, stellar characteristics and evolution, and discussion of our sun. Also includes basic discussion of astronomical distance, determination methods, and radiation theory.

II. **Prerequisites, pre-/co-requisites, co-requisites, recommended:** There are no official pre or co-requisites.

III. **Rationale for Course Level:** AST 110 is a course designed to introduce students to the basic features, phenomenon, and processes that take place in our universe. Students will work with astronomical tools and concepts and see how they are applied to learning more about the cosmos. A research project and presentation will engage students in how Native Americans appreciated the night sky.

IV. **Suggested Textbooks:**


V. **Other Requirements and/or Materials for the Course:**
Star Finder, compass, red flashlight, clear ruler, protractor, and/or

VI. **Student Learning Course Objectives:**

**Institutional Learning Goals:**

1. Demonstrate competency in reading, writing, oral communication, and numerical literacy
2. Be able to evaluate information
3. Consider multiple perspectives from the diversity of human experience

**Student learning outcomes:**

1. Demonstrate a basic understanding of the principles of Astronomy as they pertain to Stars, Planets, Galaxies, and Celestial motions.
2. Summarize certain historical events that led to our current appreciation of the cosmos.
3. Apply basic physical laws and principles into the study of the universe.
4. Observe and identify characteristics of the celestial night sky.
5. Present findings from researching how Native Americans saw the night sky.
### VII. Suggested Course Outline:

<table>
<thead>
<tr>
<th>Semester Divisions</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weeks 1 to 4 (First Quarter)</td>
<td>Constellations, Coordinates, Seasons, Lunar Phases, Eclipses and Assessment</td>
</tr>
<tr>
<td>Weeks 5 to 8 (Second Quarter)</td>
<td>History of Astronomy, Light, Spectra, Telescopes, Stellar Motion and Assessment</td>
</tr>
<tr>
<td>Weeks 9 to 12 (Third Quarter)</td>
<td>Extrasolar Planets, Formation and Characteristics of the Solar System, Comparative Planetology, and Assessment</td>
</tr>
<tr>
<td>Weeks 13 to 16 (Fourth Quarter)</td>
<td>Our Sun, Stellar Measurements, Stellar Life Cycles, Galaxies, Cosmology, and Assessment Student Presentations over Native American Constellations</td>
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</tbody>
</table>

### VIII. Suggested Course Evaluation

In class evaluation could be in the form of learning checks, concept tests, and or minute papers. Formal assessments include weekly quizzes and quarterly or tri-semester examinations.

Possible Grade Distribution:
Final Grades will be based on 2 Exams (200 pts), 8 quizzes (160 pts.), 1 completed tutorial booklet (300 pts.), and 1 student project (100 pts.) for a total of 760 points.

Grading Scale: Grades will be given as letter grades. Letter grades and numerical equivalents are given below. To determine your final percentage (%) and letter grade, divide points earned by total possible points and multiply by 100. (_______ points earned/ 760 points x 100)

- 93 – 100% = A
- 90 – 92.9% = A-
- 87 – 89.9% = B+
- 83-86.9% = B
- 80-82.9% = B-
- 77-79.9% = C+
- 73-76.9% = C
- 70-72.9% = C-
- 67-69.9% = D+
- 63-66.9% = D
- 60-62.9% = D-
- 59.9% or Lower = F

### VIII. Bibliography


Syllabus Prepared By:
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October 19, 2012