ASTRONOMY 177 – Spacecraft Astronomy – Syllabus

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Keep checking UVM Blackboard for course updates.

Purpose: There are over 80 astronomical observatories in space today. The majority of data contributing to astronomical discoveries now come from these instruments. They are all well documented on the internet, including their design, launch and maintenance procedures as well as their scientific findings. The purpose of this course is to learn more about them. And the best way to learn is to teach.

Prerequisite: Astronomy 05; Math 10 or instructor permission

Course Structure: Students will choose a space observatory from the list provided in class to research independently, and then give a 25-30 minute talk with slides to the class on its design and findings. 10 minutes of questions, discussion and critique will follow each presentation. Faculty will then introduce the topic of the next presentation for the remaining class time, focusing on the pertinent astronomical problems to date, and how the space observatory is expected to solve them. Students must contribute significantly to the discussion and critique, and this will require researching each topic independently before that class presentation.

Exams:
2 midterms and 1 cumulative final exam, covering the presentation topics and specific background astronomy. Exam format will be described in class.

Brief Course Outline:

<table>
<thead>
<tr>
<th># classes</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course Introduction; list of possible topics</td>
</tr>
<tr>
<td>6</td>
<td>Assignment of topics; faculty presentations (can serve as prototypes)</td>
</tr>
<tr>
<td>20</td>
<td>Student topic presentations, discussions, criticisms, and faculty discussion of next topic</td>
</tr>
<tr>
<td>2</td>
<td>Midterm exams</td>
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</tbody>
</table>

Recommended Text: Websites

Grade Structure: 10% - presentation quality
10% - involvement in class discussions
25% - each of 2 midterms
30% - cumulative final exam