ASSESSMENT PLAN — ASTRONOMY — MINOR

(Program of Study / Major / Degree Level, etc.)

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Program Goals: The Department of Astronomy Minor program provides students with a background in astronomy that focuses on answering the fundamental questions about our universe that humans have pondered over the ages. Completion of this program provides the opportunity to acquire knowledge supporting the student's major or toward a lifelong interest in astronomy.

Relevance of goals to the mission statements and/or strategic plans of the University, College, or Program as applicable:

These program goals are aligned with the University's requirements for minors and completion of this minor offers students a coherent field of study in astronomy.

Student Learning Outcomes (list the three-to-five most important)	**Assessment Measures and Criteria** (describe one or more measures for each outcome and criteria for success)	**Assessment Schedule** (initial year, and subsequent cycle)
1. Identify basic concepts from the many areas of astronomy, including motions in the sky, gravity, electromagnetic radiation, solar system, stars, and galaxies.	Students complete a 1-2 semester survey course in introductory astronomy (ASTR 100, 101, or 120 and 121) that includes broad coverage of the various areas of astronomy. Responses to questions from final exams for ASTR 120, 121, 100, and 101 will be selected as indicators of basic astronomical knowledge.	The Astronomy Department Assessment Committee (ADAC) will review the responses to the selected questions from final exams, and make recommendations to

	Student responses to these selected questions will be scored according to the following rubric: Outstanding (argument/mathematics is presented in a clear, concise, and logical manner that effectively identifies, supports, and demonstrates mastery of the concepts) Strong (argument/mathematics is presented in an understandableand rational manner that successfully identifies, supports and demonstrates good understanding of the concepts) Adequate (argument/mathematics is presented in a satisfactorily way that includes some of the main points but doesn't complete the necessary connections between concepts) Inadequate (argument/mathematics is presented in a disorganized manner with very limited application of concepts with evidence of misunderstanding) Seventy-five percent of astronomy minors should score an outstanding or strong on their responses to the selected questions.	the Chair once every three years beginning in 2006.
2. Recognize and apply the scientific method to solve astronomical problems. Critically evaluate hypotheses and theories proposed using the scientific method.	ASTR 220 (required of all astronomy minors) applies the scientific method to evaluate the effects of astronomical collisions. The responses to selected questions from final exams will be evaluated according to the rubric	The ADAC will review syllabi and responses to the selected final exam questions from ASTR 220, and make recommendations to

	described above in #1. Seventy-five percent of astronomy minors should receive an outstanding or strong on their responses to the selected questions.	the Chair once every three years beginning in 2007.
3. Demonstrate a deeper understanding in several areas of astronomy.	Students are required to complete three upper level astronomy courses that focus on a specific topic in astronomy (for example: stellar evolution, solar system astronomy, cosmology, or life in the universe). The responses to selected questions from final exams will be evaluated according to the rubric described above in #1. Seventy-five percent of astronomy minors should receive an outstanding or strong on their responses to the selected questions.	The ADAC will review syllabi and responses to the selected final exam questions from these upper level astronomy courses, and make recommendations to the Chair once every three years beginning in 2008.
4. Develop skills to facilitate the continued the study of astronomy.	Students are required to complete ASTR 220, which focuses on the problem of future impacts between Earth and asteroids or comets. This problem and possible solutions are often featured in newspapers, television, magazines, and on the web. In ASTR 220 students develop and practice media and web research skills to successfully complete assignments. These skills will assist students in continuing their independent study of astronomy after graduation. Responses to selected questions from assignments will be evaluated according to the rubric described above in #1 with special emphasis on how media and web resources were used to construct the responses.	The ADAC will review responses to the selected questions from assignments in ASTR 220 and make recommendations to the Chair once every three years beginning in 2007

	Seventy-five percent of astronomy minors should receive an outstanding or strong on their responses to the assignment questions.	
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