SLO REPORT FOR AST1002 – Fall 2016

During the fall semester of 2016, the astronomy department taught 4 separate sections of the course AST1002: Discover the Universe. These sections were taught by professors Vicki Sarajedini, Francisco Reyes, Dan Li, and Jonathan Tan. Student SLOs were evaluated for all students in the areas of content knowledge, critical thinking, and communication (see attached rubric). The results of the grading yielded the following results:

Sarajedini

Total students evaluated: 174

% Content knowledge mastery: 134/174 = 77.0%

% Critical Thinking mastery: 174/174 = 100%

% Communication mastery: 174/ 174 = 100%

Reyes

Total students evaluated: 101

% Content knowledge mastery: 95/101 = 94.0%

% Critical Thinking mastery: 100/101 = 99.0%

% Communication mastery: 101/101 = 100%

Li

Total students evaluated: 105

% Content knowledge mastery: 87/105 = 82.9%

% Critical Thinking mastery: 102/105 = 97.1%

% Communication mastery: 105/105= 100%

Tan

Total students evaluated: 187

% Content knowledge mastery: 140/187 = 74.9%

% Critical Thinking mastery: 179/187 = 95.7%

% Communication mastery: 187/187 = 100%

Total:

Total students evaluated: 564

% Content knowledge mastery: 456/564 = 80.9%

% Critical Thinking mastery: 555/564 = 98.4%

% Communication mastery: 564/564 = 100%

These results show that all students have achieved mastery in communication through their observing reports and that the vast majority adequately demonstrated critical thinking. We find that ~80% achieved mastery for content learning, which is assessed through multiple choice exams.

Vicki Sarajedini

Grading rubric for AST1002 Observing Project

	Outstanding (A)	Very Good (B)	Satisfactory (C)	Unsatisfactory (D/E)
Sketch, type and distance (question #1)	Student presents extremely detailed sketch of each observed object with accurate type and distance measurements (10-9 pts)	Student presents detailed sketch of each observed object with accurate type and distance measurements within a reasonable range (8 pts)	Student presents a rough sketch of each object with reasonable type and distance measurements for at least one of the objects (6-7 pts)	Student presents partial or no sketch. Types and distances are incorrect or missing (5-0 pts)
Description of Observations (question #2)	Student gives a detailed and specific description of the observations (10-9 pts)	Student gives a detailed description of the observations (8-7 pts)	Student gives a description without much detail (6 pts)	Student uses vague language to describe the observations or not at all (5-0 pts)
Astrophysical significance of observed objects (questions #3)	Student uses and references sources to give a thorough explanation of the type of source being observed and its place in the Universe (10-9 pts)	Student uses sources to give a thorough explanation of the type of source being observed and its place in the Universe (8 pts)	Student gives a reasonably good explanation of the type of sources observed (6-7 pts)	Student gives a vague or incorrect explanation of the observed objects (5-0 pts)
Recent news summary (question #4)	Detailed summary of article with thoughtful attention to reporting accuracy. Addresses question of new material and includes reference (10-9 pts)	Summary of article with some discussion of reporting accuracy. Addresses question of new material and includes reference (8 pts)	Summarizes article and discusses reporting accuracy with minimum detail. May not address question of new material. Includes reference (6 – 7 pts)	Article summarized very briefly or not at all with little to no discussion of reporting accuracy. (5 – 0 pts)
Hypothesis and proposed observation (question #5)	Clearly stated hypothesis. Planned observations for testing are clearly explained and reasoned. (10-9 pts)	Clearly stated hypothesis. Planned observations for testing are presented with minimal explanation (7-8 pts)	Hypothesis stated and planned observations stated which justify observations with minimal detail. (6 pts)	Over simplistic hypothesis stated with observations that are unreasonable and not well explained (5-0 pts)

Summary of scoring for Gen Ed SLOs

	Assignments	Total points possible	Standard for Mastery
Content	Exams	300	210
Critical Thinking	1. Recent news summary (Q#4) 2. Hypothesis and proposed observation (Q#5)	20	13
Communication	1. Description of observations (Q#2) 2. Astrophysical Significance (Q#3)	20	12