**Course Prefix, Number, and Title: AST 101, General Astronomy**

**Section Number(s): 1006**

**Department: Science**

**Instructor: Milinda Wasala**

**Academic Year: 2020/2021**

**Semester: Fall 20**

**Is this a GenEd class? No**

**Complete and submit your assessment report electronically to your department chair. As needed, please attach supporting documents and/or a narrative description of the assessment activities. You may use as many or as few outcomes as necessary.**

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| **Class/Course Outcomes** | **Assessment Measures** | **Assessment Results** | **Outcome Results Analysis** |
| In the boxes below, summarize the outcomes assessed in your class or course during the last year*.* If this is a GenEd class, include the appropriate GenEd objectives. | In the boxes below, summarize the methods used to assess course outcomes during the last year. Include the criterion you’ll use to judge whether or not students have achieved the expected outcome. | In the boxes below, summarize the results of your assessment activities during the last year. Include your judgement as to whether or not the criterion for student achievement has been met. | In the boxes below, please reflect on this outcome’s results and summarize how you plan to use the results to improve student learning. |
| Outcome #1:  State Kepler’s laws of planetary motion.  Outcome #2:  Explain how we can determine an object’s temperature by observing the radiation it emits. | Assessment Measure:  Ch 1-2 Homework  Quiz 1, 2  Exam 1  Final Exam  Criterion for achievement:  60% of students earned 80% or above in homework 1-2  60% of students earned 60% or above in Quiz 1 and 2  60% of students earned 60% or above in exam 1  60% of students earned 60% or above in Final Exam | Results:  89% of students had an aggregate score of 80% or more on Ch 1-2 homework.  87% of students had an aggregate score of 60% or more on quiz 1 and 2.  95% of students had an aggregate score of 60% or more on exam 1.  72% of students had an aggregate score of 60% or more on Final Exam.  Criterion Met: Yes | 1. Results Analysis:  Expected results  2. Action Plan: |
| Outcome #3:  Describe how optical telescopes work, and specify the advantages of reflecting telescopes over refractors.  Outcome #4:  Describe the scale and structure of the solar system, and list the basic differences between terrestrial and jovian planets..  Outcome #5:  Summarize and compare the basic structural properties of Earth and the Moon. | Assessment Measure:  Ch 3-5 Homework  Quiz 3-5  Lab 1  Exam 1  Final Exam  Criterion for achievement:  60% of students earned 80% or above in homework 3-5  60% of students earned 60% or above in Quiz 3-5  60% of students earned 60% or above in exam 1  60% of students earned 60% or above in Final Exam | Results:  90% of students had an aggregate score of 80% or more on Ch 3-5 homework.  89% of students had an aggregate score of 60% or more on quiz 3, 4 and 5.  95% of students had an aggregate score of 60% or more on exam 1.  72% of students had an aggregate score of 60% or more on Final Exam.  Criterion Met: Yes | 1. Results Analysis:  Expected results  2. Action Plan: |
| Outcome #6:  Compare the surface of Mercury with that of the Moon, and describe how Mercury’s surface features formed.  Outcome #7:  Describe the internal structure and composition of the jovian planets | Assessment Measure:  Ch 6-7 Homework  Quiz 6  Lab 2  Exam 2  Final Exam  Criterion for achievement:  60% of students earned 80% or above in homework 6-7  60% of students earned 60% or above in Quiz 6  60% of students earned 60% or above in exam 2  60% of students earned 60% or above in Final Exam | Results:  93% of students had an aggregate score of 80% or more on Ch 6-7 homework.  95% of students had an aggregate score of 60% or more on quiz 6.  86% of students had an aggregate score of 60% or more on exam 2.  72% of students had an aggregate score of 60% or more on Final Exam.  Criterion Met: Yes | 1. Results Analysis:  Expected results  2. Action Plan: |
| Outcome #8:  Describe the internal structure of the Sun.  Outcome #9:  Explain how stellar distances are determined.  Outcome #10:  Summarize the composition and properties of interstellar matter. | Assessment Measure:  Ch 8-11 Homework  Quiz 7-10  Exam 2  Final Exam  Criterion for achievement:  60% of students earned 80% or above in homework 8-11  60% of students earned 60% or above in Quiz 7-10  60% of students earned 60% or above in exam 2  60% of students earned 60% or above in Final Exam | Results:  89% of students had an aggregate score of 80% or more on Ch 8-11 homework.  88% of students had an aggregate score of 60% or more on quiz 7-10.  86% of students had an aggregate score of 60% or more on exam 2.  72% of students had an aggregate score of 60% or more on Final Exam.  Criterion Met: Yes | 1. Results Analysis:  Expected results  2. Action Plan: |
| Outcome #11:  Explain why stars evolve off the main sequence.  Outcome #12:  List the key properties of neutron stars, and outline how these strange objects are formed. | Assessment Measure:  Ch 12-13 Homework  Quiz 11  Lab 3  Final Exam  Criterion for achievement:  60% of students earned 80% or above in homework 12-13  60% of students earned 60% or above in Quiz 11  60% of students earned 60% or above in Final Exam | Results:  81% of students had an aggregate score of 80% or more on Ch 12-13 homework.  86% of students had an aggregate score of 60% or more on quiz 11.  72% of students had an aggregate score of 60% or more on Final Exam.  Criterion Met: Yes | 1. Results Analysis:  Expected results  2. Action Plan: |
| Outcome #13:  Explain the importance of variable stars in determining the size and shape of our Galaxy.  Outcome #14:  List the basic properties and main types of normal galaxies. | Assessment Measure:  Ch 14-15 Homework  Quiz 12-13  Final Exam  Criterion for achievement:  60% of students earned 80% or above in homework 14-15  60% of students earned 60% or above in Quiz 12  60% of students earned 60% or above in Final Exam | Results:  90% of students had an aggregate score of 80% or more on Ch 14-15 homework.  82% of students had an aggregate score of 60% or more on quiz 12.  72% of students had an aggregate score of 60% or more on Final Exam.  Criterion Met: Yes | 1. Results Analysis:  Expected results  Follow up:  This was a completely online course. I’ve introduced a simulation laboratory component to the course and had positive feedbacks from students about that addition. I also believe, that increases student’s understanding of the course materials much better. I’d consider increasing simulation laboratory activities in the next semester. Also, I would encourage students to use the tutoring facilities regularly. |

**Notes:**

I have reviewed this report:

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Department Chair Dean

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Vice President of Academic Affairs and Student Services

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