

## Course Outcomes Guide (COG)

**Directions:** Please complete this form to document your progress toward improving student learning. For each item, indicate your progress and your anticipated next steps. Thank you!

**Course Title:** PHS 109 Meteorology

**Date:** 5/14/17

**Course Team:** David Terlizzi

### Expected Learning Outcomes

1. Explain how solar energy creates the weather experienced in their daily lives;
2. Use tools available to meteorologists to explore, analyze, and interpret the relationship between earth and its atmosphere.
3. Describe the different layers of the atmosphere and the changes in air temperature that occur in each.
4. Explain the differences between solar and terrestrial radiation and how they are measured.
5. Distinguish the difference between heat and temperature.
6. Calculate specific heat and explain its significance.
7. Define air pressure, and draw the wind circulation patterns associated with pressure areas.
8. Compute specific, relative, and maximum humidity for parcels of air at different altitudes.
9. Explain the different processes that produce precipitation.
10. Access, process, analyze, and synthesize scientific weather information and relate it to current and future weather conditions and climate change

**Assessment** (How do or will students demonstrate achievement of each outcome? Please attach a copy of your assessment electronically.)

1. In-class exams and quizzes with combination of multiple-choice, short answer, and essay.
2. Various homework assignments.
3. Comprehensive final exam.
4. Online laboratories.

**Validation** (What methods have you used or will you use to validate your assessment?)

We offer only one section of this course so we have only been using our standard exams.

**Results** (What do your assessment data show? If you have not yet assessed student achievement of your learning outcomes, when is assessment planned?)

We are still working on the process. Spring 2017, is the first time we are reporting any actual data, so we do not have any analysis or comparisons to make at this time. One thing to note is that overall, the scores for fall are higher than the scores for spring.

**Follow-up** (How have you used or how will you use the data to improve student learning?)

Instructors will use the detailed analysis of the exams to help improve their teaching styles and content delivery for the course. We will continue to improve upon the scores, as well as, data collection and reporting for this course.

**Budget Justification** (What resources are necessary to improve student learning?)

No further resources are needed.

**Course: PHS 109****SLOA Data****Faculty Team: D. Terlizzi**

	FA 2016	SP 2017	FA 2017	SP 2018	FA 2018	SP 2019
# Active students	33	35				
%W						
*% walk-away Fs No final exam/grade = F	0	3%				
% Success (A,B,C)						
Mean Lab Score	90.0%	86.9%				
Comprehensive Final Exam Score	73.8%	69.7%				
Gen Ed Assessment (for all sections of the course)	76.9%	83.0%				
Mean course grade						
Item Analysis <b>Weakest Content Areas</b>						

\*% Walk-away Fs = Did not take the final exam and received a grade of F.

**Content Areas**