## Anthropology

| Outcome  | Measureable Criteria  | Measurement Tool | Courses                  | Time Frame        |
|--|---|------------------|--------------------------|-------------------|
| Identify concepts and approaches of anthropology | Essay grading rubric, focusing on argumentation/analysis and anthropological evidence | Final Essay      | ANTH 221<br>(Section 01) | Fall 2017<br>term |

## **Results:**

#### Rubric View: Essay Rubric

| E                     | (4 pts) | encpeveloped Proficienc<br>(3 pts) | Marginal Proficienc<br>(2 pts) | kacks Demonstrated Pro<br>(1 pts) | oficiency<br>Mean Mode Stdev    |
|-----------------------|---------|------------------------------------|--------------------------------|-----------------------------------|---------------------------------|
| Argument and Analysis | 12      | 4                                  | 2                              | 0                                 | 3.556 4.000 0.685               |
| Evidence and Citation | 12      | 5                                  | 1                              | 0                                 | 3.611 4.000 0.591               |
| Organization          | 13      | 4                                  | 1                              | 0                                 | 3.667 4.000 0.577               |
| Clarity and Mechanics | 7       | 8                                  | 3                              | 0                                 | 3.222 3.000 0.711               |
| Argument and Analysis |         | 12 (66.67%)                        |                                | 4 (22                             | 2 (11.11)                       |
| Evidence and Citation |         | 12 (66.67%)                        |                                | 5 (27.7                           | 8%)<br>1 (5.569                 |
| Organization          |         | 13 (72.22%)                        |                                | 4 (2                              | 2.22%)<br>1 (5.569              |
| Clarity and Mechanics |         | 7 (38.89%)                         | 8 (44                          | .44%)                             | 3 (16.67%)                      |
|                       |         | Exemplary<br>Proficiency           | Developed<br>Proficiency       | Marginal<br>Proficiency           | Lacks Demonstrat<br>Proficiency |

Of the 18 students who completed the assignment, 12 achieved exemplary proficiency in argumentation and analysis, 4 demonstrated developed proficiency, and 2 demonstrated marginal proficiency. None of the students who completed the assignment earned below a 70% on this dimension of the criteria.

Of the 18 students who completed the assignment, 12 achieved exemplary proficiency in application of anthropological evidence, 5 demonstrated developed proficiency, and 1 demonstrated marginal proficiency. None of the students who completed the assignment earned below a 70% on this dimension of the criteria.

#### Analysis:

This was a summative assignment and reflected the culmination of work that had been conducted throughout the term. Students had the opportunity to submit multiple drafts of the final essay, allowing them to engage more deeply with the concepts and approaches in anthropology over time and to develop stronger analytical skills through the process of revision.

#### Plan:

This outcome was successful. I will continue to use this method for teaching students how to identify concepts and approaches of anthropology in the future.

## Chemistry

| Outcome 1                       | Measureable Criteria                 | Measurement Tool | Courses  | Time Frame              |
|---------------------------------|--------------------------------------|------------------|----------|-------------------------|
| Utilize knowledge of chemical   | An average score of at least 80% or  | Homework,        | CHEM 110 | Data collection begins: |
| structure to predict and        | better on homework and 70% or better | Exams            | CHEM 221 | 2015-2016               |
| explain the physical properties | on homework and exam questions       |                  | CHEM 222 |                         |
| of chemical materials.          | relating to chemical structure.      |                  | CHEM 223 | Analysis begins:        |
|                                 |                                      |                  |          | 2016-2017               |

# 2015-2016 Results:

| CHEM 221 – FL15 | Average |            | Average |            | Average |
|-----------------|---------|------------|---------|------------|---------|
| HW Chp. 1       | N/A     | HW Chp. 7  | 87%     | Exam 1     | 79%     |
| HW Chp. 2       | 96%     | HW Chp. 8  | 93%     | Exam 2     | 70%     |
| HW Chp. 3       | N/A     | HW Chp. 9  | 86%     | Final Exam |         |
| HW Chp. 4       | N/A     | HW Chp. 10 | 90%     |            |         |

| CHEM 110 - FL15 | Average |            | Average |            | Average   |
|-----------------|---------|------------|---------|------------|-----------|
| HW Chp. 2       | 91%     | HW Chp. 8  | 79%     | Exam 1     | 80%       |
| HW Chp. 3       | 97%     | HW Chp. 17 |         | Exam 2     | 57% (n=1) |
| HW Chp. 5       | 84%     | HW Chp. 19 |         | Final Exam |           |
| HW Chp. 6       | N/A     | HW Chp. 21 |         |            |           |

Analysis:

CHEM 221CHEM 110Homework: 90%, Exams: 75%Homework

Homework: 88%, Exams: 69%

#### Plan:

I will continue to examine my teaching methodologies and exam and homework questions to improve these numbers.

Further, although students have met my standards, it is difficult to know whether they have met national standards. To compare student achievement in my courses to student achievement in General Chemistry courses nation-wide, I plan to administer an American Chemical Society approved exam for general chemistry at the conclusion of CHEM 223.

| Outcome 1                            | Measureable Criteria               | Measurement Tool   | Courses  | Time Frame              |
|--------------------------------------|------------------------------------|--------------------|----------|-------------------------|
| Utilize knowledge of <b>chemical</b> | CHEM 110/GS 105/CHEM 221: at least | Homework,          | GS 105   | Data collection begins: |
| structure to predict and             | 75% achieve "emerging proficiency" | Exams,             | CHEM 110 | WT17                    |
| explain the physical properties      | CHEM 222: at least 75% achieve     | Chemical structure | CHEM 221 |                         |
| of chemical materials.               | "marginal proficiency"             | rubric             | CHEM 222 | Analysis begins:        |
|                                      | CHEM 223: at least 75% achieve     |                    | CHEM 223 | SP17                    |
|                                      | "developed proficiency"            |                    | CHEM 245 |                         |
|                                      | CHEM 245/246/247: at least 75%     |                    | CHEM 246 |                         |
|                                      | achieve "exemplary proficiency"    |                    | CHEM 247 |                         |

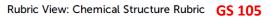
## 2016-2017 winter Results:

| WIN<br>Rubric View:                   | ITER 2017                           |                                     | ibric <b>C</b> h                 | IEM 110                            | Exemp<br>Proficie  | -     |       | Develop<br>Proficier | M<br>Pi |
|---------------------------------------|-------------------------------------|-------------------------------------|----------------------------------|------------------------------------|--|-------|-------|----------------------|---------|
| I                                     | Exemplary<br>Proficiency<br>(4 pts) | Developed<br>Proficiency<br>(3 pts) | Marginal<br>Profiency<br>(2 pts) | Emerging<br>Proficiency<br>(1 pts) | Lacks<br>Demonstrated<br>Proficiency<br><sup>(0 pts)</sup> | Mean  | Mode  | Stdev                |         |
| Electronic<br>Structure               | 0                                   | 0                                   | 21                               | 0                                  | 2  | 1.826 | 2.000 | 0.564                |         |
| Molecular<br>Geometry                 | 0                                   | 0                                   | 0                                | 20                                 | 3  | 0.870 | 1.000 | 0.337                |         |
| Spectroscopic<br>Analysis             | 0                                   | 0                                   | 0                                | 0                                  | 0  | 0.000 | NA    | 0.000                |         |
| Electronic<br>Structure<br>std_text   | 21 (91%)                            |                                     |                                  |                                    |  |       |       | 2 (8%)               |         |
| Molecular<br>Geometry<br>std_text     | 20 (86%)                            |                                     |                                  |                                    |  |       | 3(1   | 3%)                  |         |
| Spectroscopic<br>Analysis<br>std_text |                                     |                                     |                                  |                                    |  |       |       |                      |         |

| rginal<br>ofiency                | Emerging<br>Proficiency                               | Lacks<br>Demonstrated |   |  |  |  |
|----------------------------------|---|-----------------------|---|--|--|--|
| CHEM 110 GOAL: ProWif19/RESULTS: |   |                       |   |  |  |  |
| achiev                           | st 75% of students<br>e at least<br>ging proficiency" |                       | <b>88.5%</b> of students<br>achieved at least<br>"emerging proficiency" |  |  |  |

#### Rubric View: Chemical Structure Rubric CHEM 246

|                                       | Exemplary<br>Proficiency<br>(4 pts) | Developed<br>Proficiency<br>(3 pts) | Marginal<br>Profiency<br>(2 pts) | Emerging<br>Proficiency<br>(1 pts) | Lacks<br>Demonstrated<br>Proficiency<br>(0 pts) | Mean  | Mode  | Stdev |
|---------------------------------------|-------------------------------------|-------------------------------------|----------------------------------|------------------------------------|---|-------|-------|-------|
| Electronic<br>Structure               | 3                                   | 0                                   | 0                                | 0                                  | 0   | 4.000 | 4.000 | 0.000 |
| Molecular<br>Geometry                 | 3                                   | 0                                   | 0                                | 0                                  | 0   | 4.000 | 4.000 | 0.000 |
| Spectroscopic<br>Analysis             | 0                                   | 0                                   | 3                                | 0                                  | 0   | 2.000 | 2.000 | 0.000 |
| Electronic<br>Structure<br>std_text   | 3 (100%                             | )                                   |                                  |                                    |   |       |       |       |
| Molecular<br>Geometry<br>std_text     | 3 (100%                             | )                                   |                                  |                                    |   |       |       |       |
| Spectroscopic<br>Analysis<br>std_text | 3 (100%                             | )                                   |                                  |                                    |   |       |       |       |



| k                                   | Exemplary<br>Proficiency<br>(4 pts) | Developed<br>Proficiency<br>(3 pts) | Marginal<br>Profiency<br>(2 pts) | Emerging<br>Proficiency<br>(1 pts) | Lacks<br>Demonstrated<br>Proficiency<br>(0 pts) | Mean  | Mode  | Stdev |    |
|-------------------------------------|-------------------------------------|-------------------------------------|----------------------------------|------------------------------------|---|-------|-------|-------|----|
| Electronic<br>Structure             | 0                                   | 17                                  | 2                                | 0                                  | 0   | 2.895 | 3.000 | 0.307 |    |
| Molecular<br>Geometry               | 0                                   | 0                                   | 17                               | 2                                  | 0   | 1.895 | 2.000 | 0.307 | t  |
| Spectroscopic<br>Analysis           | 0                                   | 0                                   | 0                                | 0                                  | 0   | 0.000 | NA    | 0.000 | :I |
| Electronic<br>Structure<br>std_text | 17 (89%                             | )                                   |                                  |                                    |   |       | 2     | (10%) |    |
| Molecular<br>Geometry<br>std_text   | 17 (89%                             | )                                   |                                  |                                    |   |       | 2     | (10%) |    |

Proficiency

the desired level of performance in the categories of chemical of performance with regards to chemical structure.

Spectroscopic

**ANALYSIS:** Although a majority of students scored at the desired level of performance in this exercise, I believe that there is more work to be done. I do believe that these data reflect the true abilities of my students in this category, as I have been sufficiently impressed with their understanding of chemical structure. However, the data seem to indicate that nearly all of the students in the course are achieving at the same level; I do not necessarily believe this result. I think that the problem lies within the chemical structure rubric; if it were designed more carefully, it could be used to investigate these differences in abilities between students in the same course, even if they are achieving at the desired performance level.

**PLAN:** This initial assessment is promising, but I believe that students can perform even better in this area. I will take another look at the "chemical structure rubric" to see if I can change the wording of each category to better match student performance and to better tease out small differences in performance among students in the same course. Another possibility is to increase the measurable criteria for this outcome; rather than expecting 75% to perform better than "marginal proficiency", perhaps I should expect 75% to perform at or better than "developed proficiency".

| GS 105 GOAL:             | WT17 RESULTS:          |
|--------------------------|------------------------|
| At least 75% of students | 100% of students       |
| achieve at least         | achieved at least      |
| "emerging proficiency"   | "emerging proficiency" |

## Geology

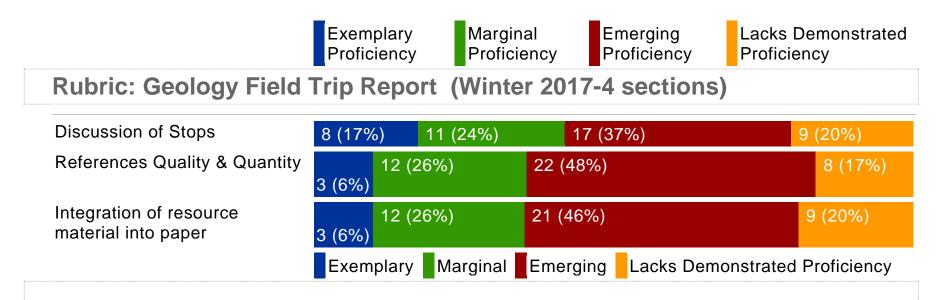
| Outcome 3   | Measureable Criteria  | Measurement Tool                        | Courses                             | Time Frame                              |
|---|---|---|-------------------------------------|---|
| Interpret and communicate<br>scientific information via<br>written, spoken, and/or visual<br>representations. | A threshold of 50% or more<br>students will exhibit Exemplary<br>& Marginal proficiency for the<br>geology field trip rubrics and<br>the GSLO Communication<br>rubric for supporting materials. | Performance on G145 field trip reports. | G145 Regional<br>Geology Field Trip | Fall 2016<br>Winter 2017<br>Spring 2017 |

# Rubric: Geology Field Trip Report (Fall 2016 – 4 Sections)

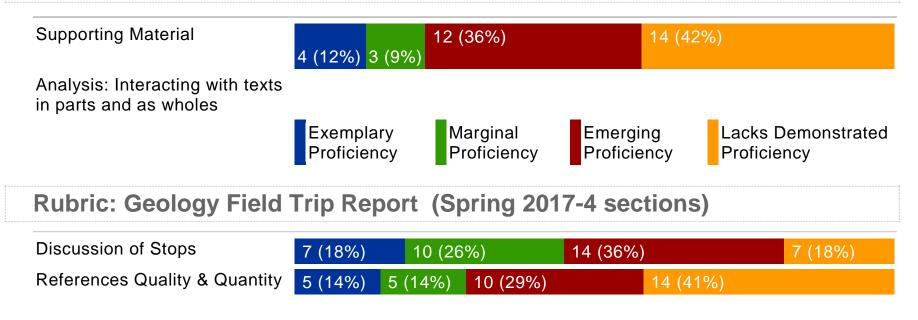
| Discussion of Stops                            | 3 (6%) | 10 (21%)   | 20 (42% | 6)     |              | 11 (23%)                  | 3 (6%)   |
|--|--------|------------|---------|--------|--------------|---------------------------|----------|
| References Quality & Quantity                  | 4 (8%) | 6 (13%) 1  | 4 (30%) |        | 14 (30%)     |                           | 8 (17%)  |
| Integration of resource<br>material into paper | 4 (8%) | 6 (13%) 1  |         |        | 2 (26%)      |                           | 23%)     |
|  | Exem   | plary Deve | eloped  | rginal | merging<br>F | _acks Demo<br>Proficiency | nstrated |

# Rubric: 4GSLO COMM Communication (Winter 2017-4 sections)

| Supporting Material                                     | 3 (6%) | 10 (22%) | 17 (37%) | 15 (33%) |
|---|--------|----------|----------|----------|
| Analysis: Interacting with texts in parts and as wholes |        |          |          |          |



# Rubric: 4GSLO COMM Communication (Spring 2017-4 sections)



| Integration of resource |                             | 10 (30%)     | 15 (45%)                  |             |
|-------------------------|-----------------------------|--------------|---------------------------|-------------|
| material into paper     | 4 (12%) <mark>4 (1</mark> 2 | 2%)          |                           |             |
|                         | Exemplary                   | Marginal Eme | erging Lacks Demonstrated | Proficiency |

**Analysis:** For the past three years I have been tracking Outcome 4 (the relevance of specific scientific principles to the human experience) with the geology field classes by utilizing grade performance. With the incorporation of LiveText into the assessment process, I have decided to further assess the field trip course by looking at both the GSLO for Communication, specifically the one looking at Supporting Material along with Outcome 3 (Interpret and communicate scientific information via written spoken, and/or visual representations). The main contribution to the final grade in G145 is a field trip report which is designed to combine a discussion of the observations made over the course of the trip along with research (and potentially further observation and description from samples-sand, fossils, rocks which are collected on the trip). For the 2016-17 year there were some decisions made by the assessment committee that changed the rubrics used for assessment. I have included the graph for Fall 2016, but will not address it further as we have changed from a five-tiered to a four-tiered rubric, and Fall 2016 did not have a GSLO required. The GSLO rubric indicated 28% (WI 17) and 21% (SP 17) meeting the threshold. When observing the 3 pieces of the rubric for discipline assessment, they all fall well short of the threshold. For discussion of stops the results show 41% (WI 17) and 44% (SP 17) are meeting the threshold; for References-Quality & Quantity 32% (WI 17) and 28% (SP 17) are meeting the threshold and for integration of resource material into paper 32% (WI 17) and 24% (SP 17) are meeting the threshold.

**Plan:** The field trip class includes both students that are in a geology class as well as independent students that are taking the regional geology field class for an elective credit. Anecdotally, students that are registered and not taking a geology class are frequently exemplary when it comes to assessment. I was fortunate to be in the three-year evaluation cycle during Winter 2017 and had one of my colleagues participate and evaluate one of the field classes. They indicated that the material was easy to access in our LMS system (handout packet and post trip memo are both in eLearning) and that the course and expectations were well presented. The disconnect lies between the materials and instructions available to students, and the final product that is being submitted. While there are excellent well referenced and written reports, many fall short of expectations. As a response to this issue, for the last several years I have offered to review a draft of partial or complete trip reports prior to the due date. I have not recorded how many students have taken advantage of this offer, but it has been relatively limited. Suggestion is also made in the handout materials that students have access to the writing center on campus as well.

My goal for 2017-18 is to see an improvement in quality of trip reports both from greater observations made in the discussion of stops section and through use of references (GSLO, quality & quantity of references and the integration of resource material). I believe that if students turn in a draft copy of their reports, it will give them an opportunity to improve their final product. Towards this end, my plan for 2017-18 is to have 5 points towards the final grade come from the draft they will need to turn in 2 weeks following the trip report. I have been making the trip reports due roughly 4 weeks following the field trip, and believe that many students put off working on the report until just before it is due. This should result in improvement of reports and after reviewing I can determine if additional adjustments are necessary.

#### Humanities

| Outcome 6   | Measureable Criteria   | Measurement<br>Tool   | Courses | Time Frame  |
|---|--|---|---------|-------------|
| Demonstrate self-reflection,<br>intellectual elasticity, widened<br>perspective, and respect for<br>diverse viewpoints. | 80% of students will be able to create a<br>successful presentation focusing on<br>one or more works of a relatively<br>unknown writer from another culture,<br>their multicultural context and<br>diversity themes. | Project guidelines<br>containing the checklist<br>with the parameters of the<br>assignment<br>The general student<br>learning outcomes rubric<br>for creative, critical, and<br>analytical thinking | ENG 109 | Spring 2017 |

## Rubric View: 4GSLO CCAT Creative, Critical & Analytical Thinking

|   | Exemplary Proficiency<br>(4 pts) | Marginal Proficiency<br>(3 pts) | Emerging Proficiency<br>(2 pts) | Lacks Demonstrated Proficiency<br>(1 pts) | Mean Mode Stdev   |
|---|----------------------------------|---------------------------------|---------------------------------|---|-------------------|
| Identifies and explains issues          | 1                                | 3                               | 2                               | 0   | 2.833 3.000 0.687 |
| Recognizes contexts and assumptions     | 0                                | 2                               | 3                               | 1   | 2.167 2.000 0.687 |
| Recognizes perspectives                 | 0                                | 2                               | 4                               | 0   | 2.333 2.000 0.471 |
| Evaluates evidence to reach conclusions | 1                                | 2                               | 2                               | 1   | 2.500 2.000 0.957 |
| Identifies and explains issues          | 1 (16%) 3 (50%)                  | 2 (33%)                         |                                 |   |                   |
| Percognizes contexts and assumptions    |                                  |                                 |                                 |   |                   |

| Recognizes contexts and assumptions     | 2 (33%) 3 (50%) 1 (16%)         |  |
|---|---------------------------------|--|
| Recognizes perspectives                 | 2 (33%) 4 (66%)                 |  |
| Evaluates evidence to reach conclusions | 1 (16%) 2 (33%) 2 (33%) 1 (16%) |  |
|   |                                 |  |

Exemplary Proficiency Marginal Proficiency Emerging Proficiency Lacks Demonstrated Proficiency

**Results:** This class had 8 registered students. 2 students didn't present in class (one was auditing the course and opted out of a public speaking situation; the other stopped attending prior to this project, but did not formally withdraw from class). Overall students have successfully met the widened perspective/ diversity outcome for literature, but because of a small sample size, these results might not be statistically significant. The average score for completers was a B-. Almost all of the students demonstrated emerging proficiency or higher.

**Analysis:** Even though the students did show inconsistent/emerging proficiency in the widened perspective/diversity outcome, the assignment did not live up to its full potential. About a third of the presentations was somewhat predictable and simplistic. Overall, students struggled with literary analysis and resorted to biographies and summarizing themes. Also, the students did not succeed at getting others excited about their chosen readings. They had an opportunity to choose somebody we WERE NOT reading as part of our class curriculum, somebody exciting, culturally diverse, and perhaps controversial. I had originally envisioned this assignment as a great opportunity to share our multicultural literature discoveries in class and add some interesting selections to our summer reading lists (mine included).

**Plan:** I will discuss this assignment with another ENG109 instructor. My expectations might be unrealistic for students taking their first ever literature course. I will incorporate individual conferences to discuss presentations with students so that they are better able to articulate their new perspectives and reflect on diversity themes and significance of their chosen works.

#### **Mathematics**

| Outcome 1   | Measureable Criteria   | Measurement Tool | Courses | Time Frame  |
|---|--|------------------|---------|-------------|
| Read, interpret, write, and communicate<br>mathematical concepts with<br>understanding, clarity, and precision. | 70% of students are proficient<br>(exemplary or marginal) in defining a<br>problem, propose solutions, and<br>implement the solution of the problem. | Final Exam       | MTH 81  | Spring 2017 |

**Results**: The sample size was 9 students, 7 of them were proficient (Exemplary or Marginal) in reading, writing and interpreting mathematical concepts with understanding, clarity and precision, and 2 of them were not. Those two students, rarely appeared in class to receive help.

**Analysis**: This was summative assessment based on the final exam, but also on one to one interactions between the instructor and the students, both inside and outside the classroom. 4 students were very comfortable with both communicating mathematical concepts and using reasoning to solve problems, and they were able to work through the book and finish the course early. The other three students, had either failed 81 before or had to take math 20 (with ALEKS) to prepare themselves for math 81. Two of the three students were proficient in communication and math reasoning, and the third was proficient only in communication but needs to keep working on his math reasoning and more particular in checking and estimating solutions.

**Plan**: Teaching math 81, after a long time was a challenge that I welcomed. Next time I am teaching the course, I will keep the same format, but will work harder on providing more support to students that might be falling behind. Given the very small sample size of this course, we cannot infer any conclusions just yet but will communicate my results with the other math faculty teaching this course and re-access again next fall.

## Rubric View: Math Program Learning Outcomes

|   | Highly developed:<br>Exemplary Proficiency<br>(4 pts) | Developed:<br>Proficient<br>(3 pts) | Developing:<br>Marginal<br>Proficient<br>(2 pts) | Emerging<br>Proficiency<br>(1 pts) | Lacks<br>Demonstrated<br>Proficiency<br>(0 pts) | Mean               | Mode  | Stdev   |
|---|---|-------------------------------------|--|------------------------------------|---|--------------------|-------|---------|
| Outcome 1: Communication  | 4   | 3                                   | 0  | 0                                  | 0   | 3.571              | 4.000 | 0.495   |
| Outcome 2: Symbolic Language  | 0   | 0                                   | 0  | 0                                  | 0   | 0.000              | NA    | 0.000   |
| Outcome 3: Mathematical Reasoning   | 4   | 2                                   | 1  | 0                                  | 0   | 3.429              | 4.000 | 0.728   |
| Outcome 4: Estimation   | 0   | 0                                   | 0  | 0                                  | 0   | 0.000              | NA    | 0.000   |
| Outcome 5: Technology   | 0   | 0                                   | 0  | 0                                  | 0   | 0.000              | NA    | 0.000   |
| Outcome 6:Demonstrate an appreciation for<br>mathematics as a rich theoretical and applied discipline.    | 0   | 0                                   | 0  | 0                                  | 0   | 0.000              | NA    | 0.000   |
| Outcome 1: Communication  | 4 (57%)   |                                     |  | 3 (42%)                            |   |                    |       |         |
| Outcome 2: Symbolic Language  |   |                                     |  |                                    |   |                    |       |         |
| Outcome 3: Mathematical Reasoning   | 4 (57%)   |                                     |  | 2 (28%)                            |   | 1                  | (14%) |         |
| Outcome 4: Estimation   |   |                                     |  |                                    |   |                    |       |         |
| Outcome 5: Technology   |   |                                     |  |                                    |   |                    |       |         |
| Outcome 6:Demonstrate an appreciation for<br>mathematics as a rich theoretical and applied<br>discipline. |   |                                     |  |                                    |   |                    |       |         |
|   | Highly developed:<br>Exemplary Proficiency            | Develope<br>Proficient              |  | oping:<br>inal Proficient          | Emerging<br>Proficiency                         | Lacks [<br>Profici |       | strated |

## **Physics**

### **Course Level Outcomes**

| Course Outcome   | Measurable Criterion  | Measurement Tool   | Courses | Time Frame  |
|--|---|--|---------|-------------|
| Apply conservation laws<br>(energy and momentum)<br>to analyze the behavior<br>of physical systems and<br>to understand when to<br>apply these laws. | Score of at least 3 on Final<br>Exam Rubric section on<br>conservation laws<br>Or<br>A total of at least 20 of 27<br>points on the final exam<br>questions involving<br>conservation of energy or<br>momentum | Group of 3 questions on the<br>final exam of PH 212 using<br>conservation laws of energy and<br>momentum | PH 212  | Winter 2017 |

**Results:** Of 14 students included in the Livetext eligible students, 13 scored at least proficient in problems involving conservation laws (3 exemplary, 10 proficient) for a success rate of 93%

**Analysis:** The final exam questions covered conservation of energy through a roller coaster type application, rotational kinetic energy of a rolling object, and angular momentum conservation. I included this range of evaluation to cover the many topics discussed during the PH 212 term involving conservation laws.

**Plan:** Going forward I will continue to emphasize conservation laws and continue to address applications to everyday life outside of the classroom.

| Course Outcome  | Measurable Criterion   | Measurement Tool  | Courses | Time Frame  |
|---|--|---|---------|-------------|
| Understand how to<br>represent and analyze<br>motion for fluids,<br>oscillations and waves. | Score of at least 3 on Final<br>Exam Rubric section on<br>oscillations/waves/fluids<br>Or<br>A total of at least 20 of 27<br>points on the final exam<br>questions | Group of 3 questions on the<br>final exam of PH 212 concerning<br>fluids, oscillations and waves. | PH 212  | Winter 2017 |

**Results:** Of 14 students included in the Livetext eligible students, only 6 scored at least proficient in problems involving oscillations, fluids, and waves (4 exemplary, 2 proficient) for a success rate of only 43%. The remaining 8 students showed an emerging proficiency but a struggle with concepts of simple harmonic motion.

**Analysis:** Simple harmonic motion problems were a struggle for many students. Some additionally struggled with applications of Bernoulli's Principle and pressures. In previous assignments, more students showed an ability to comprehend and process these problems; however, in the final culminating test, this seemed to be a stumbling block.

**Plan:** Clearly more concentration and emphasis needs to be placed on simple harmonic oscillations and their applications. More lecture examples and additional problems and experiments will be devised and incorporated.

| Course Outcome   | Measurable Criterion   | Measurement Tool   | Courses | Time Frame  |
|--|--|--|---------|-------------|
| Understand and apply<br>principles of torque,<br>elasticity, and rotational<br>equilibrium | Score of at least 3 on Final<br>Exam Rubric section on<br>torque/elasticity<br>Or<br>A total of at least 20 of 27<br>points on the final exam<br>questions | Group of 3 questions on the<br>final exam of PH 212 using<br>torque, elasticity, and rotational<br>equilibrium | PH 212  | Winter 2017 |

**Results:** Of 14 students included in the Livetext eligible students, 11 scored at least proficient in problems involving torque, elasticity, and equilibrium (6 exemplary, 5 proficient) for a success rate of 78.6% .The remaining 3 students showed an emerging proficiency. **Analysis:** While more time could and should be spent to address the effects of torque and elasticity with more practical examples. Nearly 80 percent of the students are demonstrating proficiency while the remaining students show emerging skills. **Plan:** Continue to emphasize torque and its implication for rotating systems. Emphasize rotational kinematics (angular velocities and angular accelerations). Use more tangible example for elasticity and compressions.

| Course Outcome  | Measurable Criterion   | Measurement Tool   | Courses | Time Frame  |
|---|--|--|---------|-------------|
| Make observations of<br>physical behavior and<br>find explanations of<br>sound applications that<br>are consistent with the<br>observations, apply<br>these explanations to<br>make predictions about<br>outcomes of<br>experiments | Score of at least 3 on Final<br>Exam Rubric section on sound<br>Or<br>A total of at least 27 of 36<br>points on the final exam<br>questions. | Group of 4 questions on the final exam of PH 212 using sound and its applications. | PH 212  | Winter 2017 |

**Results:** Of 14 students included in the Livetext eligible students, 8 scored at least proficient in problems involving sound and its applications (Doppler Effect, musical instruments, etc.) (2 exemplary, 6 proficient) for a success rate of 57.1%. The remaining 6 students showed an emerging proficiency.

Analysis: Sound and its applications consisted of two weeks of lecture time near the time of the final. While these two weeks are sufficient for some students, it is possible that additional lectures and work on sound should be incorporated.

**Plan:** Continue to emphasize fundamentals while also incorporating more practical examples. Develop a lab and principles of sound waves to be more complete than the musical pipe lab performed this term.

## Psychology

| Outcome 1                      | Measurable Criteria               | Measurement Tool                 | Courses      | Time Frame  |
|--------------------------------|-----------------------------------|----------------------------------|--------------|-------------|
| Demonstrate knowledge of       | 80% of the class will earn a C or | Major Writing Assignment:        | Douda PSY203 | Spring 2017 |
| the theoretical and conceptual | better on the research            | Applying Psychology to Real Life |              |             |
| frameworks of a particular     | project/essay following the       |                                  |              |             |
| Social Science discipline.     | scoring rubric for essay          |                                  |              |             |
|                                | questions.                        |                                  |              |             |

### **Results: Figures on following page**

### Analysis:

Overall, the average grade on this assignment was a 40.9/50, or an 81.8%. The biggest area for student improvement is their use and application of APA style in-text citations, where 52% of student assignments lacked demonstrated proficiency. This is an improvement over the assignment from the previous course/term (PSY202, Winter 2017), where 63% of students lacked demonstrated proficiency on their in-text citations. It is also apparent that students are better at coming up with examples to fit with certain concepts in psychology than they are at sufficiently defining those concepts.

### Plan:

Students clearly grasped the critical thinking content of this assignment, but could use improvement in clearly defining psychological concepts in a way that an audience not familiar with psychology could understand. Students' use and proper application of APA intext citations are still below expectations. In future classes using this assignment, I will spend more in-class time, in the form of low-stakes writing assignments and a group activity, demonstrating the importance of giving credit to the work of others (e.g., in-text citations). In addition, more time will also be spent helping the students understand the importance of writing clearly so that individuals who don't share their same knowledge-base can understand their ideas fully.

## Major Writing Assignment:

| First Psych Concept Identified and Defined           | 8 (42%)                  | 10 (52%)                                     |                                   | 1 (5%)            |
|--|--------------------------|--|-----------------------------------|-------------------|
| Second Psych Concept Identified and Defined          | 7 (36%)                  | 9 (47%)                                      |                                   | 3 (15%)           |
| Third Psych Concept Identified and Defined           | 6 (31%)                  | 8 (42%)                                      | 5 (26                             | 5%)               |
| Fourth Psych Concept Identified and Defined          | 6 (31%)                  | 11 (57%)                                     |                                   | 2 (10%)           |
| Fifth Psych Concept Identified and Defined           | 7 (36%)                  | 9 (47%)                                      |                                   | 2 (10%)<br>1 (5%) |
| First Personal Example Relating to Concepts Defined  | 10 (52%)                 |  | 8 (42%)                           | 1 (5%)            |
| Second Personal Example Relating to Concepts Defined | 12 (63%)                 |  | 6 (31%)                           | 1 (5%)            |
| Third Personal Example Relating to Concepts Defined  | 12 (63%)                 |  | 5 (26%)                           | 2 (10%)           |
| Fourth Personal Example Relating to Concepts Defined | 11 (57%)                 |  | 7 (36%)                           | 1 (5%)            |
| Fifth Personal Example Relating to Concepts Defined  | 9 (47%)                  | 6 (3:  | 1%)                               | 3 (15%)<br>1 (5%) |
| Title  | 19 (100%)                |  |                                   |                   |
| Formatting   | 19 (100%)                |  |                                   |                   |
| Editing  | 17 (89%)                 |  |                                   | 1 (5%) 1 (5%)     |
| ΑΡΑ  | 8 (42%)                  | 10 (1<br>1 (5%)                              | 52%)                              |                   |
|  | Exemplary<br>Proficiency | Marginal Emerging<br>Proficiency Proficiency | Lacks Demonstrated<br>Proficiency | Non-<br>Existent  |

## Major Writing Assignment, GSLO Rubric:

Rubric View: 4GSLO CCAT Creative, Critical & Analytical Thinking

|   | Exemplary Proficiency<br>(4 pts) | Marginal Proficiency<br>(3 pts) | Emerging Proficiency<br>(2 pts) | y Lacks Demonstrated Pr<br>(1 pts) | oficiency Mean    | Mode       | Stdev |
|---|----------------------------------|---------------------------------|---------------------------------|------------------------------------|-------------------|------------|-------|
| Identifies and explains issues          | 8                                | 9                               | 2                               | 0                                  | 3.316             | 3.000      | 0.653 |
| Recognizes contexts and assumptions     | 0                                | 0                               | 0                               | 0                                  | 0.000             | NA         | 0.000 |
| Recognizes perspectives                 | 0                                | 0                               | 0                               | 0                                  | 0.000             | NA         | 0.000 |
| Evaluates evidence to reach conclusions | 14                               | 5                               | 0                               | 0                                  | 3.737             | 4.000      | 0.440 |
| Identifies and explains issues          | 8 (42%)                          |                                 | 9 (479                          | 6)                                 |                   | 2 (1       | .0%)  |
| Recognizes contexts and assumptions     |                                  |                                 |                                 |                                    |                   |            |       |
| Recognizes perspectives                 |                                  |                                 |                                 |                                    |                   |            |       |
| Evaluates evidence to reach conclusions | 14 (73%)                         |                                 |                                 |                                    | 5 (26%)           |            |       |
|   | Exemplary                        | Proficiency Mar                 | ginal Proficiency               | Emerging Proficiency               | Lacks Demonstrate | d Proficie | ncy   |

## Writing

| Be able to use multiple writing<br>strategies in order to explore,<br>clarify, and effectively<br>communicate ideas to80% demonstrating proficiency<br>proficiencyEssay Grading Rubric Evaluation<br>of in-class persuasive essay with<br>introduction, outline, and<br>conclusionWR 122Winter 2017Winter 2017Of in-class persuasive essay with<br>introduction, outline, and<br>conclusionWR 122Winter 2017 | Outcome 1   | Measureable Criteria          | Measurement Tool   | Courses | Time Frame  |
|--|---|-------------------------------|--|---------|-------------|
| appropriate audiences.   | strategies in order to explore,<br>clarify, and effectively<br>communicate ideas to | 80% demonstrating proficiency | of in-class persuasive essay with introduction, outline, and | WR 122  | Winter 2017 |

### **Results:** (See chart below)

**Analysis:** 82 % of the students demonstrated audience awareness when writing a persuasive essay, but more should be moving to an exemplary level. It is possible that a summative assignment done in class as a final examination depresses the level of audience awareness the students should be demonstrating. It might be wise to assess a final essay that is written to specific audience profile.

**Plan:** I might have students do a pre-writing exercise that demonstrates how they would frame the same argument differently for two different audiences. Another idea to is have student engage in more meta-discourse about what steps they had taken to persuade their specific audience.

Rubric View: SWOCCwritten communication rubric

|   | Exemplary<br>Proficiency<br>(4 pts) | Demonstrates<br>Proficiency<br>(3 pts) | Emerging<br>Proficiency<br>(2 pts) | Lacks<br>Demonstrated<br>Proficiency<br>(1 pts) | Mean  | Mode  | Stdev |
|---|-------------------------------------|--|------------------------------------|---|-------|-------|-------|
| Context of and Purpose for<br>Writing Includes considerations of<br>audience, purpose, and the<br>circumstances surrounding the<br>writing task(s).           | 1                                   | 14                                     | 2                                  | 0   | 2.941 | 3.000 | 0.416 |
| Content Development   | 0                                   | 8                                      | 9                                  | 0   | 2.471 | 2.000 | 0.499 |
| Genre and Disciplinary<br>Conventions Formal and informal<br>rules inherent in the expectations<br>for writing in particular forms<br>and/or academic fields. | 1                                   | 8                                      | 8                                  | 0   | 2.588 | 2.000 | 0.600 |
| Sources and Evidence  | 0                                   | 11                                     | 6                                  | 0   | 2.647 | 3.000 | 0.478 |
| Control of Syntax and Mechanics   | 0                                   | 9                                      | 8                                  | 0   | 2.529 | 3.000 | 0.499 |
| Context of and Purpose for<br>Writing Includes considerations<br>of audience, purpose, and the<br>circumstances surrounding the<br>writing task(s).           | 14<br>1 (5%)                        | (82%)                                  |                                    |   |       | 2     | (11%) |
| Content Development   | 8 (47%)                             |  | 9(                                 | 52%)  |       |       |       |
| Genre and Disciplinary<br>Conventions Formal and informal<br>rules inherent in the expectations<br>for writing in particular forms<br>and/or academic fields. | 8 (*<br>1 (5%)                      | 47%)                                   |                                    | 8 (47%)   |       |       |       |
| Sources and Evidence  | 11 (64%)                            |  |                                    | 6 (35   | 5%)   |       |       |
| Control of Syntax and Mechanics   | 9 (52%)                             |  |                                    | 8 (47%)   |       |       |       |

| Outcome 1  | Measureable Criteria  | Measurement Tool  | Courses | Time Frame  |
|--|---|---|---------|-------------|
| Research, discover, and<br>develop information resources<br>and structure verbal messages<br>to increase knowledge and<br>understanding. | 80% or more of WR121<br>students will be able to write an<br>expository essay explaining an<br>academic concept to their<br>readers and properly<br>documenting their sources in<br>MLA format. | Concept Essay Assessment<br>Rubric developed by instructor<br>SWOCC written communication<br>rubric | WR121   | Winter 2017 |

**Results:** Of the nineteen students, 3 did not turn in their concept essay assignments. Since LiveText captures data solely for degree seeking students, the results of additional 3 students are missing from this analysis.

|  | Exemplary<br>Proficiency<br>(4 pts) | Demonstrates<br>Proficiency<br>(3 pts) | Emerging<br>Proficiency<br>(2 pts) | Lacks<br>Demonstrated<br>Proficiency<br>(1 pts) | MeanModeStdev   |
|--|-------------------------------------|--|------------------------------------|---|-----------------|
| Context of and Purpose for Writing Includes<br>considerations of audience, purpose, and the<br>circumstances surrounding the writing task(s).              | 7                                   | 3                                      | 3                                  | 0   | 3.3084.0000.821 |
| Content Development  | 5                                   | 6                                      | 2                                  | 0   | 3.2313.0000.697 |
| Genre and Disciplinary Conventions Formal and<br>informal rules inherent in the expectations for<br>writing in particular forms and/or academic<br>fields. | d 6                                 | 5                                      | 2                                  | 0   | 3.3084.0000.722 |
| Sources and Evidence   | 7                                   | 3                                      | 3                                  | 0   | 3.3084.0000.821 |
| Control of Syntax and Mechanics  | 4                                   | 7                                      | 2                                  | 0   | 3.1543.0000.662 |
| Context of and Purpose for Writing<br>Includes considerations of audience,<br>purpose, and the circumstances<br>surrounding the writing task(s).           | 6)                                  | 3 (23%) 3 (23%)                        |                                    |   |                 |
| Content Development 5 (389   | 6)                                  | 6 (46%)                                | 2 (                                | 15%)  |                 |

| Genre and Disciplinary Conventions  | 6 (46%) | 5 (38%)         | 2 (15%) |
|---|---------|-----------------|---------|
| Formal and informal rules inherent in<br>the expectations for writing in particular | r       |                 |         |
| forms and/or academic fields.   |         |                 |         |
| Sources and Evidence  | 7 (53%) | 3 (23%) 3 (23%) |         |
| Control of Syntax and Mechanics   | 4 (30%) | 7 (53%)         | 2 (15%) |

**Analysis:** Overall, students were significantly more successful with this essay than their earlier essays. Their writing improved slowly throughout the term as long as they completed all assignments, attended regularly, and took advantage of revision opportunities offered after most important assignments. Concept essay is their last written assignment in WR121. It's the only essay assignment that requires students to prepare for and attend a mandatory writing conference with me. I scheduled these mandatory conferences in lieu of responding to students' rough drafts via email. Written responses to every rough draft earlier in the term were time consuming, and not very effective. (Only about 50% of students seemed to care about my feedback enough to check their email, go over my recommendations and revise accordingly – very frustrating!) In-person conferences seemed a lot more successful in this respect (All attending students made at least some of the improvements we explicitly discussed during our meeting.)

#### Plan: 1. Rethink rough draft feedback in WR121.

- 2. Examine the feasibility of a required writing conference with at least 2 if not 3 essay assignments. It's a challenge in terms of logistics, but according to both student evaluations and essay results, this form of rough draft feedback seems to be more effective.
- 3. Introduce additional audience analysis activities.
- 4. Introduce additional activities focusing on style and grammar/mechanics.

| Outcome 2   | Measureable Criteria  | <b>Measurement Tool</b>   | Courses | Time Frame  |
|---|---|---|---------|-------------|
| Demonstrate consistent use of<br>conventions particular to a specific<br>writing task including organization,<br>content, presentation, and stylistic<br>choices. | 80% or more students will earn a grade<br>of 70% or better for an annotated<br>bibliography formatted in either MLA<br>or APA style | <ol> <li>Instructor's rubric assessing<br/>students' MLA/APA format, quality of<br/>sources, content and mechanics</li> <li>SWOCC written communication<br/>rubric</li> </ol> | WR 227  | Spring 2017 |

Rubric View: SWOCCwritten communication rubric

|   |                                   | Exemplary<br>Proficiency<br>(4 pts) | Demonstrates<br>Proficiency<br>(3 pts) | Emerging<br>Proficiency<br>(2 pts) | Lacks Demonstrated<br>Proficiency<br>(1 pts) | Mean     | Mode     | Stde  |
|---|-----------------------------------|-------------------------------------|--|------------------------------------|--|----------|----------|-------|
| Context of and Purpose for Writing Includes consideration<br>circumstances surrounding the writing task(s).   | ns of audience, purpose, and the  | 1                                   | 14                                     | 7                                  | 0  | 2.727    | 3.000    | 0.53  |
| Content Development   |                                   | 0                                   | 14                                     | 8                                  | 0  | 2.636    | 3.000    | 0.48  |
| Genre and Disciplinary Conventions Formal and informal r<br>for writing in particular forms and/or academic fields.                                     | ules inherent in the expectations | 0                                   | 14                                     | 6                                  | 2  | 2.545    | 3.000    | 0.65  |
| Sources and Evidence  |                                   | 1                                   | 13                                     | 8                                  | 0  | 2.682    | 3.000    | 0.55  |
| Control of Syntax and Mechanics   |                                   | 1                                   | 18                                     | 3                                  | 0  | 2.909    | 3.000    | 0.41  |
| Context of and Purpose for Writing Includes<br>considerations of audience, purpose, and the<br>circumstances surrounding the writing task(s).           | 14 (63%)<br>1 (4%)                |                                     |  |                                    | 7 (31%)                                      |          |          |       |
| Content Development   | 14 (63%)                          |                                     |  |                                    | 8 (36%)                                      |          |          |       |
| Genre and Disciplinary Conventions Formal and informal<br>rules inherent in the expectations for writing in particular<br>forms and/or academic fields. | 14 (63%)                          |                                     |  |                                    | 6 (27%)                                      |          | 2(       | 9%)   |
| Sources and Evidence  | 13 (59%)<br>1 (4%)                |                                     |  |                                    | 8 (36%)                                      |          |          |       |
| Control of Syntax and Mechanics   | 18 (81%)<br>1 (4%)                |                                     |  |                                    |  | 3        | 3 (13%)  |       |
|   | Exemplary Proficiency             | Demonstrates P                      | Proficiency                            | Emerging Profic                    | ciency 📒 Lacks Demo                          | onstrate | d Profic | iency |

**Results:** WR 227 students have successfully met the conventions outcome for writing as demonstrated through their MLA/APA annotated bibliography assignment. However, of the 27 students, 3 did not turn in their bibliography homework. Since LiveText captures data solely for degree seeking students, the results of additional 2 students are missing from this analysis. The average score

for completers was 53.93/60, which was a B. Overall 91% of students who submitted this assignment earned a grade of 70% or better. Almost all of the students demonstrated emerging proficiency or higher. Only two students lacked demonstrated proficiency in genre and disciplinary conventions. These results were significantly better when compared to annotated bibliography scores achieved in previous years when almost a third of the class lacked demonstrated proficiency in at least one if not two assessed criteria.

**Analysis:** It is a successful assignment overall. After reviewing the poor results from previous years, I worked on revising/clarifying assignment directions, building a rubric, providing additional examples to demonstrate successful completion, and explaining to students the shortcomings of automatic citation makers. These revisions have produced very encouraging results and visible improvement. I am pleased with how my revised annotated bibliography assignment turned out. It allows WR227 students to locate authoritative sources and assess their relevance, purpose, audience and practical applicability in preparation for the term project due later in the term. The annotations provide a good opportunity to practice acceptable paraphrases and summaries.

**Plan:** No significant improvements are needed. The only course of action I can see at this time would be possibly experimenting with the timing of this assignment to see if I can reach 100% completion rate. It's currently assigned in Week 3 and paired up with another somewhat challenging assignment. It's an intense week. Also, additional updates will be needed to reflect the newest MLA, 8<sup>th</sup> ed. I will make these changes when the publisher updates our WR227 textbook to the newest format.