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Dean of Science and Mathematics 2010-12-07

Students will be able to develop and support conclusions drawn from an analysis of data.

CHEM 2122 will be given a chemical problem that can be solved by applying standard lab techniques used earlier in the semester. The students will develop a detailed procedure. After an initial evaluation of the student's plan to insure the safety and workability of the plan, the students will carry out their written procedures, solve the problem, and write a conclusion that is well supported by data. The conclusion paragraph will be evaluated using a faculty developed rubric. (Note: This assessment tool will be used to collect data for both outcome 2 and outcome 3.)

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of the students will solve the problem correctly. At least 80% of the students will be rated as competent or higher in writing well supported conclusions according to the rubric.

CHEM 2122: As described in Outcome 2, 56 students in all three sections of CHEM 2122 were asked to determine the identity of an unknown solid or liquid. During the first lab session, the students identified and wrote procedures for two laboratory techniques that could be used together to identify an unknown. During the second session, the students were required to carry out the procedures, collect and analyze the data, and write a well-supported conclusion that identified the unknown.

Beginning this year, each student's conclusion was evaluated separately for evidence of both effective data analysis and the level of support provided. Faculty-developed rubrics were used to classify the student's efforts in each area as superior, competent, developing, or unacceptable. The goal is for 80% of students to be able to correctly identify their unknown and be rated competent or higher in both data analysis and the level of support presented for their conclusion. As shown in Table 12, an increase in the number of students who were able to correctly identify the assigned unknown was observed (77% vs. 70% in 2009). The majority of students assessed were also rated competent or higher in both data analysis (57%) and support (71%), but the goal of 80% was not achieved. Since this is the first year that this rubric has been used, it is not possible to compare this year's results with previous results.

Significant differences in students' abilities to both analyze their data and support their conclusion effectively were observed depending on whether students were taught by a full-time faculty or an adjunct faculty. For example, 66% of the students in the two sections taught by full-time faculty were rated competent or higher in data analysis vs. only 43% of the students in the section taught by an adjunct faculty member. Similarly, 89% (exceeding the assessment goal) of students in sections taught by full-time faculty were rated competent or higher in terms of support while only 43% of the students in the section taught by the adjunct faculty were given the same rating. These differences are *not* the result of variations in evaluation by different faculty. One faculty member read and evaluated *all* of the lab practicals using the same rubrics and criteria for the purposes of this report. It should be noted that in a number of instances there were significant variations between the rating assigned by the faculty member generating this data/report and the adjunct faculty member. In some cases, the adjunct faculty member assigned a competent or even superior rating to work that had significant errors in data analysis and/or lacked any discernible support other than the experimental data. This indicates that we failed to effectively communicate our expectations to this adjunct faculty member. As a result, it is unlikely that students were provided with appropriate feedback during the course, resulting in poorer performance.

The improvements observed in the level of support included in conclusions written by students in sections

taught by full-time faculty are a direct result of the changes made in the Organic laboratory during this past year. Beginning with the Spring 2009 semester, the lecture and laboratory portions of the Organic course sequence were separated into separate courses. Along with this change, the format of the lab changed as well, with considerable emphasis being placed on drawing and writing conclusions. Each of the laboratory exercises that students complete now require a thorough conclusion section be written. This section is worth 25% of the grade for the lab exercise. It is clear that “holding their feet to the fire” with *appropriate* feedback makes a measurable difference in student performance.

CHEM 1215 will be able to correctly identify an unknown compound and write a conclusion that is well supported by data. The conclusion paragraph will be evaluated using a faculty-developed rubric.

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At least 80% of students will be able to correctly identify their unknown compound. At least 80% of the students will be rated as competent or higher in writing well supported conclusions according to the rubric.

An exercise in which students analyze data, draw conclusions, and write a well-supported conclusion paragraph was introduced during the Spring 2007 semester. In this activity the students analyze information from the titration of an unknown polyprotic acid, identify the acid from a list of standards through several data analysis steps, then write a well-supported conclusion paragraph. 224 students in fifteen sections of CHEM 0220 (the CHEM 1215 lab) completed the exercise. The results are summarized in Table 13. The benchmark for this outcome is that at least 80% of students will be able to identify their unknown compound correctly and properly use their data to write supporting statements in their conclusions. In the 2010 academic year, 89% of the students correctly identified the unknown.

In 2007-2009, we categorized the students as “completely supporting” their identification of the acid, “incompletely supporting,” “incorrectly supporting,” or “making a lucky guess.” The difference in criteria between completely supporting and incompletely supporting was such that we felt more students were *competently* supporting their identification than we were showing. We also noted that incorrect analysis of the data was a factor that affected our assessment of support when really it should be considered independently.

Starting in the fall of 2009, we modified the rubric by which we assessed the exercises (we did not change the exercises themselves) and separated data analysis from support. We also changed the classifications to “superior,” “competent,” “developing,” and “unacceptable.” For the 2010 academic year, we classified 54% of the students as competent or superior in analyzing the data and 64% of the students as competent or superior in supporting their identification with a well-written conclusion. Both are encouraging but below the goal of 80%.

To summarize, we met the goal of 80% for correct identification of the unknown, but are below the goal of 80% in data analysis and support.

This academic year we have introduced a new Chem 0220/1215 lab in which the emphasis is on data analysis and writing well-supported conclusions to see if this will result in an improvement in these two areas. We have introduced a similar lab exercise into CHEM 0110/1115.

Additional training for faculty who are teaching the Organic chemistry lab for the first time should help eliminate the discrepancies observed between full-time and adjunct faculty. One approach to consider is having new-to-the-course faculty and experienced faculty both grade representative conclusions written by previous students and then discuss the ratings assigned. This might allow us to more effectively communicate the program expectations.

We want to monitor performance on the formal report exercise in CHEM 0220/1215 to see if there is significant improvement in the ability of students to analyze their data and support their conclusions as a result of more supervised practice of these skills in the new analysis and conclusion writing lab exercise earlier in the semester. Improvements in CHEM 1215 will hopefully eventually result in improvements in CHEM 2122.

Some of the topics we need to emphasize will be communicated via email. During spring prep and planning week, we will also have the opportunity to meet face to face with the adjunct faculty. Further meetings can be arranged as needed.

We will make an edited version of our assessment report available through the Physical Sciences Department's Internet home page.

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2010 Science and Mathematics Science with Chemistry Concentration - Part 2 of 4 2010-10-04 Sonya Williams

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Dean of Science and Mathematics 2010-12-07

Students will be able to identify and apply standard chemical laboratory techniques to acquire and analyze empirical data that can be used to solve chemical problems.

CHEM 2122 will be given a chemical problem that can be solved by applying standard lab techniques used earlier in the semester. The students will develop a detailed procedure. After an initial evaluation of the student's plan to insure the safety and workability of the plan, the students will carry out their written procedures, solve the problem, and write a conclusion that is well supported by data. (Note: This assessment tool will be used to collect data for both outcome 2 and outcome 3.)

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of the students will be able to identify and carry out appropriate techniques without redirection from the instructor. At least 80% of the students will solve the problem correctly.

During the final laboratory practical exam of the semester, students in all sections of CHEM 2122 were asked to identify and use laboratory techniques to determine the identity of an unknown solid or liquid. During the first lab session, the students identified and wrote procedures for two laboratory techniques that could be used together to identify an unknown. The instructor then evaluated the procedures and provided redirection if necessary. During the second session, the students were required to carry out the procedures, collect and analyze the data, and write a well-supported conclusion that identified the unknown. Data collected from this exercise was used to assess both this outcome and Outcome 3 as described below.

Fifty-six students from all three sections of CHEM 2122 were assessed. All of the students assessed (100% in 2010 vs. 88% in 2009) were able to correctly identify at least two reasonable methods for identifying their unknown compound. A decrease in the number of students who were then able to collect reasonable data was observed this year (73% vs. 80% in 2008). This decrease was primarily associated with students who had difficulty obtaining a reasonable IR spectrum due to either the amount of sample present, ineffective grinding, or contamination with moisture. In spite of some difficulties obtaining data, most students (77% vs. 70% in 2009) were able to correctly identify their unknown sample. The conclusions that students drew regarding the identity of their unknown were analyzed as part of the

assessment of Outcome 3 and are described below. A detailed breakdown of the results from the CHEM 2122 lab practical is shown in Table 12.

The fact that 77% of all students were able to successfully identify their unknowns would indicate, on the surface, that students are relatively effective at analyzing data. In depth evaluation of their abilities to analyze data, as presented in their conclusion paragraph, revealed that only 57% of students were rated competent or higher in this area. This discrepancy is undoubtedly related, in part, to students not communicating their thought processes as effectively as we would like. There were, however, several instances in which the students made significant errors in logic, ignored data that was inconsistent or data they didn't know how to interpret, or forgot to consider experimental error. This is clearly an area that faculty need to emphasize during subsequent semesters.

Now that we are separating data analysis and the level of support provided for the conclusion, it is more apparent that our students need additional training in critically evaluating data. Beginning this fall, students in the General Chemistry labs are receiving additional formal training in data analysis. Although students in the Organic lab have a similar conclusion writing exercise at the start of the semester, we did not incorporate the separate data analysis component. In light of the difficulties students have with analyzing data in a logical manner, we need to consider incorporating such activities into the early part of the semester.

Another issue related to data analysis appears to be related to our students' abilities to effectively communicate their thought process as part of the conclusion paragraph. This is another situation in which we need to establish clear expectations and continue to hold students' "feet to the fire" throughout the semester.

Some of the topics we need to emphasize will be communicated via email. During spring prep and planning week, we will also have the opportunity to meet face to face with the adjunct faculty. Further meetings can be arranged as needed.

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2010 Science and Mathematics Science with Chemistry Concentration 2010-10-04 Sonya Williams

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Outcome 1. Students will be able to apply concepts, principles, and techniques of chemistry to solve chemically oriented problems.

Students in all program courses - CHEM 1115, CHEM 1215, CHEM 2115, and CHEM 2125 - as well as in CHEM 1123 will be given exit assessments (departmental comprehensive final exams) covering important concepts, principles, and calculation techniques covered in each of these courses or course sequences.

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80% of students should score 70% or higher on the exit assessment in all program courses.

CHEM 1115

Students completing CHEM 1115 in Fall 2009, Spring 2010, and Summer 2010 semesters were assessed using a departmental final exam covering key course objectives. A total of 24 sections and 628 students were assessed. Overall, 75.5 % of the students scored at least 70% on the final exam, with pass rates ranging from 50% to 97% for the various sections. The overall 2010 pass rate is slightly lower than the 2009 school year, but it is still higher than the overall pass rate of each school year from 2003 to 2008 (Table 1).

Error Analysis: Two exams were randomly selected for detailed error analysis from each of the total 24 sections. A total of 48 exams (7.6%) were analyzed. Table 6 shows a detailed breakdown of errors in many key areas.

Inorganic nomenclature, i.e. naming compounds and writing correct formulas, continues to be the number one problem area for CHEM 1115 students with error rates ranging from 27% to 52%. These rates are generally higher than that of the 2009 school year with the exception of a slight improvement in writing correct formulas for metal sulfate or phosphate salts. The difficulty in writing correct formulas is echoed in the increased error rate for writing chemical formulas as part of balancing a chemical equation for a metathesis reaction. This year 27% of students had at least one incorrect formula in the equation versus 17% last year.

Another area of concern is that the error rate for reporting calculations with the correct number of significant figure continued its increasing trend from 16% in 2003 to 31% in 2010.

This year the rate at which students showed no attempt to solve the more complex problems remained low. The numbers in Table 6 in the error category of "no attempt or wrong approach" for stoichiometry, molarity and density (6%, 4%, and 5% respectively) are mainly due to students taking the wrong approach rather than making no attempt at the problem. For assessment purposes we much prefer students to attempt the problems rather than leaving them blank since we can get at least some idea of where they are having difficulty. Generally speaking, the students this year were slightly better than last year in solving molarity and density problems with fewer errors in mL to L conversions in the molarity and density problems (only 4% and 6% error rates respectively this year versus 11% for both types of problems last year).

There was a significant decrease in the number of students forgetting to include ionic charge as part of a Lewis structure this year. Only 27% failed to do so versus 48% last year.

CHEM 1215

Final Assessment: Students completing CHEM 1215 in Fall 2009, Spring 2010, and Summer 2010 semesters were assessed using a departmental final exam covering key course objectives. A total of 169 students in 10 sections were assessed. Overall, 74% of the students assessed achieved a passing score of 70% or higher on the final exam (Table 2). Pass rates for individual sections of CHEM 1215 ranged from 43% to 97%. Because the 2008 and 2009 results were, to our minds, inexplicably low, and because we suspected incentive might be a factor, we changed the point value of the final from 50 to 100 points in the Spring and Summer semesters of 2010. With the 50-point final, there was an improvement (64%) over 2008 (59%) and 2009 (54%). However, it is clear that making the final worth 100 points, as are the regular unit tests, has made the students take it more seriously. Our next step is to add content to the final. This will be implemented starting in the Fall 2010 semester.

Error Analysis: This year, 78 (46%) final exams from CHEM 1215 students were randomly selected for a detailed error analysis. Detailed results and comparison to previous years are summarized in Table 7.

The concepts missed most often during 2010 were related to thermodynamic units, redox reactions, finding the correct formula and molar mass of a named organic compound, activation energy, and inorganic nomenclature.

Expressing the result of a simple ΔG calculation with the correct units (kJ instead of kJ/mol) continued to be a problem for students although there was significant improvement. Last year 82% of the students did not use the correct units. The CHEM 1215 faculty were made aware of the issue, and this particular error rate dropped significantly (to 45%) in the 2010 academic year.

Inorganic nomenclature continues to be an on-going problem with error rates ranging from 27% to 54%.

Finding the activation energy from a reaction energy diagram is still a problem for 38% of the CHEM 1215 students but the error rate did drop from the 50% observed last year. CHEM 1215 students also continued to struggle with identifying elements oxidized or reduced (35% error rate versus 38% last year) and identifying oxidizing and reducing agents in redox reactions (41% error rate versus 44% last year).

CHEM 1215 students had difficulty finding the correct chemical formula and then molar mass of a named organic compound in a molarity calculation (40% error rate). This is not a molarity issue, but an organic nomenclature issue and perhaps is due to this material being some of the very last to be presented in the semester, leaving little time for any kind of mastery of this topic.

Two areas where improvement occurred are in correctly identifying intermolecular forces (an error rate of only 15% this year continuing a trend of steady improvement since 2007 when the error rate was 37%) and in correctly calculating the hydroxide ion concentration in a pH calculation (a 26% error rate this year as compare to 43% in 2009 and 40% in 2008).

Initial Assessment: An initial assessment covering critical concepts from CHEM 1115 was administered on the first day of class to students in all sections of CHEM 1215 for semesters beginning in 2007 and ending in the summer of 2010. The structure of the initial assessment was very similar to the comprehensive final exam used in CHEM 1115. The first year's results from the initial assessment were so low that we started utilizing a lab period as a review and tutoring session for key CHEM 1115 concepts. Results are not presented in this report since the chemistry faculty has decided the initial assessment data has little utility.

CHEM 2114

Eighty-eight students from the four sections of CHEM 2114 offered during the Fall 2009 and Spring 2010 semesters were assessed using a faculty-developed comprehensive final exam. This year only 41% of all students scored at least 70% compared to 66% last year after implementing the new 100 point final exam (see Table 3). There was considerable variation in performance from section to section with "pass" rates for the four sections of 24%, 27.3%, 35.3% and 75.0%. The average exam score for all students was also lower than last year (64.7% vs. 73.8%). Again, significant variation was observed from section to section with average exam scores for each section of 52.9%, 62.2%, 65.3%, and 79.0%.

Although the results obtained this year are better than those obtained before moving to the 100 point final exam, they are lower than those obtained during the Spring 2009 semester when the 100 point exam was first used. This is very discouraging. One reason for the poorer performance relates to the use of an adjunct who taught two out of the four sections. While evaluating the errors made by students in those sections, a large number of grading errors were noticed, forcing faculty to re-grade all of those exams. When the exams were graded correctly, the average exam grade for those two sections was nearly 11 points lower than the grades assigned by the adjunct faculty. This is disturbing on several levels. First, all faculty are given a clear grading key and rubric to follow. Second, there were many instances in which the adjunct gave full credit to questions related to either reaction mechanisms or synthetic questions in

which the student did absolutely nothing right! Examples of such errors include giving full credit for mechanisms in which a hydrogen atom is part of a three-membered ring or giving full credit for a synthetic question involving a rearrangement in which students drew a structure with five bonds to carbon. Accepting such answers indicates that the adjunct's level of understanding of important organic chemistry concepts is severely lacking. Review of this adjunct's final course grades indicates very little correlation between student's grades on the final exam and their overall course grade. Students making an A or B in the course often scored well less than 70% on the comprehensive final exam. In contrast, students in the two sections taught by full-time faculty typically had course grades that were within one letter grade of their final exam score.

Error Analysis: A detailed analysis of the errors made by all students on the final exam was performed. These results are summarized and compared to those obtained previously in Table 8. As would be expected, a significant increase in error rates was observed due to the lower "pass" rate observed during this assessment cycle. As might also be expected, error rates varied significantly from section to section due to the extreme differences in pass rates. Concepts that seem to be universally challenging to our students are highlighted below.

One of the most problematic areas continues to be our students' inability to draw correct reaction mechanisms. For example, 73% of our students made one or more significant errors while illustrating the protonation of an alkene in the acid catalyzed hydration of 1-methylcyclohexene. Similarly, 65% of our students made one or more major error while illustrating the formation of an alkoxide ion which is used in the Williamson ether synthesis. In addition, 42% of the students incorrectly identified a termination step as a propagation step in free radical halogenation reaction. Some improvement was observed when students were asked to identify an S_N2 reaction mechanism (20% vs. 31%), but they continued to struggle with identifying the correct intermediate for this reaction. Drawing reaction mechanisms is such a critical skill for not only Organic I but also Organic II that we cannot afford such poor performance in this area.

A second fundamental skill in Organic Chemistry is the ability to correctly identify products for common reactions of various functional groups. Students proved to be reasonably skilled at predicting products of elimination reactions but struggled with addition reactions (44% error rate) and organometallic reactions (42% error rate). In a multi-step synthesis, students performed reasonably well in identifying the correct intermediate product (66% correct) but still had difficulty remembering to use a bulky base for the elimination step and anti-Markovnikov conditions for the formation of the final product.

Another skill that is important throughout the Organic course sequence is the ability to draw resonance structures for reactive intermediates. As reported last year, students are generally adept at drawing resonance structures for carbocations but continue to experience difficulty with carbanions. This difficulty is most likely due to the fact that students work predominately with carbocations during this course. An understanding of carbanion resonance structures is, however, very important for those students who take Organic II.

Correctly determining stereochemical relationships between compounds also proved to be difficult for students. The error rate for this concept increased significantly this year with 58% of the students incorrectly identifying the relationship between two compounds. Just as significant, the majority of students (60%) had difficulty identifying the number of asymmetric carbons present in a molecule.

This is the second year that IR spectroscopy has been included on the comprehensive final exam. A surprising number of students (mostly from the sections taught by adjunct faculty) had difficulty using a table of important IR absorption bands to correctly label peaks in the spectrum of an alcohol. Last year, identifying the O-H peak proved most problematic while this year students had trouble labeling the C-H peaks correctly. In another spectroscopy problem, students were asked to identify the structure that best matched the given IR spectrum. A much larger number of students misidentified the compound this year (52% vs 31% in 2009) with about half of those students incorrectly choosing a ketone instead of an ester.

Chem 2124

Students in CHEM 2124 (Organic Chemistry II) were given a new comprehensive final designed by the full time faculty. This new exam incorporates material from CHEM 1115, CHEM 1215 and CHEM 2114. These additional topics were added so the exam could be used to assess the overall chemistry program. Use of the new final exam started in the Fall 2009 semester and the point value of the final exam was increased to 100 points to give students an increased incentive to perform well on the final exam. This portion of the assessment report is based only on the questions that are specific for CHEM 2124 (67% of total points). The portion of the final dealing with topics from our other chemistry program courses are discussed in a later section.

In the Fall 2009 and Spring 2010 semesters, 41 students in three sections were assessed. Fourteen (14) students out of the 41 students scored at least 70% (34.1%). While there was improvement over previous years (see Table 4), the results show that we are still far from our benchmark. The improvement seen in FY10 is a little misleading because of the exceptional performance of one section during the spring semester which had 56.3% of the students scoring at least 70% on the final. The other sections that were assessed had 23.0% and 16.7% of students passing the final, which is similar to previous years.

Error Analysis: A detailed analysis of the errors made by all students on the final exam was performed. These results are summarized and compared to those obtained previously in Table 9. Comparing the FY10 results to what was observed in FY09 shows a wide range of variations in the errors being made by students on the final assessment. Though improvements were seen in several areas many areas were essentially unchanged. Of more concern was the large increase in student errors in two areas.

The largest increase in student errors was in the prediction of products from the monohydrobromination of a conjugated diene. All students (100%) failed to give both of the possible addition products. In previous years the error rates were 62.1% (FY09) and 28.2% (FY08). Detailed review of all exams found that 61% of students had given the dihydrobromination product. This question has been used in the past and does not indicate that only the possible mono addition products should be considered. It appears that most students interpreted the question as there being excess of reagent present and thus gave the di-addition product. The cause of this misinterpretation appears to be the result of two separate factors. The first is that the question as written does imply that there is an excess of reagent. The second is the inclusion of CHEM 2114 objectives on the final. It is thought that students reviewing alkene chemistry (which is covered in CHEM 2114) for the final do not understand how hydrobromination occurs with an alkene. When presented with a diene and an apparent excess of reagent they simply did a di-addition of the reagent.

There was a significant increase in the error rate for the mechanism of electrophilic aromatic substitution (78.0% error rate this year versus a 50.0% error rate in FY09). The specific cause for this increase is not known. Since electrophilic aromatic substitution is covered in the first part of the semester it is possible that students are simply not retaining the material.

The ability to relate the structure of a molecule with its' physical properties is an area of mixed student performance. Students continue to have a poor ability to recognize the differences in the basicity of different nitrogen containing compounds, with 73.2% failing to identify the strongest base in a list of compounds. In contrast to this finding 87.8% of the students were able to identify the compound that had the most acidic hydrogen.

Overall Chemistry Program Assessment

To assess the overall chemistry program at OCCC a comprehensive exam containing questions covering topics from CHEM 1115, CHEM 1215, CHEM 2114 and CHEM 2124 was developed by the full time faculty. The exam was given to all forty one (41) students that completed CHEM 2124 starting in the Fall

2009 semester. Approximately one third of the exam was devoted to General Chemistry and Organic Chemistry I topics. To prepare students for the exam they were given practice problems that covered a large range of topics in CHEM 1115, CHEM 1215 and CHEM 2114.

The average grade on the program assessment was 67.2% with grades ranging from 17.0% to 91.7%. There were 22 of the 41 student assessed (53.7%) that made 70.0% or above. This is well below our goal of having 80% of students make 70% or better on the exit assessment.

Error Analysis: A detailed analysis of the errors made by all students on the CHEM 2124 final exam was performed on questions pertaining to topics introduced in prior chemistry program courses. These results are summarized in Table 10. Data from this assessment found that the error rates for many of the topic covered were relatively low ranging from 4.9% to 29.3%. However, five (5) of the items that were evaluated had error rates ranging from 34.1% to 82.9%.

CHEM 1115 Topics

The error rates observed for skills taught in CHEM 1115 were generally low, ranging from 14.6% to 29.3%.

CHEM 1215 Topics

The area of greatest difficulty for students was the calculation of ΔG with the correct units. This is not a surprising finding since students taking CHEM 1215 have traditionally struggled with the calculating thermodynamic quantities such as ΔG with the correct units (kJ instead of kJ/mol). Of the 41 students that were evaluated 82.9% had incorrect units in their answers when calculating ΔG and 48.8% were not able to calculate the correct value for ΔG . It is not surprising that these two areas continue to be challenging to students since they have generally not worked this type of problem since taking CHEM 1215. A second CHEM 1215 topic that students (39.0%) had difficulty with was the calculation of pH. It appeared that most of the students that failed to calculate the correct pH simply did not know (remember) how to calculate pH from the data given.

CHEM 2114 Topics

Students (51.2%) could not correctly identify the reactive intermediate involved in different types of nucleophilic substitution reactions. This finding is a little puzzling since only 26.8% of students misidentified the type of reaction that was given.

The proper use of arrows in reaction mechanisms also continues to be a problem for students. Arrows were shown incorrectly 34.1% of the time in the mechanism for the simply hydrobromination of an alkene.

A gratifying result was that most students were very good at interpreting infrared (IR) spectra. Only 4.9% of students did not identify a compound as being aromatic and 12.2% did not recognize that the compound contained an ester functional group. When asked to propose a structure that was consistent with the IR data and a specific molecular formula only 14.6% of students did not have an acceptable answer. This is a very positive finding and is perhaps not surprising since after this skill is introduced in CHEM 2114, the interpretation of IR data is included in all units in CHEM 2124.

CHEM 1123

Although CHEM 1123 is generally not taken by chemistry program students (except to make up a deficiency), it is important to monitor quality of the course to insure that it meets the needs of the nursing program.

Students in seventeen of eighteen sections in FY10 were given a final exam designed by program faculty. The final was not given in one section due to lost instructional time related to college closure in the wake of spring storms.

Sixteen of the seventeen sections where the final was given reported results for a total of 408 students. Overall, 65.7% of the students scored at least 70% on the final exam with rates for individual sections ranging from 43.5% to 89.3% (Table 5). The overall pass rate for all sections is still below the goal established by program faculty ($\geq 80\%$ of students will score 70% or higher on an exit assessment) but there was considerable improvement from FY09. In contrast to FY09, there was not a significant difference between the pass rate in full time versus adjunct sections. One reason for the higher pass rate this year may be due to making a practice exam available to all sections.

Error Analysis: Three exams per section were pulled at random for a detailed error analysis. Of these 48 exams (12%), 33 (69% of the 48) had a score of 70% or better while 15 (31%) had a score below 70%. Since these pass rate percentage of the randomly selected exams was comparable to the overall pass rate of 65.7%, the sample was considered a good representation of the overall student population in the course. Table 11 shows a detailed breakdown of the errors made in key areas.

Error analysis shows that students in CHEM 1123 have many of the same difficulties as students in CHEM 1115. For instance, misidentifying the group classification for hydrogen is one of the most common errors in both courses (60% for CHEM 1123 and 38% for CHEM 1115). Students in both courses seem reluctant to use the "none of these" category when classifying hydrogen.

This year, the highest error rates were observed in the balancing of acid-base neutralization reaction (54% of students made one or more errors). The most common error was an incorrectly balanced salt formula (42% of the formulas were incorrect). The second highest error rate occurred in calculating molarity (46% of student made one or more errors). Failing to convert grams to moles (27%) and failing to convert milliliters to liters (25%) were the most common errors in this area. The individual error percentages do not add up to 46% because some students made both errors. The errors observed indicate that students frequently do not remember the basic definition of molarity. Another error with a high error frequency was in the identification of functional groups with 42% misidentifying the aldehyde functional group in a molecule. Finally, some students had trouble with the basic concept of a chemical versus physical change. Misidentifying the dissolving of sugar as a chemical change (35%) was the most frequent error in this area.

CHEM 1115: While the drop in the overall pass rate was slight, it is still of concern. Some sections may have been affected by the number of instructional days that were lost due to a number of unusual weather events that forced the college to close in the spring. College closure affected different sections at different times, with Tuesday-Thursday evening classes bearing a disproportionate number of cancellations.

Our strategy of keeping key topics such as nomenclature, stoichiometry, and molarity in front of students by repeatedly testing over these topics will continue. It was interesting that the results from the CHEM 2124 that included CHEM 1115 echoed the need for reminding students of these skills.

CHEM 1215: Students tend to focus on the calculations and neglect nomenclature and definitions. Keeping nomenclature in front of students by incorporating it into every exam is important in addressing this problem. While considerably improved, the high error rate in reporting correct units in a thermodynamic calculation emphasizes that CHEM 1215 instructors need to continually reinforce the idea that correct units are important and that showing all steps in a calculation helps one keep track of those units. This need to reinforce the importance of correct units is reinforced by the data from the final in CHEM 2124 that included CHEM 1215 topics. While MasteringChemistry has been generally positive in ensuring our students get a certain amount of practice, one weakness of MasteringChemistry in the area of unit reporting is that students do not have to type out the units as part of their answers. The correct units are shown to the right of the answer box, but students may not always note or appreciate the distinction between units of kJ and kJ/mol.

It has become clear that the initial assessment is not a useful indicator of what students may have retained from CHEM 1115 because: 1) it was given on the first day of class and students were not yet back "in the groove" of thinking chemically, and 2) there were very few to no points attached to it, so many students gave virtually no effort. The initial assessment exercise was useful in that it told us that many students needed a review of CHEM 1115 topics, but it no longer serves any real purpose. Consequently we have decided to discontinue the initial assessment. We will however, continue to utilize a lab period every semester as a review and tutoring session for key CHEM 1115 concepts.

CHEM 2114: One issue that must be addressed before we can see consistent improvement in Organic I assessment results is ensuring that all faculty who teach the course are thoroughly familiar with the concepts covered. Organic Chemistry has a lot of details and subtleties that are not always readily apparent to someone not trained in the field. Errors that seem relatively insignificant to someone who is not "skilled in the art," can be major errors from an organic perspective.

Improving our students' abilities to draw mechanisms is important since it is critical in the second semester course as well. One strategy for improving this skill is to emphasize the importance of reaction mechanisms by increasing point values and incorporating "old" mechanisms on quizzes or exams. In addition, faculty must consider how the information is presented. Students often try to memorize everything instead of understanding the process. Teaching mechanisms from a process perspective might help students apply concepts of acid-base, substitution, and elimination reactions to drawing reasonable mechanisms.

The stereochemical relationship between compounds is a topic that is covered during Unit 3 and then generally "forgotten" until the final exam. Keeping this skill in front of students by asking them related questions on exams should help improved their abilities in this area. Similarly, faculty should consider incorporating carbanion resonance structures into several quizzes or exams throughout the semester.

IR spectroscopy was incorporated between Units 1 and 2 in order to improve students' knowledge of organic functional groups as well as to allow them to experience the use of IR spectra to identify products that might form during the reactions that they study in subsequent units. Faculty need to continue to incorporate the interpretation of IR spectra into each and every exam starting with Unit 2.

CHEM 2124: Given the generally poor performance of students on writing organic reaction mechanisms on the comprehensive final, starting in the Fall 2010 semester, mechanisms covered in the first part of the semester will be incorporated into exams given later in the semester to keep the topic in front of students. If positive results are seen at the end of the semester the practice will be carried into the Spring 2011 semester. Improving performance on the CHEM 2124 comprehensive final on pH and G calculations (topics from CHEM 1215) could involve incorporating questions in these areas on exams throughout CHEM 2114 and CHEM 2124 as reminders to students that they cannot forget their general chemistry knowledge as they advance through the organic chemistry sequence.

It seems obvious that continually having students work on the interpretation of IR data during the semester in CHEM 2124 resulted in the high level of mastery of this skill that was first introduced in CHEM 2114. This finding emphasizes that mastery comes with repeated exposure and practice. Unfortunately there is simply not time in a semester to re-emphasize all the skills we would like students to leave with and not all topics would integrate as seamlessly into CHEM 2124 as IR interpretation does. We will have to pick our battles, so to speak.

CHEM 1123: The problem areas in CHEM 1123 closely parallel those CHEM 1115. Therefore instructors should repeatedly test over nomenclature and molarity. Given that CHEM 1123 is now the primary course where future OCCC nursing students first learn to use dimensional analysis for dosage calculations, conversions and dosage calculations should likewise repeatedly show up on unit exams.

Our key strategy of reminding students of the importance of key topics by repeatedly testing over these topics will continue (i.e. the beatings will continue until morale improves). In CHEM 1115 this will mean repeatedly testing over nomenclature, stoichiometry, and molarity. Unfortunately, beginning in Fall 2010 we have rearranged the order of topics in CHEM 1115. This will significantly limit the number of times we can test over these topics. The error rate may actually increase in these areas as a result.

In CHEM 1215 repeated topics on tests will include nomenclature and use of proper units in calculations.

Another area that is working and will be continued is our use of an on-line homework system, begun in Fall 2008, that "forces" students to practice the important skills and concepts. Since many problems are algorithmic, each student must complete his/her own assignment. The system also allows faculty to examine wrong answers, determine how much of the problem was attempted, how much time a student spent on the assignment, and the difficulty level of OCCC students compared to "national" averages. MasteringChemistry is currently being used in CHEM 1115, CHEM 1123, and CHEM 1215.

We also will continue using MasteringChemistry to keep the critical concepts mentioned above "in front of" students as the semester progresses. In particular, quizzes for the later units include review questions concerning these concepts, thus keeping them in the students' awareness even if they are not mentioned again in class. These review questions have been modified yet again as we change Chem 1115 to a new order of topics in Fall of 2010.

In CHEM 2114 we recommend that full time faculty cover the course as much as possible. If we have to use an adjunct to teach this class, we have to take extra pains to make sure the adjunct is truly qualified to teach organic chemistry. Repeated topics on tests will include IR, reaction mechanisms, resonance structures of carbanions, and stereochemical relationships.

Starting in the Fall 2010 semester, mechanisms covered in the first part of the semester in CHEM 2124 will be incorporated into exams given later in the semester to keep the topic in front of students. If positive results are seen at the end of the semester the practice will be carried into the Spring 2011 semester. Other repeated topics will include differences between conjugated and isolated dienes. Furthermore, the question on the CHEM 2124 comprehensive final should be re-written to make it obvious that the reaction does not involve an excess of hydrogen bromide. Key topics from CHEM 1115, 1215, and 2114 such as inorganic nomenclature, pH, and reaction mechanisms will be placed on exams and quizzes to help prepare students for the comprehensive final that comes at the end of CHEM 2124.

In CHEM 1123, nomenclature and molarity will be topics for repeated testing. In addition, the use of dimensional analysis for dosage calculations will also be tested over repeatedly. The comprehensive final should be revised to include a conversion problem that is more closely related to a dosage calculation.

Some of the topics we need to emphasize will be communicated via email. During spring prep and planning week, we will also have the opportunity to meet face to face with the adjunct faculty.

Our syllabi in all our courses already state that students should be able to answer questions from previous units. Many of our instructors already remind students on a regular basis about topics that are likely to show up again on future exams.

We will make an edited version of our assessment report available through the Physical Sciences Department's Internet home page.

2010 Science and Mathematics Pre-Engineering 2010-10-04 Gregory D. Holland Dean of Science and Mathematics 2010-12-07

1. Students will demonstrate knowledge, comprehension, and application of basic engineering topics for the engineering science courses they take at OCCC. At the end of each semester, students will be given non-credit assessment instrument in one or more of the following program courses - ENGR 2133, ENGR 2143, ENGR 2333, ENGR 2343, ENGR 2623, AND ENGR 2613. These

assessment instruments will be composed of questions from previous Fundamentals of Engineering exams and practice materials for the same. Courses evaluated this cycle include ENGR 2333 - Thermodynamics and ENGR 2613 - Electrical Science. 2. Students who take engineering classes at OCCC will be successful in their subsequent engineering classes at transfer institutions.

Students in each course were allowed 45-minutes to complete the unmodified practice exam for that course from a Fundamentals of Engineering review manual. The practice exams were composed of 15 multiple-choice questions with four possible answers to choose from. The students were allowed to use their textbooks as references.

402

80% of students should score 70% or higher on their assessment exam(s).

A total of 30 students were assessed in ENGR 2333 - "Thermodynamics" during the fall of 2009 and spring of 2010. None of the students scored 70% or higher. The average score was 28%, with the highest score being 53%.

A total of 10 students were assessed in ENGR 2613 - "Electrical Science" in the summer of 2010. None of the students scored 70% or higher. The average score was 55%, with five students tying for the highest score of 67%.

This assessment requires changes. Assessment instruments should be limited to concepts actually covered in the respective courses and only results from students who pass the course with a grade of "C" or higher should be included in the final assessment.

The graduation rate at 4-year transfer institutions for students who complete the program at OCCC will be compared to the graduation rate for students who began their degree at the transfer institution.

The graduation rate at 4-year transfer institutions for students who complete the program at OCCC will be greater than or equal to the graduation rate for students who began their degree at the transfer institution.

Only the University of Oklahoma has provided numbers regarding transfer students. Unfortunately, these numbers are not broken down by transferring institution and do not accurately reflect the performance of students graduating from OCCC compared to any other cohort.

This method of assessment did not provide useful results. Alternative methods of assessment should be investigated.

Assessment methods appear to be a poor indicator of student learning. Assessment questions must be reviewed to insure that they are appropriate for the course in question.

Seven of the 15 questions used to assess students in ENGR 2333 - "Thermodynamics" covered information not covered in the course itself. When those questions were excluded, the average score rose by 5%, to an average score of 33%, although none of the students scored 70% or better. Additionally, only 24 of the 40 students assessed in this course actually passed so including these scores in the assessment does not seem appropriate.

Three of the 15 questions used to assess students in ENGR 2613 - "Electrical Science" covered information not covered in the course itself. When those questions were excluded, the average score rose by 6%, to an average score of 61% and 30% of the students scored 70% or better.

A real question exists concerning how "seriously" students strive to do well on the assessment tool.

Faculty who teach engineering courses will be informed about the outcomes of this assessment period during the next program meeting. Potential changes to the assessment methods or program itself will be discussed.

Students will be made more aware of the importance of outcomes assessment and the importance of preparing for the Fundamentals of Engineering Exam by discussing professional licenses in class.

2010 Science and Mathematics Biotechnology 2010-10-01 Dr. Fabiola Janiak-Spens Dean of Science and Mathematics 2010-12-07

Graduates of the Biotechnology Program will be proficient in a) aseptic technique, b) calculation and making laboratory solutions, c) keeping a legible and accurate scientific notebook in compliance with worksite regulations.

All Biotechnology Program students participate in an 8-week (total of 320h) internship at a biotechnology company, where they

are mentored and supervised by qualified staff. At the end of the internship the supervisors are given a questionnaire to evaluate the student intern.

72

Internship supervisors will rate all biotechnology program student interns as "competent" or "exceeded expectations" on the 'aseptic techniques', 'calculations' and 'notebook' evaluation question.

From the evaluations received for the 7 students, the ratings were as follows:

- 4 students were rated 'competent' or 'exceeded expectations' in aseptic techniques, 3 students did not perform aseptic techniques during their internship and were thus rated as 'not observed'.
- All 7 students were rated either 'competent' or 'exceeded expectations' in calculations and making solutions.
- 5 students were rated 'competent' or 'exceeded expectations' in notebook evaluation, 1 was rated as 'not observed' and 1 was rated 'not yet competent'.

The student that was rated as 'not yet competent' on the notebook evaluation by the internship mentor, was given an overall 'satisfactory' evaluation for the internship. The low rating in the notebook category was due to the student's very terse entries in the notebook, where longer analyses of results and data entry are needed.

The instructors in the biotechnology program have always put a strong emphasis on the importance of proper notebook keeping and will continue to do so.

Graduates of the Biotechnology Program who seek employment in the field will obtain a job.

72

Program graduates will be contacted within 3 months and again in six months after graduation, and all those seeking employment in the field in the OKC metro area will be employed by the six month mark.

7 students graduated during the period that this report covers, 3 in Dec 09 and 4 in Aug 10.

- Of the 3 who graduated in Dec 09, 2 had sought employment in the field and both have been and are currently employed full-time as laboratory technicians. The third graduate pursued other interests.
- Of the 4 who graduated in Aug 10, 2 were immediately employed full-time by their internship company and are still employed to date. Of the remaining 2, one is seeking employment in the field and is currently being interviewed by two sites. The remaining student is enrolled at a 4-year university and is working toward a BS degree.

Continue to foster good relationships between internship companies and seek out other entities that could be potential sites of employment for Biotechnology Program graduates in order to provide excellent employment opportunities for the students and visibility of the program.

No major changes beyond using past evaluations as examples to stress/underscore to the program students the importance of soft skills (e.g. communication) and program specific skills (notebook keeping, techniques) as key elements to do well in their internships and future employment.

Invite previous program graduates and internship supervisors (potential employers) to talk to current students about their experiences and expectations as well as emphasizing the key skills (communication, notebook keeping, critical thinking) and incorporating more activities for practice in biotechnology classes.

FY 2010 Science and Mathematics Biology, Pre-Baccalaureate Nursing Oct, 2010 Brenda Breeding

Brenda Breeding
Ron Scribner
Anthony Stancampiano

Dean of Science and Mathematics 2010-12-07

1. Students will recognize the role of genetics and the environment in the evolutionary process.
2. Students will be able to apply concepts, principles, and techniques to the classification scheme of organisms.

Students in program courses - BIO 2114, General Botany; BIO 2125, Microbiology; BIO 2215, General Zoology; and BIO 2404, Comparative Vertebrate Anatomy will be administered questions from previous GRE exams. These questions will be course dependent.

2892

80% of the students should score 70% or higher on these questions.

A total of 289 students were assessed in the above Biology courses. 70% of these students were in BIO 2125, Microbiology; 25% were in BIO 2215, Zoology; and 5% were in BIO 2404, Comparative Vertebrate Anatomy.

70.2% of all of the students successfully passed the assessment with a score of 70% or better, with an average overall score of 75.4%. Although this number still falls short of our goal of 80% successfully passing, this is a significant improvement over our first assessment of this outcome four years ago. In 2007, only 43% of the students successfully passed this assessment with a score of 70% or above.

These results illustrate that a continued emphasis needs to be placed on the importance of evolution in the Biological Sciences. All Biology faculty, full-time and adjunct, still need to discuss evolution in greater detail for those objectives listed in the respective syllabi.

Students in program courses - BIO 2114, General Botany; BIO 2125, Microbiology; BIO 2215, General Zoology; and BIO 2404, Comparative Vertebrate Anatomy will be administered questions from previous GRE exams. These questions will be course dependent.

2892

80% of the students should score 70% or higher on these questions.

A total of 289 students were assessed in the above Biology courses. 70% of these students were in BIO 2125, Microbiology; 25% were in BIO 2215, Zoology; and 5% were in BIO 2404, Comparative Vertebrate Anatomy.

78.3% of all of the students successfully passed the assessment with a score of 70% or better, with an average overall score of 86.2%. Although this number still falls short of our goal of 80% successfully passing, this is a significant improvement over our first assessment of this outcome four years ago. In 2007, only 57% of the students successfully passed this assessment with a score of 70% or above.

It is believed that by utilizing only professors whose backgrounds are in these subjects, the overall understanding by the students of classification in the respective courses has vastly improved. However, it is also important that these professors stay current in their respective field of study to help ensure continued success in teaching.

1. Many of the 2000 level Biology courses will, hopefully, have a new course as a prerequisite, General Biology I (Majors). This will allow more time in the 2000 level Biology courses for discussion of course specific topics instead of spending time reviewing "introductory" biological concepts.

2. Emphasis should be placed on hiring faculty that are knowledgeable in the subjects that they are asked to teach.

3. OCCC needs to emphasize that we teach the concept of evolution as it relates to the biological sciences. Biology faculty that oppose teaching this concept should be encouraged to seek employment elsewhere. Students that oppose this teaching should understand that, although they do not have to subscribe to evolution, it is important that they understand the concept as it relates to biology.

1. All biology faculty need to understand the purpose of the proposed curriculum changes that will require General Biology I (Majors) as a prerequisite for many biology courses. This will require additional time with the Biology Adjunct Faculty during "planning and prep" week.

2. All biology faculty should be encouraged to stay current on their specific fields of study. Ideally additional funds to attend conferences would be welcomed.

3. All biology faculty need to understand the importance of teaching objectives regarding evolution. Once again, time with the adjunct faculty during "planning and prep" week could serve this purpose.

1. Students need to be informed of curriculum changes that affect their science degree. Possibly a handout given at the beginning of the semester for all students enrolled in a science class, and a brief explanation by the professor will communicate this message. The school newspaper is another venue to disseminate this information.

2. Possibly ALL biology classes taught at OCCC should have at least one objective regarding "evolution" so that student's understand the basic concept of biological change and diversity.

The administrators of OCCC need to understand the importance of the OCCC Biology department's stance on teaching topics related to evolution. An open forum would be welcomed by the faculty of the Biology department if the need arises.

2010 Science and Mathematics Mathematics (including as a component of the pre-engineering program) 2010-11-16 Chris Oehrlein

Professor Charles Nunley
Professor Sherry Ray
Professor Ken Harrelson
Professor Jay Malmstrom

The learner will demonstrate an understanding of the relationship between differential and integral calculus.

Students were given questions and computational problems on exams in Calculus II and Calculus III addressing to the concepts and skills relating differentiation to integration. In Calculus II the questions used the concepts and skills for solving separable first-order differential equations, and in Calculus III the questions used the concepts and skills about line integrals, conservative vector fields and potential functions, including solving exact first-order differential equations.

682

70% of students who took the prerequisite courses in the OCCC Calculus & Analytic Geometry sequence will successfully complete each question or computation.

Calculus II: All of the 42 assessed students (100%) answered the conceptual questions correctly. They all identified that the solution to the differential equation would involve an antiderivative or integral. 38 of the 42 (90.4%) successfully calculated an antiderivative recognizable from basic formulas. 22 of the 42 (52.4%) successfully calculated an antiderivative that involved a substitution before applying a basic formula.

Calculus III: 21 of the 26 (80.8%) assessed students successfully identified the vector field as conservative and the appropriate theorem to apply to calculate the line integral. 19 of the 26 (73.1) correctly calculated the potential function and the value of the line integral.

In 4 of the 5 situations, the goal was met, but even where the goal was met, there was a decrease in the percentages that could successfully complete the calculation after identifying the correct concept to apply. As an assessment tool, the calculation was identified as correct or not. The types of errors were not analyzed and categorized. That information could still be identified by the instructor and used to improve the structure of the courses as it relates to homework, practice and feedback to students on the development of their skills and their study skills before testing. It is encouraging to see the improvement in using the antiderivative/integration skills between Calculus II and Calculus III. It shows that through the sequence of courses, students are getting the opportunity to practice and understand the basic skills. That connection of the skills and concepts from one course in the sequence to the next needs to be emphasized better, especially at the beginning of Calculus II. Beginning Calculus II with a review of the Chain Rule for differentiation and its application to integration by substitution (the very last objective presented and assessed in Calculus I) would establish the continuity of concepts and computational skills between Calculus I and Calculus II and would emphasize the importance of both objectives.

Students will be prepared to succeed in sophomore physics and engineering courses requiring calculus as a prerequisite.

861

Seventy percent of students completing the entire sequence of relevant calculus courses at OCCC with grades of C or higher will attain grades of C or better in physics and engineering courses with calculus prerequisites.

Calculus II: 36 out of 49 (73.5%) students assessed successfully completed Engineering Physics I after successfully completing Calculus II in the Fall 2009 semester.

Calculus III: 28 out of 37 (75.6%) students assessed successfully completed Engineering Physics II after successfully completing Calculus III in the Fall 2009 semester. Of those 37 there were 33 who also took a sophomore-level engineering course with a calculus and physics prerequisite. 21 of those 33 (63.6%) successfully completed the engineering course.

The criteria were met in 2 of the 3 situations. The data about the students taking multiple physics/engineering courses after completing Calculus III needs to be compared to students who take the sophomore-level engineering after, not concurrently with, Engineering Physics II to determine if there is a student workload/burnout issue to be addressed or if the decrease in success is related to content or content delivery in the calculus courses. The effects of Engineering Physics I on success in engineering courses needs to be included in the overall evaluation.

As stated in many of the items above, deeper analysis is needed to address the few areas where there were shortcomings. This analysis may enact changes that improve not only those areas needing improvement, but others where there is room for improvement even though targets were met. The overall experience of students in the calculus/physics/engineering curricula needs to be studied rather than looking at the disciplines as separate entities within programs.

Faculty teaching the Calculus & Analytic Geometry sequence as well as those teaching Precalculus and Trigonometry should be involved in determining what the teaching/learning/assessment issues are that need to be addressed. They as well as our colleagues in Physics and Engineering will need to know how (if at all) the style of content delivery or content in the calculus courses needs to be adjusted.

Students will have important information communicated to them through changes in syllabus, textbook, types of exercises and styles of assignments and tests. Reiteration of important study skills concepts such as time management and test preparation is needed. (We tend to assume that students who have reached this level of mathematics and science don't need those concepts reinforced.)

Data concerning student persistence through the OCCC programs must also be analyzed in light of data concerning student success as juniors in programs at four-year institutions upon transfer. We do not want to make changes to improve persistence and success rates locally that could potentially sacrifice success rates globally. Stability throughout the STEM programs in Oklahoma needs to be maintained.

2010 Science and Mathematics Physics 12/10/2010 Tad Thurston/Sonya Williams

Tad Thurston

Dean of Science and Mathematics 2010-12-07

Outcome 1: Analyze problems drawn from the physical sciences and mathematics, recognize the appropriate principles involved, synthesize solution strategies, and apply concepts and techniques from program courses (physics, chemistry, mathematics) to solve the problems.

Outcome 2: Apply standard laboratory techniques to acquire and analyze experimental data.

Outcome 3: Develop and report conclusions drawn from an analysis of laboratory experiments

Output 1: Upon transfer to Baccalaureate Granting Institutions, students will be prepared for further study in Physics or related fields.

Utilize class average scores on comprehensive final examinations for PHYS 2014 and PHYS 2114.

Individual success is indicated by scores of 80% or better on each test, as program credit is only given for course grades of 'B' or higher. Course success is indicated by 70% of students achieving 80% or better on each test.

PHYS 2014 --- 16% of students taking the comprehensive final test scored at least 80%.

PHYS 2114 --- 50% of students taking the comprehensive final test scored at least 80%.

During the next semester, the faculty teaching these courses will meet to compare and review final exam questions as well as course content, coverage, and emphasis with an aim toward improving the scores (particularly in PHYS 2014).

Apply standard laboratory techniques to acquire and analyze experimental data.

902

Each course coordinator will identify a particular laboratory experiment that falls after the midterm of the course. Student reports will be evaluated based upon departmentally determined criteria for acquisition and analysis of the data as outlined in the laboratory manuals. Success is indicated by a score of 80% or better by 70% of students on the Experimental Method and Data Analysis sections of the reports.

PHYS 2014 --- 75% of students scored above 80% on Laboratory 4, chosen for its detailed experimental methods as well as thorough error analysis.

PHYS 2114 --- 100% of students scored above 80% on Laboratory 3, chosen for the requirement of students to analyze data gathered in the electron mass lab and derive the mass of the electron from the slope of the data obtained.

The results indicate (and the coordinator also feels) that this is a sound measure of laboratory technique and analysis. The PHYS 2014 experiment trains students in fitting non-linear data using logarithm fits, and the PHYS 2114 experiment involves measuring a minute quantity indirectly using relationships derived in class.

Upon transfer to Baccalaureate Granting Institutions, students will be prepared for further study in Physics or related fields.

901

For PHYS 2014, the Force Concept Inventory will be used as a pre-test before instruction and a post-test before the final test to assess general understanding of physical principles. Normalized gain will be computed for each student, and the average gain for the class as a whole can be compared to national results from widely varying institutions to gauge efficacy of instruction and preparedness. Success is indicated by a normalized gain score statistically similar to or larger than those at comparable institutions.

For PHYS 2114, faculty will select questions from a standard inventory of problems in electricity and magnetism to likewise compare to those results from other institutions. Success is indicated by a normalized gain score statistically similar to or larger than those at comparable institutions.

Normalized gain $\langle g \rangle$ in standardized tests for the two sections:

PHYS 2014 --- 38%

PHYS 2114 --- 37%

Since these results are similar to gains reported by peer courses delivered at 4-year universities, and the results are reported to be good indicators of future success, they reinforce the notion that our students are ready for future study that builds upon our foundation.

The most immediate need is for the PHYS 2014/2114 faculty to meet and agree on a standard set of questions for final exams in both courses. This may require some realignment or changes in objectives for each class.

Faculty realize the importance of a consistent and rigorous program of study to help our students compete at their future 4-year institution. We should all agree on the set of objectives and assessment instruments that best benefits the students.

The best way to communicate the importance of these objectives and outcomes is to continually reinforce in class that these are the core concepts and skills needed to continue in the field. They should be assessed on this material in homework exercises, quizzes, tests, and comprehensive final exams.

Bruce Bailey
Kristy Bailey
Courtney Dodd
Steven Shore
Changjiang Zhu

Dean of Science and Mathematics 2010-12-07

Students will be able to follow written laboratory procedures to safely and correctly complete a laboratory experiment.

An instructor or outside observer will use a checklist to evaluate how well students in the lab follow safety protocols.

2902

100% of the students will be able to complete a laboratory experiment without committing a safety violation.

Full time faculty visited a total of eighteen lab sections (approximately half of all sections) during the latter part of the Spring 2010 semester. Eleven of the lab sections were taught by adjunct instructors. Seven of the eighteen sections were taught by full time instructors. Five of the sections were evening sections with the remaining twelve being daytime sections. Safety violations ranging from improper wearing of goggles and aprons, to gum chewing, to not cleaning chemical spills were noted.

Section sizes ranged from eight to twenty-four. The per student violation rate (i.e. the number of violations divided by the number of students in the section) varied from 0 to 1.5. Three sections had a per student violation rate of zero. The overall per student violation rate was 0.290.

The largest section audited (24 students in attendance) also had the highest number of safety violations for a single lab section (36 violations total, 1.5 violations per student). When the faculty member doing the safety audit entered the lab, not a single student was wearing a lab apron, part of the required personal protective equipment.

The three top violation areas were in not wearing or improperly wearing aprons (32.1%), not wearing or improperly wearing goggles (10.7%), and not cleaning chemical spills (10.7%). Table 14 shows a detailed list of all the types of violations and the numbers of violations. Table 15 shows a comparison of selected results from 2006 and 2010.

The last time we measured Outcome 4 with a widespread safety audit was in the Spring 2006 semester. At the time we still had independently-paced (IP) labs. The high per student violation rate in the IP labs that semester (1.53) was one of the motivating factors in moving to all group labs. The per student violation rate in 2006 in group labs was 0.59. Even with the one section where no students were wearing aprons is factored in, the average per student violation rate of 0.29 for all labs is an excellent result. Moving to all group labs was obviously the right thing to do from a safety standpoint. The lower number also reflects how much we try to emphasize to all instructors the need to enforce the safety policies. The adjunct who had the section where no one was wearing lab aprons was corrected in his notion that aprons were optional.

We should continue to emphasize to all instructors that safety is important and that they need to instill a sense of safety consciousness in their students. We should do this during adjunct the adjunct meeting at the beginning of the fall and spring semester and via email or one-on-one meetings when we learn from lab staff that instructors are being lax in enforcing safety rules.

Some of the topics we need to emphasize will be communicated via email. During spring prep and planning week, we will also have the opportunity to meet face to face with the adjunct faculty. Further meetings can be arranged as needed.

We will make an edited version of our assessment report available through the Physical Sciences Department's Internet home page.

We will make an edited version of our assessment report available through the Physical Sciences Department's Internet home page.

2010 BusinessAS Business (General, Business Management and Aviation Management)2010-10-25Dr.
Germain Pichop

Ms. Kayla Fessler
Ms. Anita Williams
Ms. Myra Decker
Mr. Gyanendra Baral
Mr. Michael Machiorlatti
Mr. Charles Myrick
Mr. Mathew Price
Mr. Vijayan Ramachandran
Mr. Ron Summers
Ms. Tamala Zolicoffer

Transfer students from OCCC will perform at a level similar or higher to that of domestic students at their host institutions, for the institutions that received the bulk of our students.

OCCC A.S. Business graduates who transfer to OU, OSU, or UCO will maintain a grade point average equal to or better than the overall undergraduate grade point average at their host institutions.

1

Transfer data will reflect that 100% of OCCC graduates who transfer to OU, OSU, or UCO will maintain an average GPA equal or better than the overall undergraduate average GPA at their respective host institutions

The OCCC transfer students average GPA for UCO decreased progressively between 2005 and 2007, but remained above the average undergraduate students GPA. OCCC Transfers average GPA were 2.90, 2.53 and 2.85, while UCO overall undergraduate average GPA were respectively 2.80, 2.75 and 2.80 for the three years assessed.

The OCCC transfer students average GPA increased over the 3 years assessed and was higher than all undergraduate average GPA at OSU. OCCC Transfer students average GPA were respectively 2.90, 3.10 and 3.00 for 2005, 2006 and 2007 while the average undergraduate GPAs remained at 2.90 at the host institution for all three years.

The OCCC transfer students average GPA was lower for the 3 years assessed than the average undergraduate GPA at OU. For the years 2005, 2006 and 2007, OCCC transfer students average GPA were respectively 2.72, 2.57 and 2.77 while the average undergraduate students GPA at the host institution were 3.07, 3.08 and 3.08.

OCCC will continue to monitor these results and work with transfer institutions, transfer offices and through our office of institutional research to make sure our curriculum content and delivery matches or exceed the quality standard in business education.

Graduates of the Oklahoma City Community College - A.S. Business Programs will demonstrate above average competencies in critical areas of business education.

2

At least 70% of students who effectively complete the major required business courses listed below (and receive a valid letter grade other than W or I) will earn an average of 70% or greater on the said courses. Students will be tested using either embedded questions or comprehensive exams. 80% of students will demonstrate competence in critical business communication skills including effective written business communication and oral presentation.

List of Courses:

ACCT 2113 (Managerial Accounting)

ACCT 2123 (Financial Accounting)

BUS 2033 (Business Communication)

ECON 2113 (Principles of Macroeconomics)

ECON 2123 (Principles of Microeconomics)

MGMT 2053 Principles of Management)

ACCOUNTING

Embedded questions were included on 11 financial accounting topics on exams given to ACCT 2113 students in both Fall 2007 and Spring 2008. In Fall 2007, reports were submitted for all of the 15 sections taught. Faculty submitted reports for all 14 sections taught in Spring 2008.

The results indicated that students met the minimum competency on 4 of the 11 questions in Fall 2007 and on 3 of the 11 questions in Spring 2008. This is down from 7 of the 11 questions on both Fall 2006 and Spring 2007.

73% of Fall 2007 students and 75% of Spring 2008 students on the final grade report earned 70% or more on the basic financial statement problem. 80% of Fall 2007 students and 77% of Spring 2008 students earned 70% or more on the general journal entry problem. 76% of Fall 2007 students and 70% of Spring 2008 students earned 70% or more on the perpetual inventory problem.

The reports indicated mixed results on 1 of the 11 questions. 71% of Fall 2007 students and 64% of Spring 2008 students earned 70% or more on the merchandising transactions problem.

Fewer than 70% of students earned 70% or greater on the remaining embedded problems in both semesters. 58% of Fall 2007 students and 52% of Spring 2008 students earned 70% or more on the adjusting entries problem. 69% of Fall 2007 and 57% of Spring 2008 earned 70% or more on the closing entry problem. 69% of Fall 2007 and 68% of Spring 2008 students earned 70% or more on the bank reconciliation problem. 53% of Fall 2007 and 46% of Spring 2008 students earned 70% or more on the estimation of bad debts problem. 55% of Fall 2007 and 56% of Spring 2008 students earned 70% or more on the depreciation problem.

55% of Fall 2007 and 58% of Spring 2008 students earned 70% or more on the payroll entry problem. 61% of Fall 2007 and 64% of Spring 2008 students earned 70% or more on the corporate transactions problem.

The decrease in scores was expected because we made a change in the number of students measured. Prior to Fall 2007, we had measured only students who earned a passing grade for the course. During an ACBSP conference in Summer 2007, a faculty member had a discussion with a presenter on outcomes assessment. The presenter suggested that the department use all students on the final grade report instead of just students passing. Beginning Fall 2007, we used all students who were listed on the final class grade report. This included students earning failing grades regardless of whether they continued to attend and take exams. We believed this would give us a more accurate picture of student success.

The accounting faculty plans to seek approval from the Curriculum Committee to add an additional prerequisite for ACCT 2113 of “successful completion of 12 college credit hours”. If approved, this would go into effect Fall 2009. Based on data received from the college Achieving the Dream initiative, we believe there will be a significant improvement in student success.

Embedded questions were included on eight managerial accounting topics on exams given to ACCT 2123 students in both Fall 2007 and Spring 2008. Faculty submitted reports in 5 of the 6 sections taught in Fall 2007. In Spring 2008, reports were submitted in all 8 of the sections taught.

The results indicated that students met the minimum competency on 1 of the 8 questions in both semesters. This is down from 3 of the 8 questions in both Fall 2007 and Spring 2008. 77% of Fall 2007 and 71% of Spring 2008 students earned more than 70% on the allocation of cost problem.

Mixed results were indicated on 2 of the embedded problems. 78% of Fall 2007 and 68% of Spring 2008 students earned more than 70% on the manufacturing statement problem. 72% of Fall 2007 and 59% of Spring 2008 students earned more than 70% on the cost-volume-profit analysis problem.

Fewer than 70% of the students earned 70% or greater on the remaining 5 embedded problems. 69% of Fall 2007 and 49% of Spring 2008 students earned more than 70% on the job order cost accounting problem. 57% of Fall 2007 and 39% of Spring 2008 students earned more than 70% on the process cost accounting problem. 68% of Fall 2007 and 61% of Spring 2008 students earned more than 70% on the cash budget problem. 53% of Fall 2007 and 40% of Spring 2008 students earned more than 70% on the standard costing problem. 58% of Fall 2007 and 59% of Spring 2008 students earned more than 70% on the capital budgeting problem.

The decrease in scores was expected because we made a change in the number of students measured. Prior to Fall 2007, we had measured only students who earned a passing grade for the course. During an ACBSP conference in Summer 2007, a faculty member had a discussion with a presenter on outcomes assessment. The presenter suggested that the department use all students on the final grade report instead of just students passing. Beginning Fall 2007, we used all students who were listed on the final class grade report. This included students earning failing grades regardless of whether they continued to attend and take exams. We believed this would give us a more accurate picture of student success.

Embedded problems were included on eight managerial accounting topics on exams given to ACCT 2123 students in Fall 2009. Faculty submitted reports for 5 of the 7 sections offered.

The results indicated that students met the minimum competency on 2 of the 8 problems in Fall 2009. 79.3% earned greater than 70% on the manufacturing statement problem, and 80.9% earned greater than 70% on the cost allocation problems.

BUSINESS COMMUNICATION

2007 - 120 out of 200 students scored 100% on their portfolio which resulted in 60%

2008 - 125 out of 191 students scored 100% on their portfolio which resulted in 66%.

2007 - 230 out of 268 students scored 80% or higher on the final oral presentation which resulted in 85%.

2008 - 175 out of 185 students assessed in Business Communication scored 80% or better on the final oral presentation which resulted in 94%.

The portfolio results showed an increase in the number of students who scored 100%. We will continue to inform program faculty about the need to emphasize the portfolio project to students.

This was a 9% increase from previous year. Continue to use these measures but also survey other BCOM faculty for good assessment measures. Consider feasibility of external evaluators.

2009 - 126 out of 237 students scored 100% on their portfolio which resulted in 53%. 197 out of 237 students assessed in Business Communication scored 80% or better on the final oral presentation which resulted in 83 %.

The portfolio results were below last year in the number of students who scored 100%. The point value for the portfolio was increased from the previous year with intent to emphasize the importance. Unfortunately, the results were still below our target. Inform program faculty about the need to continue to emphasize the portfolio project to students. The oral presentation results are still above the 80% measure

ECONOMICS

Embedded questions were included on exams given to ECON 2113 students, covering all important macroeconomics topics. However, not all sections used this instrument.

Results indicated that students met the minimum competencies required.

Overall results show that 70 % of students met the minimum competency. Based on embedded questions results, student performances ranged from 60 to 80%.

Overall, 77% of those students who effectively completed the course achieved a grade of 70% or above in ECON 2113. There was an increase in the pass rate from 2006 (76%) to 2007 (79%). However, the pass rate fell to 75% in 2008. Performances were below average, if all students who enrolled in the course were taken into account. Only 63% of students that effectively enrolled in the course achieved a passing grade (70% or above).

Embedded questions were included on microeconomics exams given to ECON 2123 students, and covered all important microeconomics topics. However, not all instructors used this instrument. Overall results show that 72 % of students met the minimum competency. Based on embedded questions results, student performances ranged from 70 to 75%.

Overall, 81% of the students who effectively completed the ECON 2123 course achieved a grade of 70%. There was a decrease in the pass rate from 2006 (83%) to 2007 (78%). However, the pass rate rose again to 81% in 2008. Performances were below average, if all students who enrolled in the course were taken into account. Only 67% of students that effectively enrolled in the course achieved a passing grade (70% or above).

In order to make the assessment more accurate and meaningful, the economics faculty decided to administer comprehensive tests, rather than using embedded questions beginning with Fall 2009. A comprehensive test covering all basic microeconomics principles and concepts will thus be administered to all sections of ECON 2113 and ECON 2123.

Comprehensive exams were administered to some sections of both ECON 2113 and 2123, in Fall 2009. The purpose of the comprehensive exam was to assess the retention of the most basic concept of economics by completing students. For Principles of Macroeconomics, the course average grade on the comprehensive dropped to 64% in Spring 2010 from 70% in the Fall of 2009. However, the success rate on the Microeconomics comprehensive exam increased to 70% in Spring 2010 from 66% in the Fall of 2009.

The academic division of business used embedded questions in order to assess the competencies of completing students in business in major required subjects.

The accounting faculty will continue to measure the success of ACCT 2123 students with the hope that the change in structure and content of the developmental math courses effective Fall 2010 will improve problem-solving skills and critical thinking skills in ACCT 2113. Students who perform well in ACCT 2113 are generally successful in ACCT 2123. However, it may take 3 or 4 semesters to see a measurable change in performance

Because some instructors failed to collect the result of the embedded questions in economics, it was decided that beginning Fall 2009, comprehensive tests will be administered to all sections of principles of economics. Results clearly showed that comprehensive exams measured more accurately the retention of basic concepts of economics. A change in the sequence in which Macroeconomics and Microeconomics are offered

In addition, beginning Spring 2011, comprehensive tests will also be administered to students enrolled in the following courses to ensure that all major required courses are properly assessed: BUS 2023 Business Statistics; MGMT 2053 (Principles of Management).

Graduates of the Oklahoma City Community College Community College - A.A.S. Business Programs will achieve a score at or above national and regional average score on the ETS 2-year colleges major field test in business.

2

At least 70% of the graduating business students will received a grade of 70% on the major field test in business upon completion of their various degree programs.

An E.T.S. major field test (MFT) was administered to a random sample of graduating business students in 2007, but the data obtained turned out to be unusable due to the fact the test was still in its pilot phase. The faculty in the Division of Business decided that the administration of the MFT will resume in Spring 2011.

The E.T.S. Major Field Test used was in its pilot phase at the time it was administered. The result turned out to be unusable. E.T.S. has since cleaned up and fine tuned the test and it is now planned that a random group of graduating students will complete the test in the Spring Semester of 2011.

A major field test for business assesses the students' mastery of a predetermined set of competencies and skills necessary to be successful in the field of business.

In order to improve student learning, it is imperative to implement a business lab or tutorial center. The lab/ tutorial center physically exists but has not been staffed due to the lack of personnel. Students have great expectations regarding the lab, but the division has not been successful in securing student workers either from the pool of the work-study eligible students or the student employment program. Additional resources needed include an increase in the number of computers available in the lab and software applications necessary for increased student practices as well as supplies and accessories.

Curricular changes are planned in order to improve the success rate in some courses including a change in sequences in ECON 2113 and ECON 2123, which will potentially increase the pass rate in those courses. Change is also planned regarding BUS 2023 (Business Statistics) where the name, the description and prerequisites needs modification in order to improve success. A new course, ECON 2023 will be implemented exclusively for those students in the AS Business program to facilitate their transfer and integration into their host programs.

The assessment scores obtained on our major courses were generally below our desired level. However, we believe that the change in structure and content of the developmental math courses effective Fall 2010 will improve problem-solving skills and critical thinking skills in ACCT 2113. We had tried to require students to have at least 12 college credit hours completed as a prerequisite to ACCT 2113. However, the OCCC Curriculum Committee denied our request. As a result of the change in developmental math courses, our students are likely to have at least one or more semesters completed before they will be allowed to enroll in ACCT 2113.

We will continue to measure the success of ACCT 2123 students with the hope that the change in structure and content of the developmental math courses effective Fall 2010 will improve problem-solving skills and critical thinking skills in ACCT 2113. Students who perform well in ACCT 2113 are generally successful in ACCT 2123. However, it may take 3 or 4 semesters to see a measurable change in performance.

Suspension will be sought for certain Programs such as AS Business Management and AS Aviation.

The AS Business Management was originally created as an implementation of a 2+2 agreement with School of Business at the University of Central Oklahoma (UCO). UCO has since readjusted its business core program curriculum and all business majors are required to complete the same set of courses entering their junior year. These core courses are already part of our AS General Business. Since UCO was the only transfer institution that received our graduates in AS Business/ Management, there will be no other destination for those students that will remain enrolled in the program. The business faculty therefore recommended that the AS Business, Management Option be suspended.

The AS Aviation Management will need to be suspended due to low enrollment and lack of interest from the community.

Student activities and engagement is also proven to increase retention rates and the level of student success. The Division has made efforts to increase avenues for increased student engagement and students activities by encouraging and supporting initiatives such as departmental student organizations, a business honor society and a mentor program.

Lastly, it is important to communicate with the stakeholder and the community about the value of our program by designing brochures that will not only show them the opportunities that our programs offer, but also the requirements of the said programs.

Additional efforts will be made to improve the quantity and the quality of the outcome assessment data in the academic division of business in order to assess the impact of the proposed changes

In addition to the regular Division Meeting, a Division's faculty meeting allows us to communicate and discuss with faculty members the changes needed as well as any other issues that may arise. Faculty members are generally aware of changes and need for changes since they are always discussed in both meetings.

Students will be called upon to help with the collection of outcome assessment data and the implementation of any proposed change. Their cooperation is more or less needed to insure to quality of the assessment process and imperative for the implementation of initiatives such as the Major Field Test. By encouraging student engagements though the promotion of student activities in the Academic Division of Business, we hope to create the communications pipelines that will allow us to convey our messages.

The Academic Division of Business has taken steps to encourage student initiatives that will boost the level of retention and student success such as the "Investment Game" the creation of student organizations such as Business Professional of America (BPA) and then SIFE (Students In Free Enterprise), Kappa Beta Delta, The International Honor Society for Business Students and much more recently, the Multicultural Business Club (MSBC).

2010 BusinessAAS Business (Management)2010-10-26Dr. Germain Pichop

Ms. Kayla Fessler
Ms. Anita Williams
Ms. Myra Decker
Mr. Gyanendra Baral
Mr. Michael Machiorlatti
Mr. Charles Myrick
Mr. Mathew Price
Mr. Vijayan Ramachandran
Mr. Ron Summers
Ms. Tamala Zolicoffer

Graduates of the Oklahoma City Community College - A.A.S. Business Management will demonstrate above average competencies in the following critical business education areas: · Reading comprehension; · Technical report writing; · Critical thinking; · Interpersonal communication; · Computational skills; · Leadership and decision making; · Cultural diversity.

Oklahoma City Community college will use an employer survey to assess the adequacy of the training and education provided to students.

A random sample of employers was surveyed to collect information on the job performance of OCCC graduates. The employers were asked to rate the education received by OCCC graduates as it relates to the requirements of their job.

1

Graduates of the Oklahoma City community college Business programs will receive an average rate rating of 4 out of 5 for their performance at their workplace.

A random sample of employers was surveyed between 2004 and 2008 (20 in 2004, 40 in 2005, 66 in 2006, 54 in 2007 and 52 in 2008). Oklahoma City Community College's business graduates on the job performance ratings were excellent according to surveyed employers. On average, employer rated graduates of Oklahoma City Community College on a scale of 1 to 5, 1 being the lowest grade and 5 the highest. OCCC graduates rated as follow:

Reading comprehension (4.5)
Technical and report writing (4.4)
Interpersonal communication (4.4)
Critical thinking (4.3)
Computational skills (4.4)
Leadership and decision making (4.1) and
Cultural diversity (4.5)

Of all the employers surveyed, 97% of employers thought OCCC graduates possessed acceptable to excellent on the job skills, while 100% of the employers had this opinion between 2005 and 2008. The percentage of employers who indicated that OCCC graduates had "good" to "excellent" skills were 85% in 2004, 94% in 2005, 95% in 2006, 94% in 2007 and 98% in 2008. In all of those years, more the 50% of employers indicated that OCCC graduates possessed excellent job related skills.

98% of the 20 employers surveyed in 2004 indicated that they will be willing to hire another OCCC graduate in the future. In 2005, the

number increased to 100% of 40 employers, 100% of 66 employers in 2006, 100% of 54 employers in 2007 and 98% of 52 employers in 2008.

The survey results show that OCCC graduates perform rather well on the job market. Oklahoma City Community college will continue to use the employer survey to assess the adequacy of the training and education provided to students, as well as suggestions from programs' advisory boards.

Graduates of the Oklahoma City Community College Community College - A.A.S. Business Programs will achieve a score at or above national and regional average score on the ETS 2-year colleges major field test in business.

2

At least 90% of the sample graduating business students that complete the E.T.S Major Field Test will place at 60th percentile range or higher among all Major Field Test takers.

In an effort to use an external instrument for assessment to measure the quality of the education offered in our Institution, it was determined that the E.T.S. Major Field Test is currently the most convenient way of achieving this objective, because there is no comparative data currently available for similar institutions that could be used to achieve the same result.

E.T.S. Major Field Test measure student competencies in key courses in business field including Accounting, Economics, Management and Marketing.

The E.T.S. major field pilot test was administered in 2007, but the data obtained turned out to be unusable. At the time, the major field test was on a pilot phase.

The results of the E.T.S. major field pilot test administered in 2007 was unusable. It was decided that the Academic Division will resume the administration of the major field test in 2011. In addition to the major field test, additional assessment data will be collected on the Course MGMT 2053 (Principles of Management) a major required course for the AAS Business Management, just as it is done for other major required courses.

Graduates of the Oklahoma City Community College - A.S. Business Management Program will demonstrate above average competencies in critical areas of business education.

2

At least 70% of students who effectively complete the major required business courses listed below (and receive a valid letter grade other than W or I) will earn an average of 70% or greater on the said courses. The competencies will be tested using either embedded questions or comprehensive exams.

List of Courses:

ACCT 2113 (Managerial Accounting)

ACCT 2123 (Financial Accounting)

BUS 2033 (Business Communication)

ECON 2113 (Principles of Macroeconomics)

ECON 2123 (Principles of Microeconomics)

MGMT 2053 Principles of Management)

ACCOUNTING

Embedded questions were included on 11 financial accounting topics on exams given to ACCT 2113 students in both Fall 2007 and Spring 2008. In Fall 2007, reports were submitted for all of the 15 sections taught. Faculty submitted reports for all 14 sections taught in Spring 2008.

The results indicated that students met the minimum competency on 4 of the 11 questions in Fall 2007 and on 3 of the 11 questions in

Spring 2008. This is down from 7 of the 11 questions on both Fall 2006 and Spring 2007.

73% of Fall 2007 students and 75% of Spring 2008 students on the final grade report earned 70% or more on the basic financial statement problem. 80% of Fall 2007 students and 77% of Spring 2008 students earned 70% or more on the general journal entry problem. 76% of Fall 2007 students and 70% of Spring 2008 students earned 70% or more on the perpetual inventory problem.

The reports indicated mixed results on 1 of the 11 questions. 71% of Fall 2007 students and 64% of Spring 2008 students earned 70% or more on the merchandising transactions problem.

Fewer than 70% of students earned 70% or greater on the remaining embedded problems in both semesters. 58% of Fall 2007 students and 52% of Spring 2008 students earned 70% or more on the adjusting entries problem. 69% of Fall 2007 and 57% of Spring 2008 earned 70% or more on the closing entry problem. 69% of Fall 2007 and 68% of Spring 2008 students earned 70% or more on the bank reconciliation problem. 53% of Fall 2007 and 46% of Spring 2008 students earned 70% or more on the estimation of bad debts problem. 55% of Fall 2007 and 56% of Spring 2008 students earned 70% or more on the depreciation problem.

55% of Fall 2007 and 58% of Spring 2008 students earned 70% or more on the payroll entry problem. 61% of Fall 2007 and 64% of Spring 2008 students earned 70% or more on the corporate transactions problem.

The decrease in scores was expected because we made a change in the number of students measured. Prior to Fall 2007, we had measured only students who earned a passing grade for the course. During an ACBSP conference in Summer 2007, a faculty member had a discussion with a presenter on outcomes assessment. The presenter suggested that the department use all students on the final grade report instead of just students passing. Beginning Fall 2007, we used all students who were listed on the final class grade report. This included students earning failing grades regardless of whether they continued to attend and take exams. We believed this would give us a more accurate picture of student success.

Please refer to the attached graphs for a comparison of semesters from Fall 2005 - Spring 2008.

Because of the change in the student population being measured, it is difficult to determine if previous changes made in the accounting program were successful.

The accounting faculty plans to seek approval from the Curriculum Committee to add an additional prerequisite for ACCT 2113 of "successful completion of 12 college credit hours". If approved, this would go into effect Fall 2009. Based on data received from the college Achieving the Dream initiative, we believe there will be a significant improvement in student success.

Embedded questions were included on eight managerial accounting topics on exams given to ACCT 2123 students in both Fall 2007 and Spring 2008. Faculty submitted reports in 5 of the 6 sections taught in Fall 2007. In Spring 2008, reports were submitted in all 8 of the sections taught.

The results indicated that students met the minimum competency on 1 of the 8 questions in both semesters. This is down from 3 of the 8 questions in both Fall 2007 and Spring 2008. 77% of Fall 2007 and 71% of Spring 2008 students earned more than 70% on the allocation of cost problem.

Mixed results were indicated on 2 of the embedded problems. 78% of Fall 2007 and 68% of Spring 2008 students earned more than 70% on the manufacturing statement problem. 72% of Fall 2007 and 59% of Spring 2008 students earned more than 70% on the cost-volume-profit analysis problem.

Fewer than 70% of the students earned 70% or greater on the remaining 5 embedded problems. 69% of Fall 2007 and 49% of Spring 2008 students earned more than 70% on the job order cost accounting problem. 57% of Fall 2007 and 39% of Spring 2008 students earned more than 70% on the process cost accounting problem. 68% of Fall 2007 and 61% of Spring 2008 students earned more than 70% on the cash budget problem. 53% of Fall 2007 and 40% of Spring 2008 students earned more than 70% on the standard costing problem. 58% of Fall 2007 and 59% of Spring 2008 students earned more than 70% on the capital budgeting problem.

The decrease in scores was expected because we made a change in the number of students measured. Prior to Fall 2007, we had measured only students who earned a passing grade for the course. During an ACBSP conference in Summer 2007, a faculty member had a discussion with a presenter on outcomes assessment. The presenter suggested that the department use all students on the final

grade report instead of just students passing. Beginning Fall 2007, we used all students who were listed on the final class grade report. This included students earning failing grades regardless of whether they continued to attend and take exams. We believed this would give us a more accurate picture of student success.

Because of the change in the student population being measured, it is difficult to determine if previous changes made in the accounting program were successful.

Embedded problems were included on eight managerial accounting topics on exams given to ACCT 2123 students in Fall 2009. Faculty submitted reports for 5 of the 7 sections offered.

The results indicated that students met the minimum competency on 2 of the 8 problems in Fall 2009. 79.3% earned greater than 70% on the manufacturing statement problem, and 80.9% earned greater than 70% on the cost allocation problems.

BUSINESS COMMUNICATION

2007 - 120 out of 200 students scored 100% on their portfolio which resulted in 60%

2008 - 125 out of 191 students scored 100% on their portfolio which resulted in 66%.

2007 - 230 out of 268 students scored 80% or higher on the final oral presentation which resulted in 85%.

2008 - 175 out of 185 students assessed in Business Communication scored 80% or better on the final oral presentation which resulted in 94%.

The portfolio results showed an increase in the number of students who scored 100%. We will continue to inform program faculty about the need to emphasize the portfolio project to students.

This was a 9% increase from previous year. Continue to use these measures but also survey other BCOM faculty for good assessment measures. Consider feasibility of external evaluators.

2009 – 126 out of 237 students scored 100% on their portfolio which resulted in 53%. 197 out of 237 students assessed in Business Communication scored 80% or better on the final oral presentation which resulted in 83 %.

The portfolio results were below last year in the number of students who scored 100%. The point value for the portfolio was increased from the previous year with intent to emphasize the importance. Unfortunately, the results were still below our target. The oral presentation results remained above the 80% measure

ECONOMICS

Embedded questions were included on exams given to ECON 2113 students, covering all important macroeconomics topics. However, not all sections used this instrument.

Results indicated that students met the minimum competencies required.

Overall results show that 70 % of students met the minimum competency. Based on embedded questions results, student performances ranged from 60 to 80%.

Overall, 77% of those students who effectively completed the course achieved a grade of 70% or above in ECON 2113. There was an increase in the pass rate from 2006 (76%) to 2007 (79%). However, the pass rate fell to 75% in 2008. Performances were below average, if all students who enrolled in the course were taken into account. Only 63% of students that effectively enrolled in the course achieved a passing grade (70% or above).

In order to make the assessment more accurate and meaningful, the economics faculty decided to administer comprehensive tests, rather than using embedded questions beginning with Fall 2009. A comprehensive test covering all basic microeconomics principles and concepts will thus be administered to all sections of ECON 2113.

Comprehensive exams were administered to some sections of both ECON 2113, in Fall 2009. The purpose of the comprehensive exam was to assess the retention of the most basic concept of economics by completing students. The results of the comprehensive test indicates that the course average grade on the student average competency in Macroeconomics dropped to 64% in Spring 2010 from 70% in the Fall of 2009.

The academic division of business uses embedded questions in order to assess the competencies of completing students in major required courses. Because some instructors failed to collect the results of the embedded questions in economics, it was decided that beginning Fall 2009, comprehensive tests will be administered to all sections of Principles of Economics.

In addition, beginning Spring 2011, comprehensive tests will also be administered to students enrolled in MGMT 2053 (Principles of Management) to ensure that all major required courses are properly assessed.

In order to improve student learning, it is imperative to implement a business lab or tutorial center. The lab/ tutorial center physically exists but has not been staffed due to the lack of personnel. Students have great expectations regarding the lab, but the division has not been successful in securing student workers either from the pool of the work-study eligible students or the student employment program. Additional resources needed include an increase in the number of computers available in the lab and software applications necessary for increased student practices as well as supplies and accessories.

Student activities and engagement is also proven to increase retention rates and the level of student success. The division has made efforts to increase avenues for increased student engagement and students activities by encouraging and supporting initiatives such as departmental student organizations, a business honor society and a mentor program.

Lastly, it is important to communicate with the stakeholder and the community about the value of our program by designing brochures that will not only show them the opportunities that our programs offer, but also the requirements of the said programs.

In addition to the regular division meetings, a division faculty meeting allows us to communicate and discuss with faculty members regarding the changes needed as well as any other issues that may arise. Faculty members are generally aware of changes and need for changes since they are always discussed in both meetings.

Students will be called upon to help with the collection of outcome assessment data and the implementation of any proposed change. Their cooperation is more or less needed to insure to quality of the assessment process and imperative for the implementation of initiatives such as the Major Field Test. By encouraging student engagements through the promotion of student activities in the Academic Division of Business, we hope to create the communications pipelines that will allow us to convey our messages.

The Academic Division of Business has taken steps to encourage student initiatives that will boost the level of retention and student success such as the "Investment Game" the creation of student organizations such as Business Professional of America (BPA) which was replaced in the Fall 2009 by SIFE (Students In Free Enterprise), Kappa Beta Delta, The International Honor Society for Business Students and much more recently, the Multicultural Business Club (MSBC).

FY2010 Health Professions Emergency Medical Sciences- Paramedic 2010-11-17 Leaugey C. Barnes Dean of Health Profession

Graduates of the Oklahoma City Community College Emergency Medical Sciences Program will demonstrate comprehensive knowledge of the National Standard Curriculum, and have the ability to apply this knowledge and evaluate results in the setting of an entry level Paramedic.

The National Registry Paramedic written examination.

132

80% of graduates who attempt the National Registry written examination will pass on the first attempt.

100% of graduates who attempted the National Registry written examination passed on the first attempt (12/13 one has not yet tested).

No action needed.

National Registry practical examination.

132

80% of graduates who attempt the National Registry practical examination will pass on the first attempt.

91% of graduates who attempted the National Registry practical examination passed on the first attempt (11/13 two have not yet tested).

One student was required to retest one practical skill station at the National Registry practical examination.

No action needed.

Graduates of the Oklahoma City Community College Emergency Medical Sciences Program who seek employment as an entry level paramedic will obtain employment.

132

80% of graduates who seek employment as an entry level paramedic will obtain employment.

100% of graduates who have pursued employment as an entry level paramedic have been employed. (11/13)

No action needed.

1. Faculty will continue to write test items at the critical thinking level.
2. The program will continue to implement scenario based education.
3. Faculty will continue to be encouraged to integrate student centered learning into the classroom.
4. Student involvement in professional organizations is being encouraged.

Full time faculty meet to discuss student learning and program outputs in EMS department meetings. Adjuncts are encouraged to attend since there are a large number of adjuncts involved in the program to enhance communication and continuity however, due to other obligations this does not occur as often as we would like.

Faculty are encouraged to discuss program changes with students and how these changes benefit student learning and program outputs.

The program hosts an Advisory Committee Meeting every semester to discuss changes with communities of interest and to assure the program is meeting the needs of stakeholders.

2010 Health Professions Occupational Therapy Assistant (OTA) 2010-11-10 Thomas Kraft

Reeca Young
Fonda Scott

Upon completion of the Occupational Therapy Assistant Program, the graduate(s) will possess the cognitive, affective, and psychomotor skills appropriate to entry-level practice.

Upon graduation, graduates of the Occupational Therapy Assistant Program will make application and sit for the National Certification Examination for the Occupational Therapy Assistant administered by the National Board for Certification in Occupational Therapy (NBCOT).

172

The total number of graduates who sit for the National Certification Examination for the Occupational Therapy Assistant will achieve a first time pass rate of 80% or better.

During calendar year 2009, and as reported by NBCOT, seventeen (17) graduates sat for the Certification Examination. Thirteen (13) passed first time with four (4) unsuccessful first time. This represents a 76.5% first time pass rate. The four (4) graduates who were unsuccessful initially, successfully passed on retake.

Of the four (4) unsuccessful graduates (first time test takers) we know the following:

Two (2) performed very well on their clinical placements during the last semester of the program. Both felt

that given their performance on the assigned clinicals that significant study/preparation for the national exam wasn't needed. Surprise! Given the embarrassment of the first time failure, both studied and prepared and were successful on retake.

One (1) of the four (4) has a history of significant test anxiety and waited for over a year to sit for the exam. A graduate from May 2008, he waited till fall of 2009 to sit for the exam and wasn't surprised at the unsuccessful first attempt. He felt that experiencing the exam format and layout the first time was a positive experience and would assist him on his second attempt. After consulting with OTA Program faculty, he applied a variety of exam preparation strategies, retook the exam in late fall of 2009 and was successful on the second attempt.

The last unsuccessful graduate never contacted us post graduation but we know she was initially unsuccessful the first time, studied/prepared, and was successful on retake sometime during the time period of Jan.1 - Apr.21, 2010. It is assumed that like the first two (2), she was very successful on fieldwork (with her second fieldwork supervisor employing her upon graduation) and therefore sat for the exam initially without the study/preparation necessary for first time success.

OTA Program faculty feel the following actions are indicated:

1. Continue to stress that students not wait a significant amount of time before taking the examination. Although there have been graduates that have waited for a year or more and been successful first time, that is not always the case as evidenced by one of the exam candidates during calendar year 2009.
2. Continue to reinforce that performance on Level II Fieldwork should not detract from comprehensive study and preparation activity prior to sitting for the NBCOT Certification Examination.
3. Monitor individual student test anxiety and counsel/suggest (when appropriate) a student's interaction with Student Support Services for assistance with strategy development/implementation in test taking.
4. In the OTA 2143 - Professional Development and Support course, continue to use and expose students to various study materials available and specific to preparation for the NBCOT Certification Examination.
5. Continue to reinforce the value of "study groups" as an effective tool for exam preparation.
6. Investigate the inclusion of newly developed NBCOT Occupational Therapy Knowledge Exams (OTKE) for use prior to enrollment in Level II Fieldwork. Results can be used to focus students in areas where knowledge increase is indicated/suggested.
7. Improve OTA faculty item writing that is consistent with the format used by NBCOT in the Certification Examination. Also, consider attendance at a "faculty oriented" item writers workshop sponsored by NBCOT in various regions across the US during 2011.

Students enrolled in the last semester clinical portion of the OTA Program will be assessed on successful/unsuccessful performance using the American Occupational Therapy Association's "Fieldwork Performance Evaluation For The Occupational Therapy Assistant Student".

222

The total pass rate ("C" or above) for students enrolled in the two (2) terminal clinical Level II Fieldwork placements will be 85% or better on the first attempt.

During fall 2009, two (2) students were each assigned one (1) Level II Fieldwork placement.

During spring 2010, twenty (20) students were each assigned two (2) Level II Fieldwork placements.

The total Level II clinical placements during the reporting period was forty-two (42).

Of the forty-two (42) placements, forty-one (41) passed ("C" or above) on the first attempt.

One (1) placement resulted in a grade of "F" due to the student abandoning/leaving the Fieldwork site to move to another state with only a little over 2 weeks from completion.

Thus, during the reporting period, there was a 97.6% pass rate ("C" or above) on the first attempt.

OTA faculty feel the following actions are indicated:

1. Continue to request student input on a Level II Fieldwork "placement preference" survey.
2. Continue to use an OTA faculty Level II Fieldwork placement meeting where the appropriate matching of student to clinical site and clinical instructor (CI) is discussed and made. Use of the student input survey in appropriate placement discussions is an important tool in the process.
3. Continue to seek out additional OTA clinical site availability which will enhance positive student placement and performance success.
4. Continue to make regular telephone contacts with assigned on-site Clinical Instructors along with periodic on-site visits to review student performance and clarify potential performance issues/ concerns where/when indicated.

Six (6) to Nine (9) months post graduation, graduates will be sent an OCCC/OTA Graduate Survey with a request to complete and return.

161

The total number of OTA graduates (surveyed and responding) will rate the OCCC/OTA Program at "4" or above (using a 1-5 scale) on 80% of the items listed.

In December of 2009, the Department of Institutional Effectiveness sent out sixteen (16) OTA Graduate surveys which included a combined OCCC and OTA Program Survey along with an accompanying OTA Employer Survey. Out of the sixteen (16) surveys sent, only seven (7) were returned (a 43.8% response).

Given the responses, data provided by Institutional Effectiveness only pertained to general survey questions and did not include responses specific to OTA specific survey questions.

General survey responses from the seven (7) returned surveys indicate a 4.43 (on a 1-5 scale) overall satisfaction rating with OCCC. This is an 88.6% satisfaction rating. And, 100% would recommend OCCC to another person.

Although there were only seven (7) respondents out of sixteen (16), the data provided by Institutional Effectiveness did not include the tabulation of the specific OTA Program oriented questions.

Also, even though the Employer Survey was not included in this "measurement area" for the report, the OTA Program was advised by Institutional Effectiveness that there were no employer surveys returned for OTA.

OTA Program faculty believe that having less than a 50% graduate return and no employer surveys returned indicates that a more vigorous effort be expended to:

1. Reinforce with students in the OTA 2143 - Program Development and Support course (taken in the last semester of the Program) the significance of providing the OTA Program and OCCC with survey input postgraduation.
2. Reinforce with those same students the importance of requesting their respective employers to complete and return the Employer Survey.
3. Initiate some sort of follow-up with graduates after Institutional Effectiveness has sent out survey materials in late November/early December.
4. Contact Institutional Effectiveness during the summer semester to inquire about survey responses and

tabulation of OTA surveys.

An articulated primary institutional indicator at OCCC of student success is "first time" success rates on national certification/licensure exams. Although the OTA graduate first time success rate during calendar year 2009 was 76.5% (13 out of 17), subsequent retake by the four (4) graduates resulted in success. So ultimately, there was a 100% Certification Exam success rate for these graduates. It would be nice to be able to provide that input also.

It would be nice to be provided the resources to attend the regional NBCOT 2011 Item Writer Workshop to be held in St. Louis on June 24, 2011. Attendance would enhance faculty item writing for exams within the OTA program resulting in a format similarity for OTA Program Exams and the NBCOT Certification Examination. This could benefit each student by experiencing format similarity and possibly lessening the test anxiety experienced when getting ready to sit for the NBCOT Certification Examination.

If the NBCOT Occupational Therapy Knowledge Exam (OTKE) could be purchased from NBCOT at a group rate for the OTA Program, this tool would be used during the second year of the OTA Program (probably) in the last semester. Results of this tool would show areas for individual student improvement in OT knowledge and provide a general indicator for the OTA Program on general areas of content strength and areas for possible content enhancement.

Any changes (additions/deletions) to the OTA Program would be discussed at both formal and informal meetings (individual and group).

Changes to curriculum would be provided by instructors (as appropriate) in the classroom, syllabi, web site, prospective student information packet, new student orientation, and the Student OT Association (SOTA) club.

Changes (as appropriate) would be shared via prospective student information packet, web site, periodic College-wide program information sessions, advisory committee, and other avenues deemed appropriate regarding the change(s).

2009-10 Health Professions Physical Therapist Assistant 2010-11-03 Jennifer Ball

Vicky Davidson

Students will successfully complete a comprehensive practical examination, that demonstrates competency in cognitive, psychomotor, and affective program areas prior to participation in PTA 1312 Initial Practicum, PTA 2034, Practicum I and PTA 2134 Practicum II

Practical Exam Grading forms.

422

Criteria: 90% or better of the students will pass on first attempt enabling participation in clinical practicum courses.

For the first cohort (2010 graduates) 100% of the students passed the comprehensive check out on the first attempt and were able to progress to PTA 2034, Practicum I and PTA 2134, Practicum II. For the second cohort (2011 graduates) 100% of the students passed the comprehensive check out on the first attempt and were able to progress to PTA 1213 Initial Practicum.

These practical examinations allow the faculty to assess the students' critical thinking and problem solving skills, communication, psychomotor skills, and knowledge. This also verifies the curriculum and instructional methods/activities. When the criteria is not met, the Program Director looks at any curricular patterns related to the student deficit noted.

Students will be adequately prepared to successfully complete three clinical practicums, demonstrating competency in cognitive, psychomotor, and affective areas prior to receiving the AAS in PTA degree. Tool used: Clinical Performance Instrument (CPI) and clinical preceptor reports.

422

1. Zero students will be sent back for remediation within the first two weeks of clinical internship due to inept preparation.
2. Ninety percent or greater students will successfully complete each clinical practicum on the first attempt.

1. For the 2010 graduating cohort, enrolled in PTA 2034 Practicum I and PTA 2134 Practicum II, zero students were sent back for remediation within the first two weeks of the internship due to inept preparation. For the 2011 graduating cohort, enrolled in PTA 1312 Initial Practicum, zero students were sent back for remediation due to inept preparation.
2. For the 2010 graduating cohort, 100% of the students enrolled successfully completed PTA 2034 Practicum I and PTA 2134 Practicum II on their first attempt. For the 2011 graduating cohort, 100% of the students enrolled successfully completed PTA

1312 Initial Practicum on their first attempt.

This data set also relates to curriculum and allows the PTA Program to verify that the curriculum matches the clinical skill set needed for successful transition into the workforce. If the criteria is not met, the ACCE and Program Director look at the clinical instructor training, the student's abilities, and the curriculum/faculty in the area of deficit.

OCCC will produce successful graduates who will demonstrate competency in the CAPTE terminal competencies, pass the licensure examination, and proficiently enter the workforce.

392

Licensure examination scores will be equal or better than other accredited PTA programs with regard to first time pass rates.

1. For the cohort of 2009 graduates, the first time pass rate was 85% (compared to national first time pass rate of 82%), the overall pass rate for this group of students is 100% (compared to national overall first time pass rate of 80%). *this is based on new data updated in October 2010.
2. For the cohort of 2010 graduates, the first time pass rate was 82% (only 2 people have not taken the exam at this time). The national first time pass rate as of today was 82%.

This data indicates how well the students in the PTA Program learn and retain their material. Licensure is required in 48/50 states, excluding Colorado and Hawaii. Although the OCCC has an ultimate pass rate of 99% (one student with English as a second language has not retaken the test), the program faculty would prefer for the students to pass on the first attempt. In 2008 the PTA Program did not meet this criteria and as a result, a comprehensive exam, in which the student must successfully complete, was initiated as a PTA program requirement prior to receiving an educational release of records for licensure. The examination was piloted over the past two years. In the first year (2009 grads), the students who did not achieve a passing score also did not pass the licensure examination on the first attempt, showing a strong correlation between the data. In the second year (2010 grads), the students who did not achieve a passing score also did not pass the licensure examination. The next cohort will be the first one that is required to achieve a passing score in order to complete the educational requirements.

We have implemented the comprehensive examination as a pilot over the last two years. Beginning this year, it will be a program requirement. The students are assessed a \$35.00 fee payable to the Bursar's office in January 2011. This fee pays for the academic version of the comprehensive computer based exam. The students will take the exam when they return to the school to finalize their clinical documents. In the event that a student does not achieve a passing score, he/she will be allowed to retake the examination within 30 days from the first exam at no additional charge. In the event that a student does not pass the examination on that attempt, he/she will need to develop a study plan, identify a mentor, and petition to retake the exam within 6 months. This final attempt is the PEAT exam and costs approximately \$85.00. All of these examinations have been identified as preparation exams for the national licensure examination.

We have regular faculty meetings to identify strengths/weakness of faculty and curriculum. We review competencies every summer. We review students strengths/weaknesses at the faculty meetings as well.

The information regarding Program mission, goals, competencies, objectives, and program requirements such as comprehensive practical exams, comprehensive program finals, and clinical requirements are described in detail in the student handbooks given annually to each student at orientation.

Our mission, goals, Program information, and curriculum is posted on our website at www.occc.edu/pta. Specific assignments and skills checks are listed on the syllabi and student handbooks.

Health Professions Nursing 2009-2010-2010-11-04 Jo Ann Cobble, Rosemary Klepper, Jacqueline Frock, Monica Holland, Valerie McCartney, Robin McMurry, Deborah Myers, Beverly Schaeffer, Terri Walker Dean of Health Profession

1. Student Success: Our students achieve their individual educational aspirations.
2. Graduate Success: Our graduates succeed at four-year institutions and/or in their careers.

Program outcomes are:

1. Eighty percent (80%) of students will complete the program within a period of six semesters (traditional program and baccalaureate to associate degree nurse accelerated pathways) and four semesters (career ladder pathway).
2. Graduates will perform at or above the national average pass rate on the NCLEX-RN licensure exam.
3. Ninety percent (90%) of graduates responding to graduate surveys will be employed as registered nurses.
4. Ninety percent (90%) of graduates responding to graduate surveys will report satisfaction with the program.
5. Ninety percent (90%) of employers responding to employer surveys will report that graduates are prepared for entry level practice.
6. One hundred percent (100%) of graduates will demonstrate proficiency in the nursing skills identified in the program's curriculum.
7. One hundred percent (100%) of graduates will demonstrate the professional, social, and personal behaviors consistent with expectations of an entry level registered nurse.

These outcomes are:

1. Graduates will perform at or above the national average pass rate on the NCLEX-RN licensure exam.
2. Ninety percent (90%) of graduates responding to graduate surveys will report satisfaction with the program.
3. One hundred percent (100%) of graduates will demonstrate the professional, social, and personal behaviors consistent with expectations of an entry level registered nurse.

Graduates will perform at or above the national average pass rate on the NCLEX-RN licensure exam.

Most recent official National Council Licensure Examination for Registered Nurses pass rates for first time candidates, which is for the period of January 1-December 31, 2009.

2

Meet or exceed national national pass rate.

91.75% of calendar year 2009 program graduates passed the NCLEX-RN licensure exam on the first time they tested. The national pass rate on the NCLEX-RN licensure exam for 2009 was 88.42%.

The data continues to support the overall effectiveness of the OCCC nursing program in preparation of entry level Registered Nurses. Multi-level strategies to ensure that the program's first-time pass rate meets the national average pass rate will continue to include ongoing curricular evaluation in core nursing courses; implementation of more active teaching/learning strategies in the core courses; efforts to improve course tests, including improvements in testing policies and practices including use of test analysis data provided through the ParSystem; and implementation of a comprehensive assessment and review program through Assessment Technologies Institute, LLC (ATI). The ATI program consists of additional learning tools for students which include computerized content-specific practice tests; skills modules available electronically; extensive NCLEX-RN type practice items for development of testing skills; comprehensive remediation programs; course progression exams with required benchmark scores; and a final comprehensive exam with a required score that predicts a 93% or higher likelihood of passing the NCLEX-RN exam. The ATI program was initiated in FY 2006, and licensure exam results have met or exceeded national averages since that time. Additional future plans to maintain the results include finding software which will allow us to include alternative type items in course exams AND incorporation of more simulations in the curriculum to contribute to critical thinking abilities.

The Oklahoma City Community College Nursing Graduate Survey item: Overall, how satisfied were you with the OCCC nursing program?

5

A mean score of 3.5 (5 point scale with 5 "strongly agree" to 1 "strongly disagree") will be attained as well as 90% of respondents

indicating satisfaction with the program.

Criterion 1): A total of 73 of 208 graduates responded on the NURSING Graduate Survey for FY 2009 (latest survey data available for review) for a response rate of 35.1%. On the item "Overall, how satisfied were you with the OCCC nursing program, 21.9% reported "Very Satisfied"; 56.2% reported "Satisfied"; and 15.1% reported "Somewhat Satisfied." Based upon these results, 92% of the respondents were satisfied with the program. The mean score was 3.88, which exceeds the expected level of achievement (3.5). The data shows that graduates in FY 2009 were, overall, satisfied with the program.

The results on the item support the plans for continuous quality improvement of the program which the systematic plan for evaluation (SPEP) directs although a slight decline (from 96% reporting satisfaction) is noted from AY 2008 graduate surveys. The significance of that decline is probably negligible but will continue to be monitored. Specific weaknesses most commonly reported as comments were that more practice time for skills is needed; improvement of clinical organization is needed; test item improvements are needed; more lecture time is needed. To address these concerns, more open lab hours will be added to address student practice time requests; this will be facilitated by having the additional lab space although more lab adjunct hours will also be requested for spring 2011. The team leaders will plan ways to ensure their clinical faculty are using/organizing clinical hours optimally. The last comment about more lecture time is a "common complaint" of nursing students. Efforts to explain the rationales for more active teaching/learning strategies will continue with new strategies (such as the simulations) increased. There is a sense among faculty that "lecture demands" are diminishing among students. (Important to note that both Graduate Surveys and Employer Assessments are over a year old as that is the schedule used to administer these surveys).

Employer Assessment of OCCC Nursing Graduates

2

Mean score of 3.5 or higher (5 point scale with 5 as "excellent" and 1 as "not acceptable") as well as 90% of respondents reporting that graduates are prepared for practice on Nursing Question 4 "Makes decisions and takes actions that are consistent with current standards of nursing practice and licensing laws."

A mean score from Employers Assessments from FY 2009 of 4.44 on the specified item. The response rate for Employer Assessments for FY 2009 was 15.87%, which is much lower than previous years. The mean score could only be attained if (at least) nine of the ten reported satisfaction although a specific break-down on the responses was not reported by Institutional Effectiveness.

The mean score on the specified Nursing Knowledge/Critical Thinking item of 4.44 demonstrates that graduates are performing well in areas requiring sound nursing knowledge underscoring decisions and actions taken. Multiple methods to build critical thinking skills in students/graduates have been implemented (e.g., active teaching strategies; use of simulations in curriculum; course tests improvements; use of comprehensive assessment and review program: ATI). Primary future strategy to make sure this item continues to be met at high level is increased incorporation of simulations in the curriculum which require students to practice/achieve improvements in clinical decision-making. These will include multiple patient assignments to "upscale" decision-making required as new graduates.

Institutional Effectiveness has reported strategies are in place to improve response rates for the next administration of the Employer Assessments.

2010 Information Technology Computer Science 2010-10-29 Vicki Gibson

James Bothwell
Haining Chen
Albert Heitkamper
Haifeng Ji
Sara Mathew
Anita Philipp
Mary Williams

Dean of Information Technology 2010-11-04

Students will be able to subdivide a complex problem into appropriate program modules, with parameter passing.

Students will be able to subdivide a complex problem into appropriate program modules, with parameter

passing.

722

At least 70% of assessed students will perform at a minimum of 70% level on the assessment. The student's performance will be measured using a competency checklist

63 students (87.5%) scored at least 70% on the assessment

The data suggests that the approach we are using is effective

Graduates of the Oklahoma City Community College Computer Science A.S. degree will be satisfied with their education.

52

75% of Computer Science A.S. degrees graduates responding to a graduate survey will be satisfied with their education 3 or above on a 4 point scale.

13 students were surveyed with 5 responding. Of the 5 who responded overall satisfaction with their education was 4.80 (1-4 scale)

It appears from the responses we will continue to move forward.

Graduate Survey administered through Institutional Effectiveness

52

Continue to monitor these outcomes to maintain the quality instruction in the program.

Monthly department meetings.

syllabus and course materials.

2010 Information Technology Computer-Aided Technology 2010-09-30 John Helton

John Helton
Doug Gregory
Akram Taghavi-Burris

Dean of Information Technology 2010-11-04

Graduates will be well prepared for an entry level position in their field of study.

The advisory Board will evaluate the students capstone projects which will include an oral presentation, printed drawings and a portfolio of their work.

72

100% of the students will score 80% or higher on presentation rubric.

Seven students were evaluated by six board members. 71% of the students scored an 80% or above on their presentation. The student's score was base on categories such as presentation delivery, profession attire, ability to answer questions, quality of presentation and quality of visual aids.

Based on the feedback from the advisor board members the CAT Program plans to make changes to the capstone course and to the program as described later in this document.

The advisory Board will evaluate the students capstone projects and evaluate their paper drawings.

22

100% of the students will score 80% or higher on the drawing review rubric.

One advisory board member evaluated two students drawings. Because of time constraints and large number of presentations, the advisory board members didn't have the time to evaluate the drawings in detail. However, the two architecture students that were evaluated scored a 100% and a 93%.

In the future, we need to allow the advisory board members a hour prior to the presentation to evaluate the drawings.

All presentation materials and power points should be turned in two weeks (week 13) before final presentation, for review by instructor. Allowing one week for students to make revision.

Professional attire must be required. Students who do not have professional attire will be referred student support services for assistance.

To build confidence in speaking in front of an audience, CAT instructors are being asked to incorporate presentations in their classes.

In the future, we need to allow the advisory board members a hour prior to the presentation to evaluate the drawings. Project can also be posted online for evaluation.

The CAT Department chair will email the faculty the changes in the capstone courses. These changes will be discussed at a monthly department meeting.

The CAT Department chair will email all CAT faculty (full-time/adjunct) and encourage them to include presentations in the course.

Changes in the courses will be included in the syllabus.

2010 Information Technology Computer-Aided Technology 2010-09-30 John Helton

John Helton
Doug Gregory
Akram Taghavi-Burris

Dean of Information Technology 2010-11-04

To provide students with the latest equipment and software in industry.

Design Project - Outcomes Assessment Exit Survey

142

100% of the students will indicate that the Hardware/Software is adequate.

Fourteen students completed the survey. Five students indicated that the HW/SW was not adequate. Seven students indicated that it was adequate.

The CAT faculty will review the feedback and make changes as funding becomes available.

2

1. Purchase two new plotters that can print faster and wider sheets.
2. Computers are scheduled to be replaced next year. It would not be cost effective to upgrade the video cards and memory on current computers. However, we can tweak the ghost image and ghost the computers more often.
3. We upgraded the 3D Studio Max software to the Entertainment Suite which now includes Maya and other programs the students are requesting.
4. Student storage space has been temporarily solved with the use of an external buffalo drive. Students will need instructions on how to access the drive. A more permanent solution should be found.

The CAT Department chair will email the faculty the changes in the capstone courses. These changes will be discussed at a monthly department meeting.

The CAT Department chair will email all CAT faculty (full-time/adjunct) and encourage them to include presentations in the course.

Changes in the courses will be included in the syllabus. Changes in the student computer center and classroom will be discussed in the classes.

2010 Information Technology Computer-Aided Technology 2010-09-30 John Helton

John Helton
Doug Gregory
Akram Taghavi-Burris

Dean of Information Technology 2010-11-04

Students will be able to apply concepts, principles and techniques of 3D modeling.

The faculty members will evaluate the submitted artifacts using the 3D Modeling Assessment rubric.

192

80% of the students will score 70% or higher on the 3D modeling assessment rubric.

19 artifacts were collected from two courses, CAT 1253 and CAT 2543. 11 (58%) of the artifacts scored 70% or better. The data collected was not complete. Data should have been collected from all six courses that used 3D modeling, not just two of them. Some artifacts were not complete, (i.e. sheets missing, drawings missing, etc.) In the future, data/artifact collection guidelines will be given to the instructor before the semester starts.

The results will identify key objectives that need emphasizing within a particular course. For example, In Application in CAD, students use standard Rendering material, but spend little time creating custom materials.

2

1. Create guidelines for collecting artifacts for outcomes assessment.
2. In CAT 2543-Architecture, a handout will be created for creating custom materials.
3. More emphases will be placed on proper usage of lineweight and linetype on printed 2D drawings.

By email, department meetings.

The changes will be incorporated into the lessons and the syllabus.

2010 Information Technology 2010-10-29 Vicki Gibson

James Bothwell
Haining Chen
Albert Heitkamper
Haifeng Ji
Sara Mathew
Anita Philipp
Mary Williams

Dean of Information Technology 2010-11-04

Students will be able to install, configure and upgrade computer hardware components

In class timed, graded project was assessed in CS 1353 - Introduction to Operating Systems and Hardware

182

At least 80% of assessed students will perform at a minimum of 80% level on the assessment. The student's performance will be measured using a competency checklist

17 students out of 18 in CS 1353 (94%) were successfully able to install, configure and upgrade computer hardware components at above an 80% level

The course will continue to use the same method of instruction

Graduates of the Oklahoma City Community College Computer Science - Computer Science A.A.S. degree will be well prepared for continued education.

102

- 75% of Computer Science AAS degrees graduates responding to a graduate survey will rate the prepared graduate for performing job 3 or above on a 4 point scale.

In 2009 25 students were surveyed with a response from 10 of those. Of those 10 the average response for being prepared to perform job was 3.60 (1-4 scale).

Continue to move forward with the program of study

Continue to add new technologies into curriculum as they become available.

Monthly department meetings.

Syllabus and course materials.

FY11 BusinessAviation Maintenance Technology2010-10-22Alexa C. Mashlan

Pete Lee

I demonstrate competency at performing the necessary skills required of aviation maintenance technicians as defined by national standards.

Graduates will demonstrate competency at performing the required skills consistent with employer expectations.

1902

Graduates of the program are prepared to complete the FAA national certification examination and must meet minimum proficiency requirements to successfully complete the certification. Students will meet or exceed the national average.

Data collected indicates that the overall pass rate for the national certification is 98% as compared to the overall national average of 94%.

No action will be taken at this time.

Graduates will demonstrate competency at performing the required skills consistent with employer expectations.

N/A

Student Follow-up Surveys are conducted during the first six months of completion of the program. 80% of graduates will be positively placed in the field, related fields, or in continuing education within the first six months of completing the program.

Data collected indicates that 91% of the graduates were positively placed.

Continue to work with industry partners to ensure students will be positively placed.

This program is at the technology center, but as the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant program information for the necessary skills set associated with each program.

Through advisory committee meetings and/or general meetings with faculty/directors.

The technology center faculty will relate all necessary program information to students.

Industry partners will be involved in upgrading program content.

2010 BusinessElectronics - Instrumentation and Control2010-10-22Alexa Mashlan and Melissa Dyer

Identify and troubleshoot operational procedures on electrical motor control circuits and electromechanical devices.

Students must take ET 2044- Electromechanical Devices with a pass rate of 85% or greater.

Students must take ET 2044- Electromechanical Devices with a pass rate of 85% or greater.

Data collected indicates that 87% of students completed ET 2044 Electromechanical Devices with a pass rate of 85% or greater.

Based on industry input, program content and program outcomes will be examined as needed.

Graduates of the Electronics-Instrumentation and Control Program will be prepared for the workforce with the skills and education necessary by today's industry standards.

N/A2

75% of the program graduates will be positively placed in the field, related fields, or in continuing education within the first year of graduation, as indicated by the Student Follow-up Survey report.

Positive Placement data for this program is currently unavailable. The Oklahoma State Department of Career Tech is in the process of compiling the data for this program.

Follow up with ODCTE for the positive placement data.

This program is at the technology center, but as the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant program information for the necessary skills set associated with each program.

Through advisory committee meetings and/or general meetings with faculty/directors.

The technology center faculty will relate all necessary program information to students.

Industry partners will be involved in upgrading program content.

2010 BusinessElectronics-General2010-10-22Alexa Mashlan and Melissa Dyer

Demonstrate knowledge of principles by solving problems relating to both DC and AC in subjects such as resistive circuits, reactance impedance, AC circuits and resonance.

Students of the program must take and successfully pass ET 1014-DC/AC Fundamentals with a rate of 80% or above.

142

Students of the program must take and successfully pass ET 1014-DC/AC Fundamentals with a rate of 80% or above.

Data indicates that 100% of students successfully completed ET 1014-DC/AC Fundamentals with a rate of 80% or above.

Course will be updated as needed or as dictated by industry standards.

Graduates of the Electronics-General Program will be prepared for the workforce with the skills and education necessary by today's industry standards.

02

75% of the program graduates will be positively placed in the field, related fields, or in continuing education

within the first year of graduation, as indicated by the Student Follow-up Survey Report.

The Electronics-General program is an evening, "Flex" program. Placement data is not available for this program.

This program is at the technology center, but as the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant program information for the necessary skills set associated with each program.

Through advisory committee meetings and/or general meetings with faculty/directors.

The technology center faculty will relate all necessary program information to students.

Industry partners will be involved in upgrading program content.

2010 BusinessManufacturing - Advanced Manufacturing2010-09-08Alexa Mashlan and Melissa Dyer

Set up a batch processing line, which converts raw material into a finished product, utilizing the concepts learned in earlier courses and provide programming, interfacing and troubleshooting of an automated system.

Students must take and successfully complete PRDT 2544- Computer Integrated Manufacturing at a pass rate of 80%.

22

Students must take and successfully complete PRDT 2544- Computer Integrated Manufacturing at a pass rate of 80%.

Data collected indicates that 100% of students successfully completed PRDT 2544- Computer Integrated Manufacturing at a pass rate of 80%.

Based on industry input, program content, and therefore program outcomes, will be examined as needed.

Graduates of the Manufacturing Advanced Manufacturing will be prepared for the workforce with the skills and education necessary by today's industry standards.

N/A2

75% of the program graduates will be positively placed in the field, related fields, or in continuing education within the first year of graduation, as indicated by the Student Follow-up Survey report.

Data indicates that 88.2% of students were positively placed in the field, related fields, or in continuing education within the first year of graduation.

Continue to work with industry partners to ensure student will be positively placed.

This program is at the technology center, but as the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant program information for the necessary skills set associated with each program.

Through advisory committee meetings and/or general meetings with faculty/directors.
The technology center faculty will relate all necessary program information to students.
Industry partners will be involved in upgrading program content.

2010 Information Technology Network Technology 2010-10-22 Alexa Mashlan and Melissa Dyer

Demonstrate a basic understanding of network structures network operating systems, network media, common components used in a network, common network protocols, configuration settings for workstations, and accepted practices and procedures for maintaining and supporting a network

Students will successfully complete and pass NT 1144-Introduction to Networking, at a rate of 80% or higher.

422

Students will successfully complete and pass NT 1144-Introduction to Networking, at a rate of 80% or higher.

Data collected indicates that 84% of students successfully completed and passed NT 1444-Introduction to Networking, at a rate of 80% or higher.

Based on industry input, program content, and therefore program outcomes, will be examined as needed.

Graduates of the Networking Program will be prepared for the workforce with the skills and education necessary by today's industry standards.

N/A2

75% of the program graduates will be positively placed within the first year of graduation as indicated by the Student Follow-up Survey report.

Data collected indicates that 91.2% of graduates were positively placed within the first year of graduation.

Continue to work with industry partners to ensure student will be positively placed.

This program is at the technology center, but as the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant program information for the necessary skills set associated with each program.

Through advisory committee meetings and/or general meetings with faculty/directors.
The technology center faculty will relate all necessary program information to students.
Industry partners will be involved in upgrading program content.

2010 Information Technology Enterprise Communication Systems 2010-10-22 Alexa Mashlan and Melissa Dyer
Dean of Information Technology

Demonstrate the ability to set-up a local area network using various routers, switches, cable analyzers, smart

remotes, and cable meters.

Students in ECS 1314 Networking Fundamentals will successfully pass the course at an acceptable level of 85% or higher.

29

Students in ECS 1314 Networking Fundamentals will successfully pass the course at an acceptable level of 85% or higher.

Data collected indicates that 64% of students successfully completed ECS 1314 Networking Fundamentals at a rate of 80% or higher.

Graduates of the ECS Program will be prepared for the workforce with the skills and education necessary by today's industry standards.

N/A

75% of the program graduates will be positively placed within the first year of graduation as indicated by the Student Follow-up Survey report.

Positive Placement data for this program is currently unavailable. The Oklahoma State Department of Career Tech is in the process of compiling the data for this program.

Follow up with ODCTE for the positive placement data.

This program is at the technology center, but as the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant program information for the necessary skills set associated with each program.

Through advisory committee meetings and/or general meetings with faculty/directors.

The technology center faculty will relate all necessary program information to students.

Industry partners will be involved in upgrading program content.

2010 BusinessDatabase Management2010-10-22Alexa Mashlan and Melissa Dyer

Student will be able us to successfully demonstrate the ability to create, manage and support a database using Oracle. (Competency #1)

Students must successfully complete DBM 1313-Introduction to SQL with a pass rate of 80% or higher.

8

Students must successfully complete DBM 1313-Introduction to SQL with a pass rate of 80% or higher.

Data collected indicates that 100% of students successfully completed DBM 1313-Introduction to SQL with a pass rate of 80% or higher.

Graduates of the Database Administration Program will be prepared for the workforce with the skills and education necessary by today's industry standards

N/A2

75% of the program graduates will be positively placed within the first year of graduation as indicated by the

Student Follow-up Survey report.

Data indicates that 75% of students were positively placed.

Continue to work with industry partners to ensure students will be positively placed.

This program is at the technology center, but as the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant program information for the necessary skills set associated with each program.

Through advisory committee meetings and/or general meetings with faculty/directors.

The technology center faculty will relate all necessary program information to students.

Industry partners will be involved in upgrading program content.

2011 Health Professions Respiratory Care 2010-10-22 Alexa Mashlan

Lezli K. Heyland

Graduates will demonstrate comprehension of and the ability to apply knowledge necessary to perform as an advanced level respiratory care practitioner.

Graduates of the program will meet or exceed the national certification average, on their first attempt. Results will be taken from the National Board for Respiratory Care (NBRC) Registry Examinations.

Employer Survey; 80% of responding employers will indicate satisfaction with graduates' knowledge level. This will be indicated by a rating of 3 or greater on a Likert scale of 1-5, with 3 being acceptable.

232

Criteria for Success -

Graduates will demonstrate competency at performing the clinical skills required of advanced level respiratory care practitioner as defined by the community and the national standards.

1a. Data indicates that 100% of graduates met or exceeded the average nation CRT examination score of 77%.

1b. Data indicates that 100 % of employers responding to a survey pertaining to graduates rated the graduates knowledge level as 3 or greater on a Likert Scale of 1-5.

1a. No action will be taken at this time.

1b. Employer Survey will be used to assess feedback regarding how well the RC program prepared graduates for the workplace.

2a. Employer Survey; 80% of responding employers will indicate satisfaction with graduates' clinical skills. This will be indicated by a rating of 3 or greater on a Likert scale of 1-5, with 3 being acceptable.

2b. Minimum proficiency requirements check list; In order to successfully complete the Respiratory Care Therapist program, graduates must demonstrate 100% competency in performing required skills.

152

2a. Data indicates 100% of employers responding to a survey pertaining to graduates rated the graduates' clinical skills as a 3 or greater on a Likert scale of 1-5.

2b. Data indicates 100% of graduates completed the minimum proficiency requirements for skills performance

2a. Employer Survey will be used to assess feedback regarding how well the RC program prepared graduates for the workplace.

2b. Continue to monitor employer evaluation of graduates.

Measure and Criteria for Success-

3a. Employer Survey; 80% of responding employers will indicate satisfaction with graduates' professional behavior. This will be indicated by a rating of 3 or greater on a Likert scale of 1-5, with 3 being acceptable.

152

Outcome 3

Criteria for Success -

Graduates will demonstrate professional behavior in the clinical setting consistent with employer expectations.

3a. Data collected indicates 100% employer satisfaction with graduates' professional behavior. This was indicated by a rating of 3 or greater on a Likert scale of 1-5.

3a. Employer Survey will be used to assess feedback regarding how well the RC program prepared graduates for the workplace.

This program is at the technology center, and must meet the criteria in place by the national accrediting body. As the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant information related to the field.

Through advisory committee meetings and/or general meetings with faculty/directors.

The technology center faculty will relate all necessary program information to students.

2010 Health Professions Orthotics Prosthetics Technician 2010-10-22 Alexa C. Mashlan

Joseph Young

Outcome 1. Criteria for Success - Graduates will demonstrate comprehension of and the ability to apply knowledge necessary to perform as an entry-level orthotic/prosthetic technician.

Employer survey; responding employers will indicate satisfaction with the students' job performance by indicating on a Likert scale of 1-5 with 80% satisfied by indicating a 4 or above.

42

Criteria for Success - Graduates will demonstrate comprehension of and the ability to apply knowledge necessary to perform as an entry-level orthotic/prosthetic technician.

Data collected indicates 100% employer satisfaction with students' job performance. This was indicated by a rating of 3 or greater on a Likert scale of 1-5.

1a. Employer Survey will be used to assess feedback regarding how well the ORPR program prepared

graduates at the workplace.

2a. Employer survey; 80% of responding employers will mark agree or strongly agree to student preparedness based on survey items related to knowledge base, technical competence, and employability skills.

2b. Meet minimum proficiency requirements check list; 100% of the students will meet or exceed the minimum proficiency requirements to successfully complete the program.

42

Criteria for Success -

Graduates will demonstrate competency at performing the clinical skills required of advanced-level orthotic/prosthetic technician as defined by the community and the national standards.

2a. Data collected indicates 100% of employers agreed or strongly agreed to student preparedness.

2b. Data collected indicates that 100% of students met or exceeded the minimum proficiency requirements to successfully complete the program.

2a. Data from the employer satisfaction survey will continue to be collected and used to make changes or improvements in the program as needed.

2b. Faculty will assess student performance on the minimum proficiency requirements check list and if a student does not achieve minimum standards, they must repeat the skill evaluation before they are allowed to proceed.

3a. Clinical Site evaluation; responding clinical site evaluators will indicate satisfaction with the students professional behavior in the clinical setting by indicating on a Likert scale of 1-5 with 80% satisfied by indicating 4 or above.

42

Graduates will demonstrate professional behavior in the clinical setting consistent with employer expectations.

3a. Data indicates that 100% of clinical site evaluators were satisfied with students' professional behavior in a clinical setting.

3a. Data from the clinical site evaluations will continue to be collected and used to make changes or improvements in the program as needed.

This program is at the technology center, and must meet the criteria in place by the national accrediting body. As the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant information related to the field.

Through advisory committee meetings and/or general meetings with faculty/directors.

The technology center faculty will relate all necessary program information to students.

Industry partners will be involved in upgrading program content.

2010 Health Professions Medical Assistant 2010-10-22 Alexa C. Mashlan

David Wiggins
Tammy Kersey
Jenny McGuire

Graduates will demonstrate comprehension of and the ability to apply knowledge necessary to perform as an entry-level medical assistant

Clinical Site evaluation; responding clinical site evaluators will indicate satisfaction with the students professional behavior.

252

Satisfaction in the clinical setting will be indicated on a Likert scale of 1-5 with 80% satisfied by indicating 4 or above.

The Clinical Site respondents were 100% satisfied with the Medical Assistant students' professional behavior in the clinical setting by indicating 5 on a Likert scale of 1-5.

Employer Survey will be used to assess feedback regarding how well the MA program prepared graduates for the workplace.

Graduates will demonstrate competency at performing the clinical skills required of a medical assistant as defined by the community and national standards.

252

Student Survey-Clinical Procedures I and II; on a scale of 1-5 with responses of 4 or above indicating satisfaction, 80% of participating students will indicate satisfaction with their preparation and the ability to perform the competencies of the Medical Assistant program.

Data collected indicates that 100% of the Medical Assistant Students indicated satisfaction with their preparation and the ability to perform the competencies of the Medical Assistant program.

No action will be taken at this time.

Graduates will demonstrate professional behavior in the clinical setting consistent with employer expectations.

252

Employer Survey; responding employers will indicate satisfaction with the students' performance by indicating on a Likert scale of 1-5 with 80% satisfied by indicating a 4 or above

Data collected indicates the Employer respondents were 100% satisfied with the Medical Assistant students' performance by indicating a 5 on a Likert scale of 1-5.

Employer Survey will be used to assess feedback regarding how well the MA program prepared graduates for the workplace.

This program is at the technology center, and must meet the criteria in place by the national accrediting body. As the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant information related to the field.

Through advisory committee meetings and/or general meetings with faculty/directors.

The technology center faculty will relate all necessary program information to students.

Meleah Meadows

Graduates will demonstrate comprehension of and the ability to apply knowledge to perform as an entry-level diagnostic medical sonographer.

Students will take the national licensure examination --the ARDMS. Students will have a pass rate that meets or exceeds the national average on the licensure examination, on their first attempt. National licensure examination benchmark is 60%.

92

1a. Upon completion of their final semester in the Diagnostic Medical Sonography program, students will take the national licensure examination --the ARDMS. Students will have a pass rate that meets or exceeds the national average on the licensure examination, on their first attempt. National licensure examination benchmark is 60%.

1a. This report is for the 2008 graduating class and is a duplicate of last year's information. The DMS program graduates 10 students every 15 months, therefore, information is not available every year. Data indicates an overall pass rate of 89% for graduates who took the ARDMS on first attempt. The Graduates exceeded the national average on the licensure examination.

1a. Faculty will continue to evaluate the results of the licensure examination and update program accordingly.

Graduates will demonstrate competency at performing the clinical skills required of the diagnostic medical sonographer as defined by national standards.

92

2a. Diagnostic medical sonography students are evaluated in a clinical setting and must meet minimum proficiency requirements to successfully complete the program of study. This will be met with a 100% completion rate of all competency skills in a clinical setting.

2a. Data indicates that 100% of the graduates met minimum proficiency requirements to successfully complete the DMS program of study.

2a. No action will be taken at this time.

Graduates will demonstrate professional behavior in the clinical setting consistent with employer expectations.

9

3a. Diagnostic Medical Sonography students are evaluated by employers through the Employer Survey. Employers will indicate satisfaction with the students' job performance by indicating on a Likert scale of 1-5 with 80% satisfied by indicating a 3 or above on the survey.

3a. Data indicates 100% employer satisfaction with the students' job performance. This was indicated by a rating of 3 or greater on a Likert scale of 1-5.

3a. Employer Survey will be used to assess feedback regarding how well the Diagnostic Medical Sonography program prepared graduates for the workplace.

This program is at the technology center, and must meet the criteria in place by the national accrediting body. As the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant information related to the field. This report is for the 2008 graduating class and is a duplicate of last year's information. The DMS program graduates 10 students every 15 months, therefore, information is not available every year.

Through advisory committee meetings and/or general meetings with faculty/directors.

The technology center faculty will relate all necessary program information to students.

10 Health Professions Surgical Technology 2010-10-22 Alexa C. Mashlan

Kim Shannon

Graduates will demonstrate comprehension of and the ability to apply knowledge to perform as an entry-level surgical technician.

Students will have a pass rate that meets or exceeds the national average on the licensure examination, on their first attempt. National licensure examination benchmark is 66%.

172

1a. Upon completion of their final semester in the Surgical Technology technical course work, students will take the national licensure examination. Students will have a pass rate that meets or exceeds the national average on the licensure examination, on their first attempt. National licensure examination benchmark is 66%.

1a. Data collected indicates that the students met or exceeded the overall pass rate average benchmark of 66% with an overall pass rate of 76%.

1a. Faculty will continue to evaluate the results of the licensure examination and update program accordingly.

Graduates will demonstrate competency at performing the clinical skills required of surgical technician as defined by national standards.

172

Measure and Criteria for Success-

2a. Surgical Technology students are evaluated in a clinical setting and must meet minimum proficiency requirements to successfully complete the program of study. This will be met with a 100% completion rate of all competency skills in a clinical setting.

2a. Data collected indicates 100% of students successfully met minimum proficiency requirements of competency skills in a clinical setting.

2a. Clinical settings' feedback regarding graduate skills will be used to continue to evaluate how well the Surgical Technology program prepared graduates for the workplace.

Graduates will demonstrate professional behavior in the clinical setting consistent with employer expectations.

17

Measure and Criteria for Success-

3a. Surgical Technology students are evaluated by employers through the Employer Survey. Employers will indicate satisfaction with the students' job performance by indicating on a Likert scale of 1-5 with 80% satisfied by indicating a 3 or above on the survey.

3a. Data collected indicates 100% employer satisfaction with graduates' clinical skills. This was indicated by a rating of 3 or greater on a Likert scale of 1-5.

The faculty will continue to monitor and assess changes in industry and community needs, student performance, new technologies and procedures, and make changes or adjustments in the curriculum as needed.

This program is at the technology center, and must meet the criteria in place by the national accrediting body. As the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant information related to the field.

Through advisory committee meetings and/or general meetings with faculty/directors.

The technology center faculty will relate all necessary program information to students.

2010 BusinessManufacturing - Precision Machining2010-10-22Alexa Mashlan and Melissa Dyer

Develop basic set up and programming skills on computer numerical control (CNC) lathes, mills and machining centers, through cutting tool set up, fixturing alignment and set up, uploading and downloading of programs, minor program editing, identification application of various cutting tools and cutting tool configuration.

Students of the Precision Machining program will have successfully completed and passed MET 1112-Precision Measurement with a rate of 80% or above.

322

Students of the Precision Machining program will have successfully completed and passed MET 1112-Precision Measurement with a rate of 80% or above.

Data collected indicates that 100% of students successfully completed and passed MET 1112-Precision Measurement with a rate of 80% or above.

Based on industry input, program content, and therefore program outcomes, will be examined as needed.

Graduates of the Manufacturing Technology- Precision Machining Program will be prepared for the workforce with the skills and education necessary by today's industry standards.

N/A2

75% of the program graduates will be positively placed in the field, related fields, or in continuing education within the first year of graduation as indicated by the Student Follow-up Survey report.

Data collected indicates that 87.5% of graduates were positively placed within the first year of graduation as indicated by the Student-Follow-up Survey report.

Continue to work with industry partners to ensure student will be positively placed.

This program is at the technology center, but as the college partner, OCCC can encourage faculty to add new advisory committee members to continue to provide the most current and relevant program information for the necessary skills set associated with each program.

Through advisory committee meetings and/or general meetings with faculty/directors.

The technology center faculty will relate all necessary program information to students.

Industry partners will be involved in upgrading program content.

2010 Arts and Humanities Learning Skills 2010-10-12 Linda Robinett, Professor of Learning Skills

Lori Farr
Carlotta Hill
Amy Wilson

Dean of Arts and Humanities

Outcome 2: College Writing II Competency: 80 percent of students completing College Writing II LS-0033 will be able to write a well developed paragraph in Standard American English, which will demonstrate unity, coherence, and organization in a sixty-minute period of time on a given topic.

Measurement: These competencies will be evaluated during the FY 10 and FY 12 years. As measured using the College Writing II assessment rubric, the students will be able to write paragraphs that demonstrate effective topic sentences, strong support sentences that comprise the body, and a concluding sentence that brings the paragraph full-circle. Additionally, the students will demonstrate the ability to:

- Adhere to the selected topic and pattern
- Use appropriate transition words for coherence
- Write in complete sentences
- Demonstrate a variety of sentence beginnings
- Correctly use subject-verb patterns
- Use correct American English spelling
- Use commas correctly

-
-

5722

Eighty percent of students completing College Writing II will be able to complete the final paragraph at a score of 70% or higher.

In Fall of 2009, 87% of students were able to write the paragraph successfully. In Spring 2010, 95% of students wrote the paragraph successfully, and in summer of 2010, 78% successfully completed the paragraph. The combined average was 87%. The goal was achieved.

Since the data indicates that students are successful in College Writing II, no changes have been made to the objectives of the course. However, there is an ongoing discussion among faculty concerning what needs to be assessed in the course and how to collect and analyze data to promote continuous improvement in this course. Currently, faculty are revising the course description of College Writing II to include cooperative learning and computer usage. Faculty are also experimenting with paired classes,

various technology, and more preparation for writing essays.

College Reading II Output 1: Upon satisfactory completion of College Reading II, LS-0213, and College Writing II, LS-0033, 70 percent of students will successfully complete HIST-1483 or HIST-1493 at the same rate as non-developmental students

Measurement: This output will be measured during the FY 10 and FY 12 years. This completion data has been requested from the Office of Institutional Effectiveness.

1

Seventy percent of students will successfully complete HIST 1483 or 1493 at the same rate as non-developmental students.

Non-developmental students completed HIST 1483 or 1493 with an "A,B,or C" at a rate of 67.25 percent. Students who had taken College Writing II and College Reading II had a successful completion rate of 51.6 percent for the same history classes. The goal was for 70% of developmental students to pass history at the same rate as non-developmental students, and 77% passed, so the goal was achieved.

The data showed that developmental students who had taken either College Reading II or College Writing II had a higher success rate in HIST 1493 than HIST 1483, but that was also true of non-developmental students.

Learning Skills faculty have begun to discuss this data. Although the results indicate that the objective was met, faculty members are questioning the wording of this output and whether its measurement is a good indication of the program's success. The discussion of how to help prepare developmental students to succeed in history classes is ongoing.

No third outcome

With the current research trends suggesting an even more importance on the use of cooperative learning, paired classes, and technology in the developmental classroom, the Learning Skills faculty is currently creating and piloting use of these strategies during fall 2010 and spring 2011. The team is also planning professional development training sessions for the adjunct faculty on the use of these strategies to assist developmental learners in skill building. The Learning Skills faculty strongly believes the resources necessary to develop state of the art classrooms for retention and persistence of developmental learners must include cooperative learning tables for large and small group instruction as well as a perimeter set up for computers to promote technology knowledge. Resources for faculty to attend professional conferences specifically for developmental education are also necessary to promote the success of these students.

Our full-time faculty is small, and we meet regularly to discuss the need for cooperative learning and technology in the classroom. We plan to have workshops on cooperative learning for our adjunct faculty, and we are inserting more technology into the reading and writing curriculum through our generic syllabi.

Students will be participating in large and small group cooperative learning situations. Through cooperative discussions and activities, students will begin to develop an understanding about the need for cooperation to promote successful attainment of educational goals. Students will also have exposure and practice with technology to ensure advancement of this concept in college and life.

Achieving the Dream meets to report achievement by different areas. Current program information will be shared during this setting.

2010 Arts and Humanities Liberal Studies 2010-10-13 Bertha Wise, Coordinator of Multi-Divisional Programs
Dean of Arts and Humanities

General Education outcomes that were assessed:

Social Institutions: Demonstrate an understanding of the function of major social institutions

Writing: Demonstrate effective writing skills

Mathematical Methods: Demonstrate analytical reasoning and logic skills by using mathematical methods and tools.

Scientific Methodology: Demonstrate critical thinking by using scientific methodology

Human Heritage, Culture, and Values: Demonstrate an understanding of the ideas, events, and values that have helped shaped global communities

Public Speaking: Demonstrate effective public speaking skills

General Education Learning Competencies are measured using appropriate rubrics for each of the six areas. Each rubric includes items relevant to the particular area. Artifacts are collected across disciplines and distributed to assessment teams, who report their scores for all artifacts as well as general observations. The student artifacts used are not specific to the program; however, data is sufficient to draw general conclusions related to the Liberal Studies program.

At least 37 credit hours of General Education are required in Liberal Studies, and many of the support courses students take as part of their curriculum are classified under the General Education category, with some exceptions.

4902

The student artifacts used in each of the six general education learning competencies will score at least 70% overall.

Human Heritage, Culture, and Value

97 Artifacts were evaluated. Artifacts originated across the discipline.

70% (68 out of 97 artifacts) met the requirements of the evaluation rubric.

12 out of 97 (or about 12%) scored a 5 on the rubric.

22 out of 97 (or about 23%) scored a 4 on the rubric.

34 out of 97 (or about 35%) scored a 3 on the rubric.

25 out of 97 (or about 26%) scored a 2 on the rubric.

4 out of 97 (or about 4%) scored a 1 on the rubric

Notes: Students performed well on the rubric at the explanation level of thinking. The group suggested students need more practice with higher critical thinking skills, such as application, analysis, evaluation, and synthesis. Faculty should continue developing assignments evaluating higher critical thinking skills.

Public Speaking

46 speeches were evaluated, Artifacts originated across the discipline.

61% (28 out of 46 speeches) met the requirements of the evaluation rubric.

Writing

105 essays were evaluated. Artifacts originated across the discipline.

94 out of 105 essays (about 90%) met requirements of the evaluation rubric.

11 out of 105 essays (about 10%) did not meet the requirements of the evaluation rubric.

Social Institutions

66 essays were evaluated. Artifacts originated across the discipline
53 out of 66 (about 80%) met the requirements of the evaluation rubric.
8 out of 66 (about 12%) scored a 5 on the evaluation rubric.
18 out of 66 (about 27%) scored a 4 on the evaluation rubric.
27 out of 66 (about 41%) scored a 3 on the evaluation rubric.
13 out of 66 (about 20%) scored a 2 on the evaluation rubric.
0 out of 66 (exactly 0%) scored a 1 on the evaluation rubric.

Mathematical Methods

105 artifacts were evaluated. Artifacts originated across the discipline. Some artifacts did not contain all objectives of the evaluation rubric. Therefore, not all artifacts were evaluated in each category.
97 out of 105 (about 92%) met the requirements for Mathematical Properties.
84 out of 104 (about 81%) met the requirements for Mathematical Applications.
42 out of 72 (about 58%) met the requirements for Mathematical Conclusions.
30 out of 62 (about 48%) met the requirements for Mathematical Evaluation.
Notes: The majority of artifacts evaluated showed competency in Mathematical Properties and Applications. However, the evaluation demonstrates students need to possess evaluation, analytical, and communication skills when making conclusions and evaluations on mathematical questions.

Science

71 artifacts were evaluated. 3 artifacts were not applicable to the General Education Requirements.
57 out of 68 (84%) met the requirements for critical thinking in Science.
11 out of 68 (16%) achieved a score of "not acceptable."
41 out of 68 (60%) achieved a score of "acceptable"
16 out of 68 (24%) achieved a score of "excellent."

No recommendations or actions are being made for Liberal Studies based on the General Education assessment outcomes.

Program Output: transfer or continuing education

· Students graduating with an Associate of Arts in Liberal Studies will be prepared to succeed at a four year institution or continue to meet their educational goals. Each year the Institutional Effectiveness Office sends out a Graduate Survey to all graduates of the previous year. In addition to the general questions asked on the Graduate Survey, the following specific questions were added for those graduates who completed a degree in Liberal Studies.

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Seventy percent (70%) or better of those students who respond to the graduate survey will rate their preparation for to transfer or continue their education at least a 4 on a scale of 1-5. The additional questions will provide other information useful in making any changes or decisions related to the Liberal Studies program.

Of the 15 graduates/students surveyed, 71.4% indicated they were continuing their education, and they had had no difficulties transferring their credit. The average rating was 4.20 on a scale of 1-5.

Other information also indicate that 60% of the respondents (3) were fully employed, 40% were employed part time (2), none reported being unemployed, and two (2) were not seeking employment.

Of those who responded, 25% also indicated that their job related to their education, 85.7% met their educational goals at OCCC, 14.3% were the first in their family to earn a degree, 42.9% volunteered in the community. Additionally, they indicated that on a scale of 1-4, they rated their perspective of other cultures due to their education at a 3.57.

No changes are planned based on the given information and data.

Graduate Survey questions:

Overall satisfaction with OCCC

Recommendation to other people to attend OCCC

711

Seventy percent of those students who were Liberal Studies majors will rate their satisfaction with their preparation to transfer or continue their education at least a 3.5 in each category on a scale of 1-5.

The added survey questions may provide other information useful in making any changes or decisions related to the Liberal Studies program.

On a scale of 1-5, respondents indicated their overall satisfaction with OCCC at 4.33, well above the minimum rating sought.

80% also indicated that they would recommend OCCC to another person.

Additionally, 6 students who self-identified as majoring/graduating with the degree in Liberal Studies. The information provided below shows comparisons for three years, but it also combines feedback and numbers with Pre-Education and Diversified Studies, so it's not completely accurate for only Liberal Studies:

Number of credits completed before you declared this major?

2009 Graduates	2008 Graduates	2007 Graduates	
6	12	2	5 to 20 hours
4	8	3	21 to 30 hours
16	3	4	31 to 40 hours
2	9	8	41 to 50 hours
8	7	4	51 to 60 hours
12	18	10	Greater than 60 hours

(Conclusion: Since 2007, it appears that many more students are declaring their major much earlier in the coursework completion.)

The 2009 graduates indicated their top three means of learning about their major were college faculty or staff, college catalog, and friend or relative, respectively. This trend has not changed from previous years.

The rating of 1-5, least to most helpful in choosing courses and degree plan have not significantly changed from previous years:

2009 Graduates

3.73 (Advising and Career Services) --steady slight increase in rating over the last 3 years

3.56 (Other faculty or staff) --same rating as 2008

3.55 (college catalog) --slightly lower rating from last year

3.52 (webpage) --slightly higher rating

3.48 (assigned faculty advisor)--a slight dip from 2008 graduates

3.23 (other) --unidentified but significantly higher by .53 over the 2008 group

2.79 (coordinator of multi-divisional programs) --slightly higher from two previous years

(Conclusion: consistency in ratings exists)

Challenges that students identified included deciding on the major, finding the correct person to help, scheduling, and personal situations such as being in the military, working full time, and transferring of credit from other institutions.

No changes in the Liberal Studies program would seem to be indicated by the information above.

At this time, it would appear that no changes are needed in the Liberal Studies program. The needs of the students are being met.

None needed

None needed

None needed

2010 Arts and Humanities Humanities Program: General Humanities, Literature, and Philosophy 2010-10-13 Faculty Assessment Representatives: Marybeth McCauley, General Humanities; Mark Schneberger, Literature; and Michael Punches, Philosophy

General Humanities Faculty: Jeff Cleek and Mike Franco. Literature Faculty: Carlotta Hill, Mary Punches, Pamela Stout, Chris Verschage, and Bertha Wise. Philosophy Faculty: Jon Inglett, Stephen Morrow, and Nina Smith.

Dean of Arts and Humanities

The identified student learning outcome and program output for the Humanities Program: General Humanities, Literature, and Philosophy Emphases will be evaluated using the measures and criteria for success identified below:

A. STUDENT OUTCOME/DIRECT MEASURE

Student Learning Outcome

Outcome 3

Upon completion of an Associate in Arts degree in Humanities, students will demonstrate proficient knowledge and application of the scholarship, principles, concepts, or vocabulary of their disciplines.

This outcome is measured by the three emphasis as:

General Humanities Emphasis:

· General Humanities students will demonstrate proficient knowledge and application of the scholarship, principles, concepts, or vocabulary of their disciplines.

Literature Emphasis:

· Students will exhibit the ability to recognize and apply the foundational concepts and vocabulary of the discipline, think and write critically and analytically about literature texts and, when applicable, use MLA format.

Philosophy Emphasis:

· Philosophy students will master the foundational concepts and vocabulary of the discipline, such as philosophical subfields and associated terms

(This Student Learning Outcome will be measured in FY10 and FY13.)

This outcome will be measured by a Course-Embedded Assessment Artifact (Essay for Humanities) from one of the following designated courses in General Humanities: HUM 2000 and above, Literature: ENGL 2123 and above, and Philosophy: PHIL 2000 and above. By using the Rubrics from the three emphases, faculty members (from the Language Arts Department) will evaluate the Course-Embedded Assessment Artifact/Essay.

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After the results are tabulated, we will consider the outcome achieved if 80% of the students in the General Humanities Emphasis score a 3 out of 4, students in the Literature emphasis score “yes” in at least six categories, and students in the Philosophy emphasis scores a 2 out of 4. (Philosophy recommends that

students who earn a score of 2 on the artifact should be said to have achieved proficiency because “emerging” knowledge should be an appropriate threshold for sophomore level students.)

Program Outcome 3:

General The Humanities

--General Humanities assessment team had no artifacts with which to assess the emphasis this year and has no data at this time.

Literature

The assessment team received 18 essays from Literature majors. Of those artifacts, the team determined that 13 of 18 met the level of proficiency expected of majors. The results indicate that the Literature students sampled are meeting the 80 percent threshold set for the emphasis.

This is not to say that the majority of program Lit majors are at or above the measurement threshold, however. Because of the very small sample, and the recognition that students from only one professor's classes were measured, the group was reserved about the results --both positives and negatives.

The group also noted the newly created rubric used to assess the outcome may be more accurate in helping assess the Outcome 3. This is a positive change from last year in which the rubric was not determined effective.

There were some negative outcomes reported. A large percentage of the students (84 percent) sampled scored below the benchmark in relation to accurately documenting sources. Another weak area is in students (67 percent) who lack the desired skills in mechanics (grammar, spelling and punctuation errors). Deficiencies in these two areas were disquieting to the group who felt that literature majors should always be able to demonstrate accurate documentation and mechanics.

Another large percentage of the students sampled (71.9 percent) also scored low in the “vocabulary” criteria, which asked them to clearly define the literary terminology. This low score could reflect that the students simply did not use any/many literary terms in the essay, that these terms weren't vital to the content of those particular essays. An artifact which required a definition/example of literary terms might demonstrate that those students do, in fact, have an understanding of literary terms. Again, this was a strong concern for the group who felt students who are nearing the end of their degrees should be more than competent in demonstrating understanding of the core terms. Next year the group plans to use several kinds of artifacts to better gauge the perceived deficiency.

Aside from the two lower-than-hoped for results, the group was pleased that students assessed seemed to be mastering the concepts of organization, quality of information, and synthesis needed to write critically and analytically about literature. However, the group members still were skeptical about all results because of the small sample size.

Philosophy

The PHIL assessment team received 36 artifacts of which 35 (97%) met the level of proficiency determined by the team to be acceptable. All of the artifacts are formal essays; no shorter assignments such as discussion board

postings or assignments in other media were received. The team's confidence in the results is tempered by the following anomalies:

- Most of the artifacts were once again misplaced during the transitional period in the Department Director's office. (This problem is addressed in the recommendations section below.)
- All of the artifacts were collected from two classes, both taught by the same professor.
- While the criteria assessed deal largely with matters of content, terminology, and philosophical subfields, no specific criterion addressed compositional skills or knowledge of MLA documentation guidelines.

Team members were impressed by the facility with which students (1) deal with philosophical terminology; (2) demonstrate their knowledge of the subfields of philosophical inquiry and (3) analyze the inter-relationships among philosophical concepts.

General Humanities

Outcomes Recommendations:

General Humanities assessment team recommends that the Language Arts department meet as a whole to discuss issues related to assessment; including strategies for implementing an effective program assessment plan, the identification of students whose work should be included, types of writing to be used as artifacts, collection and storage of artifacts, the administration of program outputs, the overall goals of the entire program, and areas of strength and weakness. Our current system is not adequate; therefore, we have no meaningful results with which to determine areas of program improvement. In order to achieve effective program assessment, we must work together as a department. The first step in the development and implementation of a new system by which to assess the program should be this open idea-sharing discussion with the full-time Language Arts faculty. Our LA department director has agreed to give us some department meeting time to address the group.

Literature

1. The assessment team determined that one approach to raising the skill level of the Literature emphasis students may be to provide more instruction about how they will be assessed. This is not in any way to be misconstrued as teaching to the assessment. Rather, the concept is one in which the students will be reminded very clearly about what specific requirements they must meet --the base level of Competency Based Education. The group felt if students were given a rubric for each essay that reminded them of the very specific learning tasks that were required to be met, they would both remember to accomplish the tasks and be more assured they are meeting the assignments. Therefore, the group has decided to construct group-built assessment rubrics to give to the students with each essay assignment explanation. The group will work first on core expectations, utilizing the outcomes assessment rubric, and then develop personalized essay assessment rubrics that are both specific and measurable.

2. Additionally, because of the low number of artifacts available for assessment, the group will design a more uniform and comprehensive student identification and artifact collection system. The current system allows for challenges in collecting and retaining the artifacts; therefore, a new system must be developed. With more artifacts, a more accurate assessment will occur.

3. Also, because of the low score in use of sources, the group felt a more hands-on approach in assisting the students in more accurately documenting sources would be beneficial. The group plans to discuss ways it can implement more practice documenting sources --perhaps by having the students write annotations.

4. Finally, the group will meet this year to finalize its assessment plan for Outcome 2. The outcome has been modified, but a rubric has not yet been developed to assess it. The group will complete the rubric before the next assessment cycle.

Philosophy

The Philosophy Assessment Team makes the following recommendations:

Locate a safe and stable place where artifacts can be stored. The office of Professor Morrow has been suggested.

- Arrange an event/forum for potential philosophy majors and/or those students with an interest in philosophy in order to welcome them and acquaint them with courses, programs, and organizations dealing with philosophy at OCCC.
- Establish a means by which adjuncts teaching philosophy classes can (1) be kept in the loop; and (2) contribute to the pool of artifacts for assessment.

Program Output 1: Exit Survey and Interview Recommendation.

We should implement a new strategy for measuring program outputs.

Humanities Program Overall Recommendations

Outcomes Recommendations:

There are currently no shared recommendations for pedagogical differences (outcomes and outputs).

Assessment would be easier and the results more meaningful if we move toward bridging program differences. We can achieve this by:

- Soliciting department-wide input
- Evaluating our assessment methodologies to identify similarities and avoid repetition
- Exploring the development and use of shared rubrics
- Investigating possible relationship between program assessment and General Education committee artifacts and findings
- Developing a program assessment process that garners meaningful results

Output Recommendations:

- Soliciting department-wide input on program output(s)
- Implementing a new strategy for measuring program outputs

Output 1.

Program Output: Exit Survey and Interview for Humanities Program: General Humanities, Literature, and Philosophy Emphases

Students who graduate from Oklahoma City Community College in Humanities: General Humanities, Literature, and Philosophy Emphases will participate in an Exit Interview with their advisor and complete an Exit Survey. The interview will not focus on students' knowledge of the discipline; instead, faculty advisors will ask questions related to the strengths and weaknesses of the Humanities Program and the three emphases. Similar to the interview, the survey will provide our department with practical feedback for strengthening and revising our program. It will pinpoint the reasons why the students decided to pursue an A.A. degree in Humanities in one of the three emphases at Oklahoma City Community College. Also, the survey will ask students to rate our program on the following ideas:

- Overall experience of the degree program;
- Quality of instruction in degree program courses;
- Quality of advising in the degree program;
- Quality of course content;
- Availability of literature courses;
- Grading and testing procedures;
- Flexibility of teaching styles;
- Use of instructional media or technology;
- Effective classroom interaction;
- Preparation for four-year degree in a specific major.

02

Beyond rating our program on a rubric scale, students will also answer four brief questions related to their experiences in our program. We will consider the Program Output achieved if 80% of the surveys rank our program at an average of 3 out of 4 on the Survey scale.

In the absence of artifacts to assess, no direct assessment was possible. This issue is addressed in the recommendation sections below.

Output Recommendations:

- Soliciting department-wide input on program output(s)
- Implementing a new strategy for measuring program outputs

Beyond rating our program on a rubric scale, students will also answer four brief questions related to their experiences in our program. We will consider the Program Output achieved if 80% of the surveys rank our program at an average of 3 out of 4 on the Survey scale.

Because of lack of artifacts, there are currently no shared recommendations for pedagogical differences (outcomes and outputs).

Therefore, to ensure assessment become easier and the results more meaningful the three emphasis groups, along with the entire Language Arts department, will move toward bridging program differences. We can achieve this by:

- Soliciting department-wide input
 - Evaluating our assessment methodologies to identify similarities and avoid repetition
 - Exploring the development and use of shared rubrics
 - Investigating possible relationship between program assessment and General Education committee artifacts and findings
 - Developing a program assessment process that garners meaningful results
-
- Soliciting department-wide input
 - Evaluating our assessment methodologies to identify similarities and avoid repetition
 - Exploring the development and use of shared rubrics
 - Investigating possible relationship between program assessment and General Education committee artifacts and findings
 - Developing a program assessment process that garners meaningful results

Students will be made aware of program findings and recommendations through program syllabi.

2010 Arts and Humanities Diversified Studies 2010-10-13 Bertha Wise, Coordinator of Multi-Divisional Programs Dean of Arts and Humanities

General Education outcomes that were assessed:

Social Institutions: Demonstrate an understanding of the function of major social institutions

Writing: Demonstrate effective writing skills

Mathematical Methods: Demonstrate analytical reasoning and logic skills by using mathematical methods and tools.

Scientific Methodology: Demonstrate critical thinking by using scientific methodology

Human Heritage, Culture, and Values: Demonstrate an understanding of the ideas, events, and values that have helped shaped global communities

Public Speaking: Demonstrate effective public speaking skills

General Education Learning Competencies are measured using appropriate rubrics for each of the six areas. Each rubric includes items relevant to the particular area. Artifacts are collected across disciplines and distributed to assessment teams, who report their scores for all artifacts as well as general observations. The student artifacts used are not specific to the program; however, data is sufficient to draw general conclusions related to the Diversified Studies program.

4902

The student artifacts used in each of the six general education learning competencies will score at least 70% overall.

Human Heritage, Culture, and Value

97 Artifacts were evaluated. Artifacts originated across the discipline.

70% (68 out of 97 artifacts) met the requirements of the evaluation rubric.

12 out of 97 (or about 12%) scored a 5 on the rubric.

22 out of 97 (or about 23%) scored a 4 on the rubric.

34 out of 97 (or about 35%) scored a 3 on the rubric.

25 out of 97 (or about 26%) scored a 2 on the rubric.

4 out of 97 (or about 4%) scored a 1 on the rubric

Notes: Students performed well on the rubric at the explanation level of thinking. The group suggested students need more practice with higher critical thinking skills, such as application, analysis, evaluation, and synthesis. Faculty should continue developing assignments evaluating higher critical thinking skills.

Public Speaking

46 speeches were evaluated, Artifacts originated across the discipline.

61% (28 out of 46 speeches) met the requirements of the evaluation rubric.

Writing

105 essays were evaluated. Artifacts originated across the discipline.

94 out of 105 essays (about 90%) met requirements of the evaluation rubric.

11 out of 105 essays (about 10%) did not meet the requirements of the evaluation rubric.

Social Institutions

66 essays were evaluated. Artifacts originated across the discipline

53 out of 66 (about 80%) met the requirements of the evaluation rubric.

8 out of 66 (about 12%) scored a 5 on the evaluation rubric.

18 out of 66 (about 27%) scored a 4 on the evaluation rubric.

27 out of 66 (about 41%) scored a 3 on the evaluation rubric.

13 out of 66 (about 20%) scored a 2 on the evaluation rubric.

0 out of 66 (exactly 0%) scored a 1 on the evaluation rubric.

Mathematical Methods

105 artifacts were evaluated. Artifacts originated across the discipline. Some artifacts did not contain all objectives of the evaluation rubric. Therefore, not all artifacts were evaluated in each category.

97 out of 105 (about 92%) met the requirements for Mathematical Properties.

84 out of 104 (about 81%) met the requirements for Mathematical Applications.

42 out of 72 (about 58%) met the requirements for Mathematical Conclusions.

30 out of 62 (about 48%) met the requirements for Mathematical Evaluation.

Notes: The majority of artifacts evaluated showed competency in Mathematical

Properties and Applications. However, the evaluation demonstrates students need to possess evaluation, analytical, and communication skills when making conclusions and evaluations on mathematical questions.

Science

71 artifacts were evaluated. 3 artifacts were not applicable to the General Education Requirements. 57 out of 68 (84%) met the requirements for critical thinking in Science.

11 out of 68 (16%) achieved a score of "not acceptable."

41 out of 68 (60%) achieved a score of "acceptable"

16 out of 68 (24%) achieved a score of "excellent."

No recommendations or actions are being made for Diversified Studies based on the General Education assessment outcomes.

Program Output: transfer or continuing education

· Students graduating with an Associate of Arts or Associate of Science in Diversified Studies will be prepared to succeed at a four year institution or continue to meet their educational goals. Each year the Institutional Effectiveness Office sends out a Graduate Survey to all graduates of the previous year. See the Addendum for the complete set of survey questions.

711

Seventy percent (70%) or better of those students who respond to the graduate survey will rate their preparation for continued education at least a 4 on a scale of 1-5.

Of the 71 graduates/students surveyed, 73.2% indicated they were continuing their education, and they had had no difficulties transferring their credit. The average rating was 4.40 on a scale of 1-5.

Other information also indicate that 58.5% of the respondents were fully employed, 37.7% were employed part time, 3.8% were unemployed but looking for work, and 15 respondents were no seeking work.

Of those who responded, 47.1% also indicated that their job related to their education, 86.8% met their educational goals at OCCC, 28.3% were the first in their family to earn a degree, 41.5% volunteered in the community. Additionally, they indicated that on a scale of 1-4, they rated their perspective of other cultures due to their education at a 3.23.

No changes are planned based on the given information and data.

Graduate Survey questions:

Overall satisfaction with OCCC

Recommendation to other people to attend OCCC

711

· Seventy percent of those students who were Diversified Studies majors will rate their satisfaction with their preparation to transfer or continue their education at least a 3.5 in each category on a scale of 1-5.

The added survey questions may provide other information useful in making any changes or decisions related to the Diversified Studies program.

On a scale of 1-5, respondents indicated their overall satisfaction with OCCC at 4.59, well above the minimum rating sought.

98.5% also indicated that they would recommend OCCC to another person.

The careers that were provided as part of the information include the following:

aircraft sheet metal mechanic

bank teller

financial specialist
 hydrologic technician/lab tech --X-ray diffractometer
 paramedic
 receptionist
 sales manager
 service associate

The places of employment listed range from Tinker AFB, Coppermark Bank and First Fidelity Bank, OSDE, US Geological Survey at the OU College of Geology and Geophysics, Midwest EMS, Access Medical Center, and Star Building 3.

Additionally, 54 students who self-identified as majoring/graduating with the degree in Diversified Studies. The information provided below shows comparisons for three years, but it also combines feedback and numbers with Pre-Education and Liberal Studies, so it's not completely accurate for only Diversified Studies:

Number of credits completed before you declared this major?

2009 Graduates	2008 Graduates	2007 Graduates	
6	12	2	5 to 20 hours
4	8	3	21 to 30 hours
16	3	4	31 to 40 hours
2	9	8	41 to 50 hours
8	7	4	51 to 60 hours
12	18	10	Greater than 60 hours

(Conclusion: Since 2007, it appears that many more students are declaring their major much earlier in the coursework completion.)

The 2009 graduates indicated their top three means of learning about their major were college faculty or staff, college catalog, and friend or relative, respectively. This trend has not changed from previous years.

The rating of 1-5, least to most helpful in choosing courses and degree plan have not significantly changed from previous years:

- 2009 Graduates
- 3.73 (Advising and Career Services) --steady slight increase in rating over the last 3 years
 - 3.56 (Other faculty or staff) --same rating as 2008
 - 3.55 (college catalog) --slightly lower rating from last year
 - 3.52 (webpage) --slightly higher rating
 - 3.48 (assigned faculty advisor)--a slight dip from 2008 graduates
 - 3.23 (other) --unidentified but significantly higher by .53 over the 2008 group
 - 2.79 (coordinator of multi-divisional programs) --slightly higher from two previous years

(Conclusion: consistency in ratings exists)

Challenges that students identified included deciding on the major, finding the correct person to help, scheduling, and personal situations such as being in the military, working full time, and transferring of credit from other institutions.

No changes in the Diversified Studies program would seem to be indicated by the information above.

At this time, it would appear that no changes are needed in the Diversified Studies program. The needs of the students are being met with the flexibility that Diversified Studies offers as an option to those students who need it.

None needed

None needed

None needed

2010 Arts and Humanities Pre-Education 2010-10-13 Bertha Wise, Coordinator of Multi-Divisional Programs
 Dean of Arts and Humanities

General Education outcomes that were assessed:

Social Institutions: Demonstrate an understanding of the function of major social institutions

Writing: Demonstrate effective writing skills

Mathematical Methods: Demonstrate analytical reasoning and logic skills by using mathematical methods and tools.

Scientific Methodology: Demonstrate critical thinking by using scientific methodology

Human Heritage, Culture, and Values: Demonstrate an understanding of the ideas, events, and values that have helped shaped global communities

Public Speaking: Demonstrate effective public speaking skills

General Education Learning Competencies are measured using appropriate rubrics for each of the six areas. Each rubric includes items relevant to the particular area. Artifacts are collected across disciplines and distributed to assessment teams, who report their scores for all artifacts as well as general observations. The student artifacts used are not specific to the program; however, data is sufficient to draw general conclusions related to the Liberal Studies program.

At least 37 credit hours of General Education are required in every program; however, in Pre-Education, almost every required and support course is classified under the General Education category, with only a very few exceptions, depending on the transfer university curriculum pattern.

4902

The student artifacts used in each of the six general education learning competencies will score at least 70% overall.

Human Heritage, Culture, and Value

97 Artifacts were evaluated. Artifacts originated across the discipline.

70% (68 out of 97 artifacts) met the requirements of the evaluation rubric.

12 out of 97 (or about 12%) scored a 5 on the rubric.

22 out of 97 (or about 23%) scored a 4 on the rubric.

34 out of 97 (or about 35%) scored a 3 on the rubric.

25 out of 97 (or about 26%) scored a 2 on the rubric.

4 out of 97 (or about 4%) scored a 1 on the rubric

Notes: Students performed well on the rubric at the explanation level of thinking. The group suggested students need more practice with higher critical thinking skills, such as application, analysis, evaluation, and synthesis. Faculty should continue developing assignments evaluating higher critical thinking skills.

Public Speaking

46 speeches were evaluated, Artifacts originated across the discipline.

61% (28 out of 46 speeches) met the requirements of the evaluation rubric.

Writing

105 essays were evaluated. Artifacts originated across the discipline.

94 out of 105 essays (about 90%) met requirements of the evaluation rubric.

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18 out of 66 (about 27%) scored a 4 on the evaluation rubric.

27 out of 66 (about 41%) scored a 3 on the evaluation rubric.

13 out of 66 (about 20%) scored a 2 on the evaluation rubric.

0 out of 66 (exactly 0%) scored a 1 on the evaluation rubric.

Mathematical Methods

105 artifacts were evaluated. Artifacts originated across the discipline. Some artifacts did not contain all objectives of the evaluation rubric. Therefore, not all artifacts were evaluated in each category.

97 out of 105 (about 92%) met the requirements for Mathematical Properties.

84 out of 104 (about 81%) met the requirements for Mathematical Applications.

42 out of 72 (about 58%) met the requirements for Mathematical Conclusions.

30 out of 62 (about 48%) met the requirements for Mathematical Evaluation.

Notes: The majority of artifacts evaluated showed competency in Mathematical Properties and Applications. However, the evaluation demonstrates students need to possess evaluation, analytical, and communication skills when making conclusions and evaluations on mathematical questions.

Science

71 artifacts were evaluated. 3 artifacts were not applicable to the General Education Requirements.

57 out of 68 (84%) met the requirements for critical thinking in Science.

11 out of 68 (16%) achieved a score of "not acceptable."

41 out of 68 (60%) achieved a score of "acceptable"

16 out of 68 (24%) achieved a score of "excellent."

No recommendations or actions are being made for Pre-Education Studies based on the General Education assessment outcomes.

One item to note, though, is the lower than expected performance in Public Speaking. This item is significantly lower than expected, and since public speaking is required of all Pre-Education majors, it is hoped that they performed well. Since there is no breakdown by major in the General Education assessment, it's difficult to tell for sure.

Program Output: transfer or continuing education

Students graduating with an Associate of Science in Pre-Education will be prepared to succeed at a four year institution or continue to meet their educational goals. Each year the Institutional Effectiveness Office sends out a Graduate Survey to all graduates of the previous year. In addition to the general questions asked on the Graduate Survey, the following specific questions were added for those graduates who completed a degree in Pre-Education.

101

Seventy percent (70%) or better of those students who respond to the graduate survey will rate their preparation for to transfer or continue their education at least a 4 on a scale of 1-5. The additional questions will provide other information useful in making any changes or decisions related to the Pre-Education program.

Of the 10 graduates/students surveyed, 80% indicated they were continuing their education, and they had had no difficulties transferring their credit. The average rating was 4.13 on a scale of 1-5.

Other information also indicate that 28.6% of the respondents (2) were fully employed, 57.1% were employed part time (4), 14.3% reported being unemployed (1), and three (3) were not seeking employment.

Of those who responded, 33.3% also indicated that their job related to their education, 100% met their educational goals at OCCC, 14.3% were the first in their family to earn a degree, 14.3% volunteered in the community. Additionally, they indicated that on a scale of 1-4, they rated their perspective of other cultures due to their education at a 3.14.

No changes are planned based on the given information and data.

Graduate Survey questions:

Overall satisfaction with OCCC

Recommendation to other people to attend OCCC

711

Seventy percent of those students who were Pre-Education majors will rate their satisfaction with their preparation to transfer or continue their education at least a 3.5 in each category on a scale of 1-5.

The added survey questions may provide other information useful in making any changes or decisions related to the Pre-Education program.

On a scale of 1-5, respondents indicated their overall satisfaction with OCCC at 4.50, well above the minimum rating sought.

100% also indicated that they would recommend OCCC to another person.

Additionally, 6 students who self-identified as majoring/graduating with the degree in Pre-Education. The information provided below shows comparisons for three years, but it also combines feedback and numbers with Diversified Studies and Liberal Studies, so it's not completely accurate for only Pre-Education:

Number of credits completed before you declared this major?

2009 Graduates 2008 Graduates 2007 Graduates

6	12	2	5 to 20 hours
4	8	3	21 to 30 hours
16	3	4	31 to 40 hours
2	9	8	41 to 50 hours
8	7	4	51 to 60 hours
12	18	10	Greater than 60 hours

(Conclusion: Since 2007, it appears that many more students are declaring their major much earlier in the coursework completion.)

The 2009 graduates indicated their top three means of learning about their major were college faculty or staff, college catalog, and friend or relative, respectively. This trend has not changed from previous years.

The rating of 1-5, least to most helpful in choosing courses and degree plan have not significantly changed from previous years:

2009 Graduates

3.73 (Advising and Career Services) --steady slight increase in rating over the last 3 years

3.56 (Other faculty or staff) --same rating as 2008

3.55 (college catalog) --slightly lower rating from last year

3.52 (webpage) --slightly higher rating

3.48 (assigned faculty advisor)--a slight dip from 2008 graduates

3.23 (other) --unidentified but significantly higher by .53 over the 2008 group

2.79 (coordinator of multi-divisional programs) --slightly higher from two previous years

(Conclusion: consistency in ratings exists)

Challenges that students identified included deciding on the major, finding the correct person to help, scheduling, and personal situations such as being in the military, working full time, and transferring of credit from other institutions.

No changes in the Pre-Education program would seem to be indicated by the information above.

At this time, it would appear that no changes are needed in the Pre-Education program. The needs of the students are being met.

The one item of concern, related to the General Education assessment, is the relatively low performance on the Public Speaking assessment. Since Public Speaking is necessary as part of becoming an educator, it is important that steps be taken to ensure a higher success rate.

None needed

None needed

None needed