Assessment: Course/Service Four Column

Dept - (BHES) Biology

BIOL 10:Introductory Biology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL10_SLO_1 - Evaluate the correlation of structure and function in plants and animals. **SLO Status:** Active	**Exam - Course Test/Quiz -** Evaluation of student responses for questions on exams regarding structure and function of animal cells and plant cells. **Target for Success:** For each question, at least 75% of the students will choose the correct answer.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met On the questions from the exams regarding the function of animal cells and plant cells, student responses were measured and recorded. 47% of the students met the target for this SLO. (10/02/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Despite the target not being met, this was a good step forward in the assessment for this SLO. We hope to meet our target for this SLO in future assessments.	**Enhancement:** This SLO was assessed by one instructor in one class in one quarter. An enhancement would be to increase the number of instructors doing this assessment in order have a larger sample size. (10/02/2016)
		Program Review Reporting Year: 2011-2012 **Target :** Target Met The question on plants: 86% scored correctly and for the question on animals: 80% scored correctly. (07/03/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This SLO captures a foundational biological concept emphasized in all introductory biology courses. This material is taught in both lecture and laboratory settings with repetition throughout the course. The SLO is valid and the 75% target is being met.	**Enhancement:** Keep the SLO and diversify how it is measured to include lab assessments. (09/24/2012)
BIOL10_SLO_2 - Identify and explain the characteristics of life. **SLO Status:** Active	**Exam - Course Test/Quiz -** Evaluation of student responses for questions on exams regarding the characteristics of life. **Target for Success:** At least 75% of the students will accurately answer	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met On the questions from the exams regarding the characteristics of life, , student responses were measured and recorded. 88% of the students accurately answered the questions regarding the characteristics of life.	**Enhancement:** This SLO was assessed by one instructor in one class in one quarter. An enhancement would be to increase the number of instructors doing this assessment in order

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	the questions.	(10/02/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This was the first assessment in 4 years, and illustrates that students are understanding this important concept in biology. We're hoping to meet our target in future assessments.	have a larger sample size. (10/02/2016)
		Program Review Reporting Year: 2011-2012 **Target :** Target Met 77% of the students answered this question correctly. (07/03/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This SLO captures a foundational biological concept emphasized in all introductory biology courses. This material is presented and discussed primarily in lecture. The SLO is valid and the 75% target is being met.	**Enhancement:** Keep the SLO. Incorporate this concept into lab activities or discussions. (09/24/2012)
	Project - A worksheet was used to assess this SLO. **Target for Success:** 70% of the students are able to complete the worksheet successfully.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 95% of the students were able to complete the worksheet successfully (40 out of 42) (07/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This assignment was given at the beginning of the quarter after I covered the characteristics of life like order,reproduction,growth and development,energy processing,response to the environment and regulation in a list of fifteen entities from yeast and mold to seeds.The students had to analyze which characteristic that can be observed in each case.Students were little confused about mold and yeast.They were not sure they were living or non living.In future I will emphasize all characteristics may not be apparent at the same time.	**Enhancement:** I plan to give this assignment after I teach evolution.Evolution is also a characteristic of life.That would make it more meaningful.
BIOL10_SLO_4 - Apply principles of the scientific method to every day problems and develop potential plans for solutions. **SLO Status:** Active	**Exam - Course Test/Quiz -** Evaluation of student responses for select questions on exams regarding the utilization of the scientific method. **Target for Success:** For each question at least 75% of the students will choose the correct answer.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met On the questions from the exams regarding the utilization of the scientific method, student responses were measured and recorded. (10/02/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 82% of the students answered the questions correctly. This was the first assessment in 4 years, and illustrates that students are understanding this important concept in biology. We're hoping to meet our target in future assessments.	**Enhancement:** This SLO was assessed by one instructor in one class in one quarter. An enhancement would be to increase the number of instructors doing this assessment in order have a larger sample size. (10/02/2016)

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		Program Review Reporting Year: 2011-2012 **Target :** Target Met The first question on the scientific method: 80% scored correctly. On the 2nd question regarding the scientific method: 85% scored correctly. (07/05/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This SLO captures a foundational biological concept emphasized in all introductory biology courses. This material is taught in both lecture and laboratory settings with repetition throughout the course. The SLO is valid and the 75% target is being met.	**Enhancement:** In addition to the exam questions, a written homework assignment regarding the utilization of the scientific method in everyday life will be added. (09/24/2012)
BIOL10_SLO_3 - Demonstrate an understanding of the impacts of human activities on the biosphere. **SLO Status:** Active	**Exam - Course Test/Quiz -** Evaluation of student responses for exam questions regarding human impacts upon the biosphere. **Target for Success:** At least 75% of the student will choose the correct answer.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met On the questions from the exams regarding human impacts upon the biosphere, , student responses were measured and recorded. 90% of the students accurately answered the questions. (10/02/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 90% of the students answered the questions correctly. This was the first assessment in 4 years, and illustrates that students are understanding this important concept in biology. We're hoping to meet our target in future assessments.	**Enhancement:** This SLO was assessed by one instructor in one class in one quarter. An enhancement would be to increase the number of instructors doing this assessment in order have a larger sample size. (10/02/2016)
		Program Review Reporting Year: 2011-2012 **Target :** Target Met For the question regarding human impacts on the biosphere, 80% of the students correctly answered the question. (07/05/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This SLO captures a foundational biological concept emphasized in all introductory biology courses. This material is taught in both lecture and laboratory settings with repetition throughout the course. The SLO is valid and the 75% target is being met.	**Enhancement:** In the future, a written research assignment may be incorporated in order to enhance student understanding of this topic. (09/24/2012)

BIOL 11:Human Biology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL 11 SLO 1 - Investigate the forms and functions of selected human organ systems from the molecular/cellular level to homeostasis at the organismal level. **SLO Status:** Active **Outcome Creation Date:** 12/31/2009	**Exam - Course Test/Quiz -** I emailed enrolled students the week before the start of the quarter and instructed them to complete an electronic survey before coming to class. As part of the survey, students were instructed to respond to three essay questions based on their prior knowledge. Two of those three questions were connected to this SLO. One of the questions read ?"Your NERVES and your GLANDS serve a very similar purpose in your body." To what extent do you agree or disagree with this statement? Why?? The other prompt asked students to place some genetically and environmentally determined traits in the order they happen in the development of a baby, and explain the reasoning for the order. Students responded to these same essay prompts on the last day of class, so I had paired pre-class and post-class data for my students. I used the same grading rubrics for both the pre- and post-assessments, and analyzed 1) the extent to which students changed their scores from before to after the class, and 2) the average class scores before and after the course. **Target for Success:** During the 2011-2012 assessment, essay scores could range from 0 to 8 possible points (first prompt) and 0 to 12 possible points (second prompt). I looked for a minimum 80% of students to	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Based on my experiences with these same assessments in the previous assessment cycle, I changed and simplified the grading rubrics to provide simple, holistic essay scores between 0 and 5. As in the last assessment cycle, I only analyzed essays for students who had submitted both pre and post course responses (n = 52). At the start of the course the average essay scores for the first and second prompts were 0.63 points and 0.42 points, respectively. Most students received zero points and exhibited only surface-level understanding of organ systems and their interactions during development, including many common misconceptions. The end of course averages for the first and second prompts were 1.13 and 2.01 respectively. Essay responses included many more detailed examples suggesting a more complex understanding of organ systems at the cellular/molecular levels. For example, for the first prompt students discussed molecules (neurotransmitters and hormones) used in feedback loops in the nervous and endocrine systems. For the second prompt, many students specifically cited independent assortment and crossing over as important to the determination of organ/organismal traits. (06/19/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** As promised in my enhancement for the previous assessment cycle, I did continue to use the same assessment prompts to evaluate this SLO. I also increasingly incorporated student quotes into class, as discussed in my previous SLOAC enhancement. During this cycle, holistic essay scores from the start and end of the course evidenced increases in student knowledge. Essay responses further evidenced an increased understanding of organ systems at the levels of cells and molecules. Scores for the second prompt met the target of an average score of 2 or higher. Despite clear increases in content knowledge, the average score for end of course essays for the first prompt were still below 2. The target is still considered met for both prompts due to	**Enhancement:** The second prompt still appears to yield particularly rich responses that match nicely with the goals implicit in this SLO. Since it also allows me to detect changes in student thought, I will continue to use that prompt for in class discussions and in SLO assessments. Responses to the first prompt yielded less rich responses and showed less content knowledge at the end of the course. This might partly relate to the online nature of the survey, since in-class responses to this question seemed much deeper. It's also possible that the brief time spent on hormones during class wasn't enough to generate the strong shifts in knowledge from pre to post I anticipated. I think it would be best to come up with a slightly different prompt that doesn't rely so heavily on a content area that is only briefly discussed. However, it was still encouraging to see clear, though less dramatic than anticipated, shifts in knowledge surrounding this area. (06/20/2016)

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	improve their scores from the start to end of the course and for an end of course average of at least 75% of available points. During the 2015-2016 assessment, the grading rubrics provided holistic essay ratings for each prompt between 0 and 5. My target was for a class-wide average essay rating of at least 2 for both prompts. This rating corresponded to the minimum requirements for understanding under my interpretation of the outcome and course outline.	documented increases in knowledge, but would be only partially met for the first prompt, due to average scores still below 2. A score of two for the first prompt required students to view both systems as communication systems with reference to specific examples of hormonal/nervous communication. A score of two for the second prompt required students to discuss the genetic roots of traits and understand that genetic traits are established at the time of fertilization.	
		Program Review Reporting Year: 2011-2012 **Target :** Target Met For question one, students on average increased their scores by 4 points from the start to the end of the class, and for question two, students on average increased their scores by 7 points from the start to the end of the class. These are quite large improvements in scores, given that the questions were worth only 8 points and 12 points respectively. 100% of students improved their scores on the second question and 48 students out of 49 present improved their scores for the first question. The class average for question one increased from 29% to 76% from pre- to post-assessment. The class average for question two increased from 16% to 78% from pre- to post-assessment. (07/04/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I was incredibly pleased with these results, not only because students scored highly at the end of the class, but more importantly because my data shows students significantly changed their understanding of biology from the start to the end of class. Even more interestingly, the pre-assessment essay responses on the development of a baby showed numerous fascinating misconceptions about biology and genetics. For example, many students commented that a person?s sex is determined by hormones released by the mother or by something the mother does during pregnancy. Many other students voiced the idea that all humans begin as females and then some change to males!	**Enhancement:** I will continue to use these assessment prompts, because they have the ability to show conceptual changes in students, and because they yield interesting misconceptions to address in class. In the future, I will use quotes from students? pre-assessments as discussion prompts when beginning genetics and reproduction. This will help directly confront students? misconceptions and will hopefully make even higher post-assessment scores possible in the future. (09/24/2012)
BIOL 11 SLO 2 - Use scientific	**Exam - Course Test/Quiz -** I emailed	**Program Review Reporting Year:** 2011-2012	**Enhancement:** I will continue to

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
reasoning to evaluate the biological principles underlying current human health dilemmas, such as the causes of disease, use of biotechnologies, management of epidemics and public health, ecological/environmental health, and social health inequities. **SLO Status:** Active	enrolled students the week before the start of the quarter and instructed them to complete an electronic survey before coming to class. As part of the survey, students were instructed to respond to three essay questions based on their prior knowledge. One of those three questions was connected to this SLO, and it read ?There are NOT currently any DNA technologies that treat human diseases, but researchers hope to discover some in the future. To what extent do you agree or disagree with this statement? Provide examples to support your opinion.? Students also responded to this same essay prompt on the last day of class, so I had paired pre-class and post-class data for my students. I used the same grading key for both the pre- and post-assessments, and analyzed 1) the extent to which students changed their scores from before to after the class, and 2) the average class scores before and after the course. **Target for Success:** I had two targets for success. 1) I wanted to see 85% or more of students increase their scores from before to after the course, which would indicate that students left my class with more biologically accurate concepts than they started with. 2) I wanted to see a class average score of at least 75% on the post-assessment, which would indicate a high level of competency among students leaving the course.	**Target :** Target Not Met On average, students increased their scores by 5 points from the beginning of the course to the end of the course. This is quite a substantial improvement, since only 14 points were available on this essay question. Only 3 students out of 49 present did not improve their scores from the start of the class to the end. The class average score for the pre-assessment was a 16%, whereas the class average score for the post-assessment was a 54%. (07/04/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I was really pleased with how dramatically most students improved on this essay question from the start to the end of the class. Most students scored 0 or 2 points out of 14 on their pre-assessment, and could describe at least one biotechnology with an acceptable level of biological detail at the end. On the other hand, the class average at the end of the class was not as high as I would like. I think there were some technical reasons for this, which I discuss in the enhancement/action plan.	assess this SLO using this essay prompt, but I plan to change my methodology in a few ways. For one, I think I will add another related essay question to get more information on students? concepts in this area. Also, I will administer the post-assessment differently, and will change my grading rubric. After discussions with colleagues, I realized that my grading rubric was far more rigorous than what instructors are using in other, more advanced classes. If I apply a more realistic, but still rigorous rubric, my students would have far exceeded my desired average score. I will also provide a more formal ?quiz-like? environment for the post-assessment. This quarter I gave the post-assessment somewhat informally as a ?participation credit only? exercise. I think if I made it clear to students that I would grade these for correctness as part of their grade, I would get more detailed responses. Overall, though, I am very happy with the results. (09/24/2012)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	Exam - Course Test/Quiz - I emailed enrolled students the week before the start of the quarter and instructed them to complete an electronic survey before coming to class. As part of the survey, students were instructed to respond to three essay questions based on their prior knowledge. One of those three questions was connected to this SLO, and it read "Given your current ideas, do you agree or disagree with the following statement? 'The flu shot sometimes gives people the flu.' Please explain the reasons for your opinion." Students also responded to this same essay prompt on the last day of class, so I had paired pre-class and post-class data for my students. I used the same grading rubric for both the pre- and post-assessments, and analyzed 1) the extent to which students changed their scores from before to after the class, and 2) the average class scores before and after the course. The grading rubric scored student essays and gave them a rating between 0 and 5. **Target for Success:** My target was for a class-wide average essay rating of at least 2. This rating corresponded to the minimum requirements for understanding under my interpretation of the outcome and course outline.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met The average pre course essay score was 0.63, while the average post course essay score was 2.67. Only essays for students that submitted both a pre and post course response were analyzed (n = 52). The scores were based on a rubric that yielded holistic scores for each essay, ranging from 0-5. A score of 2 required that students understand the scientific basis for why flu shots cannot in themselves give you the flu disease. It also required that students describe evidence in terms of what is inside a flu shot or why some individuals might still believe they get the flu from the flu shot. (06/20/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Based on some changes in the way I handle the course and my reflections on the assessment of this SLO in the previous cycle, I shifted to a different essay prompt for this assessment (the prompt above about the flu shot). This seemed attractive since the topic merged biology content with public health topics and discussions of privilege and equity (which groups refuse vs. accept vaccines). I was very happy with student responses and their shifts in ideas. Students progressed from stating numerous common vaccine misconceptions to being able to describe the scientific and social reasons for those misconceptions (and why they are misconceptions in the first place). Students progressed well above the minimum target I had set.	**Enhancement:** I was very happy with this prompt, both as an SLO assessment and as a centerpiece for in class discussions and activities about vaccines. The dramatic shifts in student thinking and its connection to broader issues connecting biology to everyday health decisions motivate me to continue using this prompt/assessment in the future. (06/20/2016)

BIOL 13:Marine Biology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL13_SLO_1 - Examine marine biology as a branch of the biological sciences and its relation to the scientific field and how the scientific method is used. **SLO Status:** Active	**Exam - Course Test/Quiz -** Evaluation of student responses for questions on exams regarding the examination of marine biology as a branch of the biological sciences and its relation to the scientific field and how the scientific method is used. **Target for Success:** 75% of the students will answer the SLO-related exam questions correctly.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Exam questions were used to assess student learning regarding the examination of marine biology as a branch of the biological sciences and its relation to the scientific field and how the scientific method is used. (10/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In doing this assessment, the data indicates that students are learning about marine biology as a science as well as how the scientific method is applied in marine biology. It's good to see that the target has been met in this assessment.	**Enhancement:** Since this was the first assessment ever in Marine Biology, an enhancement would be to continue this process in order to have a larger sample size than one class in one quarter. More data is necessary to fully assess this SLO. (10/22/2016)
BIOL13_SLO_2 - Appraise the physical and chemical properties of the ocean. **SLO Status:** Active	**Exam - Course Test/Quiz -** Evaluation of student responses for questions on exams regarding the physical and chemical properties of the ocean. **Target for Success:** 75% of the students will answer the SLO-related exam questions correctly.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Exam questions were used to assess student learning regarding the physical and chemical properties of the ocean. (10/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In doing this assessment, the data indicates that students are learning about the physical and chemical properties of the ocean. It's again good to see that the target has been met in this assessment.	**Enhancement:** Again, since this was the first assessment ever in Marine Biology, an enhancement would be to continue this process in order to have a larger sample size than one class in one quarter. More data is necessary to fully assess this SLO. (10/22/2016)
BIOL13_SLO_3 - Compare and contrast the anatomy, behavior, reproduction, and ecology of selected invertebrates, vertebrates, plants, and protista. **SLO Status:** Active	**Exam - Course Test/Quiz -** Evaluation of student responses for questions on exams regarding the anatomy, behavior, reproduction, and ecology of selected invertebrates, vertebrates, plants, and protists. **Target for Success:** 75% of the students will answer the SLO-related questions correctly.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Exam questions were used to assess student learning regarding the comparing and contrasting the anatomy, behavior, reproduction, and ecology of selected invertebrates, vertebrates, plants, and protists. (10/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In doing this assessment, the data indicates that students are learning about the differences and similarities between different groups of eukaryotic organisms. It's always good to see that the target has been met in this assessment.	**Enhancement:** Since this was the first assessment ever in Marine Biology, an enhancement would be to continue this process in order to have a larger sample size than one class in one quarter. More data is necessary to fully assess this SLO. (10/22/2016)

BIOL 15:California Ecology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL15_SLO_1 - Evaluate the impact of human behavior on California ecology. **SLO Status:** Course Not Currently Taught			
BIOL15_SLO_2 - Evaluate ecological principles using California organisms. **SLO Status:** Course Not Currently Taught			

BIOL 26:Introductory Microbiology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL26_SLO_1 - Evaluate and demonstrate the importance of aseptic techniques when working with microorganisms. **SLO Status:** Active	**Demonstration -** The assessment tool I used to assess this outcome was a rubric. If the technique was completed without any errors (all criteria addressed), the resulting score was 12 points. Points were lost as errors were made. **Target for Success:** At least 8 points scored	**Program Review Reporting Year:** 2011-2012 **Target :** Target Met Yes, my students did meet my expectations. 28 students were tested. Twenty three students were able to complete the process at the Exemplary level. All students were able to complete the procedure with at the most minor flaws. (06/22/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I was pleased with the ability of the students to perform the technique successfully without contamination. There were more successful students in this group compared to last year's group. The change I made this year was to watch the students performing the procedure on more than one occasion which gave them twice the amount of critical input than the students received at the first implementation of the SLO's.	**Enhancement:** The students that did not receive the total points (12), will be required to practice each class period until they can complete the process successfully. The instructor will continually observe the student's progress. (09/25/2012) **Enhancement:** The students that did not receive the total possible points (12), will be required to practice each class period until they can complete the process successfully. The instructor will continually observe the student's progress. (09/24/2012) **Enhancement:** The students that did not receive the total possible points (12), will be required to practice each class period until they can complete the process successfully. The instructor will continually observe the student's progress (06/25/2012) **Enhancement:** The students that did not receive the total possible points (12), will be required to practice each class period until they can complete the process successfully. The instructor will continually observe the student's progress. (06/22/2012)
	Other - Students were observed in the laboratory while they were using aseptic technique. A rubric was used to assess whether they were doing	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met 24 students were evaluated on 2/21/18. 24 out of 24 got 7/10 on the assessment (03/21/2018)	**Enhancement:** I can demonstrate the technique again and make students practice to improve their technique. (03/21/2018)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	the procedure correctly. **Target for Success:** A score of 7/10	**Reflection (CLICK ON ? FOR INSTRUCTIONS):** I can point out errors made in the procedure to the students to help them do better in the future.	
BIOL26_SLO_2 - Compare and contrast the shape, structure, nutritional and environmental requirements of bacteria, viruses, protozoa and fungi. **SLO Status:** Active	**Exam - Course Test/Quiz -** A short answer question to compare the general characteristics of viruses, bacteria, protozoa and fungi with respect to morphology and nutritional requirements **Target for Success:** 100 % of the students get a passing grade on the question	**Program Review Reporting Year:** 2013-2014 **Target :** Target Not Met 73% of the students were able to score 80% or higher on this question. (07/02/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The general characteristics and differences between the various types of microbes needs to be emphasized more and reviewed at the end of the course. Although this information was presented in the context of various chapters it was not reviewed before the final exam. In the future I will ask the students to bring this information together during the review.	**Enhancement:** Although this information was presented in the context of various chapters it was not reviewed before the final exam. In the future I will ask the students to bring this information together during the review. (07/02/2014)
	Exam - Course Test/Quiz - A short answer question worth 16 points was included on the final. The students had to describe the general characteristics of the various types of microbes listed in SLO2. Compare and contrast size, shape, structure, nutritional and environmental requirements of bacteria, viruses, protozoa, and fungi. **Target for Success:** A score of 80% on the question for the students taking the final	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Most of the class (17 out of 23 students) were able to score 80% or higher on this question. (02/08/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 75% of the students were able to score the target 80% (B). The material assessed in this SLO is presented at the beginning of the quarter and spread out in later chapters as each type of organism is covered.	**Enhancement:** Give an assignment to review the material near the end of the quarter before the students take the final exam (02/08/2016)
BIOL26_SLO_3 - Investigate host parasite relationships and assess their positive and negative impact on the participants. **SLO Status:** Active	**Exam - Course Test/Quiz -** A short answer/essay question on the final **Target for Success:** Target for Success: a score of 80% on the question for the students	**Program Review Reporting Year:** 2014-2015 **Target :** Target Not Met Assessment Data Summary:23/42 students scored 100% , 5/42 students scored 80%, 4/42 students scored 70%. 4/42 students scored 60%, The remaining 6/42 students scored below 60% (08/24/2015) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** More than half the class got all parts of the question correct- they were able to describe the interactions and give good examples.	**Enhancement:** An activity or assignment to review the material prior to the final exam (02/08/2016)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		Two thirds of the class met the goal of an 80% score on the question. They were able to describe the various types of interactions between host and microbe and give examples for most of them. Overall the class did well. 80% of the class was able to describe the interactions between host and microbe even if they were not able to give examples for all of them.	
	Exam - Course Test/Quiz - A short answer question on the final to describe the interaction between host and microbes **Target for Success:** the students score 80% or higher on the question	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 19/23 students scored 80% on the question (02/08/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Most of the students (83 % of the class) met the target for this SLO. This is a much higher percent than previous assessment of this SLO	**Enhancement:** Review the material in an assignment at the end of the quarter before the final exam (02/08/2016)
	Exam - Course Test/Quiz - I had a short answer question on the final worth 3 points. **Target for Success:** 70% of the students getting the question correct.	**Program Review Reporting Year:** 2018-2019 **Target :** Target Met 17/21 students got the question right -3 out of 3 points 3/21 students got it partly correct (2 out of 3 points). 1/21 student got 1 point out of 3 (04/08/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Will be adding reflection and enhancement shortly once I hear from instructor.	**Enhancement:** Over 80% of the class got 3/3 on the short answer question. One thing that may help to improve the scores of the remaining students is reviewing the material again before the final. The material tested was covered earlier in the quarter. Perhaps an exercise or assignment to review the material would help. Another thing that might help improve the scores of the 20% is a different type of question such as a multiple choice question to assess the SLO. Some students don't do well on free response/ short answer questions. (08/12/2018)

BIOL 40A:Human Anatomy and Physiology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL40A_SLO_1 - Demonstrate the scientific method as employed by health professionals to evaluate real-world problems involving the skin, skeletal, and muscle systems. **SLO Status:** Active	**Exam - Course Test/Quiz -** Students will be assessed using three exam questions that test the student's ability to predict the metabolic consequences of a selected enzyme deficiency. **Target for Success:** Targets for each question vary based on the level of challenge. Question 1- testing basic concepts – 80% Question 2 - requiring some level of application of concepts – 75% Question 3 - requiring increasing levels of comprehension and application – 70%	**Program Review Reporting Year:** 2017-2018 **Target :** Target Not Met Assessment Data Summary: Question 1 – 86% Question 2 – 57% Question 3 – 61% (10/23/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Most students mastered the basic concepts but found application of concepts more challenging. Many had trouble interpreting chemical reaction sequences.	**Enhancement:** Further activities with this material might involve in-class worksheet/collaborative exercises that allow students additional practice with chemical nomenclature and the application of challenging concepts. (10/25/2017)
BIOL40A_SLO_2 - Investigate the roles of molecules, organelles, and cells in the function of skin, skeletal, and muscle tissues. **SLO Status:** Active	**Laboratory Project -** Students completed a laboratory exercise that required them to take the pH of several unknown samples and to determine the identity of those samples. **Target for Success:** The class will average 4 out of 5 correct identifications based on solution pH values.	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met The class average was 4 out of 5 correct identifications. ~ 2/3 of the class scored a 4 or 5 ~1/3 of the class scored a 3 or below (12/15/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** A number of students answered a question regarding the solubility and pH of a sugar solution incorrectly. The difference between dissociation and solubility needs to be reinforced.	**Enhancement:** Future report sheets will have an additional thought question meant to illustrate the difference between dissociation and solubility. (12/15/2017)
BIOL40A_SLO_3 - Infer the homeostatic reactions of skin, skeletal, and muscle cells and tissues in reaction to external or internal changes in conditions. **SLO Status:** Active	**Exam - Course Test/Quiz -** Five exam questions regarding the regulation of blood calcium levels were asked. The questions were ranked based on level of complexity, background knowledge, and reasoning required	**Program Review Reporting Year:** 2017-2018 **Target :** Target Not Met Question Ranking / % correct 1 85% 2 75% 3 59%	**Enhancement:** Have students engage in additional in-class activities that require them to apply their knowledge when predicting outcomes of actual physiological imbalances and

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	to answer the question. **Target for Success:** Target for Success: 72% of students answering all questions correctly.	(01/10/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students showed difficulty in questions requiring the highest level of application, but showed the target level of understanding for less challenging questions.	perturbations. (01/11/2018)

BIOL 40B:Human Anatomy and Physiology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL40B_SLO_1 - Demonstrate the ability to apply basic knowledge regarding the structure and function of the respiratory system to predicting its responses in maintainng homeostasis. **SLO Status:** Active	**Exam - Course Test/Quiz -** Students completed one homework assignment consisting of a variety of questions (online quiz format) that evaluated understanding of the various concepts captured in this SLO. Average score used because various questions were used to assess this multi-faceted SLO. Students also completed an end-of-quarter survey where they outlined three misconceptions they had about the respiratory system before taking this course and how taking the course has helped correct the misconception (this question was specifically worded to see if the students would demonstrate application of their knowledge of the respiratory system structure and function). **Target for Success:** I had two targets for success. 1) I wanted to see class average score of 80% or more in homework assignments/quizzes, and evidence that students were taking advantage of the two attempt format to enhance their understanding of the various concepts the assignments were designed to assess. 2) Using student written responses to an end-of-course survey, I also wanted to see evidence of application of their knowledge of respiratory system structure to its functions and to see students articulate conceptual changes before and after taking the	**Program Review Reporting Year:** 2013-2014 **Target :** Target Met The homework assignment/quiz format enhanced understanding of key concepts and correction of misconceptions. The 79% average score in homework assessment, while slightly lower than the 80% target, was still acceptable as meeting target goal (considering that this topic was taught at the very end of the quarter, and that only one homework assignment was used). Responses to the survey question on misconceptions were very instructive. Students clearly articulated both their misconceptions before taking the course and their renewed understanding of the structure and function of the respiratory system on completion of the course. I was pleased and satisfied with their demonstrated understanding of key concepts and in their articulation of conceptual changes. (04/18/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I was extremely pleased and impressed with the responses to the survey question on the respiratory system. This tool provided me with a way to see the students demonstrate their knowledge of the structure and function for the respiratory system through clarifying misconceptions they had before and after taking the course. Even though the average performance in the homework assignment to assess the SLO was 79% (1% point below target), I still feel confident that the students met target because of the way they responded to student survey. In addition, the 80% overall course average score (which included multiple assessment tools e.g. all homework assignments/quizzes, all lecture exams, lab practical quizzes and lab practical exam, worksheets and writing assignments) was evidence that significant learning and understanding occurred.	**Enhancement:** I will continue to use these assessment tools, but increase number of homework assignments to more than just one (the expectation here would be that providing opportunities to interact with the material more frequently would help better meet the learning objective). In future, I could convert the survey question into an essay or group discussion assignment. I would also assess the SLO in lab activities. (04/18/2014)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	course – this would indicate enhanced understanding among students leaving the course. **Exam - Course Test/Quiz -** Exam questions related to this topic will be used to assess this SLO. **Target for Success:** 75% of the students will get the exam questions related to this topic correct.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 18/23 students who took the exam, had the correct answer. 78.2%. (08/09/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The data collected from the SLO Assessment for Biol.40B indicates that 78% of the students demonstrated the ability to apply basic knowledge regarding the structure and function of the respiratory system to predicting its responses in maintaining homeostasis.	**Enhancement:** The SLOs for Biol. 40 B were assessed during the summer 2017 summer quarter. The data was collected from one class section with 24 students only and it was taught in six weeks.The students had more time to focus and concentrate on the subject and get more attention from the instructor hence the percentage of the SLO results might be higher. An enhancement to the process would be to perform the assessment is a regular 12 week quarter and a larger sample of students. (09/21/2017)
BIOL40B_SLO_2 - Appraise the role of the cardiovascular system in maintaining homeostasis. **SLO Status:** Active	**Exam - Course Test/Quiz -** Students completed three homework assignments composed of a variety of questions (online quiz format) and a written exam that evaluated understanding of the various concepts captured in this SLO. Students had the option to have a second attempt at each homework assignment after reflecting on responses from first attempt. Average class scores are used because various questions were used to assess SLO. **Target for Success:** I had two targets for success. 1) I wanted to see class average score of 80% or more in homework assignments/quizzes, and evidence that students were taking advantage of the two attempt	**Program Review Reporting Year:** 2013-2014 **Target :** Target Met Providing students with option to take homework assignment twice improved their performance and provided a chance for reflection on incorrect answers and correction of misconceptions on key concepts. The 86% average score on homework assessment and 77% score in accompanying exams met the >80% (homework average) and >75% (exam average) targets respectively. (04/18/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Most students were already familiar with the cardiovascular system (blood, heart and blood vessels) before taking the course. The high homework assignment scores indicate enhanced and accurate understanding of key concepts assessed. The exam average score for this SLO is evidence that target success was achieved.	**Enhancement:** I will continue to use these assessment tools and potentially include the assessment of this SLO in lab activities. (04/18/2014)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	format to enhance their understanding of the various concepts the assignments were designed to assess. 2) I also wanted to see class average scores of at least 75% on the lecture exam, which would indicate a high level of competency among students leaving the course.		
	Exam - Course Test/Quiz - Exam questions related to this topic will be used to assess this SLO. **Target for Success:** 75% of the students will get the exam questions related to this topic correct.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met 15/23 students who took the exam had the correct answer. 65.2 %. (08/09/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The Data collected from the SLO Assessment for Biol.40B indicates that more than 65% of the students were successful in demonstrating their knowledge in the function of cardiovascular system in maintaining homeostasis.	**Enhancement:** The SLOs for Biol. 40 B were assessed during the summer 2017 summer quarter. The data was collected from one class section with 24 students only and it was taught in six weeks.The students had more time to focus and concentrate on the subject and get more attention from the instructor hence the percentage of the SLO results might be higher. An enhancement to the process would be to perform the assessment is a regular 12 week quarter and a larger sample of students. (09/21/2017)
BIOL40B_SLO_3 - Apply the structural organization of the the nervous system to how it processes information. **SLO Status:** Active	**Exam - Course Test/Quiz -** Students completed six homework assignments consisting of a variety of questions (online quiz format) and a written exam that evaluated understanding of the various concepts captured in this SLO. Homework assignments included two attempts (with compulsory intervening period between attempts for student reflection). Average class score used because	**Program Review Reporting Year:** 2013-2014 **Target :** Target Met Providing students with option to attempt each homework assignment twice improved their performance and provided a chance for reflection on incorrect answers and correction of misconceptions on key concepts. The 84% average score on homework assessment and 77% score in accompanying exams met the >80% (homework average) and >75% (exam average) targets respectively. (04/18/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The SLO is very broad and the knowledge very complex (encompassing the structure and organization of the nervous system as	**Enhancement:** I will continue to use these assessment tools, but try to simplify them in order to assess specific aspects of this broad SLO. For example, the nervous system is complex and it would be instructive if the structural organization was narrowed further so that an understanding of the various concepts about information

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	various questions were used to assess SLO. **Target for Success:** I had two targets for success. 1) I wanted to see class average score of 80% or more in homework assignments/quizzes, and evidence that students were taking advantage of the two attempt format to enhance their understanding of the various concepts the assignments were designed to assess. 2) I also wanted to see class average scores of at least 75% on the lecture exam, which would indicate a high level of competency among students leaving the course.	well as how it processes information). To assess the breadth of understanding, I used multiple homework assignments and two exams. Overall, students appreciated homework assignment format as helpful in enhancing understanding of key concepts.	processing of the various structural components were assessed more precisely. Since laboratory instruction is an important part of this course, I would also include the assessment of this SLO in lab activities. (04/18/2014)
	Exam - Course Test/Quiz - Exam questions related to this topic will be used to assess this SLO. **Target for Success:** 75% of the students will get the exam questions related to this topic correct.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 20/24 students (83.3%) who took the exam had the correct answer. (07/17/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The data collected from the SLO Assessment for Biol.40B indicates that more than 83% of the students understood the relation of the structure of the nervous system and processing neural information.	**Enhancement:** The SLOs for Biol. 40 B were assessed during the summer 2017 summer quarter. The data was collected from one class section with 24 students only and it was taught in six weeks.The students had more time to focus and concentrate on the subject and get more attention from the instructor hence the percentage of the SLO results might be higher. An enhancement to the process would be to perform the assessment is a regular 12 week quarter and a larger sample of students. (09/21/2017)

BIOL 40C:Human Anatomy and Physiology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL40C_SLO_1 - Predict the homeostatic responses of the endocrine system to internal and external changes or stimuli. **SLO Status:** Active	**Other -** Small group In-class exercise involving graphing and analysis of data. Completion of follow-up questions designed to determine if the students understand the experimental results and if they are able to explain these results using previously studied information. **Target for Success:** Correct presentation and analysis of data. Correct reasoning and explanation of results with a demonstrated proficiency determined as at 3 correct answers out of 4.	**Program Review Reporting Year:** 2011-2012 **Target :** Target Met The average score on this exercise was 4/5. 32/78 students (41%) scored 5/5 12/78 students (15%) scored 3/5. No students scored below 3/5. (07/03/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Difficulties students had included: Problems with graphing and data analysis Understanding /application of the concept of negative feedback	**Enhancement:** Review of graphing and basics of negative feedback prior to exercise. (04/08/2013)
	Laboratory Project - In lab, worksheets were utilized to have the students analyze the various methods of homeostasis as it relates to each endocrine organ. To achieve this, students were to draw feedback mechanisms for several endocrine glands such as the various Hypothalamic-Pituitary pathways. **Target for Success:** For lab worksheets (because they are done in groups) the target goal is 90% correct.	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met Lab Worksheets – 95% of students (~50/62) were able to analyze the mechanisms correctly related to the SLO. (12/16/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I am very pleased with the results of the lab worksheet related to the endocrine anatomy and physiology. This shows that the students understood the mechanisms.	**Enhancement:** The next time I teach this course, I plan to spend more time on the material during lecture utilizing more drawings and videos to explain the concepts and then providing students with endocrine feedback loop in-class exercises to complete. (12/19/2017)
	Exam - Course Test/Quiz - Students were given several questions on the lecture exam to assess their knowledge of these mechanisms. **Target for Success:** For lecture exam questions, the target goal is 70% correct for 25 questions regarding the material	**Program Review Reporting Year:** 2017-2018 **Target :** Target Not Met Lecture Exam - 68% of students were able to achieve 70% minimum of answering the twenty-five questions related to this SLO correctly. (~42/62 students) (12/19/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The lecture exam questions ranged from easy to very difficult so I am not surprised by the outcome. This illustrates that most students understand the mechanisms, but some did not	**Enhancement:** The next time I teach this course, I plan to spend more time on the material during lecture utilizing more drawings and videos to explain the concepts and then providing students with endocrine feedback loop in-class exercises to complete. (12/19/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		and were not able to answer multiple choice and essay questions related to the material correctly	
BIOL40C_SLO_2 - Appraise the role of the lympathic and immune system in the body's defense to disease. **SLO Status:** Active	**Presentation/Performance -** Students were asked to act out the steps of the immune response. They were provided with all the 'props' to act out their cellular 'roles'. **Target for Success:** Basic understanding of the processes carried out by the cells of the immune system and the mechanisms by which these processes protect and clear antigens from the body.	**Program Review Reporting Year:** 2012-2013 **Target :** Target Met Students received a group score based on the recognition of correct 'props' needed by each cell type and the demonstration of the sequential steps of the specific and non-specific immune responses. Students worked through the exercise until they felt they understood both processes. (02/11/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students enjoyed this activity and commented that it helped their understanding.	**Enhancement:** The props used for this exercise receive heavy use and several 'props' are in need of replacement or repair. (02/11/2014)
	Laboratory Project - Utilizing questions on lab worksheets, students were asked questions (multiple choice, fill in the blanks, matching, etc.) to analyze their understanding. **Target for Success:** Lab Worksheet Questions – 90% success in answering the questions correctly	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met Lab Worksheet Questions – 95% of students (~59/62) were able to complete the lab questions related to the SLO correctly. (12/19/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I am very pleased with the students' performance in lab and their understanding of various complex mechanisms related to the lymphatics and immune system.	**Enhancement:** The next time I teach this course, I plan to do an enhanced immunity lab utilizing materials that will help explain the immune process (drawings, student creation of posters, a physiological experiment relating to antibodies.) (12/19/2017)
	Exam - Course Test/Quiz - Utilizing questions on lecture exams, students were asked questions (multiple choice, fill in the blanks, matching, etc.) to analyze their understanding. **Target for Success:** Lecture Exam Questions – 70% success in answering the questions correctly	**Program Review Reporting Year:** 2017-2018 **Target :** Target Not Met Lecture Exam Questions – 60% of students (~37/62) achieved the goal of 70% or above on 25 exam questions related to this SLO. (12/19/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Student success on the exam was below my expectation.	**Enhancement:** Because student success on the lecture exam fell below my expectations, I will analyze the questions in the future to ensure that they are not too difficult as well as rewording/changing the type of questions. I will also do the above in laboratory to enhance understanding. (12/19/2017)
BIOL40C_SLO_3 - Generalize the way in which nutrients are processes to perform various energetic and structural functions in the body. **SLO Status:** Active	**Exam - Course Test/Quiz -** 50 multiple choice examination questions were given that were meant to assess the student's understanding of the fate of	**Program Review Reporting Year:** 2012-2013 **Target :** Target Met The scores on this exam ranged from 60%-96% with an average score of 73%. (04/03/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The average	**Enhancement:** An activity in which students create a storyboard and then step through he processes of glycolysis, the citric acid cycle, and

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	ingested nutrients (carbohydrates, proteins, and lipids) and the flow of energy from foodstuff to ATP production. These questions built upon one another and varied in the level to which they tested a student's ability to apply foundational information to novel **Target for Success:** General understanding of ways in which ingested nutrients are metabolized and utilized by the body General understanding of the physiological processes involved in the production of ATP with emphasis on the significant products of each step in the process	score on this exam was a C with scores following a normal distribution.	oxidative phosphorylation will be implemented Spring 14 and used to enhance the worksheet-type activities used to reinforce this material. (04/03/2014)
	Other - Students were given a 3-day (2 hour per day) lecture on the various mechanisms in which nutrients are processed. Questions were posed orally to students during the lecture and videos were utilized to further their understanding of the material. During the 2-week analysis of the material, students were asked to assess the anatomy of each structure and the function of each structure. **Target for Success:** Oral questions – 85% correct	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met Oral Questions – Approximately 90% of students (~56/62) were able to answer the oral questions posed during class discussion related to the SLO. (12/19/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I am overall pleased with the ability of the students who volunteered to answer the questions posed correctly	**Enhancement:** Next time I teach this course, I plan to randomly select students to answer the questions to get better overview of understanding of the material. (12/19/2017)
	Laboratory Project - Students were given a 3-day (2 hour per day) lecture on the various mechanisms in which nutrients are processed. Students performed physiological digestion by utilizing amylase and starch in various scenarios to see if the breakdown of nutrients occurred. They were then tested	**Program Review Reporting Year:** 2017-2018 **Target :** Target Not Met Experimental Procedure – Approximately 50% (~31/62) of the class were able to follow the instructions and receive the correct outcome of the experiment that is related to the SLO. (12/19/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** There was obviously issues related to the understanding of experimental procedures as well as a problem with	**Enhancement:** Next time I teach this course, I will change the process in which the digestion experiment is performed providing my own instruction sheet (not utilizing the lab manuals instructions) and make sure of student understanding of the

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	utilizing practical examination questions about the structure and function. **Target for Success:** Experimental Success – 90% correct in following the procedure and receiving the expected outcome.	materials provided that were provided leading to this very low correct outcome.	material before beginning the experiment. Further, I plan to discuss the concentrations of the materials provided to ensure they will work properly with the lab tech. (12/19/2017)
BIOL40C_SLO_4 - Integrate the structure and function of the kidneys in the regulation of fluid, electrolyte, and pH balance. **SLO Status:** Active	**Other -** Students were provided data regarding urine output and urine osmolarity for three experimental cohorts that had ingested different solutions. Students graphed data and analyzed results with regards to renal function and hormonal control of water balance and body fluid composition **Target for Success:** Basic understanding of the role of the kidneys in the maintenance of body fluid volume and composition as demonstrated by the correct interpretation of experimental results and the application of renal physiology to explain these results.	**Program Review Reporting Year:** 2012-2013 **Target :** Target Met Students received points for: correct graphing of data, correct analysis of dats, and correctly answering questions relating to graphically displayed results and hormonal control of ECF osmolarity. Scores ranged between 5pts-8pts out of a possible 8 total points. The average score was 7/8 (02/11/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students had the most difficulty in the graphing portion of this exercise. The also had to be cautioned against searching for answers using their electronics rather than using their notes and critical thinking skills.	**Enhancement:** A pre-activity discussion on graphing techniques is planned for the next time this activity is scheduled. (02/11/2014)
	Exam - Course Test/Quiz - During laboratory, students were asked to analyze the structure of the kidney utilizing various models. Lab worksheets were utilized for them to understand the regulation of fluids, electrolytes, and pH balance as it is associated with the kidney. Experiments included utilizing urine testing strips and four different artificial urine types to look at values for the various components found in urine (pH, glucose, specific gravity, leukocytes, etc.) On a subsequent	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met Of the three lab questions, approximately 76% of students (~47/62) were able to answer all questions correctly related to the SLO. (12/19/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I am pleased that the students showed understanding of the complex material related to the SLO.	**Enhancement:** I will continue to ask diverse types of questions during laboratory related to the SLO. (12/19/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	lab exam, there were questions asked regarding this material. **Target for Success:** Experimental results and Understanding – 3 lab exam questions regarding the experimental material with an 70% success rate.		
	Other - During laboratory, students were asked to analyze the structure of the kidney utilizing various models. Lab worksheets were utilized for them to understand the regulation of fluids, electrolytes, and pH balance as it is associated with the kidney. Experiments included utilizing urine testing strips and four different artificial urine types to look at values for the various components found in urine (pH, glucose, specific gravity, leukocytes, etc.) During lecture, students were asked to complete a take-home acid/base worksheet specific to the kidney's role in acid/base (pH) homeostasis. **Target for Success:** Acid/Base Worksheet – 80% success rate for completion of the worksheet without error.	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met Acid/Base Worksheet – approximately 88% of students (~55/62) were able to complete the take-home assignment (related to the SLO) without error. (12/19/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I am pleased by the student's performance on the take-home acid/base worksheet.	**Enhancement:** I would like to assess student understanding in-class instead of by homework of acid/base relationships to the kidney. To achieve this, I will have the students work in small groups to complete the problems provided within the lecture presentation. (12/19/2017)

BIOL 45:Introduction to Human Nutrition

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL45_SLO_1 - Demonstrate a coherent understanding of the relationship between diet and the major chronic diseases. **SLO Status:** Active	**Project -** One of the questions on the Diet Assignment asks students "In what ways does your diet help to reduce your risk of developing cardiovascular disease, diabetes and cancer? In what ways does your diet increase risk of developing these diseases? This question is worth 10 points out of the 100 that the entire Diet Assignment is worth. **Target for Success:** 80% of the class earns 7-10 points on this question.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 90% of the class earned between 7-10 points on this question. (06/29/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I feel this project assessed this SLO effectively and it was good that the target was met in this assessment.	**Enhancement:** For the next assessment, I will make sure that more time is spent in class prior to the assessment regarding this topic. (06/29/2017)
		Program Review Reporting Year: 2013-2014 **Target :** Target Not Met 75% of the students taking Biology 45 (2 sections) during winter quarter scored 7-10 points on this question. (04/19/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Writing coherently, organizing ideas and information are areas that many students need to improve, in order to earn higher scores on this question. There is room for improvement.	**Enhancement:** The top areas for students to improve include organizing their information better (editing their work) and including more dietary factors that influence the chronic diseases. A voluntary out-of-class workshops for peer reviewing of this essay could potentially help students to do better. (04/21/2014)
BIOL45_SLO_2 - Evaluate a meal plan or diet for meeting the criteria of a " healthy diet." **SLO Status:** Active	**Project -** 2 questions on the Diet Assignment ask students to list the ways their diet (from a 3-day food record and subsequent, computerized nutritional analysis) is healthy and nutritious and in what ways it is not. Additionally, students are asked to come up with suggestions for specific modifications of their food choices on those 3 days that would "fix" those nutritional shortcomings. These 2 questions together make up 30 points out of 100 for the entire Diet Assignment. **Target for Success:** 80% of the class earns 21-30 points (70-100%), combined, on these 2 questions.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 90% of the class earned 21-30 points combined on the 2 questions. (06/29/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This assessment was effective for this SLO. I'm glad that the target was met.	**Enhancement:** Prior to the next assessment, I will focus more on this topic in the lecture to increase student understanding. (06/29/2017)
		Program Review Reporting Year: 2013-2014 **Target :** Target Not Met During winter quarter 2014, 78% of the students (total, in 2 sections) met the target. (04/19/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The target was met but there is room for improvement.	**Enhancement:** Giving students an opportunity to peer review their early drafts of their answers to these questions would help students to get help and help each other in making their answers accurate and complete. (04/20/2014)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements

BIOL 54G:Applied Human Anatomy and Physiology: Levels of Organization

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL54G_SLO_1 - Define the characteristics of life and demonstrate an understanding of how homeostatic mechanisms are important to survival. **SLO Status:** Active	**Exam - Course Test/Quiz -** Evaluation of student responses for 2 Select questions on TEST # 1 regarding this objective. **Target for Success:** For each question, at least 75% of the student will choose the correct answer.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Assessment Data Summary: Percentage of students scoring these two questions correctly: 84.5% for item # 1 82% for item # 2. (05/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This SLO requires that student's understand the basic characteristics of life, which includes an organisms internal mechanisms to maintain homeostasis. This material is presented in both lecture and the text as well as in lab reports. The 75% SLO target is being met with 84.5% of the students achieving this objective.	**Enhancement:** Keep the SLO but will raise the target to 80%, (05/14/2017)
		Program Review Reporting Year: 2013-2014 **Target :** Target Met Assessment Data Summary: Percentage of students scoring these two questions correctly: 89% for item # 1 81% for item # 2. (12/10/2013) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Keep the SLO .	**Enhancement:** Keep the SLO . (04/18/2014)

BIOL 54H:Applied Human Anatomy and Physiology: Support, Movement, and Integration

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL54H_SLO_1 - Describe the macroscopic and microscopic aspects of a long bone and their function. **SLO Status:** Active	**Exam - Course Test/Quiz -** Evaluation of student responses for one select question on TEST # 1 regarding this objective. **Target for Success:** At least 75% of the students will accurately answer the question.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 77% of the students answered this item correctly on test 1. (05/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The content that supports the achievement of this SLO is presented in lecture (power point images and using models of bones), in the text. Students also complete multiple questions on this topic in lab report # 12. The SLO 75% target is being met.	**Enhancement:** Will increase the expectation to 80% for the next SLO cycle. (05/14/2017)
		Program Review Reporting Year: 2013-2014 **Target :** Target Met 75.2% of the students answered this item correctly on test 1. (12/10/2013) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Keep the SLO. Evaluate this SLO next time in lab reports as well as a test question.	**Enhancement:** Keep the SLO. Evaluate this SLO next time in lab reports as well as a test question. (04/18/2014)

BIOL 54I:Applied Human Anatomy and Physiology: Coordination and Transport

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL54I_SLO_1 - Apply principles of homeostasis and distinguish between the mechanisms that regulate hormones and cardiovascular function. **SLO Status:** Active	**Exam - Course Test/Quiz -** Evaluation of student responses for 2 questions (one question from Test # 1 and one question from Test # 3) regarding this objective. **Target for Success:** For each question, at least 75% of the student will choose the correct answer.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Percentage of students scoring these two questions correctly: 79.4%for item # 1 82.3% for item # 2. (05/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students show a slight improvement in achieving this objective. This SLO requires that students apply their understanding of homeostatic mechanisms to the regulation of the Cardiac Cycle and maintenance of hormone levels. The 75% target is being met.	**Enhancement:** This material is presented to students in lecture, (power point notes & with the use of heart models) as well as in lab report exercises and the text which offers schematic diagrams and images. I have also added extra credit work that requires students to spend additional time with these concepts. I will keep the SLO and the75% target. (05/14/2017)
		Program Review Reporting Year: 2013-2014 **Target :** Target Met Percentage of students scoring these two questions correctly: 76%for item # 1 80% for item # 2. (03/18/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This SLO requires that the students apply their understanding of homeostatic mechanisms to the regulation of the Cardiac Cycle and maintenance of hormone levels. The 75% target is being met.	**Enhancement:** Keep the SLO . This material is currently emphasized in the text, the lecture and the lab manual. I will incorporate this SLO into an extra credit activity that is available to the students on the endocrine system . (03/18/2014)

BIOL 54J:Applied Human Anatomy and Physiology: Absorption, Excretion, and Reproduction

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL54J_SLO_1 - Evaluate the anatomy and general functions of the human digestive system. **SLO Status:** Active	**Exam - Course Test/Quiz -** Evaluation of student responses for one select question on TEST # 1 regarding this objective. **Target for Success:** At least 75% of the students will accurately answer the question.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 82% of the students answered this item correctly on test 1. (05/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Evaluation of one lab report exercise and one question on test 1 indicates that 84.6% if students are meeting this SLO. The content of this SLO is presented in one lab report, one lecture (power point slides) and in chapter 15 of the text. The SLO 75% target is being met.	**Enhancement:** Keep the SLO. Will increase the SLO achievement target to 79% for the next SLO cycle. (05/14/2017)
		Program Review Reporting Year: 2013-2014 **Target :** Target Met 83% of the students answered this item correctly on test 1. (03/18/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The content of this SLO is emphasized in chapter 15 of the text and evaluated on Test # 1. The SLO 75% target is being met.	**Enhancement:** Keep the SLO. Evaluate this SLO next time in lab reports as well as a test question. (03/18/2014)

BIOL 6A:Form and Function in the Biological World

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL6A_SLO_1 - Analyze and compare the process of homeostasis as applied to common physiological processes across higher taxonomy. **SLO Status:** Active	**Exam - Course Test/Quiz -** Several selected exam questions specifically targeting student achievement in analyzing and comparing the processes of homeostasis as applied to common physiological processes across higher taxonomy. Successive exams over the course of the quarter continue assessing application of these skills to alternative examples of physiological processes and taxonomic groups. **Target for Success:** Class scores on these targeted questions at, or exceeding, the overall class scores on these exams.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met In order to assess this SLO for my class, I am using questions from the final exam. I included 8 questions that focus on homeostasis in physiological processes. Students scored as average of 60% on these questions. The average on the final exam was 69%. (07/02/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In looking at the questions I included for this assessment, the questions with the lowest levels of understanding were those related to kidney function. I believe this is due, at least in part, to the fact that it is the last topic we cover at the end of the quarter. I believe more time is necessary for students to achieve higher levels of understanding.	**Enhancement:** In order to improve levels of understanding of homeostasis in physiological systems, I am first going to focus on kidney function because this seems to be an area of difficulty for students. I am going to add a white board component to lab in which various osmotic scenarios are presented to students and they will draw the tubules and indicate the movement of water and salts in their drawing. This will be followed up with online exercises to direct students to the most important ideas. (07/02/2017)
		Program Review Reporting Year: 2012-2013 **Target :** Target Met Class scores on these targeted questions exceed the overall class scores on these exams. (07/13/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Current instructional methods and resources are adequately achieving these learning outcomes. It is always beneficial to seek new examples of physiological processes and organisms to use to demonstrate homeostasis.	**Enhancement:** Incorporating an outline system of homework assignments to expand the exposure throughout the quarter of each student to broader examples of physiological processes and organisms to demonstrate homeostasis. (07/13/2012)
BIOL6A_SLO_2 - Apply the principles of the scientific method to critique case studies in comparative biology research. **SLO Status:** Active	**Exam - Course Test/Quiz -** Several selected quiz questions embedded within biweekly online exercises specifically targeting student achievement in analyzing and using the processes of scientific methodology as applied to comparative biology research. Successive online quiz questions	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met For this assessment, which was initially written by another instructor, I do not have online quiz scores to use as an assessment tool. I will be using scores on an assignment on Scientific Method which presents a case study and requires students to explain aspects of it. Students scored 82% on this assignment. My target for this assessment is an average minimum of 70%.	**Enhancement:** In order to improve students' understanding of Scientific Method and its application to case studies, I will add Mastering Biology's online quizzes that enable instructors to direct students to focus on specific important aspects of each topic. Mastering Biology is the tool

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	over the course of the quarter continue assessing application of these skills to varied examples of biological processes and taxonomic groups. **Target for Success:** Class scores on these targeted questions at, or exceeding, the overall class scores on these online quizzes.	(07/02/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students demonstrated a B-level understanding of this topic based on this assignment. While my target was met, I would like to see a higher level of understanding because Scientific Method is an important aspect of the foundation Biology 6A strives to build.	initially specified in this SLO assessment, as written by another instructor. After discussing Mastering with this instructor, I decided to implement it in my class, as well. (07/02/2017)
		Program Review Reporting Year: 2013-2014 **Target :** Target Met Class scores on these targeted questions match the overall class scores on these online exercises. (04/20/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Current instructional methods and resources are adequately achieving these learning outcomes. It is always beneficial to seek new examples of studies in physiological processes and biological diversity to demonstrate scientific methodologies.	**Enhancement:** Incorporating an Adaptive Follow-Up component to the online system of assignments to target reinforcement of concepts specifically to each individual student demonstrating difficulty with those particular concepts. (04/20/2014)
BIOL6A_SLO_3 - Contrast the Linnaen traditional phylogenetic and cladistic processes of taxonomy. **SLO Status:** Active	**Exam - Course Test/Quiz -** Several selected quiz questions embedded within biweekly online exercises specifically targeting student achievement in using and contrasting the different methods and rationales of biological taxonomy. Successive online quiz questions over the course of the quarter continue assessing application of these skills to varied examples and levels of taxonomic groups. **Target for Success:** Class scores on these targeted questions at, or exceeding, the overall class scores on these online quizzes.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met In assessing my class for this SLO, which was written by another instructor, I will use questions from my final exam rather than on-line quizzes. On my final exam, there were 5 questions that assessed understanding of the differences between Linnaean (Traditional) and Cladistic Taxonomy. The class averaged 92% on these questions.The mean score on the exam was 69.1%. These scores illustrate an excellent understanding of this topic. Historically, students struggled with the ideas in this topic, and scored extremely low on exam questions. The quarter of this assessment, I instituted a new approach to improve student understanding of this challenging topic. I wrote a lab in which groups of students classify inanimate objects, and draw the resulting cladograms on white boards. This lab went extremely well, and students demonstrated a much deeper understanding in class discussions, and as noted above, on the final exam. (07/02/2017)	**Enhancement:** I believe 92% on the final exam, which was several weeks after the topic was covered in class, demonstrates success of the Student Learning Outcome. As an enhancement, I will be using Mastering Biology's online assessment tools, as mentioned in the original SLO assessment strategy. I believe using online tools, such as open book online quizzes, allows instructors to guide students to the important concepts. (07/02/2017)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
		Reflection (CLICK ON ? FOR INSTRUCTIONS): I am very pleased with the outcome of the enhancement I added. Drawing on white boards increased student engagement and discussion and was instrumental in achieving the level of understanding demonstrated in this assessment. I will continue to use white boards, and expand their use to other challenging topics.	
		Program Review Reporting Year: 2013-2014 **Target :** Target Met Class scores on these targeted questions exceed the overall class scores on these online exercises. (04/20/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Current instructional methods and resources are adequately achieving these learning outcomes. It is always beneficial to seek new examples of comparative morphology and molecular diversity to demonstrate relative utility of contrasting taxonomic systems.	**Enhancement:** Incorporating an Adaptive Follow-Up component to the online system of assignments to target reinforcement of concepts specifically to each individual student demonstrating difficulty with those particular concepts. (04/20/2014)

BIOL 6B:Cell and Molecular Biology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL6B_SLO_1 - Demonstrate the ability to use appropriate molecular biology techniques to answer research questions and to interpret ans explain the results. **SLO Status:** Active	**Exam - Course Test/Quiz -** Lab exam questions. **Target for Success:** 80% correct on questions relevant to this objective.	**Program Review Reporting Year:** 2011-2012 **Target :** Target Met Class average of 80% correct on lab exam concept questions. (07/03/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Most students are meeting this objective.	**Enhancement:** Continue with current approach. (07/03/2012)
	Exam - Course Test/Quiz - I will use two open answer questions on the lab final to assess the SLO. **Target for Success:** 75% of students answering correctly.	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met The class average for the two questions was 75%. (04/09/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I am pleased that the students met my target of 75% for this exam question. It illustrates that most of the students understand this concept.	**Enhancement:** Most students are meeting this objective, but I could provide more practice and discussion opportunities to help more students meet the objective. (04/09/2018)

BIOL 6C:Ecology and Evolution

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL6C_SLO_1 - Design and compute an independent ecological research project. **SLO Status:** Active	**Project -** The assessment tool that I used was a rubric. 150 points were possible. Students were graded on content (data collection, analysis, and report of findings), oral presentation, poster aesthetics, and their field notebooks. **Target for Success:** At least 112.5 (70%) points earned.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Students' use of statistical analysis this year was much improved over last year, although since this is not the only criterion for grading, this is not explicitly apparent in the overall all project grades. This quarter, I instituted pre- and post-lab quizzes (open book through Canvas) that helped direct students through the statistics labs, and allowed me to highlight those aspects of the labs that were particularly important. The outcome of this additional instruction and direction was that students had better experimental designs with statistical tests incorporated into the planning of data collection. Students also demonstrated a deeper understanding of their statistical analysis in both their write-ups (their posters) and in their oral poster presentations. Students complete their projects in groups of 3-5 students. There were 16 groups. 7 students scored between 116 and 120 (2 groups) 8 students scored between 126 and 130 (2 groups) 5 students scored between 131 and 135 (1 group) 17 students scored between 136 and 140 (4 groups) 12 students scored between 141 and 145 (3 groups) 17 students scored between 146 and 150 (4 groups) The mean score this quarter was 137.8/150. As I mentioned above, statistical analysis is not the only criterion used in grading the research projects, so while the overall project scores did not improve, I still noticed an improved overall understanding. All students did score above 112.5% (70%), so in that sense the target was met. (06/28/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This project is a very big part of the 6C course, and I feel it provides students with an extremely valuable experience. Every	**Enhancement:** Now that students are designing their studies with the use of a particular statistical test in mind, I would like them to take that a step further and learn to collect and record data in a systematic way that lends itself to they type of analysis they will be using. This year, notebooks were not all that impressive It was often difficult for them to find and organize the data they collected. It was also difficult for me to see what they had done. Next year, I am going to incorporate a lab exercise in which we collect data in field notebook format. I am also going to have example pages posted on our website before their data collection begins. Finally, I am going to require they include a sample of their own notebook design with their Proposed Methods assignment, which must be approved before they begin data collection. I think these enhancements will greatly improve the field notebook aspect of the field research project, and add to the value of the assignment. (06/28/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		year, it is improved by what I learn from students. This year students were much improved in their statistical analysis, and I believe it is because of the additional instruction and direction through the use of Canvas on-line, open book quizzes students completed as we progressed through the labs.	
		Program Review Reporting Year: 2011-2012 **Target :** Target Met Score/150 students 130.0 7 135.0 12 140.0 0 145.0 4 150.0 22 (07/03/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students performed very well on their projects. Everyone earned passing grades, and most students earned A?s. Although the projects were very well done, I would like to see more clarity on the students? presentation of their statistical analysis.	**Enhancement:** I will modify the assignment slightly by improving my instructions. We do several labs in preparation for this project, so my instructions will include references to the statistical analyses we did in those labs. (04/08/2013)

BIOL 77 (X-Y):Special Projects in Biology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL77_SLO_1 - Dependent on the nature of the project as determined in sections 3 & 4 of the Special Projects Contract. **SLO Status:** Active_Pending_Revision **Outcome Creation Date:** 02/11/2018			

BIOL 86 (86X & 86Y):Special Projects in Experimental Biology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL86_SLO_1 - Dependent on the nature of the project as determined in sections 3 & 4 of the Special Projects Contract. **SLO Status:** Special Projects **Outcome Creation Date:** 09/13/2013			

BIOL 87 (87X & 87Y):Special Projects in Biology Education

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
BIOL87_SLO_1 - Dependent on the nature of the project as determined in sections 3 & 4 of the Special Projects Contract. **SLO Status:** Special Projects **Outcome Creation Date:** 09/13/2013			

HLTH 21:Contemporary Health Concerns

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HLTH21_SLO_1 - Appraise the interrelationship between individual lifestyle choices, societal influence and personal health. **SLO Status:** Active **Planned Assessment Quarters:** 2011-12 4 -Spring **Outcome Creation Date:** 12/31/2009	**Project -** Students compose a succinct, two-page paper that analyzes how personal choices (behaviors, issues, circumstances, etc) are affected by societal influences which ultimately impact personal health. Students choose no more than three personal choices to address and analyze them applying what they have learned in the class and experience in their communities and lives. **Target for Success:** 80% of the students earn 80% (a B or higher) of the total points for the assignment	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Of the 28 students who turned in the project, 26 of them earned a B (80%) or higher grade on the assignment. Target was met. 4 students did not turn the assignment in. (08/03/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The target was met, and this continues to be forward progress in the assessment for this SLO. Enhancements will continue to be utilized in future assessments.	**Enhancement:** In the future, continued emphasis will be placed on encouraging all students to submit work. Students will be encouraged to work on their writing and analytical skills by using on-campus resources. Additionally, students will be encouraged to view themselves as individuals who are members of a family, community, and society in order to increase their self-reflection for this project. (10/05/2017)
		Program Review Reporting Year: 2016-2017 **Target :** Target Met Of the 32 students that turned in the project, 27 of them received a B (80%) or higher grade on the assignment. (06/09/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The target was met, and this was a good first step forward in the assessment for this SLO. Enhancements will be utilized in future assessments.	**Enhancement:** In the future, a stronger emphasis will be placed on encouraging all students to submit work. Students will be encouraged to work on their writing and analytical skills by using on-campus resources. Additionally students will be encouraged more strongly to view themselves as individuals who are members of a family, community, and society in order to increase their self-reflection in this project. (06/18/2017)

HLTH 57A:First Aid for the Community, Home, Wilderness, and Disasters

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HLTH57A_SLO_1 - Demonstrate life saving skills in care of injuries and sudden illness as specified by the American Red Cross. **SLO Status:** Active **Outcome Creation Date:** 12/31/2009	**Demonstration -** Main assignment/activity: 1) Red Cross multiple choice exam 2) Splinting and bandaging injuries **Target for Success:** 85% achieving the SLO would be satisfactory	**Program Review Reporting Year:** 2009-2010 **Target :** Target Met (With the exception of one student who stopped attending) all students passed all the practical skills tests. 22 of 23 passed the written exam for certification and earned the certification. The Red Cross allows two tries at the 25-question multiple choice exam for certification. 19 of 23 students passed the exam on their first try (four students had perfect scores, four missed one question, two missed eight questions on their first try). Of the four who needed a second try, three passed. A last class day survey of the students (not all students replied): I know when to use the skills I learned in this course: 8 students strongly agree, 9 students agree, 0 disagree, 2 not sure I have confidence I can do the skills correctly: 5 students strongly agree, 12 students agree, 0 disagree, 2 not sure (03/16/2010) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The only issues we have with the class besides students who do not certify due to lack of attendance, are those who fail two tries at the Red Cross multiple choice exam.	**Enhancement:** In the future I will have students answer questions the Red Cross asks me to ask in class during lecture as homework as well as lecture, so that everyone thinks in more detail about them. (04/20/2010)
	Demonstration - Demonstration Main assignment/activity:	**Program Review Reporting Year:** 2014-2015 **Target :** Target Met	**Enhancement:** I have found that by assigning the questions the Red

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	1) complete a primary assessment 2) Splinting and bandaging injuries **Target for Success:** 85% achieving the SLO would be satisfactory	(With the exception of three students who stopped attending) all students passed all the practical skills tests. A last class day survey of the students (not all students replied): I know when to use the skills I learned in this course: 11 students strongly agree, 8 students agree, 0 disagree, 0 not sure. I have confidence I can do the skills correctly: 7 students strongly agree, 10 students agree, 0 disagree, 2 not sure. (01/30/2015) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** We still have the issue of students who do not attend the entire class and do not qualify for the Red Cross certification. But most of the class does well and qualifies for the certification if they want it.	Cross asks me to ask in class as homework, the students get better feedback on what they do not fully understand and everyone thinks in more detail about each subject. I will continue this enhancement. (03/10/2015)

HLTH 57D:CPR/AED for the Professional Rescuer - Recertification

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HLTH57D_SLO_1 - Demonstrate life saving skills in respiratory and cardiac emergencies as specified by the American Red Cross. **SLO Status:** Course Not Currently Taught **Outcome Creation Date:** 12/31/2009	**Demonstration -** Main assignment/activity: 1) Red Cross multiple choice exam 2) Skills demonstration on manikins of CPR and automated external defibrillation **Target for Success:** 75% would be certified.	**Program Review Reporting Year:** 2009-2010 **Target :** Target Met Only one student was enrolled in this class for re-certification that is taught in conjunction with HLTH 57E. He passed all the practical skills and the Red Cross exam for certification. A last class day survey : I know when to use the skills I learned in this course: 1 student strongly agrees, 0 students agree, 0 disagree, 0 not sure I have confidence I can do the skills correctly: 1 student strongly agrees, 0 students agree, 0 disagree, 0 not sure (03/15/2010) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The few students who enroll in this class are usually successful. This course is offered only to students with a current certification in CPR for the Professional Rescuer.	

NUTR 10:Contemporary Nutrition

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NUTR10_SLO_1 - Evaluate a meal plan or diet for meeting the criteria of a " Healthy Diet" **SLO Status:** Active **Outcome Creation Date:** 09/16/2013	**Project -** 25 out of 50 points awarded for the Diet Assignment is earned in the step-by-step process (a series of 15 short questions) of evaluating the student's own diet. **Target for Success:** 75% of the class will receive 20-25 points on this assignment	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 80% of the class received between 20-25 points on this assignment. (06/29/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** It was nice to see an improvement from the last assessment and that the target was met.	**Enhancement:** Prior to the next assessment, I will give more class time in order to better prepare the students for this assignment. (06/29/2017)
		Program Review Reporting Year: 2013-2014 **Target :** Target Not Met 74% of the class met the target (04/19/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The target was met, but there is room for improvement.	**Enhancement:** More in-class time spent on the steps involved in accurately and effectively assessing their diet would help. Showing examples of answers to some of these questions that are incomplete and incomplete --to contrast the differences -- would illustrate the desired goal. (04/20/2014)
NUTR10_SLO_2 - Evaluate nutrition claims about dietary supplement, food, or diet for accuracy and health enhancing potential. **SLO Status:** Active **Outcome Creation Date:** 09/16/2013	**Exam - Course Test/Quiz -** Students were presented with a description of a popular weight loss diet and the claims that are popularly attributed to it. 2 true/false and 2 multiple choice questions were asked in reference to this. One true/false question asked if the rate of weight loss was realistic and healthy. One of the multiple choice questions asked students to identify the valid claim among the 3 faulty claims. One multiple choice question asked students to identify which type of claim one claim was classified as. And one true/false question asked students if research studies are required to be presented as evidence to support that claim.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 83% of the class got all 4 questions correct. (06/29/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** It's great to see improvement since the last assessment completed for this SLO.	**Enhancement:** Prior to the next assessment, I will spend more time in lecture focusing on the material related to this assignment. (06/29/2017)
		Program Review Reporting Year: 2013-2014 **Target :** Target Met 80% of the class earns 17-25 points total for those questions (70-100%) (04/19/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students met the target for success. Great real-life skills are involved in answering these questions correctly, that students will take with them into their futures, when new trends will become "hot", and their corresponding claims needing to be evaluated.	**Enhancement:** Existing instructional methods appear ideally suited to meet this outcome. (04/20/2014)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	Target for Success: 80% of the class got all 4 questions correct. **Comments/Notes:** 81% of the class met this criteria.		

NUTR 62:Nutrition and Athletic Performance

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NUTR62_SLO_1 - Describe the regulations for supplements and apply this knowledge when evaluating sports supplements. **SLO Status:** Active **Outcome Creation Date:** 09/16/2013	**Exam - Course Test/Quiz -** During the supplement lecture, I engaged students with a clicker Challenge Question. Next I explained the Dietary Supplement Health and Education Act (DSHEA). I elaborated with a story about Ephedrine and a clip from the video Bigger, Stronger, Faster. I ended by assessing their knowledge on DSHEA and supplement regulations with the earlier Challenge Question and 100% answered correct with their clicker. **Target for Success:** A class average score of at least 80% on the 4-midterm test questions would indicate a high level of competency among students taking this course.	**Program Review Reporting Year:** 2013-2014 **Target :** Target Met Question 1: 80% correct Question 2: 68% correct Question 3: 93% correct Question 4: 88% correct Average for all 4 questions was 82% (03/25/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I was very pleased with the results for test questions 1, 3 & 4. I was most pleased with the results of question 4 which assessed their application of knowledge. I was disappointed in the results for question 2. This question included the year DHSEA was passed by congress. I believe that students may have thought the question was assessing their knowledge of the date.	**Enhancement:** I will continue to use test questions to assess learning. I will omit the date on test question 2 so it only assesess the students understanding of supplement regulations. In the future, I will track pre & post responses to the clicker challenge question. (03/25/2014)
	Presentation/Performance - I began the supplement lecture with a "Supplement Challenge Statement". Students had to guess which of four statement(s) were true about the regulation of supplements. Answers were written on individual notecards. At the end of the supplement lecture, students were presented with the same "Supplement Challenge Statement". Students were asked to write out their correct answer on the back of the notecard. **Target for Success:** Target for Success:	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met 100% answered correctly (12/12/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I was pleased with the results for the assessment. I am most pleased with the results showing students were able to apply their knowledge.	**Enhancement:** I will continue to use the test questions to assess learning. (12/19/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	I wanted to see at least 90% of students provide a correct answer to the post “Supplement Challenge Statement”, which would indicate students gained accurate information in class.		
	Exam - Course Test/Quiz - Exam Questions on midterm relating to the previous assessment method - "Supplement Challenge Statement". Questions were related to both the regulation of supplements (Question #1) as well as applying this information on questions related to the evaluation of sports supplements (Question #2). 1. The following is true about the regulation of supplements. a. The FDA regulates all supplements b. Supplement ingredients are tested for effectiveness & must be safe. c. Supplements do not have to prove they are safe prior to being sold to you. 2. If you are considering a pre-workout supplement, which is true? a. You can buy a FDA regulated supplement to take before your workout. b. There could be ingredients in the supplement that are not listed on the label. c. The supplement	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met Question #1: 84% answered midterm question correctly Question #2: 88% answered midterm question correctly (12/12/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I was pleased with the results for the 2 assessments. I am most pleased with the results showing students were able to apply their knowledge.	**Enhancement:** I will continue to use the test questions to assess learning. In addition, I will further examine which students answered assessment questions incorrectly. I am curious if it is students who missed the class lecture or students who did not retain the information. (12/19/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	ingredients must be safe and effective for building muscle. **Target for Success:** I wanted to see class average scores of 80% or higher on the midterm (Question #1) of the "Supplement Challenge Statement", which would indicate students retained information on the regulations of supplements. I wanted to see class average scores of 80% or higher on the midterm exam question assessing the students ability to apply their knowledge when evaluating sports supplements (Question #2).		

NUTR 62G:Dieting (Sifting Fact from Fiction)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NUTR62G_SLO_1 - Analyze weight loss diets, programs and supplements, determining effective strategies for healthy and lasting weight loss. **SLO Status:** Active **Outcome Creation Date:** 09/16/2013	**Exam - Course Test/Quiz -** At the beginning of the quarter, a quiz will be given. The same quiz will be given at the end of the quarter. **Target for Success:** 75% of the class receives a score of 90-100% on the 2nd quiz.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 80% of the class received a score between 90-100% on the 2nd quiz. (06/29/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** It was nice to see that most of the students met the target.	**Enhancement:** I will improve my course materials to enhance student understanding. (06/29/2017)
		Program Review Reporting Year: 2016-2017 **Target :** Target Met 83% of the class received a score of 90-100% on the 2nd quiz. (06/29/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I'm pleased with the improvement and hope to see even more improvement in future assessments.	**Enhancement:** More focus will be placed on the material during the course. (06/29/2017)

Assessment: Course/Service Four Column

Dept - (BHES) Environmental Studies

E S 1:Introduction to Environmental Studies

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES1_SLO_1 - Demonstrate a coherent understanding of environmental issues, their underlying causes and potential solutions from an interdisciplinary perspective. **SLO Status:** Active	**Presentation/Performance -** Students (working in small teams) developed and made a Final Presentation designed to convey their vision & blueprint for an environmentally sustainable city and how it fits in to their vision of a sustainable society. In so doing, they were asked to weave in as many aspects of the course as possible/ appropriate (such as sustainable resource use, pollution prevention, preservation of nature, environmental justice & ethics, etc.). After presenting, each team was then questioned by the instructor on various aspects of their presentation, with such questions designed to probe the depth of course knowledge and/or critical thinking skills of individual team members and/or the team as a whole. **Target for Success:** 70% of students participating in the Final Presentation achieving at least a grade of 70% (C) for their Final	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 100% of the students (30 out of 30) participating in the Final Presentation achieved at least a grade of 70% (C) for their Final Presentation. (06/20/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for this course was achieved. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	Presentation.		
ES1_SLO_2 - Demonstrate a coherent understanding of the relationships between human use and exploitation of natural resources, environmental and ecological concepts and possible solutions and sustainable practices. **SLO Status:** Archived SLO Statement	**Presentation/Performance -** I. Presentation/Performance Students (working in small teams) developed and made a Final Presentation designed to convey their vision & blueprint for an environmentally sustainable city and how it fits in to their vision of a sustainable society. In so doing, they were asked to weave in as many aspects of the course as possible/ appropriate (such as sustainable resource use, pollution prevention, preservation of nature, environmental justice & ethics, etc.). After presenting, each team was then questioned by the instructor on various aspects of their presentation, with such questions designed to probe the depth of course knowledge and/or critical thinking skills of individual team members and/or the team as a whole. **Target for Success:** 70% of students participating in the Final Presentation achieving at least a grade of 70% (C) for their Final Presentation. **Related Documents:** JStaundinger SLOAC ES 1 Wi2013	**Program Review Reporting Year:** 2012-2013 **Target :** Target Met 100% of the students participating in the Final Presentation achieved at least a grade of 70% (C) for their Final Presentation. (03/25/2013) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for SLO #2 for this course (ES -001.-04) was achieved for the Winter 2013 quarter. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	
	Presentation/Performance - Students synthesized the information that was learned in the class into a final presentation. The final presentation was graded based on information included, which was	**Program Review Reporting Year:** 2012-2013 **Target :** Target Met 100% of the students participating in the Final Presentation achieved at least a grade of 70% (C) in the course. (03/25/2013) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted	

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	required to include cumulative information covered in the class. **Target for Success:** 90% of students participating in the Final Presentation achieving at least a grade of 70% (C) for their Final Presentation. **Related Documents:** ADeToro SLOAC ES 1 Wi2013	outcome for SLO #2 for this course (ES -001.-01) was achieved for the Winter 2013 quarter.	
ES!_SLO_3 - Assess (apply) the criteria necessary to be successful in the Environmental Studies class. **SLO Status:** Active **Outcome Creation Date:** 09/01/2014			

E S 2:Humans, the Environment, and Sustainability

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES2_SLO_1 - Assess (apply) the criteria necessary to be successful in the Humans, the Environment and Sustainability class. **SLO Status:** Active	**Presentation/Performance -** Students Presentations **Target for Success:** Mean score of 70% or higher.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Conducted oral surveys in class to see if students knew the resources available in the department and different ways of contacting and availing of instructor's help. 100% of students enrolled showed understanding of how to utilize the resources in the department. (07/10/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The target outcome for SLO 1 has been met for this course. E S D002.01 Spring 2017	**Enhancement:** Extend SRC hours into the evening for greater access to all students (equity issue). (07/10/2017)
ES2_SLO_2 - Analyze and communicate the relationships between our health and the health of the environment in order to apply this information in a civic and community setting. **SLO Status:** Active	**Presentation/Performance -** Presentation/Performance Students (working in small teams) developed and made a Final Presentation designed to inform a general audience as to the importance and history of Humans, the Environment, and Sustainability (the overall subject of the course). In so doing, they were to address the major subjects/themes covered in the course (e.g., human evolution, human impacts on the environment, key issues/obstacles to obtaining a sustainable society and potential solutions). After presenting, each team was then questioned by the instructor on various aspects of their presentation, with such questions designed to probe the depth of course knowledge and/or critical thinking skills of individual team members and/or the team as a whole. **Target for Success:** 70% of students participating in the Final	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 84% was the average percentile of student scores on this assignment, showing that they comprehended the above-stated concepts targeted for success (via their written or oral evaluation) (04/05/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Greater encouragement and persistence in urging students to complete all assignments. I have a great deal of communication with my students in class and via email, phone conversations and office visits. For example, numerous students visit me during office hours to seek additional help but I will do my best to incite even more student visits! **Program Review Reporting Year:** 2011-2012 **Target :** Target Met 100% of the students participating in the Final Presentation achieved at least a grade of 70% (C) for their Final Presentation. (07/24/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for SLO #2 for this course (ES -002.-01) was achieved for the Spring 2012 quarter. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	Presentation achieving at least a grade of 70% (C) for their Final Presentation. **Related Documents:** ES 2 SLOAC JStaudinger Sp 2012	**Related Documents:** ES 2 SLOAC JStaudinger Sp 2012	
	Exam - Course Test/Quiz - A two-person team exam with questions to assess their ability to: 1) analyze and communicate the relationships between their health and the health of the environment 2) utilize their knowledge of past societies and human history and to apply lessons learnt from their successes and failures towards current environmental problems. **Target for Success:** 70% of students will be able to apply the knowledge learnt from their weekly assignments, quarter-long book-reading project and lectures to show comprehension of the concepts and be successful in this class	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Over 70% of students enrolled achieved the target for success (07/10/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The target outcome for SLO 2 has been met for this course. E S D002.01 Spring 2017.	**Enhancement:** Additional textbooks available in the SRC so students can have better access to them when needed (equity issue). (07/10/2017)

E S 3:Imagery of the Environment

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES3_SLO_1 - Appraise and communicate relationships between art history and environmental impacts - what art tells us about environmental change. **SLO Status:** Active	**Exam - Course Test/Quiz -** Exam score **Target for Success:** Mean of 80% or higher	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Approximately 80% of students showed obvious comprehension of the concepts covered in class, to the extent that they were capable of accurately explaining the information during their final exam. The other 20% showed comprehension of the material but had some difficulty explaining it accurately during the final presentation. (08/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The Target Outcomes have been met for this course. ES D003.01 Spring 2017	**Enhancement:** More course review before tests and possibly offer a study guide to aid students in preparing for the final and midterm. (08/08/2017)

E S 50:Introduction to Environmental Protection and Pollution Prevention

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES50_SLO_1 - Demonstrate the ability to communicate the elements, principles and practices involved with Environmental Resource Management and Pollution Prevention. **SLO Status:** Active	**Exam - Course Test/Quiz -** A comprehensive Final Exam was administered to the class. **Target for Success:** 70% of students taking the Final Exam achieving at least a grade of 70% (C) on the exam.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 95% of the students (23 out of 24) taking the Final Exam achieved at least a grade of 70% (C) on the exam. (06/20/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for this course was achieved. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	

E S 56:Introduction to Environmental Health

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES56_SLO_1 - Demonstrate the ability to communicate the elements, principles and practices utilized in the field of environmental health. **SLO Status:** Active	**Exam - Course Test/Quiz -** A comprehensive Final Exam was administered to the class. **Target for Success:** 70% of students taking the Final Exam achieving at least a grade of 70% (C) on the exam.	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met 89% of the students (17 out of 19) taking the Final Exam achieved at least a grade of 70% (C) on the exam. (12/19/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for this course was achieved. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	

E S 58:Introduction to Green Building

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES58_SLO_1 - Assess (apply) the criteria necessary to be successful in the Introduction to Green Building class. **SLO Status:** Active_Pending_Revision			
ES58_SLO_2 - Investigate and communicate the relationship between the elements and principles of green building design, the economy, sustainability and society. **SLO Status:** Active			

E S 6:Introduction to Environmental Law

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES6_SLO_1 - Demonstrate the ability to communicate the elements, principles and practices involved with Environmental Law and associated Regulation in the U.S. and California. **SLO Status:** Active	**Exam - Course Test/Quiz -** A Final Exam was administered to the class. **Target for Success:** 70% of students taking the Final Exam achieving at least a grade of 70% (C) on the exam.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 85% (17 out of 20) of the students taking the Final Exam achieved at least a grade of 70% (C) on the exam. (06/20/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome was achieved. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	

E S 61A:Environmental Protection and Pollution Prevention with Emphasis on Local and Regional Communities

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES61A_SLO_1 - Understand and communicate the elements, principles and practices involved with Environmental Resource Management and Pollution Prevention as it specifically relates to our basic air, water and land resources. **SLO Status:** Active	**Exam - Course Test/Quiz -** A comprehensive Final Exam was administered to the class. **Target for Success:** 70% of students taking the Final Exam achieving at least a grade of 70% (C) on the exam.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 100% (23 out of 23) of the students taking the Final Exam achieved at least a grade of 70% (C) on the exam. (06/20/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for this course was achieved. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	
ES61A_SLO_2 - Investigate and communicate the relationship between the local and/or regional governmental processes and the interactions of the stakeholders in establishing environment protection and pollution prevention. **SLO Status:** Archived SLO Statement	**Project -** Students (working in small teams) conducted 2 separate research projects into organizations (gov't agencies or NGOs) working in: 1) pollution control/prevention and 2) natural resource management/protection, and subsequently made class presentations of their findings. After presenting, each team was then questioned by the instructor on various aspects of their presentation, with such questions designed to probe the depth of course knowledge and/or critical thinking skills of individual team members and/or the team as a whole. **Target for Success:** 70% of students participating in each Research Project achieving at least a grade of 70% (C) for their Research Project. **Related Documents:** JStaundinger SLOAC ES 61A Wi2013	**Program Review Reporting Year:** 2012-2013 **Target :** Target Met 100% of the students participating in each Research Project achieved at least a grade of 70% (C) for their Research Project. (03/25/2013) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for SLO #2 for this course (ES -061A.-01) was achieved for the Winter 2013 quarter. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES61A_SLO_3 - Assess (apply) the criteria necessary to be successful in the Environmental Resource Management and Pollution Prevention: Air, Water and Land class. **SLO Status:** Active_Pending_Revision **Outcome Creation Date:** 09/01/2013			

E S 61B:Environmental Protection and Pollution Prevention with Emphasis on the State and Federal Levels

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES61B_SLO_1 - Demonstrate the ability to communicate the elements, principles and practices involved with Environmental Resource Management and Pollution Prevention as it specifically relates to 1) our energy and chemical production and use and 2) prevention and management of our solid and hazardous waste. **SLO Status:** Active	**Exam - Course Test/Quiz -** A comprehensive Final Exam was administered to the class. **Target for Success:** 70% of students taking the Final Exam achieving at least a grade of 70% (C) on the exam.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 95% (20 out of 21) of the students taking the Final Exam achieved at least a grade of 70% (C) on the exam. (06/20/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for this course was achieved. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	

E S 62A:Introduction to ISO 14001 and Sustainability Management Plans (SMP)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES62A_SLO_1 - Demonstrate the ability to communicate the elements, principles and practices involved with Environmental Management Systems and associated Environmental Performance Reporting. **SLO Status:** Active	**Project -** A Project which served as the Final Assessment for the course was given as an individual (non-group) assignment. The Project was to generate an Environmental Management Plan (EMP) for the student's household, incorporating all the principles learned in course for generating and carrying out an EMP, which serves as the heart of an Environmental Management System (EMS), the focus of the course. **Target for Success:** 70% of students submitting a Project achieving at least a grade of 70% (C) for their Project.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 94% of the students (15 out of 16) submitting a Project achieved at least a grade of 70% (C) for their Project. (06/20/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for this course was achieved. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	

E S 62B:Environmental Management Tools: CEQA and Environmental Impact Reports (EIRs)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES62B_SLO_1 - Demonstrate the ability to communicate the elements, principles and practices involved with the "CEQA process" and Environmental Impact Report (EIR) generation and use. **SLO Status:** Active	**Exam - Course Test/Quiz -** A comprehensive Final Exam was administered to the class. **Target for Success:** 70% of students taking the Final Exam achieving at least a grade of 70% (C) on the exam.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 94% (16 out of 17) of the students taking the Final Exam achieved at least a grade of 70% (C) on the exam. (06/20/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for this course was achieved. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	

E S 62C:Environmental Management Tools: Environmental Site Assessments (ESAs)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES62C_SLO_1 - Demonstrate the ability to communicate the elements, principles and practices involved with conducting, reporting and using the results of Environmental Site Assessments (ESAs). **SLO Status:** Active	**Exam - Course Test/Quiz -** A comprehensive Final Exam was administered to the class. **Target for Success:** 70% of students taking the Final Exam achieving at least a grade of 70% (C) on the exam.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 87.5% (14 out of 16) of the students taking the Final Exam achieved at least a grade of 70% (C) on the exam. (06/20/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for this course was achieved. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	

E S 62D:Environmental Management Tools: Industrial Ecology and Sustainable Design Principles

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES62D_SLO_1 - Demonstrate the ability to communicate the elements, principles and practices involved with Industrial Ecology and Sustainable Design. **SLO Status:** Active	**Exam - Course Test/Quiz -** A comprehensive Final Exam was administered to the class. **Target for Success:** 70% of students taking the Final Exam achieving at least a grade of 70% (C) on the exam.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 100% (15 out of 15) of the students taking the Final Exam achieved at least a grade of 70% (C) on the exam. (06/20/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for this course was achieved. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	

E S 63:Agenda 21: Blueprint for Sustainability

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES63_SLO_1 - Demonstrate the ability to communicate the elements, principles and practices involved with Agenda 21 and their role in designing a sustainable society. **SLO Status:** Active	**Exam - Course Test/Quiz -** A comprehensive Final Exam was administered to the class. **Target for Success:** 70% of students taking the Final Exam achieving at least a grade of 70% (C) on the exam.	**Program Review Reporting Year:** 2018-2019 **Target :** Target Met 100% (12 out of 12) of the students taking the Final Exam achieved at least a grade of 70% (C) on the exam. (12/22/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** No enhancement needed as target was met/exceeded.	

E S 64:California's Approach to Global Warming/Global Climate Change

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES64_SLO_0 - Assess (apply) the criteria necessary to be successful in the AB 32 class. **SLO Status:** Active_Pending_Revision **Outcome Creation Date:** 02/03/2018			
ES64_SLO_1 - Demonstrate the ability to communicate the elements, principles and practices involved with California's approach to addressing global warming/global climate change. **SLO Status:** COR_Update_Necessary	**Exam - Course Test/Quiz -** A comprehensive Final Exam was administered to the class. **Target for Success:** 70% of students taking the Final Exam achieving at least a grade of 70% (C) on the exam.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 95% (20 out of 21) of the students taking the Final Exam achieved at least a grade of 70% (C) on the exam. (06/20/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for this course was achieved. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	
ES64_SLO_2 - Demonstrate the ability to communicate the relationship between AB 32 law, history, values, stakeholders, and strategies to assist in implementing AB 32 (or like) targets and timetables. **SLO Status:** Active_Pending_Revision	**Other -** To engage students in their communities, students are assigned the following assignment: Prepare an individual AB 32 Climate Action Plan. This assignment will help to demonstrate the student's ability to communicate the relationship between AB 32 law, history, values, stakeholders, and strategies to assist in implementing AB 32 (or like) targets and timetables. **Target for Success:** 70% of students enrolled in my class will demonstrate his/her ability to communicate the relationship between AB 32 law, history, values, stakeholders, and strategies to assist in implementing AB 32 (or like) targets and timetables. Students will show their understanding of the above via their	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 87% was the average percentile of student submitted scores on this assignment, showing that they comprehended the above-stated concepts targeted for success (via their written Climate Action Plan). There were four students who did not submit the assignment; the average with these four students was 73%. (04/05/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Greater encouragement and persistence in urging students to complete all assignments. I have a great deal of communication with my students in class and via email, phone conversations and office visits. For example, numerous students visit me during office hours to seek additional help but I will do my best to incite even more student visits!	

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	Climate Action Plan. **Comments/Notes:** Greater encouragement and persistence in urging students to complete all assignments. I have a great deal of communication with my students in class and via email, phone conversations and office visits. For example, numerous students visit me during office hours to seek additional help but I will do my best to incite even more student visits!		

E S 65:Environmental Stewardship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES65_SLO_1 - Assess the criteria necessary to be successful in Environmental Stewardship. **SLO Status:** Active			
ES65_SLO_2 - Demonstrate the ability to communicate the relationship between Environmental stewardship principls and the role in designing a sustainable society. **SLO Status:** Active			

E S 66:Environmental Leadership

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES66_SLO_1 - Assess the criteria necessary to be successful in the Environmental Leadership class. **SLO Status:** Active			
ES66_SLO_2 - Demonstrate the ability to communicate the relationship between environmental leadership principles and practices and their role in designing a sustainable society. **SLO Status:** Active			

E S 67:Environmental Team-Building

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES67_SLO_1 - Assess (apply) the criteria necessary to be successful in the Environmental Team-Building class. **SLO Status:** Active			
ES67_SLO_2 - Demonstrate the ability to communicate the relationship between environmental team-building and its role in environmental protection as an integral component of a sustainable society. **SLO Status:** Active			

E S 68:Community-Based Coalitions and Stakeholders

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES68_SLO_1 - Assess (apply) the criteria necessary to be successful in the Community-Based Coalitions and Stakeholders class. **SLO Status:** Active			
ES68_SLO_2 - Demonstrate the ability to communicate the relationship between environmental protection, community-based coalitions including the involvement by key stakeholders and long-term environmental regional planning. **SLO Status:** Active			

E S 69:Energy Reliability and Your Organization

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES69_SLO_1 - Assess the criteria necessary to be successful in Energy Reliability. **SLO Status:** Active			
ES69_SLO_2 - Investigate and communicate the relationship between: energy efficiency, ethic justice principles, ecological and biological principles and evaluate the role of energy management in establishing and fostering sustainable society. **SLO Status:** Active			
ES69_SLO_3 - Understand the process of continuous improvement in relation to an organization establishing an effective energy management plan. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			

E S 69A:E S Introduction to Facilities Management

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES69A_SLO_1 - Assess the roles and responsibilities of Facility Managers and understand the technical and business skills required in the FM profession. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			
ES69A_SLO_2 - Analyze and understand the basics of building systems **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			
ES69A_SLO_3 - Understand and demonstrate the cross functional nature of the successful facility manager and be able to identify internal stakeholders and external stakeholders the FM deals with. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			
ES69A_SLO_4 - Analyze and demonstrate how to manage and track customer relationships in Facility Management. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			

E S 70:Introduction to Energy Management Technology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES70_SLO_1 - Assess (apply) the criteria necessary to be successful in the Introduction to Energy Management Technology class. **SLO Status:** Archived SLO Statement	**Exam - Course Test/Quiz -** Massimo Maniacci- A comprehensive final exam was administered at the end of the course. The exam consisted of multiple choice, problems, short answer, and true/false questions and the students had approximately one hour to complete it. Since there are four modules to the course, the exam has equal amounts of questions from each one. **Target for Success:** My target for success on the final exam is based on De Anza College's definition of a passing/satisfactory grade of a C (i.e., greater than or equal to a 70%).	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met Final exam grades for the 2017 spring quarter ranged from a low of 0% (student did not take the final exam) to a high of 83%. Only one student did not take the final exam and the average grade for it was a 54%. (08/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This is a difficult course to teach because 1. it covers a broad range of energy topics (from energy basics to energy efficiency to utility rate structures to energy economics) and 2. there are no prerequisites for it. Hence, I have students with varying levels of course preparation. But what I do notice in general about the students on the final exam (and even the assignments) is that the concepts are not difficult to master; it's how to take those concepts and apply them to setting up and solving problems. Some students even have difficulty in performing basic arithmetic operations.	**Enhancement:** Based on my assessment analysis, there seems to be a general deficiency in basic numerical proficiency among the students. So in future courses I will try to spend more time in the beginning reviewing basic math skills and showing how to systematically approach solving problems. This will be followed by giving the students ungraded practice problems to work on at home. I could even give the students an ungraded quiz on the first day of class to see where they are with their math skills. My subsequent class could then target those areas where they are deficient in. Another approach to building numerical proficiency would be to have a basic math course as a requirement for this course. (08/01/2017)
ES70_SLO_2 - Demonstrate an understanding of energy efficiency principles, economic analysis, auditing techniques and a sustainable society utilizing energy efficiency practices. **SLO Status:** Archived SLO Statement	**Exam - Course Test/Quiz -** Comprehensive final exam administered at the end of the course. The exam consisted of multiple choice, problems, short answer, and true/false questions and the students had approximately one hour to complete it. Since there are four modules to the course, the exam has equal amounts of	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Final exam grades for the 2017 spring quarter ranged from a low of 0% (student did not take the final exam) to a high of 83%. Only one student did not take the final exam and the average grade for it was a 54%. (08/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Based on my assessment analysis, there seems to be a general deficiency in basic numerical proficiency among the students. So in future courses I will try to spend more time in the beginning	**Enhancement:** Based on my assessment analysis, there seems to be a general deficiency in basic numerical proficiency among the students. So in future courses I will try to spend more time in the beginning reviewing basic math skills and showing how to systematically approach solving problems. This will be followed by

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	questions from each one. **Target for Success:** Target for success on the final exam is based on De Anza College's definition of a passing/satisfactory grade of a C (i.e., greater than or equal to a 70%). **Comments/Notes:** This is a difficult course to teach because 1) it covers a broad range of energy topics (from energy basics to energy efficiency to utility rate structures to energy economics) and 2) there are no prerequisites for it. Hence, I have students with varying levels of course preparation. But what I do notice in general about the students on the final exam (and even the assignments) is that the concepts are not difficult to master; it's how to take those concepts and apply them to setting up and solving problems. Some students even have difficulty in performing basic arithmetic operations.	reviewing basic math skills and showing how to systematically approach solving problems. This will be followed by giving the students ungraded practice problems to work on at home. I could even give the students an ungraded quiz on the first day of class to see where they are with their math skills. My subsequent class could then target those areas where they are deficient in. Another approach to building numerical proficiency would be to have a basic math course as a requirement for this course.	giving the students ungraded practice problems to work on at home. I could even give the students an ungraded quiz on the first day of class to see where they are with their math skills. My subsequent class could then target those areas where they are deficient in. Another approach to building numerical proficiency would be to have a basic math course as a requirement for this course. (08/01/2017)
ES70_SLO_3 - Assess (apply) the value and components of a successful energy management program **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			
ES70_SLO_4 - Understand and be able to demonstrate knowledge of	**Exam - Course Test/Quiz -** Assessment done by Massimo	**Program Review Reporting Year:** 2018-2019 **Target :** Target Met	**Enhancement:** Enhancement/Action: Based on

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
energy and energy efficiency principles, energy bills, auditing techniques, simple economic analyses, and energy conservation measures. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017	Maniaci adjunct professor- Assessment Method: I gave a comprehensive final exam at the end of the course. The exam consisted of multiple choice, problem, short answer, and true/false questions and the students had approximately one hour to complete it. Since there are four modules to the course, the exam has equal amounts of questions from each one. **Target for Success:** Target for Success: My target for success on the final exam is based on De Anza College's definition of a passing/satisfactory grade of a C (i.e., greater than or equal to a 70%). However, I only counted those final exams in which the student actually took it. **Comments/Notes:** Assessment Data Summary: Final exam grades for the 2018 winter quarter ranged from a low of 0% (student did not take the final exam) to a perfect score of 100%. Only five students did not take the final exam and the average grade for it was a 58.7% (including all final exam scores) and 75% (including only taken final exam scores).	Assessment Data Summary: Final exam grades for the 2018 winter quarter ranged from a low of 0% (student did not take the final exam) to a perfect score of 100%. Only five students did not take the final exam and the average grade for it was a 58.7% (including all final exam scores) and 75% (including only taken final exam scores). (03/09/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Reflection and Analysis: This is a difficult course to teach because 1. it covers a broad range of energy topics (from energy basics to energy efficiency to utility rate structures to energy economics) and 2. there are no prerequisites for it. Hence, I have students with varying levels of course preparation. But what I do notice in general about the students on the final exam (and even the assignments) is that the concepts are not difficult to master; it's how to take those concepts and apply them to setting up and solving problems. Another thing that continues to show up with some students is the difficulty in performing basic arithmetic operations.	my assessment analysis, there seems to be a general deficiency in basic numerical proficiency amongst the students. So in future courses I will try to spend more time in the beginning reviewing basic math skills and showing how to systematically approach solving problems. This will be followed by giving the students ungraded practice problems to work on at home. My subsequent class could then target those areas where they are deficient in. (03/09/2018)

E S 71:The Building Envelope

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES71_SLO_1 - Assess (apply) the criteria necessary to be successful in the The Building Envelope class. **SLO Status:** Active	**Exam - Course Test/Quiz -** Massimo Maniacci- A comprehensive final exam was administered at the end of the course. The exam consisted of multiple choice, problems, short answer, and true/false questions and the students had approximately one hour to complete it. Since there are four modules to the course, the exam has equal amounts of questions from each one. **Target for Success:** My target for success on the final exam is based on De Anza College's definition of a passing/satisfactory grade of a C (i.e., greater than or equal to a 70%).	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Final exam grades for the 2017 spring quarter ranged from a low of 28% (student completed the final exam in less than 7 minutes) to a high of 85%. All the students took the final exam and the average grade for it was a 71%. (08/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The course topics are the most familiar to students so they usually do better here than in my other introductory EM&BS courses. With no prerequisites, I have students with varying levels of course preparation. And while not as bad as in my other courses, some students have difficulty in performing simple arithmetic operations. The other issue is the time spent reviewing introductory material (e.g., the energy basics) before diving into the course topics. Although important, it seems to be redundant to me.	**Enhancement:** My assessment analysis revealed that even though the course topics are familiar to most students, some still have a general deficiency in basic numerical skills. But I don't think spending class time in the beginning reviewing these is useful here. Rather, I would give some ungraded practice problems to work on at home. However, showing them how to systematically approach solving problems is still useful. A solution to the other problem, the energy basics, could be to revamp the ES 70 course to heavily address this issue (as well as the problem solving skills) by removing some of the current course content (e.g., utility rate structures). Then I would make this new course a prerequisite for this course. (08/01/2017)
ES71_SLO_2 - Demonstrate knowledge of energy efficiency principles, properties of building materials, basic principles of solar orientation, sustainable building practices and sustainable society utilizing energy efficient building practices. **SLO Status:** Active	**Exam - Course Test/Quiz -** Massimo Maniacci- Comprehensive final exam was administered at the end of the course. The exam consisted of multiple choice, problems, short answer, and true/false questions and the students had approximately one hour to complete it. Since there are four modules to the course, the	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met My assessment analysis revealed that even though the course topics are familiar to most students, some still have a general deficiency in basic numerical skills. But I don't think spending class time in the beginning reviewing these is useful here. Rather, I would give some ungraded practice problems to work on at home. However, showing them how to systematically approach solving problems is still useful.	**Enhancement:** The course topics are the most familiar to students so they usually do better here than in my other introductory EM&BS courses. With no prerequisites, I have students with varying levels of course preparation. And while not as bad as in my other courses, some

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	exam has equal amounts of questions from each one. **Target for Success:** The target for success on the final exam is based on De Anza College's definition of a passing/satisfactory grade of a C (i.e., greater than or equal to a 70%). **Comments/Notes:** Final exam grades for the 2017 spring quarter ranged from a low of 28% (student completed the final exam in less than 7 minutes) to a high of 85%. All the students took the final exam and the average grade for it was a 71%.	A solution to the other problem, the energy basics, could be to revamp the ES 70 course to heavily address this issue (as well as the problem solving skills) by removing some of the current course content (e.g., utility rate structures). Then I would make this new course a prerequisite for this course. (08/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The course topics are the most familiar to students so they usually do better here than in my other introductory EM&BS courses. With no prerequisites, I have students with varying levels of course preparation. And while not as bad as in my other courses, some students have difficulty in performing simple arithmetic operations. The other issue is the time spent reviewing introductory material (e.g., the energy basics) before diving into the course topics. Although important, it seems to be redundant to me.	students have difficulty in performing simple arithmetic operations. The other issue is the time spent reviewing introductory material (e.g., the energy basics) before diving into the course topics. Although important, it seems to be redundant to me. (08/01/2017)
ES71_SLO_3 - Examine environmentally responsive building strategies and systems for controlling the indoor environment in order to provide comfort and health while minimizing energy use. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			
ES71_SLO_4 - Understand the fundamental scientific principles governing the thermal environment of buildings. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			
ES71_SLO_5 - Analyze building energy calculations to provide maximum cost reduction, human comfort and worker productivity.			

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*

SLO Status: Active
Outcome Creation Date: 09/25/2017

E S 76:Energy Star Products

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES76_SLO_1 - Assess (apply) the criteria necessary to be successful in the Energy Star Products class **SLO Status:** Archived SLO Statement	**Other -** Written assignment: After students have reviewed PowerPoint presentations that explain the Energy Star Program and have reviewed the EPA's Energy Star website they have opportunities to interact and ask question of the instructor. SLO 1, Assessment 1, students are asked to list and describe the principals of the Energy Star Program and how it would affect a home in Minnesota. A 25-point rubric is used to assess their understanding SLO 1, Assessment 2, students are asked to look at their own use of energy and how it affects the environment. A 25-point rubric is used to assess their understanding. SLO 1, Assessment 3 (final), students are asked to reflect on how they would use the SLO's in a business or employment environment. A 50-point rubric is used to assess their competence as potential Energy Manager using Energy Star Products. **Target for Success:** The student target for success is 80-100% of the students will achieve the Student Learning Objective. The students	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Assessment Data was collected for 2 quarters -Fall 2016 and Spring 2017: Students Enrolled Students Meeting SLO >80%Percentage % Fall 2016 22 13 60% Spring 2017 27 24 88% (08/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** • A variety of students take this course (differentiated learners); o 1) some students have very little knowledge of energy use or the cost of energy units, o 2) some students have a working knowledge because they pay their own utility bills, and o 3) some students are in the Energy Management Program and are very knowledgeable about the course content. The assessments need to accommodate the differentiation in student abilities. • Common ground for student learning appears to be technology, using websites, videos, mobile assessments and concise content.	**Enhancement:** • Update PowerPoints and Assessments • Add 2 course modules for those new to energy management 1) Glossary of Terms and 2) Energy Management Math. (08/01/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	have all the information needed to be successful in written form, demonstration videos, sample calculators, and on-line resources.		
ES76_SLO_2 - Demonstrate an understanding of the US EPA's Energy Star program principles, those affected by the program and how the program is implemented nationwide. **SLO Status:** Active	**Other -** Ronald Wheelehan- Written Assignment: After students have reviewed PowerPoint presentations that explain the Energy Star Program and have reviewed the EPA's Energy Star website they have opportunities to interact and ask question of the instructor. **Target for Success:** The student target for success is 80-100% of the students will achieve the Student Learning Objective. The students have all the information needed to be successful in written form, demonstration videos, sample calculators, and on-line resources.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Assessment Data was collected for 2 quarters -Fall 2016 and Spring 2017: Students Enrolled Students Meeting SLO >80% Quarter Enrollment # students assessed Success % Fall 2016 22 13 60% Spring 2017 27 24 88% (08/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** • A variety of students take this course (differentiated learners); o 1) some students have very little knowledge of energy use or the cost of energy units, o 2) some students have a working knowledge because they pay their own utility bills, and o 3) some students are in the Energy Management Program and are very knowledgeable about the course content. The assessments need to accommodate the differentiation in student abilities. • Common ground for student learning appears to be technology, using websites, videos, mobile assessments and concise content.	**Enhancement:** • Update PowerPoints and Assessments • Add 2 course modules for those new to energy management 1) Glossary of Terms and 2) Energy Management Math. (08/01/2017)

E S 76A:Solar Thermal Systems

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES76A_SLO_1 - Assess (apply) the criteria necessary to be successful in the Solar Thermal Systems class. **SLO Status:** Active	**Exam - Course Test/Quiz -** Massimo Maniacci- A comprehensive final exam at the end of the course. The exam consisted of multiple choice, problems, short answer, and true/false questions and the students had approximately one hour to complete it. Since there are four modules to the course, the exam has equal amounts of questions from each one. **Target for Success:** My target for success on the final exam is based on De Anza College's definition of a passing/satisfactory grade of a C (i.e., greater than or equal to a 70%).	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met The final exam grades for the 2017 winter quarter ranged from a low of 0% (students did not take the final exam) to a high of 94%. Four students did not take the final exam and the average grade for it was 52% if we include all the students and 75% if we exclude the four non-test-taking students. (08/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Most of the material in this course is familiar to the students. The only exception is the module on siting the solar collection system, which involves some geometry and trigonometry. Students have trouble visualizing the motion of the sun across the sky and using the equations that describe it. Also, because there is no prerequisite for this course, I have students with varying levels of course preparation. But I do not spend as much time on the energy basics as I do I my other introductory EM&BS courses and I do not review any basic geometry or trigonometry. However, I do spend quite a lot o time on the solar collection orientation and tilt.	**Enhancement:** Given the difficulty students have in the module on solar orientation and tilt, I could spend less time on this and more on other important solar thermal design issues (such as sizing pumps or pipes). But it is still important that they understand the basic motion and position of the sun in the sky. One way to address the geometric issue could be to find a website that allows students to see the path of the sun through the sky during the year based on their location. And I could resolve the trigonometric difficulties by spending some time at the beginning of the course (during the energy basics discussion) to review the necessary background information. I do not believe this course requires a prerequisite as most of what is needed could be taught at the beginning of the course. (08/01/2017)
ES76A_SLO_2 - Demonstrate an understanding of the basic principles of solar thermal energy, residential/utility scale solar system principles and a sustainable society utilizing. **SLO Status:** Active	**Exam - Course Test/Quiz -** Massimo Maniacci- A comprehensive final exam at the end of the course. The exam consisted of multiple choice, problems, short answer, and true/false questions and the students had approximately one	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met The final exam grades for the 2017 winter quarter ranged from a low of 0% (students did not take the final exam) to a high of 94%. Four students did not take the final exam and the average grade for it was 52% if we include all the students and 75% if we exclude the four non-test-taking	**Enhancement:** Given the difficulty students have in the module on solar orientation and tilt, I could spend less time on this and more on other important solar thermal design issues (such as sizing pumps or pipes). But it is still

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	hour to complete it. Since there are four modules to the course, the exam has equal amounts of questions from each one. **Target for Success:** The target for success on the final exam is based on De Anza College's definition of a passing/satisfactory grade of a C (i.e., greater than or equal to a 70%).	students. (08/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Most of the material in this course is familiar to the students. The only exception is the module on siting the solar collection system, which involves some geometry and trigonometry. Students have trouble visualizing the motion of the sun across the sky and using the equations that describe it. Also, because there is no prerequisite for this course, I have students with varying levels of course preparation. But I do not spend as much time on the energy basics as I do I my other introductory EM&BS courses and I do not review any basic geometry or trigonometry. However, I do spend quite a lot o time on the solar collection orientation and tilt.	important that they understand the basic motion and position of the sun in the sky. One way to address the geometric issue could be to find a website that allows students to see the path of the sun through the sky during the year based on their location. And I could resolve the trigonometric difficulties by spending some time at the beginning of the course (during the energy basics discussion) to review the necessary background information. I do not believe this course requires a prerequisite as most of what is needed could be taught at the beginning of the course. (08/01/2017)

E S 77 (X-Z):Special Projects in Environmental Studies

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES77X_SLO_1 - Assess (apply) the criteria necessary to be successful in the Special Projects in Environmental Studies class. **SLO Status:** Active			
ES77X_SLO_2 - Demonstrate the ability to communicate work place or field studies principles and practices learned from an Environmental Studies special project experience. **SLO Status:** Active			

E S 78:Energy Management Systems and Controls

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES78_SLO_1 - Assess (apply) the criteria necessary to be successful in the Energy Management Systems and Controls class. **SLO Status:** Active			
ES78_SLO_2 - Demonstrate an understanding of energy efficiency principles, principles of energy management, control system design and a sustainable society utilizing energy management and control systems. **SLO Status:** Active			

E S 78B:Advanced Energy Management Systems and Controls

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES78B_SLO_1 - Evaluate energy efficiency savings as a result of building control implementation. **SLO Status:** Active **Outcome Creation Date:** 08/26/2016	**Portfolio Review -** Students completed a portfolio of 12 controls labs utilizing state of the art controls equipment. These 12 labs embody principles of energy efficient HVAC operation. Each student was required to complete each lab individually with occasional help by the instructor and a lab worksheet. Both required and bonus activities were provided. The instructor discussed each lab with the student upon completion and made suggestions for corrections. Input/Output Lab Air Handler Fan Sequence Lab Air Handler Cooling Heating Sequence Lab Air Handler Economizer Sequence Lab Unitary Equipment Lab Central Plant Lab Network Setup Lab Network Discovery Lab Air Handler Graphical Interface Lab Supervisor Lab Modbus Networking Lab Wireless Networking Lab **Target for Success:** Students will complete 90% of required labs and demonstrate to the instructor that each lab sequence works. Advanced students will complete all required labs and will be challenged through the end of the course by bonus activities.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met Richard Holman- Two thirds of students completed all required labs & adequately demonstrated to the instructor how their sequence worked. One third of students failed to complete all required labs or showed some difficulty in explaining lab concepts to instructor. One third of students completed all required labs plus additional bonus labs. One student completed all required labs and all bonus labs well prior to the end of class. (08/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This was the first year teaching ES78B. Student feedback on the course was excellent. The use of advanced lab equipment and the chance to do real controls work was listed by students as a key benefit of the course. Based on my opinion and that of students, more time needs to be allocated for lab work – both to complete additional labs as well as finish existing labs. The course needs to do better in tying the energy efficient techniques used in the labs to demonstrable financial benefit -- we simply ran out of time to complete a lab and homework assignment targeted specifically at financial analysis. Students who had not previously used the lab software felt that more ramp-up time learning the software would be beneficial in approaching the first lab or two. Several students clearly had difficulty understanding how one of the key controls algorithms works – the labs needed to be supplemented more with lecture and/or offline study material. One student finished far earlier than others. More bonus activities needed to be provided for this student. In	**Enhancement:** Provide an additional lab covering power monitoring and its use in control systems to lower energy costs. Provide a related financial analysis homework assignment to ensure understanding. Provide more labs – which tie together the portfolio at the site level, cover additional equipment types, and which provide more unscripted exercises – requiring the student to more independently apply concepts learned in other labs. (08/01/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		general, I want to make sure every student is challenged by the lab activities – even the most advanced student.	
		Program Review Reporting Year: 2016-2017 **Target :** Target Not Met Two thirds of students completed all required labs & adequately demonstrated to the instructor how their sequence worked. One third of students failed to complete all required labs or showed some difficulty in explaining lab concepts to instructor. One third of students completed all required labs plus additional bonus labs. One student completed all required labs and all bonus labs well prior to the end of class. (08/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This was the first year teaching ES78B. Student feedback on the course was excellent. The use of advanced lab equipment and the chance to do real controls work was listed by students as a key benefit of the course. Based on my opinion and that of students, more time needs to be allocated for lab work – both to complete additional labs as well as finish existing labs. The course needs to do better in tying the energy efficient techniques used in the labs to demonstrable financial benefit -- we simply ran out of time to complete a lab and homework assignment targeted specifically at financial analysis. Students who had not previously used the lab software felt that more ramp-up time learning the software would be beneficial in approaching the first lab or two. Several students clearly had difficulty understanding how one of the key controls algorithms works – the labs needed to be supplemented more with lecture and/or offline study material. One student finished far earlier than others. More bonus activities needed to be provided for this student. In general, I want to make sure every student is challenged by the lab activities – even the most advanced student.	**Enhancement:** Provide an additional lab covering power monitoring and its use in control systems to lower energy costs. Provide a related financial analysis homework assignment to ensure understanding. Provide more labs – which tie together the portfolio at the site level, cover additional equipment types, and which provide more unscripted exercises – requiring the student to more independently apply concepts learned in other labs. (08/01/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
ES78B_SLO_2 - Summarize the terminology, physics and principles of building automation and control systems. **SLO Status:** Active **Outcome Creation Date:** 08/26/2016	**Portfolio Review -** Richard Holman-Portfolio Review Students completed a portfolio of 12 controls labs utilizing state of the art controls equipment. These 12 labs embody principles of energy efficient HVAC operation. Each student was required to complete each lab individually with occasional help by the instructor and a lab worksheet. Both required and bonus activities were provided. The instructor discussed each lab with the student upon completion and made suggestions for corrections. Input/Output Lab Air Handler Fan Sequence Lab Air Handler Cooling Heating Sequence Lab Air Handler Economizer Sequence Lab Unitary Equipment Lab Central Plant Lab Network Setup Lab Network Discovery Lab Air Handler Graphical Interface Lab Supervisor Lab Modbus Networking Lab Wireless Networking Lab **Target for Success:** Students will complete 90% of required labs and demonstrate to the instructor that each lab sequence works. Advanced students will complete all required labs and will be challenged through the end of the course by bonus activities.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met Two thirds of students completed all required labs & adequately demonstrated to the instructor how their sequence worked. One third of students failed to complete all required labs or showed some difficulty in explaining lab concepts to instructor. One third of students completed all required labs plus additional bonus labs. One student completed all required labs and all bonus labs well prior to the end of class. (08/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This was the first year teaching ES78B. Student feedback on the course was excellent. The use of advanced lab equipment and the chance to do real controls work was listed by students as a key benefit of the course. Based on my opinion and that of students, more time needs to be allocated for lab work – both to complete additional labs as well as finish existing labs. The course needs to do better in tying the energy efficient techniques used in the labs to demonstrable financial benefit -- we simply ran out of time to complete a lab and homework assignment targeted specifically at financial analysis. Students who had not previously used the lab software felt that more ramp-up time learning the software would be beneficial in approaching the first lab or two. Several students clearly had difficulty understanding how one of the key controls algorithms works – the labs needed to be supplemented more with lecture and/or offline study material. One student finished far earlier than others. More bonus activities needed to be provided for this student. In general, I want to make sure every student is challenged by the lab activities – even the most advanced student.	**Enhancement:** Provide an additional lab covering power monitoring and its use in control systems to lower energy costs. Provide a related financial analysis homework assignment to ensure understanding. Provide more labs – which tie together the portfolio at the site level, cover additional equipment types, and which provide more unscripted exercises – requiring the student to more independently apply concepts learned in other labs. (08/01/2017)

E S 79:Renewable and Alternative Energy Systems

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES79_SLO_1 - Assess (apply) the criteria necessary to be successful in the Renewable and Alternative Energy Systems class. **SLO Status:** Archived SLO Statement			
ES79_SLO_2 - Demonstrate an understanding of the principles of renewable energy generation, economic analysis and a sustainable society utilizing renewable energy generation. **SLO Status:** Active	**Exam - Course Test/Quiz -** Students were given a 50 question, multiple choice quiz. 40 questions were multiple choice, 10 questions were fill in the blank. The quiz was timed, Students had one hour to complete the quiz. the quiz was open book and open note. **Target for Success:** 80 % of students were expected to earn 70% or higher on this quiz. All of the material was covered in class and was in presentation slides available to all students on the Canvas class website. 5 of the questions came directly from assigned readings or web links posted on the class website. **Comments/Notes:** All of the students scored higher that 80% on this quiz. Because the quiz was open note, this was not surprising. The scores ranged from a high of 95% to a low of 80% In retrospect, this quiz was probably too easy given the fact the resources were available to the students for reference. In the future, I will administer a similar quiz without	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met The way this quiz was administered was too easy. a better challenge and assessment of student aptitude would be to take the quiz without the use of notes and other resources. (03/06/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This is the first time I had administered a quiz in this particular class as an effort to assess student learning objectives. Although I am pleased all of the students met the success criteria of the SLO, I believe it was too easy. In the future, I will administer the same quiz without the use of notes to get a better assessment of student aptitude and assessment of the learning objective	**Enhancement:** I am teaching this class in Spring 2018 and will administer the same quiz without the use of notes or other resources in an effort to compare this methodology to what was done in Fall 2017. I will update the assessment for this class after the Spring 2018 Quarter (03/06/2018)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	allowing students to use notes.		
ES79_SLO_3 - Assess the positive impact renewable energy systems have in regard to Global Climate Change **SLO Status:** Active **Outcome Creation Date:** 09/25/2017	**Presentation/Performance -** Students were assigned a final project to look at the Solutions Project, a 100% renewable energy proposal made by Professor Mark Jacobson from Stanford University. The Solutions Project proposes a 100% Clean Energy United States of America by implementing increases installed Solar, Wind and water Resources Statewide. Part of the proposal was to analyze job creation, healthcare cost reduction due to less fossil fuels and cleaner air, and resource depletion. Students were required to analyze and critically critique one state summary of their choice, the entire US and one other country in the World. Students were graded on their critique of the proposal, what they believed would and would not work and why as well as providing a comparison of their chosen state with the US overall and the country they chose. The purpose of this assignment was to realize the social, economic and environmental value of Renewable Energy Generation on the triple bottom line of sustainability **Target for Success:** 80% or higher on the final assessment	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met Student love this assignment! It open their eyes to the fact there is more than an up front cost to installing alternative forms of energy. They are able to assess and critique other benefits and costs such as job growth, wage earnings, overall economic growth, reduction in healthcare costs, and social and environmental justice issues and costs . In addition, they have to analyze the solar and wind resources available in their chosen State to verify the plan will work. Each State has differing resources of Wind, Water or Solar depending on its location. Student learn that a State like Washington State have tremendous water resources, but not much solar resource. The assignment also allows student to realize that environmental issues have economic and social impacts. Renewable Energy creates jobs and improves human health and healthcare costs due to the reduction in emissions and greenhouse gases, (04/14/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This assignment works both inline and in person on small groups. The fact that the data is updated and kept current makes it popular as students can see the increase in renewable energy installation worldwide each quarter. Students score high on this assignment (Average= 92%) but the effort they put into the assignment and the amount learned as a result of the assignment warrants the high grade. Students are able to expand their awareness of renewable energy to more than just the form of energy itself. They are able to examine and analyze the impact it has on them personally and on the entire planet. I have no plans on changing anything regarding this SLO. I think it may be one of the best SLOs that has been written for any of may classes. It allows students to do research, apply critical thinking and then become aware of the far reaching benefits renewable energy provides to all stakeholders.	**Enhancement:** None- Maybe allow students to look at one country who is moving down the renewable energy path quickly with one that isn't . The ability to compare and contrast may open up additional learning opportunities such as legislature and laws, regulations, subsidies and tariffs. (04/14/2018)

E S 80, X-Z:California Field Studies

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES80_SLO_1 - Assess (apply) the criteria necessary to be successful in the California Field Studies class. **SLO Status:** Archived SLO Statement			
ES80_SLO_2 - Identify and assess natural communities and watersheds in the California Floristic Province and demonstrate an understanding of the social and environmental parameters that affect these natural communities. **SLO Status:** Active	**Other -** To engage students in their communities, students are assigned the following assignment: Journal with reflections/worksheets. This assignment will help to demonstrate the student's ability to identify and assess natural communities and watersheds in the California Floristic Province and understand the social and environmental parameters that affect these communities. **Target for Success:** 70% of students enrolled in my class will show their understanding of the above via their Journal with reflections/worksheets. This assignment will help to demonstrate the student's ability to identify and assess natural communities and watersheds in the California Floristic Province and understand the social and environmental parameters that affect these communities.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 93% was the average percentile of student submitted scores on this assignment, showing that they comprehended the above-stated concepts targeted for success (via their written Climate Action Plan). There were four students who did not submit the assignment; the average with these four students added in would be 76%. (04/18/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Greater encouragement and persistence in urging students to complete all assignments. I have a great deal of communication with my students in class and via email, phone conversations and office visits. For example, numerous students visit me during office hours to seek additional help but I will do my best to incite even more student visits!	
ES80_SLO_3 - Identify ecosystem protection and policies as they relate to environmental and health effects on various species as well as on individuals, cultures, and society. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			

E S 81:Leadership in Energy and Environmental Design/Sustainability Codes

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES81_SLO_1 - Describe the components of the Building Energy Efficiency Standards (Title 24, Section 6), the Appliance Code (Title 20), and the Green Building Code (Title 24, Part 11), and the building simulation requirements of each **SLO Status:** Active **Outcome Creation Date:** 08/26/2016			
ES81_SLO_2 - Create a building model using a BEMS such as eQUEST, and employ that model to measure and evaluate various energy efficiency and demand response measures. **SLO Status:** Active **Outcome Creation Date:** 08/26/2016			

E S 82:Project Management and Technical Report Writing for Energy Professionals

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES82_SLO_1 - Assess the purpose of the energy project leadership, audit report, scope of work, and level of detail required for the report **SLO Status:** Active **Outcome Creation Date:** 08/26/2016	**Project -** Students are assigned a energy report writing project which requires assessment of a building system including a level I audit, recommendations, cost analysis, and a proposed energy project and timeline for implementation. Student must be at basic using WORD and EXCEL. Laboratory time is given to acquire basic report writing skills and support. **Target for Success:** The student target for success is 80-100% of the students will achieve Student Learning Objective #1. The students will acquire the skills to meet the objective from in-class instructor demonstrations, homework assignments, and during laboratory time.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Students Enrolled Students Meeting SLO >80% Percentage % Winter 2017 18 16 88% (08/01/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** • Two distinct type of students take this course (differentiated learners); o 1) Some students are looking for technical writing and project management skills and are NOT Energy Management Program students. o 2) Some students are in the Energy Management Program and are very knowledgeable about energy management reports. • It is important that students in the course have access to Microsoft Word and Microsoft Excel. Other applications such as Google Apps don't seem to work in this course. The college offers MS Office 365 on-line or students can download trial versions. • Audit simulations, sample reports and recommendations are key to students meeting the SLO's.	**Enhancement:** • Add 2 course modules for those new to energy management 1) Glossary of Terms and 2) Energy Management Math. • Provide multiple samples of energy audits, proposals, project management documents and Gantt charts in electronic on-line form. (08/01/2017)
ES82_SLO_2 - Formulate prioritized recommendations that evaluate energy efficiency measure (EEM) recommendations in terms of energy savings and financial costs/ benefits to the client **SLO Status:** Active_Pending_Revision **Outcome Creation Date:** 08/26/2016			

E S 83:Energy Management Return on Investment

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES83_SLO_1 - Use benchmarking tools to compare the Energy Use Intensity of buildings of similar type and climate, and illustrate typical energy use patterns of specific facility types **SLO Status:** Active **Outcome Creation Date:** 08/26/2016			
ES83_SLO_2 - Determine the cost of various energy efficiency measures, and calculate the value of them using various metrics **SLO Status:** Active **Outcome Creation Date:** 08/26/2016			

E S 84:Residential Solar Design and Installation

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES84_SLO_1 - Analyze buy vs lease solar options and understand incentives and tax breaks **SLO Status:** Active **Outcome Creation Date:** 08/26/2016			
ES84_SLO_2 - Explore OSHA 10 safety regulations and use of tools needed to install residential solar systems safely **SLO Status:** Active **Outcome Creation Date:** 08/26/2016			

E S 85A:California Native Plants and Animals

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES85A_SLO_1 - Assess the criteria necessary to be successful in California Native Plants and Animals class. **SLO Status:** Archived SLO Statement			
ES85A_SLO_2 - Identify and access the dominant components within native plant communities in the California Floristic province. And demonstrate an understanding of the environmental parameters that affect the presence of these communities. **SLO Status:** Archived SLO Statement	**Presentation/Performance -** Students had a final presentation on a California native plant community in the Cheeseman Environmental Studies Area. Their presentation focused on their ability to conduct research and organize their presentation to cover specific topics of the characteristics, climate, plants, animals and threats posed to a specific plant community. **Target for Success:** The main target that needed to be obtained was the student?s ability to not only conduct a well organized presentation but also to present the information in a way to capture, engage and retain their audiences focus and attention (docent skills).	**Program Review Reporting Year:** 2011-2012 **Target :** Target Met 100% of the students in this course achieved the required expectations by accurately communicating the set requirements for their final presentation to the faculty of this course and the other students in this class. (07/13/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The students learning objectives for the ES85A course were achieved for the Spring 2012 quarter. **Related Documents:** DMartinez SLOAC 85A Sp2012	
ES85A_SLO_3 - Demonstrate ability to identify California native plants and animals for 3 of the 12 California plant communities in the Cheeseman Environmental Studies Area. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			
ES85A_SLO_4 - Illustrate ability to lead a group tour in the Cheeseman Environmental Studies Area with adequate identification of plants,			

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
animals, biotic and abiotic components of of the California plant communities. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			

E S 85B:Cheeseman Environmental Study Area Interpretive Training and Other Docent Activities

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES85B_SLO_1 - Assess the criteria necessary to be successful in Cheesemen Environmental Study Area Interpretive class. **SLO Status:** Archived SLO Statement			
ES85B_SLO_2 - Research plant communities in the Cheeseman Environmental Study Area Iand understand plant adaptation to varying climates and habitats in California. **SLO Status:** Archived SLO Statement			
ES85B_SLO_3 - Research the food webs, California flora and fauna of the 12 California plant communities in the Cheeseman Environmental Studies Area. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			
ES85B_SLO_4 - Explain differences in the plant communities within the Cheeseman Environmental Study Area revealing an understanding plant adaptation to varying climates and habitats in California. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			
ES85B_SLO_5 - Demonstrate an understanding of native plant restoration of a selected ESA plant community through research and hands on experience of restorations practices including: weeding,			

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
mulching, soil tests, signage, planting and pruning. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			

E S 93:Sustainability Across the Curriculum

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES93_SLO_1 - Assess (apply) the criteria necessary to be successful in the Sustainability Across the Curriculum class. **SLO Status:** Active			
ES93_SLO_2 - Demonstrate the ability to communicate the strategies needed to implement sustainability across the curriculum in academic institutions and the critical role of education and educators in this process. **SLO Status:** Active			

E S 95:Introduction to Environmental Careers

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES95_SLO_1 - Assess (apply) the criteria necessary to be successful in the Introduction to Environmental Careers class. **SLO Status:** Archived SLO Statement **Outcome Creation Date:** 09/25/2017			
ES95_SLO_2 - Demonstrate the ability to communicate the relationship between values, skills, environmental education, and environmental careers in order to play a role in furthering a sustainable society. **SLO Status:** Archived SLO Statement	**Other -** Students are assigned the following assignment: Academic/Career Action Plan. This assignment will help to demonstrate the student's ability to communicate the relationship between values, skills, environmental education, and environmental careers in order to play a role in furthering a sustainable society. **Target for Success:** 70% of students enrolled in my class will show their understanding of the above via their Academic/Career Action Plan. This assignment will help to demonstrate the student's ability to communicate the relationship between values, skills, environmental education, and environmental careers in order to play a role in furthering a sustainable society.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 95% was the average percentile of student submitted scores on this assignment, showing that they comprehended the above-stated concepts targeted for success (via their written Climate Action Plan). There were four students who did not submit the assignment; the average with these four students added in would be 63%. (04/18/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Though the Target Outcomes have not been met for this course, ES-95.55 Winter 2016, this was highly unusual. Since this is an environmental careers course, students tend to be extremely motivated and therefore submit and perform very well on their Academic/Career Action Plans. Also, the majority of the time this course has ~20 students or more enrolled. So, though this was an unusual quarter, I am confident that past target outcomes in ES 95 have almost always been met (since I began teaching this class in 2008/2009).	
ES95_SLO_3 - Compare, contrast, and identify the various transfer colleges and universities as well as the multitude of career options in environmental studies and sciences, especially as they relate to our three degree/certificate areas. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017			

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*

ES95_SLO_4 - Demonstrate the ability to communicate the relationship between values, skills, environmental education, and environmental careers in order to play a role in furthering a sustainable society.
SLO Status: Active
Outcome Creation Date: 09/25/2017

E S 95A, 95B, 95C, 95D:Environmental Studies Internship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ES95A_SLO_1 - Assess (apply) the criteria necessary to be successful in the Environmental Studies Internship class. **SLO Status:** Active			
ES95A_SLO_2 - Demonstrate the ability to communicate work place principles and practices learned from an internship experience. **SLO Status:** Active			

ESCI 1:Environmental Science

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI1_SLO_1 - Utilize the scientific method to demonstrate role of scientist and public to determine a strategy to create a sustainable society using scientific principles. **SLO Status:** Active	**Exam - Course Test/Quiz -** Exam Question **Target for Success:** A mean score of 70% or higher will be achieved by the students who answer this exam question	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met Based on 46 students, 40 answered the question correctly, 3 left it blank and 3 got the wrong answer (07/26/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Although more than 85% of the students answered the question on how science works correctly, it is still a little concerning to know that about 15% of the students did not know or have no clue regarding this important topic	**Enhancement:** It would be helpful to have the assessment earlier in the quarter to identify misconceptions and to give enough time to correct any mistakes (07/26/2017)
ESCI1_SLO_2 - Utilize the environmental method to demonstrate role of scientist and public to determine a strategy to create a sustainable society using scientific principles. **SLO Status:** Active	**Demonstration -** Demonstration OR presentation/performance (Team Assessment and Final Team Assessment) ? student presents a competence of the skills for SLO 2. **Target for Success:** Students should be able to successfully presents all aspects of the assessment. **Related Documents:** ESCI 1 SLOAC JPhillips Sp2012	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met The average grade for the group presentation was a 92% (04/10/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students were able to successfully present about an environmental issue and act as scientist to research an environmental issue and what the tole of the public might be.	
		Program Review Reporting Year: 2011-2012 **Target :** Target Met 100% of the students successfully achieved the student learning outcome required in this course. (07/16/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Review the basis for the performance (team assessment and final assessment requirements Review the performance scores of the students in ESCI 001.01 **Related Documents:** ESCI 1 SLOAC JPhillips Sp2012	**Enhancement:** Require improved monitoring of team assessment preparation (07/16/2012)
	Presentation/Performance - Presentation that will explain key concepts learned through the quarter. **Target for Success:** Students will		

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	obtain a mean score of 70% or higher.		

ESCI 19:Environmental Biology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI19_SLO_1 - Demonstrate a coherent understanding of the relationship between human use and exploitation of natural resources. **SLO Status:** Archived SLO Statement	**Demonstration -** Students are required to research, using peer reviewed journals, and present their findings, in their own words, in a 750-1000 word literature review paper. This paper must cite a minimum of 5 reputable sources, including 3 peer reviewed journals. Students are asked to discuss how global climate change is impacting one of the following biomes: Coral Reefs, Tropical Rainforests, Tundra, or Grassland. They must draw conclusions and connections about how our actions and exploitation of resources here in the USA affect biomes outside our borders. **Target for Success:** 70% of students enrolled in my class will show obvious signs of comprehension and critical thinking as they develop and deliver their literature review papers.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Although only 75% of my class submitted this assignment, those that did showed a high rate of comprehension and delivered on the requirements of the assignment with 100% obtaining a grade of B or higher. The other 25% of the class did not submit any paper at all, and thus received a zero for this assignment. (04/18/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The Target Outcomes have been met for this course. ESCI-019.05 and ESCI-019.06 Fall 2015 . For all ESCi19 Labs: Water test equipment needed, cataloguing of plant and animal species in our labs and an investment of new species displays for all Kingdoms taught in lab.	
ESCI19_SLO_2 - Compare Environmental and ecological principles, concepts, and possible solutions and sustainable practices. **SLO Status:** Active	**Exam - Course Test/Quiz -** Test question asking students to describe and draw energy transfer in a food web. Students should be able to name trophic levels, explain how much energy is transferred as biomass, and give an example organism. **Target for Success:** Mean of 70% or higher	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Students scored a mean of 75% on this question. (06/22/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students benefited from this question as part of the review.	**Enhancement:** Students would benefit from a set of clickers that could accommodate 75+ students. Students could track their progress by being assigned a clicker number. (06/22/2017)

ESCI 1L:Environmental Science Laboratory

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI1L_SLO_1 - Assess (apply) the criteria necessary to be successful in the Environmental Science Lab class. **SLO Status:** Active			
ESCI1L_SLO_2 - In a outdoor laboratory setting; survey local open space areas such as major aquatic life zones (coastal wetlands, inland wetlands, coastal ocean, and riparian) and terrestrial biomes (grasslands, forests, savannah and transitional areas (ecotones)) and the impacts on these systems by humans; as well as human systems including sanitary landfills, sewage treatment facilities and others. **SLO Status:** Active	**Laboratory Project -** Students (working in small teams) developed and made a Final Presentation on a topic building off what was learned during the laboratory (in-field) sessions (such as restoration of wetlands). After presenting, each team was then questioned by the instructor on various aspects of their presentation, with such questions designed to probe the depth of course knowledge and/or critical thinking skills of individual team members and/or the team as a whole. **Target for Success:** 70% of students participating in the Final Presentation achieving at least a grade of 70% (C) for their Final Presentation. **Related Documents:** JStaundinger SLOAC ESCI 1L Wi2013	**Program Review Reporting Year:** 2012-2013 **Target :** Target Met 100% of the students participating in the Final Presentation achieved at least a grade of 70% (C) for their Final Presentation. (03/25/2013) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The targeted outcome for SLO #2 for this course (ESCI -001.-01) was achieved for the Winter 2013 quarter. In general, both faculty and students were satisfied with the objectives and outcomes of this course.	
	Presentation/Performance - Students are given a current scenario and asked to prepare and present a PowerPoint Presentation that focuses on their ability to research and explain human impacts on natural resources, plants, animals and non-renewable resources. Their presentation is based on the concepts they learned throughout	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Approximately 95% of students showed obvious comprehension of the concepts covered in class, to the extent that they were capable of accurately explaining the information during their final presentations. The other 5% showed comprehension of the material but had some difficulty explaining it accurately during the final presentation. (06/16/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The Target	**Enhancement:** Portable air and water testing equipment would help students quantify human impacts on those ecological systems (06/16/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	the quarter. Their presentation must be in their own words and demonstrate their ability to utilize critical thinking skills to find creative ways to explain complex concepts in a simple manner. **Target for Success:** 70% of students enrolled in my class will show obvious signs of comprehension of the critical concepts covered in class during their final presentations.	Outcomes have been met for this course. ESCI D001L 01, 02, 05, 06	

ESCI 20:Introduction to Biodiversity

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI20_SLO_1 - Assess the criteria necessary to be successful in the Introduction to Biodiversity class. **SLO Status:** Active			
ESCI20_SLO_2 - Utilize the scientific principles to evaluate biological diversity and the methods to analyze the underlying cause of biodiversity loss and the trends to conserve it. **SLO Status:** Active			

ESCI 21:Biodiversity 2

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI21_SLO_1 - Assess and apply the criteria and requirements needed to be successful in the California Biodiversity class. **SLO Status:** Active	**Presentation/Performance -** Evaluation of biodiversity knowledge through final presentations. **Target for Success:** 100% completion		
ESCI21_SLO_2 - Evaluate the long-term impacts on California's landforms and biodiversity of their major determinants, with the Pacific and Sierra acting as major physical/biological barriers. **SLO Status:** Active			
ESCI21_SLO_3 - Appraise the impacts of human activity affecting California's biodiversity, historically **SLO Status:** Active	**Exam - Course Test/Quiz -** Students are tested on material that was covered in lecture and on field trips. In addition, students were given meta-data from species diversity that we collected throughout the quarter and were asked to assess broad patterns in biodiversity that observed in the field and how topics we learned in course can explain for the observed patterns. The exam tests their acquisition of knowledge and the written assessment enabled them to communicate in their own words to showcase their critical thinking skills. **Target for Success:** 70% of students will score above 70% on exams and 100% students should feel comfortable with nature-based inquiry and analysis in the field, as well as understanding broad concepts in California biodiversity. **Related Documents:**	**Program Review Reporting Year:** 2012-2013 **Target :** Target Met Approximately 70% of the students performed with excellence and conveyed a thorough understanding and retention of course material. Another 20% of students showed obvious comprehension of the concepts covered in class, to the extent that they were capable of accurately explaining the information during their final presentations. The other 10% showed comprehension of the material but had some difficulty explaining it accurately during the final presentation, or were lacking in participation. (04/01/2013) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The Target Outcomes have been met for this course. ESCI-21 Winter 2013	**Enhancement:** Better attendance and involvement can be fostered if all mandatory field trips are in the schedule of classes. (03/10/2013)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	RPhillips SLOAC ESCI 21 Wi2013		

ESCI 30:Conservation Biology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI30_SLO_1 - Assess and apply the criteria and requirements needed to be successful in the Conservation Biology class. **SLO Status:** Archived SLO Statement			
ESCI30_SLO_2 - Appraise current national and extra national conservation issues and critique solutions to stop and/or mitigate species decline or loss. **SLO Status:** Active	**Presentation/Performance -** Students will give a presentation that focuses on Conservation Biology topics **Target for Success:** Mean score of 70% or higher for students that give a presentation.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met The mean score on the presentation assignment was 90%. (06/17/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The students were able to learn about and critique conservation issue by reading scientific peer reviewed journal article and present them to the class	**Enhancement:** Students might benefit from the library subscribing to more Conservation Biology journals (06/17/2017)
ESCI30_SLO_3 - Defend the importance of genetic diversity within species as a key conservation tool aiding species' long-term survival. **SLO Status:** Active	**Exam - Course Test/Quiz -** 2. (6 pts) You are the newly hired biologist in charge of a population of endangered Red Pandas (Ailurus fulgens) at a local zoo. All of the past breeding records have been destroyed in a flood. Your boss comes to you and says that the Zoo would like to start breeding the pandas with one another in order to release the juvenilles back into the wild. The problem is there is only one male and the rest are female. What challenges does this present if you want to maintain long-term success of these organisms and their offspring? **Target for Success:** Average class score of 70% or higher for those students who took the exam	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met The mean score was 84% (06/17/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students were successful in answering this question.	**Enhancement:** PVA software to help students run population simulations and manipulate variables like gene flow etc. (06/17/2017)

ESCI 50:Introduction to Wildlife Corridor Technician: Connectivity

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI50_SLO_1 - Assess (apply) the criteria necessary to be successful in the Introduction to WCT: Connectivity class including reviewing the course objectives. **SLO Status:** Active			
ESCI50_SLO_2 - Students will research and utilize the practices, technologies and principles utilized in wildlife corridor (connectivity) assessments. **SLO Status:** Active			

ESCI 54:Wildlife Corridor Technician: Data Analysis

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI54_SLO_1 - Assess (apply) the criteria necessary to be successful in the Wildlife Corridor Technician Data Analysis class including reviewing the course objectives. **SLO Status:** Active			
ESCI54_SLO_2 - Students will analyze and assess the techniques and practices of data analysis used in wildlife corridor technology and apply these concepts to a local corridor case study **SLO Status:** Active	**Project -** Students are assigned a team project (1-3 person teams) on the 2nd week of class and will work on it all quarter long – use critical thinking to pose a question/hypothesis, enter data using Excel, analyze using Excel or a Geographical Information System such as ARCMAP, Google Earth. Each student will write a 6 – 10 page project report of their findings, showcasing their knowledge of the natural history of the study area, ecosystems and wildlife corridor issues. **Target for Success:** Target for Success: 70% of students enrolled in my class will demonstrate their comprehension of using the scientific method to study the environmental and wildlife issues pertaining to a selected study area in the in-class activities, project report and the final presentation. Their project report will show their expertise in setting up and using a Microsoft Excel Spreadsheet to help answer their question/hypothesis, optionally using geographic	**Program Review Reporting Year:** 2013-2014 **Target :** Target Met 100% of the class demonstrated their comprehension of using the scientific method to study environmental and wildlife issues pertaining to their study area in the in-class activities (setting up a spreadsheet and entering data) presentation and project report. 78% highly improved their skills in setting up Excel Spreadsheets and analyzing data, as well as presenting their findings in a project report and class presentation. 100% of the students used the scientific method to pose a question, gather the data, analyze the data and answer the question. A few, 4 out of 5 teams did use GIS tools to illustrate their study area. (03/26/2013) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** It would be good to have more in-depth meetings with each team at the beginning of every class starting during the middle of the quarter. It was good to have the students submit a first draft of the project report. It was necessary to spend a lot of time was spent on data entry which left less room for the actual analysis.	**Enhancement:** Incorporate student wishes in the class – e.g. incorporate the GIS intro class early on in the quarter. Reduce other lecture time so more time can be spent on analysis and writing the project report. (05/04/2013)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	information tools to illustrate further. **Related Documents:** NSrinivasan SLOAC ESCI 54 Wi2013		

ESCI 55:Wildlife Corridor Technician: Corridor Design

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI55_SLO_1 - Assess (apply) the criteria necessary to be successful in the Wildlife Corridor Technician Corridor Design class including reviewing the course objectives. **SLO Status:** Active			
ESCI55_SLO_2 - Students will analyze and assess the process of wildlife corridor design and ecosystem management and apply these concepts to a local corridor design case study **SLO Status:** Active			

ESCI 56:Wildlife Corridor Technician: Plant Survey Techniques

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI56_SLO_1 - Assess the criteria necessary to be successful in Plant Techniques class. **SLO Status:** Active			
ESCI56_SLO_2 - Research and conduct the various plant survey techniques utilized in vegetation assessments. **SLO Status:** Active			

ESCI 57:Wildlife Corridor Technician: Advanced Tracking

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI57_SLO_1 - Assess (apply) the criteria necessary to be successful in the Wildlife Corridor Technician Advanced Tracking class. **SLO Status:** Active			
ESCI57_SLO_2 - Students will research and analyze, in a field setting, the advanced tracking techniques utilized in wildlife corridor/connectivity assessments. **SLO Status:** Active			

ESCI 58:Wildlife Corridor Technician: Advanced Tracking 2

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI58_SLO_1 - Assess (apply) the criteria necessary to be successful in the Wildlife Corridor Technician Advanced Tracking 2 class. **SLO Status:** Active			
ESCI58_SLO_2 - Students will research and analyze, in a field setting, the advanced tracking, level 2, techniques utilized in wildlife corridor/connectivity assessments. **SLO Status:** Active			

ESCI 77 (X-Y):Special Projects in Environmental Science

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI77_SLO_1 - Assess (apply) the criteria necessary to be successful in the Special Projects in Environmental Science class. **SLO Status:** Active	**Discussion -** Discuss expectations with Special Project students for the quarter term. At the end of quarter meet again to discuss how they fulfilled (or didn't fulfill) the special projects contract. **Target for Success:** 100% discussion	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met All students fulfilled the special projects contract by attending every ESCI 19 lab each week at their scheduled time. they were always available to set up and take down lab supplies as well as assist students as needed. (11/14/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Face-to-face conversations work very well for the exit discussion. I may consider adding the students to Canvas in the future to facilitate the schedule a bit more.	**Enhancement:** Funding to allow more student that are underrepresented participate int he opportunity. (11/14/2018)
ESCI77_SLO_2 - Demonstrate the ability to communicate work place or field studies principles and practices learned from an Environmental Science special project experience **SLO Status:** Active	**Interview -** Meet with Special Project students participating in ESCI 19 lab activities. Gather feedback re: activities and experiences. Discuss with students on how to apply these criteria to future projects in the disciple or not **Target for Success:** Interview 100% of students	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met 100% of ESCI 77 students that were student assistants for my ESCI 19 labs were interviewed in SP 2018. Interviews consisted of two approx. 20 minute discussions. (11/12/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** It is very important to receive this feedback. Students overall felt they had gained a lot being a student assistant in my ESCI 19 labs. Many of them had never occupied this role in the past and felt that it empowered them in their learning. It gave them an idea of what the other side of teaching is like and they felt like it would be an asset in the future.	**Enhancement:** Funding to pay for the student's 1 unit to participate in a Special Projects opportunity. Students that are low income should also be able to participate in opportunities as such free of charge. (11/12/2018)

ESCI 82 (X-Z):Central Coast Wildlife Corridors: Coyote Valley

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI82_SLO_1 - Assess (apply) the criteria necessary to be successful in the Central Coast Wildlife Corridors: Coyote Valley class. **SLO Status:** Active			
ESCI82_SLO_2 - Students will utilize wildlife field identification techniques including animal tracking, bird surveys and field observation to analyze the movement, activity and core corridor areas utilized by wildlife including along roads, highways, culverts and related structures within the Coyote Valley wildlife corridor. **SLO Status:** Active			

ESCI 87 (X-Z):Central Coast Wildlife Corridors: Diablo Range

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI87_SLO_1 - Assess (apply) the criteria necessary to be successful in the Central Coast Wildlife Corridors: Diablo Range class. **SLO Status:** Active			
ESCI87_SLO_2 - Students will utilize wildlife field identification techniques including animal tracking, bird surveys and field observation to analyze the movement, activity and core corridor areas utilized by wildlife including along roads, highways, culverts and related structures within the Diablo Range wildlife corridor. **SLO Status:** Active			

ESCI 88 (X-Z):Central Coast Wildlife Corridors: Santa Cruz Mountains

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI88_SLO_1 - Assess (apply) the criteria necessary to be successful in the Central Coast Wildlife Corridors: Santa Cruz Mountains class. **SLO Status:** Active			
ESCI88_SLO_2 - Students will utilize wildlife field identification techniques including animal tracking, bird surveys and field observation to analyze the movement, activity and core corridor areas utilized by wildlife including along roads, highways, culverts and related structures within the Santa Cruz Mountains wildlife corridor. **SLO Status:** Active			

ESCI 90:Santa Clara County Field Studies: Tule Elk

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI90_SLO_1 - Assess (apply) the criteria necessary to be successful in the Santa Clara County Field Studies: Tule Elk class. **SLO Status:** Active			
ESCI90_SLO_2 - Identify and assess tule elk natural history including habitat utilization, home range use, behavior, distribution and abundance. Demonstrate an understanding of the environmental parameters that affect the presence of this subspecies of North American elk. **SLO Status:** Active			

ESCI 92:Santa Clara County Field Studies: Raptors

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
ESCI92_SLO_1 - Assess (apply) the criteria necessary to be successful in the Santa Clara County Field Studies: Raptors class. **SLO Status:** Active			
ESCI92_SLO_2 - Identify and assess raptor natural history including habitat utilization, home range use, behavior, distribution and abundance. Demonstrate an understanding of the environmental parameters that affect the past and present distribution and abundance of raptors in Santa Clara County. **SLO Status:** Active			

Assessment: Course/Service Four Column

Dept - (BHES) Health Technologies

HTEC 101A:Skill Building in Clinical Laboratory Procedures

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC101A_SLO_1 - Observation of compliance to the OSHA Bloodborne Pathogen Standard during the performance of the last 15 venipunctures. **SLO Status:** Archived SLO Statement	**Demonstration -** Observation of compliance to the OSHA Bloodborne Pathogen Standard during the performance of the last 15 venipunctures. **Target for Success:** Compliance – 100% All 21 students wore required attire, cleansed appropriately, handled equipment safely.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met All 21 students exhibited compliance to the OSHA Bloodborne Pathogen Standard. (10/04/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% Compliance. Continue to monitor.	**Enhancement:** This SLO significantly impacts the student's safety. It will be monitored each quarter. (10/04/2016)
HTEC101A_SLO_2 - Observation of the last 15 venipunctures to ensure all phlebotomy steps were correctly performed. **SLO Status:** Archived SLO Statement	**Presentation/Performance -** Observation of the last 15 venipunctures to ensure all phlebotomy steps were correctly performed. **Target for Success:** 100% of students perform the last 15 venipunctures correctly.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 21 of 21 students demonstrated proper venipuncture technique during the last 15 (10/04/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of the students achieved the target. Continue to monitor.	**Enhancement:** Assessment will continue to be performed each quarter. Assess individual required steps versus the complete Phlebotomy procedure. (10/04/2016)
HTEC101A_SLO_3 - Consistently apply the OSHA Bloodborne Pathogen Standard during the collection of blood	**Demonstration -** Demonstration by way of blood draws **Target for Success:** 100% passage in competency in blood collection by	**Program Review Reporting Year:** 2017-2018 **Target :** Target Not Met Pass or No Pass course. 92% of the students passed the course or 24 out of 26. the 2 that did not pass are repeating	**Enhancement:** Students must be encouraged to continue practicing blood collection procedures. Not all master them at the same rate.

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
SLO Status: Active **Outcome Creation Date:** 09/25/2017	venipuncture and skin puncture procedures.	in Winter 2018 (03/05/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In order to be successful in the field, students must master blood collection techniques.	(03/05/2018)
HTEC101A_SLO_4 - Demonstrate the proper procedures for the collection of blood by venipunture and capillary puncture. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017	**Demonstration -** Students will be demonstrating how to collect blood with straight needle and butterfly method. **Target for Success:** 100% passage in competency in blood collection by venipuncture and skin puncture procedures	**Program Review Reporting Year:** 2017-2018 **Target :** Target Not Met This course is a Pass or No pass course. 92% of the students passed the course or 24 out of 26. The 2 that did not pass are repeating in Winter 2018. (03/05/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In order to be successful in the field, students must master blood collection techniques.	**Enhancement:** Students must be encouraged to continue practicing blood collection procedures. Not all master them at the same rate. (03/05/2018)

HTEC 101B:Skill Building in Basic Patient Care

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC101B_SLO_1 - Demonstrate medical asepsis, nutrition, diet therapy, vital signs, preperation of patients and examination rooms, and various procedures in the medical office. **SLO Status:** Active	**Demonstration -** Students will demonstrate proper asepsis, nutrition,diet therapy, vital signs, preparation of patients for various procedures in the medical setting safely and properly. **Target for Success:** 100 pass with a C or better	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Assessment data: Students will submit vital logs, core competency sheets each class, and have a final against the instructor for accuracy of results of each course objective. (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students passed with a C or better. Continue to go over core competency and practice vitals as a warm up so they master the skills they need prior to externship.	**Enhancement:** More student resources, more help, more time before or after class for questions and practice. (11/30/2016)

HTEC 101C:Skill Building in Medical Communications and Medical Transcription

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC101C_SLO_1 - Demonstrate a level of competence in the skills learned in Medical Communications and Medical Transcription. **SLO Status:** Active	**Demonstration -** Demonstration - Typing Test **Target for Success:** Achieve a typing test score of 40 words per minute and /or to show continual improvement throughout the quarter. Improvement to be monitored with 3 typing test per quarter.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 81% of students achieved a score of 40 words per minute. 100% of students showed an increase in their typing speeds on the 3 typing tests. (08/26/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students encouraged to type all their homework/lab assignments to help improve their typing skills. Students encouraged to use the computers available on campus or to use their personal laptops to practice so that they can get familiar with the stories on the typing test.	**Enhancement:** Students encouraged to use the computer available on campus or to use their personal laptops to practice so they can get familiar with the stories on the typing test. Practice needs to start at the beginning of the quarter to be prepared for the typing test in class. (08/27/2016)
HTEC101C_SLO_2 - Demonstrate improvement in speed and accuracy in keyboarding medical reports and transcription. **SLO Status:** Archived SLO Statement			

HTEC 101D:Skill Building in Medical Office Financial Procedures

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC101D_SLO_1 - Demonstrate billing and collection procedures and the various steps in preparing insurance claim forms. **SLO Status:** Active	**Directly related to Student Learning Outcome (SLO)**	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 90% of the students achieved a score of 82% on CMS 1500 completion (12/20/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In order to be able to perform medical billing a student must know how to properly complete a CMS 1500 form	**Enhancement:** Students need to be encouraged to keep up with the practice coding/CMS 1500 exercises (12/20/2016)
	Exam - Course Test/Quiz - Course Test/Quiz- Embedded test and assignment questions **Target for Success:** 100% passage in proper completion of CMS 1500, in addition 80% of students to achieve at least 75% on completion of CMS 1500		
HTEC101D_SLO_2 - Illustrate the ICD-9-CM and CPT codes used in medical office. **SLO Status:** Active	**Exam - Course Test/Quiz -** Embedded test and assignment questions **Target for Success:** 100% passage in proper completion of CMS 1500 in addition 80% of students to achieve at least 75% on completion of CMS 1500	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 90% of the students achieved a score of 82% on CMS 1500 completion (12/20/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In order to be able to perform medical billing a student must know how to properly complete a CMS 1500 form.	**Enhancement:** Students need to be encouraged to keep up with the practice coding/CMS 1500 exercises (12/20/2016)

HTEC 101E:Skill Building in Medical Office Sterile Technique

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC101E_SLO_1 - Demonstrate the local application of heat and cold, use of medical office instruments, application of sterile gloves. **SLO Status:** Archived SLO Statement	**Demonstration -** Students will demonstrate sterile techniques with the application of gloves and instruments. **Target for Success:** 100% students pass with a C or better.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met Students will demonstrate sterile technique while don gloves and not breaking sterile technique. (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 24 out of 27 students passed with a C or better. Continue to monitor.	**Enhancement:** More resources, additional help. Continue to monitor feedback from students. (11/30/2016)
HTEC101E_SLO_2 - Demonstrate the sterilization and disinfection of equipment and instruments and techniques in assisting in minor surgery. **SLO Status:** Archived SLO Statement **Outcome Creation Date:** 09/25/2017	**Demonstration -** Demonstration: Students will demonstrate sterile technique and identify medical equipment used for assisting method. **Target for Success:** 100% pass with a C or better	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met Students demonstrate identifying instruments used for sterile technique (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students who did well in soil lab, participated in class engagement activities, came to class prepare did better than those who didn't.	**Enhancement:** additonal resources, more help, and continue to monitor (11/30/2016)
HTEC101E_SLO_3 - Demonstrate the proper techniques in wrapping instruments and in sterile tray set up. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017	**Demonstration -** A demonstration exam **Target for Success:** 100% of students to achieve a passing score on the exam of 70% or greater	**Program Review Reporting Year:** 2017-2018 **Target :** Target Not Met 18 students came for the practical exam. 1 student failed the exam. (70%) 3 students received a C or better. 4 students scored 80% or better. 10 students scored 90% or better. Of the 18 students, only 17 (94%) of them passed. (03/22/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students success on tests is highly dependent on student's participation in the class. Participation includes in-class practice and coming to class in professional medical uniform. Students who passed the exam had good attendance, turned in weekly homework, participated in class and in-class assignments.	**Enhancement:** Students should be encouraged to come to class to practice and if they are unsure of the material then they should meet with the instructor. (03/22/2018)

HTEC 101F:Skill Building in Medical Office Diagnostic Tests

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC101F_SLO_1 - Demonstrate measuring and assessing heart rhythms using an electrocardiograph including analyzing normal and abnormal electrocardiograms. **SLO Status:** Active	**Presentation/Performance -** Students completed a final practical examination regarding EKG measurement and interpretation with instructor. Students must complete 30 EKGs prior to completion of final practical examination. **Target for Success:** 100% of student will be able to performance the EKG practical correctly.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 17 students (of 20) earned a score of 90% or higher on the practical examination. Two students earned a score of 85% or higher. One student did not complete the final examination and therefore failed this course. In addition, this student did not complete all 30 EKGs. 4 students [of 20] did not pass HTEC 91 so consequently failed HTEC 101F. Students must pass both HTEC 91 and 101F (07/01/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Ultimate success in the course seems to depend on a variety of factors, but performing well on the early EKGs and asking for feedback from instructor seems to be correlated with success in the course.	**Enhancement:** Students need to be encouraged to keep up with all readings, assignments, and EKGs right from the beginning of the quarter. Getting off to a good start in the course with strong EKG scores is predictive of future success in the course. In addition to in class hours with instructor, lab hours are available throughout the quarter. Students are encouraged to ask the instructor for feedback on and confirmation of EKG placement. (07/19/2016)

HTEC 101H:Skill Building in Medical Transcription and Editing I

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC101H_SLO_1 - Demonstration of knowledge of medical documentation, transcription, and editing skills. **SLO Status:** Active **Outcome Creation Date:** 09/20/2014	**Exam - Course Test/Quiz -** Students transcribe a patient report from audio dictation, edit and format the report and submit a final copy. **Target for Success:** 100%. Students can use reference materials to assist them as would be done in a work environment.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 99% of the students were able to successfully transcribe and edit the assigned report. (04/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** English is the second language for some of the students.	**Enhancement:** Give these students more assistance with the pronunciation of medical terms and general words as are heard on the audio dictations. (04/30/2016)

HTEC 101J:Skill Building in Medical Transcription and Editing II

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC101J_SLO_1 - Demonstration of knowledge of medical documentation, transcription, and editing skills. **SLO Status:** Active **Outcome Creation Date:** 09/20/2014	**Project -** Students transcribe from audio dictation patient reports for medical departments. These include H&P, Discharge Summary, Consultation, chart notes, and letters. **Target for Success:** 100%. Students are able to use references materials and the AHDI Style Guide as would be used in a work environment.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 99% of the students successfully completed the transcription and editing. (04/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The students need practice attention to detail when editing the report.	**Enhancement:** Encourage the students to reread their final reports focusing on the sensibility of the information, use of proper grammar (verb usage). (04/30/2016)

HTEC 101K:Skill Building in Medical Transcription and Editing III

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC101K_SLO_1 - Demonstration of knowledge of medical documentation, transcription, and editing skills. **SLO Status:** Active **Outcome Creation Date:** 09/20/2014	**Project -** Students transcribe from audio dictation patient reports for medical departments. These include H&P, discharge Summary, consultation, chart notes, and letters. **Target for Success:** 100% Students are able to use reference materials and the AHDI Style Guide as would be used in the work environment.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 100%. Students show they are able to transcribe audio dictation, use critical thinking skills, edit skills, and formatting skills (07/24/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The students show they have the ability to transcribe and edit these types of reports for the assigned specialties using critical thinking skills, reference materials and style guide.	**Enhancement:** Implement Surgical reports and Diagnostic Imaging reports for transcription practice. (04/30/2016)

HTEC 101L:Intermediate Skill Building in Clinical Laboratory Procedures II

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC101L_SLO_1 - Document the number and success of venipunctures performed in order to identify improvement. **SLO Status:** Archived SLO Statement **Outcome Creation Date:** 09/20/2014	**Presentation/Performance -** Document the number and success of venipunctures performed in order to identify improvement. **Target for Success:** Increase the success rate of venipunctures to exceed 80%.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Class of 2 students. 1 achieved a 82% success rate and 1 achieved a 88% success rate. (10/04/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** (2 of 2 Students) exceeded the 80% success rate.	**Enhancement:** Since the target was met, continue to monitor and add another parameter – Monitoring the time per venipuncture in order to identify an increasing improvement in the speed the venipuncture is performed. (10/04/2016)
HTEC101L_SLO_2 - Demonstration of knowledge of the proper collection and handling of blood specimens while speed and accuracy is increased. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017	**Demonstration -** Students will be demonstrating their phlebotomy skills **Target for Success:** 100 % passage in competency in blood collection by venipuncture and skin puncture procedures	**Program Review Reporting Year:** 2018-2019 **Target :** Target Not Met Pass / No Pass Course 92% of the students passed the course or 24 out or 26. The 2 that did not pass are repeating in Winter 2019. (04/17/2019) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In order to be successful in the field, students must master blood collection techniques.	**Enhancement:** Students must be encouraged to continue practicing blood collection procedures. Not all master them at the same rate. (04/17/2019)

HTEC 101M:Advanced Skill Building in Clinical Laboratory Procedures II

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC101M_SLO_1 - Demonstration of knowledge of proper collection and handling of blood specimens while speed and accuracy is increased. **SLO Status:** Active **Outcome Creation Date:** 09/20/2014	**Presentation/Performance -** Document the number and success of venipuncture performed in order to identify Improvement. **Target for Success:** Increase the success rate of venipunctures to exceed 90%.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Class of 2 students. 1 achieved a 91% success rate and 1 achieved a 94% success rate. (10/04/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Class (2 of 2 Students) exceeded the 90% success rate.	**Enhancement:** Since the target was met, continue to monitor and add another parameter – Monitoring the time per venipuncture in order to identify an increasing improvement in the speed the venipuncture is performed. (10/04/2016)

HTEC 110:Health Technologies Employment Preparation

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC110_SLO_1 - Illustrate steps involved in seeking employment in medical facilities which include prereartion of resumes and interviewing and preperation for certification examinations. **SLO Status:** Active	**Exam - Course Test/Quiz -** Students will have a series of quizzes, submit their resume, and prep for interview process as well as certifcation examinations. **Target for Success:** 100% pass	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met out of 7 students in 110 6 were hired right away after externship. a total of 86% out of 100% (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The way this class is designed is to help reinforce and reteach what they know and what they need to work on. This review class has an 86% passing examination rate.	**Enhancement:** Continue to monitor feedback as to helpful this course is. Possibly look into additional resources and tools for the students. (11/30/2016)

HTEC 50:Introduction to Health Technologies

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC50_SLO_1 - Develop the evolution, desirable characteristics and abilities of various roles of health technologies team members as it relates to the health care team. **SLO Status:** Active	**Exam - Course Test/Quiz -** Embedded test and assignment questions **Target for Success:** Seventy-five percent of these students should achieve at least 75% on these questions.	**Program Review Reporting Year:** 2010-2011 **Target :** Target Met Refer to Archived from ECMS/HTEC 50 (03/28/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Refer to Archived from ECMS/HTEC 50	
	Exam - Course Test/Quiz - Take-Home Exam #1 regarding desirable characteristics and various roles of Health Technology team members **Target for Success:** 100% Pass rate because this is a take-home exam that all students should pass	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 45 out of 45 who handed in their Exam #1 passed both the desirable characteristics and Health Technology team member roles (09/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students who met the class requirements and participate in class continue to do well in the take-home assignments and exams.	**Enhancement:** Students need to be encouraged to complete their assignments, take home exams and the interview with a member of the Health Technology team. Presently, in addition to the course syllabus, weekly course agenda, and review of the following week's Assignments/exams, I will incorporate more reminders and continue to encourage the students contact me if there are any questions. (09/22/2016)
HTEC50_SLO_2 - Develop various methods of coping with loss. **SLO Status:** Active	**Exam - Course Test/Quiz -** Embedded exam and assignment questions. **Target for Success:** Seventy-five percent of these students should achieve at least 75% on these questions.	**Program Review Reporting Year:** 2010-2011 **Target :** Target Met Refer to Archived from ECMS/HTEC 50 (03/28/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Refer to Archived from ECMS/HTEC 50	
	Exam - Course Test/Quiz - • Take-Home Exam #2 re developing various methods of coping with loss **Target for Success:** 100% Pass rate-this is a take-home exam that all students should pass	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 45 out of 45 who handed in (9 did not submit exam) their Exam #2 passed the question regarding developing methods to cope with loss (09/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students who	**Enhancement:** Students need to be encouraged to complete and submit their assignments, take home exams and the interview with a member of the Health Technology team. Presently, in

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		met the class requirements and participate in class usually continue to do well in their take-home assignments and exams.	addition to the course syllabus, weekly course agenda, and review of the following week's Assignments/Exams, I will incorporate more reminders and continue to encourage the students to contact me if there are any quest ions. (09/22/2016)

HTEC 60A:Basic Medical Terminology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC60A_SLO_1 - Illustrate the word components of medical terminology. **SLO Status:** Active	**Exam - Course Test/Quiz -** Embedded test and assignment questions. **Target for Success:** Seventy-five percent of these students should achieve at least 76% on these questions.	**Program Review Reporting Year:** 2010-2011 **Target :** Target Met Refer to Archived from ECMS/HTEC in Documents (03/28/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Refer to Archived from ECMS/HTEC in Documents	**Enhancement:** Refer to Archived from ECMS/HTEC in Documents (03/28/2012)
	Exam - Course Test/Quiz - Exam #1-#7 test the students on the word components (prefixes, suffixes and combining forms) of medical terminology. Each exam consists of 100 multiple choice questions. **Target for Success:** 70% is the minimum pass rate	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 72 students out of 79 passed this course(91% pass rate). (09/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 91 percent of the class passed this course which means they did understand the word components of the medical terms. I did have a high drop rate in this course perhaps due to the fact that it is an online education course. I feel that videoing the lectures for the students to stream is very helpful as indicated by some students' feedback	**Enhancement:** I will continue to emphasize that memorizing the word components would really help the students understand the medical terms. I will give more examples of breaking down medical terms into word components . (09/22/2016)
HTEC60A_SLO_2 - Develop medical terms as they relate to the body's structure, diseases of the various body systems, medical specialties and medical specialists. **SLO Status:** Active	**Exam - Course Test/Quiz -** Embedded test and assignment questions. **Target for Success:** Seventy-five percent of these students should achieve at least 76% on these questions.	**Program Review Reporting Year:** 2010-2011 **Target :** Target Met Refer to Archived from ECMS/HTEC 60A under "Documents" tab. (03/28/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Refer to Archived from ECMS/HTEC 60A under "Documents" tab.	**Enhancement:** Refer to Archived from ECMS/HTEC 60A under "Documents" tab. (03/28/2012)
	Exam - Course Test/Quiz - Exam #2-#7 test the students on the medical terms as they relate to the body's structure, diseases of the various body systems, medical specialties and medical specialists. Each exam consists of 100 multiple choice questions. **Target for Success:** 70% is the minimum pass rate	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 72 students out of 79 passed this course(91% pass rate). (09/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 91 percent of the class passed this course which means they did know medical terms as they relate to the body's structure, diseases of the various body systems, medical specialties and medical specialists. I did have a high drop rate in this	

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
		course perhaps due to the fact that it is an online education course. I feel that videoing the lectures for the students to stream is very helpful as indicated by some students' feedback	
HTEC60A_SLO_3 - Demonstrate the interpretation of medical abbreviations. **SLO Status:** Active	**Exam - Course Test/Quiz -** Embedded test and assignment questions. **Target for Success:** Seventy-five percent of these students should achieve at least 76% on these questions.	**Program Review Reporting Year:** 2010-2011 **Target :** Target Met Refer to Archived from ECMS/HTEC 60A under "Documents" tab. (03/28/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Refer to Archived from ECMS/HTEC 60A under "Documents" tab.	**Enhancement:** Refer to Archived from ECMS/HTEC 60A under "Documents" tab. (03/28/2012)
	Exam - Course Test/Quiz - Exam #1-#7 test the students on the interpretations of medical abbreviations. Each exam consists of 100 multiple choice questions. **Target for Success:** 70% is the minimum pass rate	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 72 students out of 79 passed this course(91% pass rate). (09/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 91 percent of the class passed this course which means they did know the interpretations of medical abbreviations. I did have a high drop rate in this course perhaps due to the fact that it is an online education course. I feel that videoing the lectures for the students to stream is very helpful as indicated by some students' feedback	**Enhancement:** I will continue to emphasize that memorizing and understanding the interpretations of medical abbreviations. I will consider adding more questions on the exams regarding interpretations of medical abbreviations. (09/22/2016)

HTEC 60G:Advanced Medical Terminology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC60G_SLO_1 - Demonstrate the anatomy, physiology, and diseases of the digestive, urinary, female reproductive, male reproductive, nervous, sensory, and integumentary body systems. **SLO Status:** Active	**Exam - Course Test/Quiz -** Embedded test and assignment questions. **Target for Success:** Seventy-five percent of these students should achieve at least 76% on these questions.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 18 out 20 Students passed with a 70% or better. (11/28/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** by giving a pretest that students used to study with all but 2 students met target.	**Enhancement:** students need to be encouraged to keep up with readings and assignments. Remind them to start early. Student need access to computers and internet. Remind them that these are available in the science resource centerand allied health resource center. (11/28/2016)
		Program Review Reporting Year: 2010-2011 **Target :** Target Met Refer to Archived from ECMS/HTEC 60G under "Documents" tab. (03/28/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Refer to Archived from ECMS/HTEC 60G under "Documents" tab.	**Enhancement:** 18 of 20 students passed with a 70% or better (11/28/2016) **Enhancement:** Refer to Archived from ECMS/HTEC 60G under "Documents" tab. (03/28/2012)
	Exam - Course Test/Quiz - Exam - Course Test - Quiz. **Target for Success:** 100% with a 70% or better.		
HTEC60G_SLO_2 - Develop case studies that concern diagnostic, conditions, and diseases of systems and/or medical specialties. **SLO Status:** Active	**Exam - Course Test/Quiz -** Embedded test and assignment questions. **Target for Success:** Seventy-five percent of these students should achieve at least 76% on these questions.	**Program Review Reporting Year:** 2010-2011 **Target :** Target Met Refer to Archived from ECMS/HTEC 60G under "Documents" tab. (03/28/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Refer to Archived from ECMS/HTEC 60G under "Documents" tab.	**Enhancement:** Refer to Archived from ECMS/HTEC 60G under "Documents" tab. (03/28/2012)
	Focus Group - Focus of five group of people **Target for Success:** 100% participation - everyone contributes information for case study articles from internet	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met all of 20 students added to the group with diseases and case studies (11/28/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** the students all added to case studies with information from their articles	**Enhancement:** students need to be encouraged to keep up with readings and assignments. Remind them to start early. Student need access to computers and internet. Remind them that these are available in the science resource center and allied health resource

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements

center. (11/28/2016)

HTEC 60H:Advanced Medical Terminology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC60H_SLO_1 - Demonstrate the anatomy, physiology and diseases of the cardiovascular, respiratory, blood, lymphatic, musckuloskeletal and endocrine systems. **SLO Status:** Active	**Exam - Course Test/Quiz -** Embedded test and assignment questions. **Target for Success:** Seventy-five percent of these students should achieve at least 76% on these questions.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Assesment by 100 multiple question choice test on the cardiovascular system. (11/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 10 students of 12 earned a score of 85% or higher on the examination. Ultimate success depends on a variety of factors by completing homework, making flashcards, and participating in lectures seem to correlate success in the course.	**Enhancement:** Students need to be encouraged to keep up with all the readings, homework, and participating in the lectures right from the beginning of the quarter. Getting off to a good start with the first examination is predictive of future success in this course. (11/22/2016)
		Program Review Reporting Year: 2010-2011 **Target :** Target Met Refer to Archived from ECMS/HTEC 60G under "Documents" tab. (03/28/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Refer to Archived from ECMS/HTEC 60G under "Documents" tab.	**Enhancement:** Refer to Archived from ECMS/HTEC 60G under "Documents" tab. (03/28/2012)
	Exam - Course Test/Quiz - Students will have 100 questions multiple choice examination **Target for Success:** 100 percent will pass with a C or better		
	Exam - Course Test/Quiz - Students will identify, define, and interpret word elements and demonstrate the ability to spell, pronounce, and understand the meaning of the medical terminology. **Target for Success:** 100% pass with a C or better		
HTEC60H_SLO_2 - Develop case studies that concern diagnostic conditionsand diseases of systems and/or medical specialities. **SLO Status:** Active	**Other -** Design scenarios that relate to the disease process. **Target for Success:** Seventy-five percent of these students should achieve at least 76% on these questions.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 10 students earned a score of 85% or higher on examination. One student earned a score of 72% One student earned a score of 45%. Students who are able to do homework, flashcards,participate in lecture and class do better. (11/21/2016)	**Enhancement:** Students need to be encouraged with all readings, homework assignments, getting off to the course with strong examination scores is predictive of future success in this course. (11/21/2016)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		Reflection (CLICK ON ? FOR INSTRUCTIONS): Ultimate success depends on a variety of factors, completing homework, participating in the lectures. **Program Review Reporting Year:** 2010-2011 **Target :** Target Met Refer to Archived from ECMS/HTEC 60H under "Documents" tab. (03/28/2012) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Refer to Archived from ECMS/HTEC 60H under "Documents" tab.	

HTEC 61:Medical Communications

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC61_SLO_1 - Develop the various mechanical formats and guidelines used to prepare a medical history and physical report and design the information which appears in various medical reports. **SLO Status:** Active	**Exam - Course Test/Quiz -** Exam-Course Test/Quiz **Target for Success:** 100% of students to achieve a passing score on the exam of 70% or greater.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 86% of students achieved a passing score of 70% or higher on the exam (08/27/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Student success on tests is highly dependent on the student's participation in the class. Participation includes attendance, discussion with instructor and other classmates doing the in-class open book quiz/assignments. Students who pass the exam had good attendance, turned in the homework weekly and completed the in class assignments	**Enhancement:** Exams are reviewed each quarter to make sure that the questions are all understandable and deal with items of class instruction. Students need to be encouraged to use the homework and the in class assignments for as study guides for the exam. Students will be encouraged to meet regularly with instructor if they have problems with what and how to study for the exams. (08/27/2016)
HTEC61_SLO_2 - Demonstrate words concerned with keyboarding, proofreading and editing of manuscripts and abstracts. **SLO Status:** Active	**Exam - Course Test/Quiz -** Exam – Course Test/Quiz **Target for Success:** 100% of students to achieve a passing score on the exam of 70% or greater.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met 80% of students achieved a passing score of 70% or higher on the exam. (12/05/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Student success on tests is highly dependent on the student's participation in the class. Participation includes attendance, discussion with instructor and other classmates and doing the in-class open book quiz/assignments. Students who passed the exam had good attendance, turned in the homework weekly, participated in class and completed the in-class assignments.	**Enhancement:** Exams are reviewed each quarter to make sure that the questions are all understandable and deal with items of class instruction. Students need to be encouraged to use the homework and the in-class assignments as study guides for the exams. Students should be encouraged to meet regularly with instructor if they have problems with what and how to study for the exams. (12/05/2016)

HTEC 64A:Basic Clinical Laboratory Procedures

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC64A_SLO_1 - Demonstrate the practice of proper application of OSHA standards during specimen collection. **SLO Status:** Active	**Exam - Course Test/Quiz -** 5 to 10 questions are given on a multiple choice exam covering one chapter **Target for Success:** 100% on all questions	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 30/40 students answered correctly (10/03/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students who do well on the first exam, do well on remaining chapters. This chapter has more rules and regulations.	**Enhancement:** Students need to read the text more than once, listen carefully to power point presentations, tutoring is available for students and resources such as the science resource center and instructional office hours. (10/03/2016)
HTEC64A_SLO_2 - Demonstrate the handling and storage of specimens. **SLO Status:** Archived SLO Statement	**Laboratory Project -** Each student is given a sterile swab to perform a throat culture. Students must correctly label each swab with patients name, date of collection, time of collection, and source of specimen. **Target for Success:** 100% of students performing correctly and labeling correctly.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 12.5% fail, 87.5% pass, 5/40 will miss one part labeling. (10/03/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students perform better with understanding of task concerning patient care during lab exercise.	**Enhancement:** Students need to visually see a procedure, check the data before performing a task, and rereading the text several times for success. (10/03/2016)
HTEC64A_SLO_3 - Demonstrate the classification of bacteria and identification of infectious diseases. **SLO Status:** Archived SLO Statement	**Laboratory Project -** Laboratory Assignment, four to five microscopes with gram stain slides to identify organisms according to size and color. Students will also state what infectious disease this organism it will cause. **Target for Success:** 100% will identify the correct organism according to color and shape. 10% may miss the correct the disease/ 90% will answer the correct disease.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 30 out of 40 students will answer questions correctly on infectious disease. 40/40 will obtain correct answers on color and shape. (10/03/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students who do well on the first few quizzes and exams will excel on the next chapters. Microbiology is interesting to most students while we only cover part if the subject.	**Enhancement:** Students need to read and reread chapters to retain information, listen in class, ask questions on subjects to understand, and use all resources the De Anza has to offer. (10/03/2016)

HTEC 64B:Advanced Clinical Laboratory Procedures

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC64B_SLO_1 - Demonstrate the practice of proper application of OSHA standards. **SLO Status:** Archived SLO Statement	**Exam - Standardized -** Specific questions on exam will evaluate understanding and application of the OSHA Blood Borne Pathogen Standard. **Target for Success:** 100%correct responses from 21 students. Students will demonstrate ability to understand and apply the OSHA Blood Borne Pathogen Standard.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 4 questions selected for the assessment. 1 question = 100% (21 of 21) 1 question = 95% (20 of 21) 2 questions = 91% (19 of 21) (10/03/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Target remains 100%. Improvement was identified, additional instruction required, presentation of information in a scenario format, and notes to follow with power point is helpful.	**Enhancement:** Presentation of information of information in a scenario format as well as notes plus power point. Additional questions included on the quizzes as well as the exams. (10/03/2016)
HTEC64B_SLO_2 - Recognize and respond to potential problems encountered during venipuncture that can impact patient care. **SLO Status:** Active	**Exam - Standardized -** Response to specific exam questions will indicate knowledge and judgement regarding potential problems affecting patient care. **Target for Success:** 90% correct responses from 21 students.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 10 questions were selected. 4 questions = 100% (21 of 21 students), 1 question = 91% (19 of 21 students), 1 question = 81% (17 of 21 students), 2 questions = 76% (16 of 21 students), 2 questions = 67% (14 of 21 students) (10/03/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 5 of 10 questions resulted in meeting the target of 90%. 5 questions resulted below target. 7 were significantly below. Increased emphasis on presentation of the information with various types of presentation.	**Enhancement:** Present information in a clinical situation, repeat information at a subsequent time, evaluate the wording of the questions. (10/03/2016)
	Exam - Course Test/Quiz - Select appropriate SLO questions from Exams and evaluate the student responses. **Target for Success:** Achieve 90% correct responses to reflect recognition and responses to potential problems encountered during the collection and handling of blood specimens that may impact patient care.	**Program Review Reporting Year:** 2017-2018 **Target :** Target Not Met Exam questions from a class of 25 students. Selected responses to essential issues encountered before, during, and after venipuncture that may impact patient care. Hemolysis: 1 question that identifies the effect of hemolysis on specific tests. 36% correct responses (unacceptable) Prolonged Bleeding: 1 question that identifies a test for prolonged bleeding. 32% correct responses (unacceptable) Basilic Vein: 1 question that that identifies the vein that can cause	**Enhancement:** Hemolysis: Provide a clear understanding of the definition of hemolysis with samples. Present situations that can result in hemolysis and how to minimize them. Monitor with additional questions. Prolonged Bleeding: Clarify the relationship between prolonged bleeding and a

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		patient injury. 76 % correct responses (unacceptable) (03/27/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Ultimate success in the course highly depends on the student's participation in the class by coming to class with printed lecture notes for additional note taking, participating during class discussions and asking for feedback from instructor to correlate with the success in the course.	Prothrombin Test. Monitor with additional questions. Basilic Vein: Identify the anatomic position of the basilic vein by utilizing class activities. Provide clinical situations and the action taken to minimize the chance of patient injury. Monitor with additional questions. (03/27/2018)
HTEC64B_SLO_3 - Demonstrate proper procedures for the collection of blood by venipuncture and skin puncture. **SLO Status:** Archived SLO Statement	**Exam - Standardized -** Responses to specific questions will indicate understanding of the proper procedure for the collection of blood by by venipuncture. **Target for Success:** 90% correct responses from students	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 10 questions were selected. 2 questions = 100% (21 of 21), 1 question = 95% (20 of 21), 2 questions = 91% (19 of 21), 1 question = 86% (18 of 21), 1 question = 81% (17 of 21), 1 question = 71% (15 of 21), 1 question = 57% (12 of 21), 1 question = 48% (10 of 21) (10/03/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 5 out of 10 questions met the target of 90%. 5 out of 10 fell below target value. Additional emphasis in presentation required. Additional questions added to quizzes as well as exam.	**Enhancement:** establish a participation dialogue in which student is providing information to situational scenarios. Add questions to exam and quizzes. Add quizzes so information is repeatedly tested. (10/03/2016)
HTEC64B_SLO_4 - Identify the proper procedures for the collection of blood by venipuncture and capillary puncture. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017	**Exam - Course Test/Quiz -** Select appropriate SLO questions from Exams and evaluate the student responses. **Target for Success:** Achieve 90% correct responses to reflect understanding and application of the specific factors and steps required for successful venipunctures and capillary punctures.	**Program Review Reporting Year:** 2017-2018 **Target :** Target Not Met Exam questions from a class of 25 students. Responses to essential elements of venipuncture and capillary punctures were selected to identify specific issues to be addressed. Venipuncture Procedure: 3 questions were selected that reflected knowledge and required response when encountering a problem venipuncture. Needle against vein wall – 48% (unacceptable) Needle beside vein – 96% (acceptable) Needle too deep – 73% (unacceptable) 2 questions were selected that reflected knowledge in the use of a discard tube. 72% identified when a discard tube is required (unacceptable)	**Enhancement:** Problem Venipuncture : Increase the number of situations presented in class. Monitor with additional questions. Discard tube knowledge vs. application: Increase the number and types of situations presented in class. Monitor with additional questions. Capillary Tube Order of Draw: Increase class time for presentation of Order of Draw. Monitor with additional questions. (03/27/2018)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		44% were able to apply knowledge to a clinical situation (unacceptable) Capillary Puncture: 3 questions were selected that reflected knowledge of the tube order of draw for capillary punctures. Average combined responses were 45% (unacceptable) (03/27/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Problem venipuncture questions identified 1 acceptable result and 2 unacceptable results. Discard tube questions identified a better understanding of when to use a discard tube- multiple choice (72%) over the actual clinical application (44%). Capillary order of draw questions resulted in an average 45% response. (unacceptable).	

HTEC 68:Medical Reception Externship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC68_SLO_1 - Demonstrate proper medical reception techniques in the clinical environment. **SLO Status:** Active	**Field Placement/Internship -** Field Placement/Internship- Medical Receptionist externship **Target for Success:** 100% of the registered students will complete and pass their medical receptionist externship by the end of the quarter.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 13 out of 15 students completed and performed their Medical Receptionist skills during their externships. (09/24/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 2 students were not able to extern due to taking classes.	**Enhancement:** Students need to not schedule classes that will interfere with the externship placement time frame. (09/24/2016)
HTEC68_SLO_2 - Illustrate medicolegal principles and codes of ethics that must be considered in the daily operation of the doctors office. **SLO Status:** Active	**Field Placement/Internship -** Field Placement/Internship **Target for Success:** 100% of the Medical Receptionist externs will follow medical code of ethics while externing.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 7 of out 8 students followed HIPPA (confidentiality act) guidelines while externing. (09/24/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** One student was not able to complete their externship during the quarter.	**Enhancement:** No enhancement needed. The 7 students that actually externed followed the Code Of Ethics in the medical office. (09/24/2016)

HTEC 71:Medical Office Reception

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC71_SLO_1 - Illustrate skills necessary to assist incoming and outgoing patients in the medical reception area of the doctor's office. **SLO Status:** Active	**Exam - Course Test/Quiz -** Students submit a drawing of a reception area they create at home. Attached to the drawing is a paragraph detailing further recommendations that could not be illustrated. **Target for Success:** students will pass with a C or above.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 28 out of 30 students scored 70% and above.. that is 93%. Assessment was met with positive income. (11/21/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** the test questions are appropriate to test knowledge and skills identified in the slo	**Enhancement:** no enhancement is necessary (11/21/2016)
HTEC71_SLO_2 - Demonstrate appropriate communication skills with patients and colleagues. **SLO Status:** Active	**Exam - Course Test/Quiz -** Take home assignments involving the practice with family/friends of 5 predetermined scenarios for phone skills. the student will submit 5 written phone messages. **Target for Success:** 90% of the students will submit the assignment for grading. 80% of the students will receive a grade B or better.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 100% of the students submitted the assignment. Only 70% received grade B or better. (08/27/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The students all understood the importance of the assignment as evidenced by the 100% completion rate, however, some of the students did not follow the instructions as outlined in the assignments.	**Enhancement:** Attaching a "soft copy" of a message template to the assignment would act as a good prompt in guiding the students to the proper organization of a message as well as the required information. The book was cited as reference in the assignment but many students did not follow the suggested format. (06/30/2016)
HTEC71_SLO_3 - Identify and discuss the advantages and disadvantages of the different types of appointment scheduling including demonstrating computer skills. **SLO Status:** Active	**Exam - Course Test/Quiz -** 50 question multiple choice exam **Target for Success:** 90% of the students will score 70% and above on the midterm exam	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 28 of the 30 students scored 70% and above..that is 93% assessment was met with positive outcome (06/16/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The test questions are appropriate to test the knowledge and skills identified in the SLO.	**Enhancement:** No enhancement is necessary (08/27/2016)

HTEC 72:Medical Office Financial Procedures

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC72_SLO_1 - Illustrate diagnostic and procedural coding in the medical facility. **SLO Status:** Active	**Exam - Course Test/Quiz -** Course Test/Quiz- Embedded test and assignment questions **Target for Success:** 100% in addition 80% of students to achieve at least 75% on CPT and ICD 10- coding exercises	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 82% of the students achieved a score of 80% on coding exercises (12/20/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** There is a high correlation between doing well on ICD 10 and CPT coding exercises and doing well in the classroom.	**Enhancement:** Students need to be encouraged to keep up with the practice coding exercises (12/20/2016)
HTEC72_SLO_2 - Illustrate the guidelines for credit arrangement when using payment for medical services. **SLO Status:** Archived SLO Statement			
HTEC72_SLO_3 - Illustrate eligibility, benefits guidelines for health insurance companies. **SLO Status:** Active	**Exam - Course Test/Quiz -** Embedded test and assignment questions **Target for Success:** 100% in addition 80% of students to achieve at least 75% on CPT and ICD 10-coding exercises	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 82% of the students achieve a score of 80% on coding exercises (12/20/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** There is a high correlation between doing well on ICD10 and CPT coding exercises and doing well in the class.	**Enhancement:** Students need to be encouraged to keep up with the practice coding exercises. (12/20/2016)

HTEC 73:Medical Law and Ethics

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC73_SLO_1 - Illustrate medical ethics. Medical practice act, legal relationship of patient and physician, legal responsibilities of the health technology team member, professional liability, physicians civic duties and arbitration. **SLO Status:** Active	**Presentation/Performance -** Group Presentation: Topic to be a medical ethical topic **Target for Success:** 100% class participation in the group presentation. Students divided into groups of 3 or more students. Each group will be required to pick an ethical topic. All students in the group must participate in the presentation. Each presentation to be graded based on Preparedness, Content Comprehension, Volume, Clarity, Posture and Eye Contact. Each group will also be graded on their Props, Power point Presentations and/or Handouts. The presentations will be graded with scores between 1 to 4 with 4 being the highest.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 100% of students participated in the group presentations. Scores ran from 3.5 to 3.8 out of total of 4. (07/01/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** There is a need for student to start working together in the group early in each quarter and for each group to split up the work of researching and preparing the presentation.	**Enhancement:** Students need to be encouraged to work together early. Students need to be introduced to how to work together in a group and how to prepare a presentation. (07/01/2016)

HTEC 74A:Medical Transcription with Advanced Terminology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC74A_SLO_1 - Demonstrate transcription skills necessary for medical office using actual diction from various medical specialties. **SLO Status:** Active	**Project -** Complete work packet on Style and Usage. **Target for Success:** 100%. This is an open book workbook packet on Style and Usage which includes proper usage of grammar, abbreviations, numbers, stages and grades.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 5% were not able to successful answer the questions as to stages and grades. (10/03/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students have studied this activity in HTEC61 and so they should have the knowledge to successfully research and answer these questions.	**Enhancement:** Implement additional information for this activity during the lectures. Add additional reference search information to the lecture. (10/03/2016)
HTEC74A_SLO_2 - Illustrate the anatomy, physiology and diseases of the various body systems and utilize them in medical transcription. **SLO Status:** Active	**Project -** Weekly work assignments covering anatomy, physiology and they can also use references to complete the assignment. **Target for Success:** 100% of students passed.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 2 percent of students had difficulty using references. (11/21/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The use of references is included in HTEC61, so they should have the knowledge to successfully research and answer these questions.	**Enhancement:** implement additional information as to the use of online references and previous text book references. Demonstrate using online references and provide particular websites for the students. (11/21/2016)

HTEC 74B:Medical Transcription with Editing II

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC74B_SLO_1 - Demonstrate transcription with speech recognition editing skills necessary for medical office using actual dictation from Obstetrics and Gynecology, Dermatology, and Neurology Specialties. **SLO Status:** Active **Outcome Creation Date:** 09/20/2014	**Project -** Complete open book work on "editing the record" **Target for Success:** 100% as this is an open book open reference packet, students should be able to achieve 100%	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 100% Students successfully answered the questions using the reading material, references, and editing assigned documents. (10/04/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The students show they can edit a document with the accompanying audio dictation.	**Enhancement:** Include additional editing skills practice to enhance the students abilities. (10/04/2016)

HTEC 74C:Medical Transcription with Editing III

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC74C_SLO_1 - Demonstrate transcription with speech recognition editing skills necessary for the medical office using actual dictation from Oncology, Pulmonology, Otorhinolaryngology and Urology Specialties. **SLO Status:** Active **Outcome Creation Date:** 09/20/2014	**Project -** Edit history and physical and discharge summary patient's reports using reference materials. **Target for Success:** 100% Students were able to successfully edit the patient's reports.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 95% of the students were able to successfully edit the patient's records. (10/04/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 5% of the students showed lack of attention to detail.	**Enhancement:** Include extra editing practice with the students to focus on attention to detail. (10/04/2016)

HTEC 75:Medical Office Management

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC75_SLO_1 - Illustrate advanced administrative skills including computerized accounts, management duties of the medical office manager, personnel recruitment and training, financial management, office policy and procedural manuals, and editorial and research duties and meeting arrangements. **SLO Status:** Archived SLO Statement	**Demonstration -** Chart evaluation **Target for Success:** 100% pass. In class demonstration to complete a chart evaluation.		
HTEC75_SLO_2 - Illustrate competence in the implementation of EHR, creating new documentation in an EHR, setting up EHR software using clinical and administrative tools, creation of templates for procedures and diagnosis , and importing of various documents into a patient's charts. **SLO Status:** Active	**Exam - Course Test/Quiz -** Final hands on activities. **Target for Success:** 80% of students will score 90% or better.		
	Demonstration - Chart evaluation. **Target for Success:** 100% pass. In class demonstration to complete a chart evaluation.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 23 of 26 students were able to successfully complete the chart evaluation.. (04/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students need to be encouraged to the read the chapter information thoroughly.	**Enhancement:** Have the students practice this chart evaluation at least twice to ensure success. (07/19/2016)

HTEC 76A:Advanced Medical Coding I

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC76A_SLO_1 - Demonstrate knowledge to code diagnoses using ICD-9-CM Coding Systems. **SLO Status:** Active **Outcome Creation Date:** 09/11/2013	**Exam - Course Test/Quiz -** Course Test/Quiz – Embedded test and assignment questions **Target for Success:** 100% passed in addition seventy-five percent of these students should achieve at least a 80% on coding exercises.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 32 of the 34 students graded 75% or better on this test. (09/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** There is a high correlation between doing well on coding exercises and doing well in the class.	**Enhancement:** Students need to be encouraged to keep up with the practice coding exercises as it will lead in not only passing the class but passing the Certified Coding Associate Certification thru AHIMA (09/22/2016)

HTEC 76B:Advanced Medical Coding II

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC76B_SLO_1 - Explain the purpose of ICD-10-CM/PCS coding systems **SLO Status:** Active **Outcome Creation Date:** 09/11/2013	**Exam - Course Test/Quiz -** – Course Test/Quiz – Embedded test and assignment questions **Target for Success:** 100% passed in addition seventy-five percent of these students should achieve at least a 80% on CPT coding exercises.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 27 of the 34 students graded 84% or better on this test. (09/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** There is a high correlation between doing well on CPT coding exercises and doing well in the class.	**Enhancement:** Students need to be encouraged to keep up with the practice coding exercises as it will lead in not only passing the class but passing the Certified Coding Associate Certification thru AHIMA (09/22/2016)

HTEC 77 (X-Y):Special Projects in Health Technology

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC77_SLO_1 - Develop in conjunction with student and instructor. **SLO Status:** Active	**Demonstration -** Demonstration to reinforce skills for recency prior to externship. **Target for Success:** 100% pass	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Assessment would be the same for any other class. Students are held to the same standard and must pass this class like any other student. (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% pass. They have passed the class before so they know what to expect. This class has been extremely helpful for students prior to externship.	**Enhancement:** Going over expectations ahead of time is helpful, continue to monitor the effectiveness to keep students engaged. (11/30/2016)

HTEC 90G:Basic Patient Care

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC90G_SLO_1 - Differentiate between component parts of the medical asepsis process. **SLO Status:** Archived SLO Statement	**Presentation/Performance -** Prsentation & Performance **Target for Success:** 100% of Students will accurately differientiate between components of the medical asepsis process.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Assessment by sheath on thermometers, hand washing, and cleaning up work station. (11/15/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students who are diligent in the skill lab, show up to class prepared,do well on initial exams exceeds than those who don't. Enhancements always having sheaths, sanitation wipes, and any supplies we need on hand.	**Enhancement:** Extra opportunities to perform skills. Additional materials and resource and demonstrations would be helpful to enhance learning experience. (11/15/2016)
HTEC90G_SLO_2 - Demonstrate proper application of OSHA standards. **SLO Status:** Archived SLO Statement	**Demonstration -** Demonstration, students will demonstrate proper application of OSHA standards. **Target for Success:** 100% of Students will demonstrate accurately how to apply the use of OSHA standards	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Assessment Data, Students will perform skills lab with other students with instructor supervision. They are evaluated this on a daily basis in class. (11/15/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students were able to demonstrate accurately OSHA standards in skills lab each day.	**Enhancement:** Additional Resources, such as additional help, videos, websites, and more skill lab time. (11/15/2016)
HTEC90G_SLO_3 - Demonstrate the regulation and measurement of vital signs. **SLO Status:** Active	**Presentation/Performance -** Students will perform proper procedure for measuring temperature, respiration, heart rate, and blood pressure. **Target for Success:** 95% of students will accurately perform measuring vital signs, while 5 % will be below standard.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 13 - A 100% - 90% 4 -B 89% - 80% 2 - C 79% - 70% 1 - F 59% Out of 20 students 95% passed, Less than 5% failed (11/15/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students who are diligent with skills lab, show up to class prepared, and do well on initial exams exceed than those who don't. Vital Log checks are crucial for student success.	**Enhancement:** Extra Opportunities to perform skills. Additional materials and resources would enhance the learning of our students. (11/15/2016)

HTEC 90H:Medical Office Sterile Technique

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC90H_SLO_1 - Demonstrate the local application of heat and cold, use of medical office instruments, application of sterile gloves. **SLO Status:** Archived SLO Statement	**Demonstration -** Students will demonstrate sterile technique by application of gloves and kit. **Target for Success:** 100% pass with a C or better	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met Assessment by students don gloves and not breaking sterile technique (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** out of 27 students all passed with a C or better except for 3. Students who come to class, are engaged, and partcipate to better than those who don't.	**Enhancement:** More skills lab time, resources, and additional help. (11/30/2016)
HTEC90H_SLO_2 - Demonstrate the sterilization and disinfection of equipment and instruments and techniques in assisting in minor surgery. **SLO Status:** Archived SLO Statement	**Demonstration -** Students will demonstrate which instrument is which during medical office sterile technique. **Target for Success:** 100% of students pass with a C or better.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met Students have to identify a variety of instruments used for sterile technique for minor surgery. (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students who do well will skills lab, core competencies, come to class are better prepared for the the final exam.	**Enhancement:** More Resources, More Class time, Additional Staff Help. Continue to monitor results. (11/30/2016)
HTEC90H_SLO_3 - Demonstrate the application of sterile gloves, sterilization of instruments that are used in minor surgery. **SLO Status:** Active **Outcome Creation Date:** 09/25/2017	**Demonstration -** A demonstration exam **Target for Success:** 100% of students to achieve a passing score on the exam of 70% or greater	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met 18 students came for the practical exam. (70%) 2 students received a C or better. 4 students scored 80% or better. 12 students scored 90% or better. 100% of the original students who enrolled and finished the class, passed. (03/21/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students success on tests is highly dependent on student's participation in the class. Participation includes in-class practice and coming to class in professional medical uniform. Students who passed the exam had good attendance, turned in weekly homework, participated in class and in-class assignments.	**Enhancement:** Students should be encouraged to come to class to practice and if they are unsure of the material then they should meet with the instructor. (03/21/2018)

HTEC 91:Medical Office Diagnostic Tests

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC91_SLO_1 - Illustrate common terms used in electrocardiography, physical therapy and radiology procedures. **SLO Status:** Active **Planned Assessment Quarters:** 2012-13 4-Spring **Outcome Creation Date:** 03/10/2014	**Exam - Course Test/Quiz -** 10 point take home quiz on common terms **Target for Success:** 100% pass (7/10) **Comments/Notes:** because it is a take home quiz everyone should be able to pass the quiz.	**Program Review Reporting Year:** 2013-2014 **Target :** Target Not Met 20 0f 26 students got 7 or more questions correct (03/10/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** There is a high correlation between doing well on early quizzes and doing well in the class. 11 students who passed the first quiz were successful in the course	**Enhancement:** Students need to be encouraged to keep up with readings and assignments. Remind them to start early. Student need access to computers and internet. Remind them that these are available in the Science Resource Center and the Allied Health Resource Center. (03/10/2014)
	Presentation/Performance - Written Reports **Target for Success:** Students complete a take home Quiz #1 regarding common terms. This was a 10 point quiz	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Ten students out of 23 earned a score of 9/10 or better. Ten students earned a score of 7/10 or 8/10. Three students earned a score of 6/10 or less. The only 2 students who earned A's in the course had 10/10 on this early quiz. Ultimate success in the course seems to depend on a variety of factors, but performing well in the early quizzes seems to be correlated with success in the course. (08/27/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students need to be encouraged to keep up with all the readings, assignments, and take home quizzes right from the beginning of the quarter. Getting off to a good start in the course with strong quiz scores is predictive of future success in the course.	**Enhancement:** Quizzes are available on instructor's websites at the start of the quarter. Computer and internet access for the students is important for the students to be able to access course materials early. (08/27/2016)
	Exam - Course Test/Quiz - 50 points mid term **Target for Success:** 100% students received 70 percent or better		
HTEC91_SLO_2 - Illustrate the structure and electrical conduction system of the heart. **SLO Status:** Active **Planned Assessment Quarters:** 2012-13 4-Spring	**Exam - Course Test/Quiz -** Take home quiz #2. **Target for Success:** 100% of students get 70% or better.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met 14/16 students received a 70% or better scores (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Overall the students performed well except the few who have had	**Enhancement:** Encourage students to come in during office hours for questions and answers, also to be early and stay late for student questions. Be attentive to

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
Outcome Creation Date: 03/17/2014		difficulty due to english as their second language. Students had reading and homework assignment to review the anatomy, physiology, and electrophysiology of the heart, and describe the electrical conduction and component of the electrical conduction on the electrocardiogram. Students learned to interpret arrhythmias in class, homework and simulate exercises in class.	students who speak english has a second language. (11/30/2016)
		Program Review Reporting Year: 2013-2014 **Target :** Target Not Met 19 students out of 26 pass the quiz with 70% or better. (03/17/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Those that pass went on to pass the course. Those that did not pass had missed two or more classes. They went on to fail the course. Student will be encouraged to keep up with the assignments, readings and to follow the attendance policy.	
HTEC91_SLO_3 - Demonstrate measuring and assessing heart rhythms using an electrocardiograph including analyzing normal and abnormal electrocardiograms. **SLO Status:** Active	**Exam - Course Test/Quiz -** Final exam regarding ECG interpretations and measurements using the 8 step method. **Target for Success:** 85% to 90% of the students completing the course get 70% or better.	**Program Review Reporting Year:** 2013-2014 **Target :** Target Met 24 students sat for the final exam. 13 students scored 80% or better and (60%) 22 students received a C or better. 90% of those who finished the class passed the class. 76% of the original students who enrolled in the class, passed. (03/17/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Student will be encouraged to keep up with all the readings, assignments, and take-home quizzes. Practice of the lab component of this course is very important.	
	Exam - Course Test/Quiz - 50 points mid term **Target for Success:** 100% students received 70 or better	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met 14 out of 16 students received 70 % or better scores (12/05/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In class there was over view of the lesson regarding the heart, physiology and electrophysiology of the heart and electrocardiography arrhythmias. Students had reading and homework assignment to review the anatomy, physiology, and electrophysiology of the heart, and describe the electrical	**Enhancement:** Encourage students to come in for the office hrs for questions and answer, also be early and stay late for the students questions. Be attentive to students who speak English as their second language. (12/05/2016)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		conduction and component of the electrical conduction on the electrocardiogram. The students learned to interpret the arrhythmia in class, homework and simulating exercise in the class. Over all students performed well except few students who have difficulty due to English as their second language.	

HTEC 93:Pharmacology for Medical Assistants

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC93_SLO_1 - Demonstrate dosage calculation, drug legislation and standards, drug preperations and information affecting various body systems. **SLO Status:** Active	**Exam - Course Test/Quiz -** Exam? Course Test/Quiz **Target for Success:** 100% of students will pass with a C or better	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met 35 Students; 6 received an A 100% - 90% 11 received a B 89% - 80% 11 received a C 79% - 70% 4 received a D 69% - 60% 3 received a F 59% and below (11/15/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Some students demonstrated lack of knowledge in basic math and found it difficult for dosage calculations.	**Enhancement:** Students will be encouraged to take tutoring and utilize the smart thinking website. I will have more dosage calculations problems for students who need additional help. (11/15/2016)

HTEC 94:Administration of Medications

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC94_SLO_1 - Illustrate pertinent anatomy and physiology and choice of equipment for injections. **SLO Status:** Active	**Demonstration -** Demonstrate the proper site to inject various route for medication administration. **Target for Success:** 100% will accurately demonstrate the proper medication administration.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 21 students passed the class with a C or better. (10/24/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** More help like a teachers assistant would help students get through their shots faster for sign off	**Enhancement:** More help, more skill lab time, goal met will continue to monitor for review. (10/24/2016)
HTEC94_SLO_2 - Demonstrate proper techniques, hazards and complications, post-treatment and test patient of a minimum of 10 intramuscular, 10 subcutaneous and 10 intradermal injections. **SLO Status:** Active	**Presentation/Performance -** demonstration of performance with medication withdrawal for proficiency. **Target for Success:** 100% of students will accurately demonstrate the techniques and recognize complications.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 21 Students 100% students passed the class with a C or better (10/24/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students performed at least the minimum of 30 shots, class participation, completed all their homework did well than those who didn't.	**Enhancement:** additional lab time and more models in the classroom (10/24/2016)

HTEC 95A:Medical Assisting Externship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC95A_SLO_1 - Demonstrate proper Medical Assisting techniques in the clinical environment. **SLO Status:** Active	**Demonstration -** Students will perform medical assisting techniques in the clinical environment. **Target for Success:** 100% of students will demonstrate accurate MA techniques in the clinical environment.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review at the clinical site (11/21/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** We have a variety of clinical sites to assist with students success rate. Giving them the choice of where they want to go has been helpful.	**Enhancement:** Refresher of techniques prior to externship. Monitor supervisor review comments + recommendation for a better experience for our students. (11/21/2016)
HTEC95A_SLO_2 - Illustrate medicolegal principles and codes of ethics that must be considered in the daily operation of the clinical facilities. **SLO Status:** Active	**Demonstration -** Demonstration of medicolegal principles and code of ethics in the clinical environment. **Target for Success:** 100% of students will demonstrate proper code of ethics and medicolegal principles daily.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review/ Site Review/Student Review (11/21/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students are able to recognize alternative perspectives of the delivery of health care with regard to gender, cultural differences, and various working techniques.	**Enhancement:** Confirm with the students that they understand the content of the externship evaluation packet so that they comprehend the what code of ethics expectations are in the clinical environment. (11/21/2016)

HTEC 95B:Phlebotomy Technician I Externship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC95B_SLO_1 - Demonstrate proper Phlebotomy Technician I techniques in the clinical environment. **SLO Status:** Active	**Demonstration -** Students will demonstrate proper phlebotomy techniques in the clinical environment **Target for Success:** 100% of students will pass with a C or better while demonstrating accurate and safe techniques in the clinical setting.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review/Site Review/Student Review (11/21/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students passed with a C or better. Students were able to better identify problems and solutions encountered in the clinical setting.	**Enhancement:** Continue to monitor feedback. Continue to have our refresher course prior to externship. (11/21/2016)
HTEC95B_SLO_2 - Illustrate medicolegal principles and codes of ethics that must be considered in the daily operation of the clinical facilities. **SLO Status:** Active	**Demonstration -** Students will demonstrate medicolegal principles and code of ethics in the clinical setting. **Target for Success:** 100% of students will pass with a C or better	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review/Site Review/Student Review (11/21/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students are able to recognize alternative perspectives of the health care delivery.	**Enhancement:** Going over the Evaluation Packet so students know the expectations of code of ethics and medico-legal principles to have in the clinical environment. (11/21/2016)

HTEC 96A:Medical Assisting Externship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC96A_SLO_1 - Demonstrate proper Medical Assisting techniques in the clinical environment. **SLO Status:** Active	**Demonstration -** Demonstration: Students will perform medical techniques in the clinical environment **Target for Success:** 100% will pass with a C or better while demonstrating preoper medical techniques in the clinical environment	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review/ Site Review/ Student Review (11/21/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students passed with a C or better. Students are able to recognize different perspectives of the delivery of health care.	**Enhancement:** Implement feedback into MA curriculum. (11/21/2016)
HTEC96A_SLO_2 - Illustrate medicolegal principles and codes of ethics that must be considered in the daily operation of the clinical facilities. **SLO Status:** Active	**Demonstration -** Students will demonstrate medicolegal principles and code of ethics in the clinical environment **Target for Success:** 100% of students will pass with a C or better while demonstrating medico-legal principles and code of ethics.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review/ Site Review/ Student Review (11/21/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students will be able to recognize variety of perspectives of health care delivery.	**Enhancement:** Going over the Evaluation Packet so students know the expectations of code of ethics and medico-legal principles to have in the clinical environment. (11/21/2016)

HTEC 96B:Medical Secretarial Externship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC96B_SLO_1 - Demonstrate proper Medical Secretary techniques in the clinical environment. **SLO Status:** Active	**Demonstration -** Demonstration: Students will properly demonstrate Medical Secretary techniques in the clinical environment. **Target for Success:** 100% pass with a C or better.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review, Site Review, Student Review (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students passed with a C or better. Refresher Course has been helpful for the students. Students who pick their own site have a better experience.	**Enhancement:** More variety of sites. Will continue to monitor review. Going over the expectations would be helpful students before hand. (11/30/2016)
HTEC96B_SLO_2 - Illustrate medicolegal principles and codes of ethics that must be considered in the daily operation of the clinical facilities. **SLO Status:** Active	**Demonstration -** Students will demonstrate medico-legal principles and code of ethics that must be considered in the clinical facilities. **Target for Success:** 100% of Students pass with a C or better while demonstrating proper medico legal principles and code of ethics in the clinical environment	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review/Site Review/Student Review (11/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students pass with a C or better. Students are able to recognize a variety of aspects in the delivery of health care. Students are more confident after the externship to handle problems and solutions in the clinical environment.	**Enhancement:** Continue to have refresher course prior to externship. Go over Evaluation packet with students so they understand expectations in the clinical environment. (11/22/2016)

HTEC 96C:Medical File Clerk Externship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC96C_SLO_1 - Demonstrate proper Medical File Clerk techniques in the clinical environment. **SLO Status:** Active	**Demonstration -** Demonstration: Students will properly demonstrate Medical File Clerk Techniques in the clinical environment **Target for Success:** 100% Students will pass with a C or better.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review, Site Review, Student Review (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of Students passed with a C or better. Continue monitor feedback. Students who seek out their own site have a better experience overall.	**Enhancement:** Going over the expectations, having an orientation, and continue to monitor feedback from facilities plus students is helpful. (11/30/2016)
HTEC96C_SLO_2 - Illustrate medicolegal principles and codes of ethics that must be considered in the daily operation of the clinical facilities. **SLO Status:** Active	**Demonstration -** Students will demonstrate medicolegal principles and code of ethics in the clinical environment. **Target for Success:** 100% of students will pass with a C or better while demonstrating proper code of ethics and medico legal principles.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review/Site Review/Student Review (11/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% a Students pass with a C or better. Students are able to better recognize variety of aspects in the delivery of health care. Students are better prepared for problems and have solutions after being involved in the clinical environment.	**Enhancement:** Continue to have refresher course prior to externship. Going over the Evaluation packet and going over expectations required in the clinical setting may be helpful before hand. (11/22/2016)

HTEC 96D:Medical Record Clerk Externship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC96D_SLO_1 - Demonstrate proper Medical Record Clerk techniques in the clinical environment. **SLO Status:** Active	**Demonstration -** Demonstration: Students will accurately and safely demonstrate Medical Clerk techniques in the clinical environment. **Target for Success:** 100% Students pass with a C or better.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review, Site Review, Student Review (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100 percent of students passed with a C or better. Students who picked out their own sites had a better experience. Continue to monitor and enhance expectations in the clinical environment.	**Enhancement:** Refresher of Student expectations as well as evaluation. Orientation and refresher course would be helpful. (11/30/2016)
HTEC96D_SLO_2 - Illustrate medicolegal principles and codes of ethics that must be considered in the daily operation of the clinical facilities. **SLO Status:** Active	**Demonstration -** Students will demonstrate medicolegal principles and code of ethics in the clinical environment. **Target for Success:** 100% a students pass with a C or better.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review/ Student Review/Site Review (11/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students passed with a C or better. Students are able to better recognize a variety of aspects in the delivery of health care. Students are better prepared for problems and have solutions after the clinical setting environment.	**Enhancement:** Continue to have refresher course prior to externship. Going over the Evaluation packet and going over expectations required in the clinical setting may be helpful before hand. (11/22/2016)

HTEC 96E:Business Office Clerk Externship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC96E_SLO_1 - Demonstrate proper Business Office Clerk techniques in the clinical environment. **SLO Status:** Active	**Demonstration -** Demonstration: Students will properly demonstrate safe and accurate techniques for Business Office Clerk techniques in the clinical environment. **Target for Success:** 100% of students will pass with a C or better.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review, Site Review, Student Review (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% Students with a C or better. Students who picked out their own site had a better experience. Students are able to better recognize a variety of methods to deliver health care.	**Enhancement:** Going over expectations and evaluation would be helpful for the students. Continue to monitor feedback from the students as well as clinical facilities for a better over all experience. (11/30/2016)
HTEC96E_SLO_2 - Illustrate medicolegal principles and codes of ethics that must be considered in the daily operation of the clinical facilities. **SLO Status:** Active	**Demonstration -** Students will demonstrate medicolegal principles and code of ethics in the clinical environment **Target for Success:** 100% of students pass with a C or better	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Student Review/ Supervisor Review/ Site Review (11/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students pass with a C or better. Students are able to better recognize a variety of aspects in the delivery of healthcare. Students are better prepared for a professional career after externship.	**Enhancement:** Continue to have refresher course prior to externship. Going over the Evaluation packet and going over expectations required in the clinical setting may be helpful before hand. (11/22/2016)

HTEC 96F:Insurance and Coding Externship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC96F_SLO_1 - Demonstrate proper Insurance and Coding techniques in the clinical environment. **SLO Status:** Active	**Demonstration -** Demonstration: Students will accurately and safely demonstrate proper Insurance and Coding techniques in the clinical environment **Target for Success:** 100% of students pass with a C or better.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Student Review, Supervisor Review, Site Review (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students passed with a C or better. Students are able to better recognize a variety of methods in health care delivery.	**Enhancement:** Continue to monitor feedback. Going over expectations and evaluation would be helpful for students so that they know what to expect. (11/30/2016)
HTEC96F_SLO_2 - Illustrate medicolegal principles and codes of ethics that must be considered in the daily operation of the clinical facilities. **SLO Status:** Active	**Demonstration -** Students will demonstrate medicolegal principles and code of ethics in the clinical environment **Target for Success:** 100% of students pass with a C or better while demonstrating proper techniques of medico legal principles and code of ethics.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review/ Site Review/ Student Review (11/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students passed with a C or better. Students are able to recognize a variety of aspects in the delivery of health care. Students are better prepared to take on problems and have solutions after externship experience.	**Enhancement:** Continue to have refresher course prior to externship. Going over the Evaluation packet and going over expectations required in the clinical setting may be helpful before hand. (11/22/2016)

HTEC 96G:Medical Transcription Externship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC96G_SLO_1 - Demonstrate proper Medical Transcription techniques in the clinical environment. **SLO Status:** Active	**Demonstration -** Demonstration: Proper safe and accurate techniques related to Medical Transcription in the clinical environment. **Target for Success:** 100% Students pass with a C or Better.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Student Review, Supervisor Review, Site Review (11/30/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students passed with a C or better. Students are able to better recognize a variety of health care delivery methods. Continue to Monitor for success and enhancements.	**Enhancement:** Going over expectations and evaluation packet prior to externship would be helpful for students. Continue to monitor feedback for a better clinical experience for our students. (11/30/2016)
HTEC96G_SLO_2 - Illustrate medicolegal principles and codes of ethics that must be considered in the daily operation of the clinical facilities. **SLO Status:** Active	**Demonstration -** Students will demonstrate medicolegal principles and code of ethics in the clinical environment. **Target for Success:** 100% of students pass with a C or Better while demonstrating code of ethics and medico legal principles daily.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review/ Site Review/ Student Review (11/22/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students passed with a C or better. Students are able to better recognize a variety of aspects with the delivery of health care. Students are better prepared to take on problems and have solutions after externship experience.	**Enhancement:** Continue to have refresher course prior to externship. Going over the Evaluation packet and going over expectations required in the clinical setting may be helpful before hand. (11/22/2016)

HTEC 96H:EKG Externship

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC96H_SLO_1 - Demonstrate proper EKG techniques in the clinical environment. **SLO Status:** Active	**Demonstration -** Demonstrate course objectives and accurate EKG techniques in the clinical environment. **Target for Success:** 100% will pass	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Assessment by Supervisor review. (11/15/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students who are interested in pursue EKG as a career do better in the clinical setting over all.	**Enhancement:** More variety of clinical sites with availability to enhance EKG skills. (11/15/2016)
HTEC96H_SLO_2 - Illustrate medicolegal principles and codes of ethics that must be considered in the daily operation of the clinical facilities. **SLO Status:** Active	**Demonstration -** Demonstration: Medico-legal Principals and code of ethics in the clinical facilities **Target for Success:** 100% success rate with a C or better.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Supervisor Review/ Site Review/ plus students are with a licensed professional at all times. (11/15/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% of students passes with a C or better. Will continue to monitor.	**Enhancement:** Enhancement, training about code of ethics and medicolegal principles before entering the clinical site. (11/15/2016)

Assessment: Course/Service Four Column

Dept - (BHES) Medical Laboratory Technician

HTEC 180:Clinical Hematology/Urinalysis/ Coagulation Practicum

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC 180_SLO_1 - Safely and accurately perform analyical procedures in Clinical Hematology/Urinalysis/Coagulation departments identifying normal and abnormal lab tests and factors affecting results and take appropriate action. **SLO Status:** Active **Outcome Creation Date:** 10/18/2016	**Field Placement/Internship -** Clinical site placement: Evaluations are done on site by a clinical trainer. Students are rated as proficient or above or below. 75% is considered proficient. **Target for Success:** Proficient: 75%	**Program Review Reporting Year:** 2014-2015 **Target :** Target Met Of the 8 students in clinical rotation during this time; all scored above the proficiently level for this rotation. The average score for all students was 96% well above the proficient mark. (10/18/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The students are well prepared to enter the working/training portion of the program. The laboratory work that the students do in class is very helpful to address skill, knowledge and comfort level with clinical testing. We did to keep challenging the students in the students lab so they continue to be prepared and have the confidence to perform	**Enhancement:** : Emphasizing the laboratory skills and case studies will help prepare the students for their clinical rotations. Having enough equipment and samples for all students to practice is important. (10/18/2016)

HTEC 183:Clinical Microbiology Practicum

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC183_SLO_1 - Safely and accurately perform analytical procedures in Clinical Microbiology identifying normal and abnormal lab tests and factors affecting results and take appropriate action. **SLO Status:** Active	**Field Placement/Internship -** Clinical site placement: Evaluations are done on site by a clinical trainer. Students are rated as proficient or above or below. 75% is considered proficient. **Target for Success:** Proficient: 75%	**Program Review Reporting Year:** 2014-2015 **Target :** Target Met Of the 8 students in clinical rotation during this time; all scored above the proficiently level for this rotation. The average score for all students was 96% well above the proficient mark. (10/18/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The students are well prepared to enter the working/training portion of the program. The laboratory work that the students do in class is very helpful to address skill, knowledge and comfort level with clinical testing. We did to keep challenging the students in the student's lab so they continue to be prepared and have the confidence to perform. Learning to use the microscope, stain organisms from culture and recognize normal flora is important	**Enhancement:** Emphasizing the laboratory skills and case studies will help prepare the students for their clinical rotations. Having enough equipment and samples and media for all students to practice is important. (10/18/2016)

HTEC 184:Clinical Immunology/ Immunohematology Practicum

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC184_SLO_1 - Safely and accurately perform analyical procedures in Clinical Immunology/ Immunohematology identifying normal and abnormal lab tests and factors affecting results and take appropriate action. **SLO Status:** Active **Outcome Creation Date:** 10/18/2016	**Field Placement/Internship -** Clinical site placement: Evaluations are done on site by a clinical trainer. Students are rated as proficient or above or below. 75% is considered proficient. **Target for Success:** Proficient: 75%	**Program Review Reporting Year:** 2014-2015 **Target :** Target Met Of the 8 students in clinical rotation during this time; all scored above the proficiently level for this rotation. The average score for all students was 98% well above the proficient mark. (10/18/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The students are well prepared to enter the working/training portion of the program. The laboratory work that the students do in class is very helpful to address skill, knowledge and comfort level with clinical testing. We did to keep challenging the students in the student's lab so they continue to be prepared and have the confidence to perform.	**Enhancement:** : Emphasizing the laboratory skills and case studies will help prepare the students for their clinical rotations. Having enough equipment and samples and media for all students to practice is important. Keeping the excellent blood banking portion of the course is a value as many students get little exposure in the rotations. (10/18/2016)

HTEC 185:Clinical Chemistry Practicum

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC185_SLO_1 - Safely and accurately perform analyical procedures in Clinical Chemistry deparment identifying normal and abnormal lab tests and factors affecting results and take appropriate action. **SLO Status:** Active	**Field Placement/Internship -** Clinical site placement: Evaluations are done on site by a clinical trainer. Students are rated as proficient or above or below. 75% is considered proficient. **Target for Success:** Proficient: 75%	**Program Review Reporting Year:** 2014-2015 **Target :** Target Met Of the 8 students in clinical rotation during this time; all scored above the proficiently level for this rotation. The average score for all students was 98% well above the proficient mark. (10/18/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The students are well prepared to enter the working/training portion of the program. The laboratory work that the students do in class is very helpful to address skill, knowledge and comfort level with clinical testing. We did to keep challenging the students in the student's lab so they continue to be prepared and have the confidence to perform. Having the instruments in class for the students to practices give them confidence in the field. Although many of our techniques are manual or semi-automated the theory is there and important for the students to learn before going out to the clinical sites.	**Enhancement:** Emphasizing the laboratory skills and case studies will help prepare the students for their clinical rotations. Having enough equipment and samples and media for all students to practice is important. Keeping the excellent blood banking portion of the course is a value as many students get little exposure in the rotations. (10/18/2016)

HTEC 80:Clinical Hematology Laboratory

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC80_SLO_1 - Practice proper application of OSHA standards. **SLO Status:** Active	**Exam - Course Test/Quiz -** direct observation **Target for Success:** 75%	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 1. 90% or greater of students demonstrate compliance with OSHA standards for laboratory safety (01/13/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 1. All students (100 %) successfully demonstrated compliance with 6 OSHA biohazard safety standards on the midterm practical exam. 1. Students scored 100% on this assessment. This is a mandatory requirement for anyone participating in our MLT laboratory courses, and also for anyone preparing for a career in the laboratory field. Successful demonstration of understanding and application of OSHA safety standards prepares the students for laboratory externships	**Enhancement:** 1. Current instruction and monitoring of student practices with feedback as needed are successful in meeting this objective. Continue current practices. (01/13/2017)
HTEC80_SLO_2 - Use proper technique and follow written laboratory procedures to perform Complete Blood Count (CBC) with differential and patelet estimate on a minimum of 2 normal blood samples. **SLO Status:** Active	**Exam - Course Test/Quiz -** 2. Students were required to perform the following during practical exams: Midterm Exam: automated CBC with platelet estimate on 1 normal blood sample; Final Exam: Automated CBC on a control plus manual differential with plate estimate on 2 normal samples. The instructor observed each student's operation of the autoanalyzer and evaluated the output from the instrument using a rubric. Platelet estimates and differential results were compared to established acceptable ranges. **Target for Success:** 75%	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 2. All students (100 %) passed assessments on the midterm exam (mean score = 84% for automated CBC and platelet estimate). Fifteen of 16 students (94%) passed assessments on the final exam (mean score = 90% for automated CBC, 2 platelet estimates, and 2 manual WBC differentials). Overall mean score for both exams = 89%. (01/13/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 2. Students scored above 75% overall on these assessments. The higher mean on the midterm assessment reflects that it did not include manual differentials, which requires more skill and practice. Performance of manual differentials is not within the scope of practice for MLT's working in California, but is taught in this course. The mean scores were well above the required minimum of 75%, demonstrating competency for this SLO and adequate technical ability for performing CBCs, manual differentials, and platelet estimates on normal blood samples.	**Enhancement:** 2. Offer more opportunities for students to perform automated CBCs on the analyzer, and give real-time feedback to students when practicing differentials. This will require an aide to assist with labs, because it is not feasible for one instructor to monitor multiple concurrent activities in lab sessions. Develop or purchase a library of digital images of erythrocyte and leukocyte morphology, including multiple images of normal cells, for students to practice differentials (01/13/2017)
HTEC80_SLO_3 - Identify abnormal	**Exam - Course Test/Quiz -** 3. The		

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
CBC results and correlate to possible causes. **SLO Status:** Active	final exam included 27 multiple choice questions related to the identification of abnormal CBC results and their correlation to possible causes. **Target for Success:** 75%	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 3. Of the 27 related questions, 90-100% of students correctly answered 10 questions, while another 11 questions were answered correctly by 75 – 89% of students. At least 75% of students correctly answered 21 of 27 (78%) of questions. (01/13/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 3. Performance met the target for this objective. Correlating abnormal results with possible causes requires high level cognitive skills. Several of the exam questions were challenging and required the assimilation and application of information. Some students were more successful than others in this area.	**Enhancement:** 3. Expand the number of case studies discussed in class and/or expand homework assignments to give students more practice in developing the higher level cognitive skills required for this objective. (01/13/2017)

HTEC 80A:Clinical Hematology Lecture

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC80A_SLO_1 - Given patient history informationand laboratory results identify the hematologiacl disorder displayed by the patient. **SLO Status:** Active **Planned Assessment Quarters:** 2016-17 2-Fall **Outcome Creation Date:** 03/19/2017	Several questions were asked on all three exams during the quarter relating to hematological disorders **Target for Success:** 75% passing score	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met Questions were asked on each midterm and the final. 1) Midterm one had 2 questions with an average score of 50%; the second exam had 6 questions with an average score of 80% 2)Final had 9 questions with and average score of 72% (03/19/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** There was a significant improvement from the first exam to the second. This could be due to students learning what to focus on for the exams. Out of the 6 questions 2 did not (separately) meet the cut off of 75%. Both of these are at 70%. The final exam had 9 questions and 5 of the 9 questions did not pass (separately). Four of these questions had to do with AML hematological disorders. The rate overall was 72%, still not meeting the target.	**Enhancement:** Students apparently learn what material to study for the upcoming exams and therefore preform better. AML appears to be a more complex disorder and finer points needed to separate this group. (03/19/2017) **Follow-Up:** It would be beneficial to review the AML disorders before the final exam. Perhaps added review during the quarter would help as well. (03/19/2017)

HTEC 81:Clinical Urinalysis Laboratory

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC81_SLO_1 - Practice proper application of OSHA standards. **SLO Status:** Active **Planned Assessment Quarters:** 2014-15 2-Fall	**Demonstration -** Observation of students practicing good standard precautions in the classroom. Including the use of PPE, disinfecting counter tops, and disposal of bio-waste. **Target for Success:** 100% of students will be able practice application of OSHA standards	**Program Review Reporting Year:** 2014-2015 **Target :** Target Met 100% of the students practiced proper application of OSHA standards by demonstrating proper wear of personal protective equipment (gloves, lab coats) and showed proper method of disposing biohazard waste and disinfection (02/19/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students were able to understand the importance of lab safety and OSHA standards by properly wearing lab coats & gloves, decontaminating benches before and after lab use, and properly disposing contaminated materials and sharps by mid quarter	
		Program Review Reporting Year: 2014-2015 **Target :** Target Met 100% of the students practiced proper application of OSHA standards by demonstrating proper wear of personal protective equipment (gloves, lab coats) and showed proper method of disposing biohazard waste and disinfection. (04/24/2015)	**Enhancement:** Keep emphasizing the importance of always following good safe laboratory practices. (02/19/2016) **Enhancement:** Perhaps we should have the students listen to the lecture material online as homework in order to devote more class time to going over case studies. (04/24/2015)
	Demonstration - Demonstration of students wearing appropriate PPE during all laboratories **Target for Success:** 100%		
HTEC81_SLO_2 - Perform routine urinalysis on a minimum of 2 normal urine samples with 100% accuracy to include both physical and chemical analysis. **SLO Status:** Active	**Laboratory Project -** This assessment includes both the students ability to demonstrate by performance and test questions to perform 2 normal urine samples with 100% accuracy. **Target for Success:** 100%	**Program Review Reporting Year:** 2014-2015 **Target :** Target Met 100% of the students were able to perform routine urinalysis on a minimum of 2 normal urine samples with 100% accuracy, including both physical and chemical analysis. (04/24/2015)	**Enhancement:** Perhaps we should have the students listen to the lecture material online as homework in order to devote more class time to going over case studies. (04/24/2015)
	Demonstration - Will show the correct testing procedure to test 2		

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	normal urines with the correct results. Questions will be asked. **Target for Success:** 75%		
HTEC81_SLO_3 - Identify abnormal urinalysis results and correlate these results with possible causes. **SLO Status:** Active	**Exam - Course Test/Quiz -** By given exam questions, students will be able to identify abnormal urinalysis results and correlate these results with possible causes. **Target for Success:** 75% is a passing score of the exam	**Program Review Reporting Year:** 2014-2015 **Target :** Target Met On average, only 83% students were able to correctly correlate these results with possible causes. (04/24/2015)	**Enhancement:** Perhaps we should have the students listen to the lecture material online as homework in order to devote more class time to going over case studies. (04/24/2015)
	Exam - Course Test/Quiz - Exam questions will be asked to assess students competency in identifying abnormal urine results. The students should be able to relate these abnormal results to possible diseases. **Target for Success:** 75%		

HTEC 81A:Clinical Urinalysis Lecture

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC81A_SLO_1 - Given a diagram of the kidney, labels its parts, trace the path of blood flow and urine formation to include reabsorption and secretion. **SLO Status:** Active	**Exam - Course Test/Quiz -** Given a picture of a kidney, students can correctly label the parts and draw the blood flow **Target for Success:** 80%	**Program Review Reporting Year:** 2014-2015 **Target :** Target Met 95% of the students were able to partially or in its entirety identify the parts of the kidney and trace the path of blood flow and urine formation. 1 of 19 students (5%) was unable to identify the parts of the kidney or trace the path of blood flow and urine formation. (02/19/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** All of the students demonstrated understanding of kidney structure and urine formation and were able to identify the parts of the kidney and/or trace the path of blood flow and urine formation. However only 70% of the students were able to do so with 100% accuracy. The instructors reviewed the kidney structure & urine formation after the exam with the students.	**Enhancement:** Follow up with asking the same or similar question on the final exam to see if the students showed improvement in learning the kidney structure and urine formation. (02/19/2016)

HTEC 82:Clinical Coagulation Laboratory

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC82_SLO_1 - Practice proper application of OSHA standards. **SLO Status:** Active	**Demonstration -** Students will demonstrate their knowledge of OSHA standards by wearing appropriate personnel protective equipment for all laboratory sessions, which could include, eye wear, lab coats and gloves. **Target for Success:** 100% of students will meet this requirement by the second laboratory session	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Lab Practical: All 15 students scored 100% on this assignment. They demonstrated and complied to the standards. (02/19/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students were able to understand the importance of lab safety through the practice of OSHA standards.	**Enhancement:** Continue to stress the importance of following good laboratory practices for everyone safety. (02/19/2016)
HTEC82_SLO_2 - Analyze blood samples for Protime (PT) and Activated Partial Thromboplastin Time (APTT) following proper techniques and procedures. **SLO Status:** Active	**Presentation/Performance -** Students will demonstrate the ability to perform Protime and Activated Partial Thrombopalstin Time testing in the laboratory during a practical exam. **Target for Success:** 75% is a passing score for this exam.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met Demonstration of laboratory testing was adequate, however, one student failed to meet the 75% on the written questions. (02/19/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Overall the class succeeded, they demonstrated competency in the classroom and adequate technical skills in the lab performing various coagulation testings.	**Enhancement:** More hands on practice in the laboratory setting with the instruments will help the students proficiency. (02/19/2016)
HTEC82_SLO_3 - Identify abnormal PT and APTT results and correlate to possible causes. **SLO Status:** Active	**Exam - Course Test/Quiz -** Students are asked questions on quizzes and practical final exam. **Target for Success:** 75%	**Program Review Reporting Year:** 2015-2016 **Target :** Target Not Met The Lab mean scores: Midterm: 86% Final: 81.8%. The Mean average score of the entire class was 84.4%. Lab: 14 out of 15 students achieved 75% or above. 5 students with a letter grade of A, 8 students with a letter grade of B, 1 student with a letter grade of C, and 1 students with a letter grade of D. (02/19/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Compared to last coagulation class (Fall of 2015) the midterm and final scores in lecture increased significantly by 6% and 3%, respectively, while the quiz scores decreased by only few percentages. In the Lab comparison, the midterm	**Enhancement:** Need to teach students how to prepare for the final or for any exams, develop their test taking skills. (02/19/2016)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		scores increased by 9% while the final scores were even.	

HTEC 82A:Clinical Coagulation Lecture

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC82A_SLO_1 - Evaluate laboratory data to distinguish between primary and secondary hemostasis disorders and defend your response. **SLO Status:** Active	**Exam - Course Test/Quiz -** Questions were asked on via quizzes, midterm and the final to assess students comprehension of hemostasis. **Target for Success:** Midterm exams/quizzes: Students preparing for a career in the area of clinical laboratory medicine need to score higher than 75% to pass the course.	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met The lecture mean scores breakdowns are: Quizzes: 81.5% Midterm: 91.5% Final: 78.2% The Mean average score of the entire class was 83.7%. Lecture: 14 out of the 15 students achieved the 75% or above requirement. 3 students with letter grade of A, 9 students with a letter grade of B and 3 students with a letter grade of C. (02/19/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Compared to last coagulation class (Fall of 2015) the midterm and final scores in lecture increased significantly by 6% and 3%, respectively, while the quiz scores decreased by only few percentages. They understood the usage and application of Coagulation testings and learned about the homeostatic processes and diseases related to hemostasis	**Enhancement:** Since the questions asked on the finals are based on case studies, practice more using case studies to help students understand overall clinical aspects of hemostasis. ? Need to teach students how to prepare for the final or for any exams, develop their test taking skills. (02/19/2016)

HTEC 83:Clinical Microbiology Laboratory

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC83_SLO_1 - Practice proper application of OSHA standards **SLO Status:** Active	**Demonstration -** Observation of students practicing standard precautions in the laboratory classroom. **Target for Success:** 100%	**Program Review Reporting Year:** 2014-2015 **Target :** Target Met 100% compliance of wearing PPE by the second laboratory. Disposal of hazardous waste was accomplished by the last weeks of the quarter. (04/24/2015)	**Enhancement:** Stressing the importance of following the No food and drink rule for all classes and importance of cleaning desk tops. Also, repeat the rules of disposal of material. Questions to be added to exams to help drive the point home. (04/24/2015)
HTEC83_SLO_2 - Distinguish between normal flora and pathogenic bacteria for selected body sites **SLO Status:** Active	**Exam - Course Test/Quiz -** Exam questions on the first exam and similar or exact questions asked again on the final exam. Questions concerning the differentiation between bacteria that is normal human flora was to be distinguished from pathogenic organisms. Questions encompassed the concept of when certain organisms can be normal flora and under what conditions they may be considered pathogens. **Target for Success:** An acceptable pass rate is 75%	**Program Review Reporting Year:** 2014-2015 **Target :** Target Met Two questions were asked on the first exam (#14 and #20). Each question had one miss for a 4% error rate. On the final three questions were asked. (#16 and # 44) were similar to the first exam. The third question (#57) required the student to use critical thinking to determine if the organisms listed were normal flora or pathogens. The results for these were (#16 miss of 2for a 10% error, #44 no misses 100% correct and, and #57 miss 4, 18%) The questions are above that pass rate. (04/24/2015)	**Enhancement:** Adding additional slides to view the concept of normal flora versus pathogenic bacteria may help those visual learners. Using case studies as a classroom tool may help to solidify this concept. (04/24/2015)

HTEC 83A:Clinical Microbiology Lecture

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC83A_SLO_1 - Given patient history information, specimen source and laboratory results including biochemical profile, media used, gram stain, and other selected identification results identify the pathogenic organism isolated from the patient. **SLO Status:** Active **Planned Assessment Quarters:** 2014-15 3-Winter **Outcome Creation Date:** 04/16/2015	**Exam - Course Test/Quiz -** Exam questions and case studies used to assess the student critical thinking skills. Given some information, can the student conclude which is a likely organism. **Target for Success:** An acceptable pass rate is 75%	**Program Review Reporting Year:** 2014-2015 **Target :** Target Not Met Assessment Data Summary: Three questions were asked on the final exam to assess the students ability to apply the knowledge taught in class to determine the likely pathogen. #32 had 3 miss for an error rate of 14%, #65 had 9 misses for an error rate of 41% and question #59 had 3 misses for an error rate of 14%. An additional question was asked; #91 had 10 misses for an error rate of 45%. Only the two questions met the standard. (04/24/2015)	**Enhancement:** More work is needed to help students think critically. More in-class exercises using case studies, perhaps in groups, with discussion. Questions built into lectures may help. (04/24/2015)

HTEC 84:Clinical Immunology/Immunohematology Laboratory

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC84_SLO_1 - Practice proper application of OSHA standards **SLO Status:** Active	**Demonstration -** : Direction observation of proper use of Personal Protective Equipment by always using a lab coat and gloves before working with biohazard. Directly observe proper disposal of biohazard in the appropriate waste container. **Target for Success:** 100%	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Assessment Data Summary: Students were very good about using their PPE before starting lab. This was 100%. There was some confusion about what is considered non-hazardous waste, biohazardous waste and a sharp. I found waste in the wrong container a few times. (01/17/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Reflection and Analysis: Overall the students understood how important it is to protect themselves from hazardous materials. Bloodborne pathogens are one of the most common threats to someone in the healthcare field and the clinical laboratory. I never saw a student handle blood carelessly which is extremely important for when they are placed in a laboratory internship. I give a safety talk at the beginning of the quarter, but the proper disposal of waste discussion may need to occur more than once.	**Enhancement:** Enhancement/Action: Students respond better to knowledge when they directly use what they learned. Instead of only lecturing about safety, a physical activity involving correct location of waste container for each item would help cement the lesson. (03/03/2017)
HTEC84_SLO_2 - Use proper technique and follow written laboratory procedures to perform all testing necessary to find a mock patient a compatible unit of blood. **SLO Status:** Active	**Demonstration -** Assessment Data Summary: Students were very good about using their PPE before starting lab. This was 100%. There was some confusion about what is considered non-hazardous waste, biohazardous waste and a sharp. I found waste in the wrong container a few times. **Target for Success:** 100%	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Assessment Data Summary: ABO typing: Overall 91% (14 students 100%, 3 students 50%) Finding compatible blood: Overall 81% (43: 88%, 44: 88%, 45: 59%, 46: 88%) (03/03/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Reflection and Analysis: Selecting correct ABO type blood for patients in a hospital is crucially important to the point that giving ABO incompatible blood is considered to be an event that should never happen. Correct ABO typing is supposed to occur at a rate of 100%. Since this was a final exam, they should be able to correctly identify ABO type 100% of the time. 14 of 17 students got 100%. The main problem was	**Enhancement:** Enhancement/Action: I would spend a little more time expressly discussing compatible blood and what can be safely transfused. I would also try to the identify students who had trouble with ABO typing and directly observe their technique and reaction reading. (03/03/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		being too eager to call a reaction positive. One of the finding compatible blood questions was made difficult (#45) to see if students could catch the minor detail that technically made the blood safe to give, but it may have confused students. Overall the students performed very well.	

HTEC 84A:Clinical Immunology/Immunohematology Lecture

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC84A_SLO_1 - Correlate clinical significance of serologic tests with possible disease states **SLO Status:** Active **Planned Assessment Quarters:** 2015-16 4-Spring **Outcome Creation Date:** 03/17/2017	**Exam - Course Test/Quiz -** Assessment Method: Final Exam Questions: #14-17 Questions pertained to Hepatitis status based on serological markers **Target for Success:** Target for Success: Average pass rate of 75% or greater on the 4 questions	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Assessment Data Summary: The average pass rate was 85% on the 4 questions (14. 85%, 15. 93%, 16. 85%, 17. 78%) (03/18/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Reflection and Analysis: The final was a comprehensive test. I believe in finals covering the entire course in order for the student to improve areas of weakness. I will reward improvement by allowing the final grade to take the place of the overall grade. The same type of questions appeared on a midterm, but they were not identical. I did my best to emphasize the importance of interpretation of test results to the students and they were successful.	**Enhancement:** Enhancement/Action: Since the students were successful in interpreting these tests results, I could add a couple questions at a slightly higher level of interpretation. (03/18/2017)
	Exam - Course Test/Quiz - Assessment Method: Final Exam Questions: #14-17 Questions pertained to Hepatitis status based on serological markers **Target for Success:** Target for Success: Average pass rate of 75% or greater on the 4 questions		
HTEC84A_SLO_2 - Given patient history and various immunoheamatolgy testing evaluate the results and correalte them with various disease states. **SLO Status:** Active	**Exam - Course Test/Quiz -** Assessment Method: Exam practical and written questions. Perform forward and reverse ABO typing and state the blood type (Practical Exam). State whether a patient with a specific blood type could safely receive a stated blood type unit. (Written Exam #43-46) **Target for Success:** Target for Success: 90% for performance of	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Assessment Data Summary: ABO typing: Overall 91% (14 students 100%, 3 students 50%) Finding compatible blood: Overall 81% (43: 88%, 44: 88%, 45: 59%, 46: 88%) (03/18/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Reflection and Analysis: Selecting correct ABO type blood for patients in a hospital is crucially important to the point that giving ABO	**Enhancement:** Enhancement/Action: I would spend a little more time expressly discussing compatible blood and what can be safely transfused. I would also try to the identify students who had trouble with ABO typing and directly observe their technique and reaction reading. (03/18/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	ABO typing. 80% for evaluation of blood unit.	incompatible blood is considered to be an event that should never happen. Correct ABO typing is supposed to occur at a rate of 100%. Since this was a final exam, they should be able to correctly identify ABO type 100% of the time. 14 of 17 students got 100%. The main problem was being too eager to call a reaction positive. One of the finding compatible blood questions was made difficult (#45) to see if students could catch the minor detail that technically made the blood safe to give, but it may have confused students. Overall the students performed very well.	

HTEC 85A:Clinical Chemistry I Laboratory

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC85A_SLO_1 - Practice proper application of OSHA standards. **SLO Status:** Active	**Directly related to Student Learning Outcome (SLO)**	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Assessment Data Summary: Winter 2016 – Enrolled students were observed in each laboratory class including the midterm and final exam as to the proper use of personal protective equipment and proper disposal of waste materials including biohazardous materials. There was 100% compliance of this SLO by the second laboratory class. (12/04/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In reflecting on this assessment, it is clear that the students are accomplishing the laboratory theory and technic in needed to successfully complete this SLO.	**Enhancement:** No enhancements needed, safety will continue to be of utmost importance throughout and will continue to be emphasized throughout the course. (12/04/2016)
	Demonstration - Assessment Data Summary: Winter 2016 –A rubric was used to observe enrolled students in each laboratory class including the midterm and final exam practicing good standard precautions in the classroom. This included proper use of PPE, disinfecting counter tops and proper disposal of biohazardous waste. **Target for Success:** 100%	**Program Review Reporting Year:** 2018-2019 **Target :** Target Met Assessment Data Summary: Winter 2018 – Enrolled students were observed in each laboratory class including the midterm and final exam as to the proper use of personal protective equipment and proper disposal of waste materials including biohazardous materials. There was 100% compliance of this SLO by the second laboratory class. During the midterm practical examination, a rubric was used to document student compliance with this SLO. The result was 100% of the students practiced proper application of OSHA safety standards. (04/07/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Employee/student safety is number one concern in the student and clinical laboratory. It is mandatory that students achieve 100% on this SLO.	**Enhancement:** No enhancement is required, but this SLO is of utmost importance and will continue to be a part of each clinical laboratory preparation course with expected 100% compliance,. (04/07/2018)
		Program Review Reporting Year: 2016-2017 **Target :** Target Met Assessment Data Summary: Winter 2017 – Enrolled students were observed in each laboratory class including the midterm and final exam as to the proper use of personal protective equipment and proper disposal of waste materials including biohazardous materials. There was 100% compliance of this SLO by the second laboratory	**Enhancement:** No enhancement is needed, however laboratory safety is of utmost importance and will continue to be emphasized throughout the course. (06/27/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		class. During the midterm practical examination, a rubric was used to document student compliance with this SLO. The result was 100% of the students practiced proper application of OSHA safety standards. (06/27/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% safety compliance is a must for anyone planning a career in the clinical laboratory.	
		Program Review Reporting Year: 2015-2016 **Target :** Target Met The instructor used a rubric to document data to support this SLOI. 100% of students practiced proper application of OSHA standards by demonstrating proper wear of personal protective equipment, proper disposal of biohazardous waste and proper disinfecting laboratory countertops. (12/16/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** As a clinical laboratorian, safety is of utmost importance, so this SLO will continue to be active, students will continue to be evaluated on their practice of OSHA standards and the target will remain at 100%.	**Enhancement:** No specific enhancement of this SLO, but continued emphasis on complying with OSHA standards. (12/16/2016)
HTEC85A_SLO_2 - Use proper techniques to perform serial diltion. **SLO Status:** Active **Planned Assessment Quarters:** 2016-17 3-Winter	**Exam - Course Test/Quiz -** Assessment Data Summary: Students were given serial dilution problems in both written form and practical form during class laboratories, quizzes and exams . **Target for Success:** 75%	**Program Review Reporting Year:** 2018-2019 **Target :** Target Not Met This SLO continues to challenge students enrolled in HTEC 85A, yet the concept is important for anyone entering a clinical laboratory profession. Winter 2017, only 50% of students were successful in mastering this SLO. Prior to Winter 2017, we had an MLT expert available to provide "extra" help and practice for students to master this SLO. In Winter 2017, there was no "extra" help available to students and our success was a mere 50%. Winter 2018, we added a "skills lab" option for students with emphasis on serial dilutions and calibration curves. Attendance is voluntary, but our success rate increased to 60%. (04/07/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Although our target of 75% was not met, we showed considerable improvement with the addition of the optional skills lab where students can come for additional practice in serial dilutions.	**Enhancement:** Serial dilutions will continue to be introduced early in the Clinical Chemistry Laboratory I course with increased class laboratory assignments serving as practice for this SLO. Additional quiz questions (actually performing the serial dilutions) will be added in Winter 2019 in order to enhance this SLO. I strongly believe that the addition of the skills lab this Winter 2018 was instrumental in increasing our student success from 50% to 60%. (04/07/2018) **Follow-Up:** As the skills lab continues, we will track the success of students who attend these sessions. (04/07/2018)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		Program Review Reporting Year: 2016-2017 **Target :** Target Not Met Assessment Data Summary: Winter 2017 – In Winter 2016, enhancements including employment of an MLT Professional Expert was available to provide additional support to students to achieve success on this SLO. The result was 80% of the students were able to accomplish this SLO. Winter 2017, 50% of the students were successful in performing a serial dilution correctly on the midterm and only 25% were successful performing a serial dilution on the final exam. During the Winter quarter, 2017, the MLT Professional Expert was not available to assist students with extra practice on this SLO. (06/27/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In reflecting on this assessment with regard to student performance in Winter 2015, 2016 and 2017, it is clear that students require the extra opportunity to practice and understand serial dilutions in order to be successful at the SLO. The concept of serial dilutions was presented and practiced in Lab 1 and practiced again in Lab 2 and additional practice sessions offered to students before appearing as an exam question on the midterm .	**Enhancement:** Enhancement/Action: Serial dilutions will continue to be introduced early in the Clinical Chemistry laboratory course with increased class laboratory assignments serving as practice for this SLO. A question on the final exam will continue to be included to see if the students have mastered this SLO by the end of the course. The MLT curriculum will continue to include this SLO as this is a technique/skill required for entry level employment in this field. It is imperative that the MLT program continue to employ an MLT Professional Expert or an opportunity to attend an MLT Skills Laboratory to provide students extra practice for this SLO. It has already been proven that with proper enhancements and actions, students can be successful at achieving this SLO. (06/27/2017)
		Program Review Reporting Year: 2015-2016 **Target :** Target Met Winter 2016 – In Winter 2015, only 41% of enrolled students achieved success in this SLO. This quarter, Winter 2016, enhancements were implemented which significantly increased students successfully completing this SLO. (12/04/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In reflecting on this assessment, it is clear that students require the extra opportunity to practice and understand serial dilutions in order to be successful at the SLO. The concept of serial dilutions was presented and practiced	**Enhancement:** Serial dilutions will continue to be introduced early in the Clinical Chemistry laboratory course with increased class laboratory assignments serving as practice for this SLO. A question on the final exam will continue to be included to see if the students have mastered this SLO by the end of the course. The MLT curriculum will continue to include this SLO as this is a technique/skill required

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		in Lab 1 and practiced again in Lab 2 and additional practice sessions offered to students before appearing as an exam question on the midterm .	for entry level employment in this field. It is imperative that the MLT program continue to employ additional help to provide students extra practice for this SLO. Another option would be to open an MLT skills laboratory in which the students can practice this type of technical exercise outside of class to help assist students with this concept and technique. With these enhancements and actions, students will continue to be successful at achieving this SLO. (12/04/2016)
HTEC85A_SLO_3 - Using spectrophotometer and proper techniques, dilute a given standard to establish a calibration curve. Analyze and determine the concentration of an unknown sample using the curve. **SLO Status:** Active	**Exam - Course Test/Quiz -** This SLO was accessed by means of a question on 2/5 quizzes and on both the midterm and final course examination. **Target for Success:** 75%	**Program Review Reporting Year:** 2018-2019 **Target :** Target Met Incorporating our enhancements from 2017 into this SLO, this SLO was accessed by means of a question on 3/7 quizzes, and on both the midterm and the final examination. The data on each exposure to this SLO. Quiz 3 = 32%, Midterm = 54%, Quiz 4 = 51%, Quiz 6 = 86%, final exam = 89%. Student success of this SLO was achieved this quarter. I believe this is due in part to the role of the skills lab opportunity available to students. (04/07/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This SLO will continue to play an important role in HTEC 85A. Understanding calibration curves, standards and unknowns are important concepts as students enter clinical training.	**Enhancement:** This SLO will continue to be used in HTEC 85A. It is imperative that students preparing for a career in the clinical laboratory have an understanding of calibration, standards, and unknowns. The addition of the optional skills lab for students have helped in meeting the target of this SLO. (04/07/2018)
		Program Review Reporting Year: 2016-2017 **Target :** Target Met Assessment Data Summary: Winter 2017 – This SLO was accessed by means of a question on 2/5 quizzes and on both the midterm and final course examination. 61% of the	**Enhancement:** This SLO requires critical thinking and can be a difficult concept for students to understand. In order to be prepared for clinical training, the

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		students achieved the SLO assessment target of at least 75% on the midterm question and 86% of the students achieved the SLO assessment target of 75% on the final examination. (06/27/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In reflecting on this assessment, it is clear that the students are accomplishing the laboratory theory and technic in needed to successfully complete this SLO.	students must have a successful student learning outcome on this concept. Some students need more time and opportunity to grasp this concept and practice this technique. An MLT skills laboratory would be an opportunity for students to work on this concept. Chemistry laboratory exercises will continue to give students the opportunity to practice and paper questions will continue to be included on several quizzes. Date of Implementation: ongoing (06/27/2017)
		Program Review Reporting Year: 2015-2016 **Target :** Target Met Assessment Data Summary: Winter 2016 – This SLO was accessed by means of a question on 2/5 quizzes and on both the midterm and final course examination. 81% of the students achieved the SLO assessment target of at least 75% on the midterm question and 86% of the students achieved the SLO assessment target of 75% on the final examination. (12/04/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** In reflecting on this assessment, it is clear that the students are accomplishing the laboratory theory and technic in needed to successfully complete this SLO.	**Enhancement:** : This SLO requires critical thinking and can be a difficult concept for students to understand. In order to be prepared for clinical training, the students must have a successful student learning outcome on this concept. Some students need more time and opportunity to grasp this concept and practice this technique. Chemistry laboratory exercises will continue to give students the opportunity to practice and paper questions will continue to be included on several quizzes. The employment of the MLT Professional Expert was instrumental in working with students one on one to accomplish this SLO. The employment of such an individual is vital to student success of this

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*

SLO. (12/04/2016)

HTEC 85B:Clinical Chemistry II Laboratory

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC85B_SLO_1 - Practice proper application of OSHA standards **SLO Status:** Active **Planned Assessment Quarters:** 2015-16 4-Spring	**Demonstration -** Using a rubric, students will be observed during laboratory classtime as well as exams demonstrating proper application of OSHA standards. This includes proper use of personal protective equipment, properly disinfecting laboratory counter tops and proper disposal of biohazardous waste. **Target for Success:** 100%	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Using a rubric, students were observed and evaluated during laboratory classtimes and exams regarding proper use of personal protective equipment, disinfecting work areas and biohazardous waste disposal. 100% of students were able to achieve this SLO. (06/29/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 100% safety performance is mandatory for anyone entering a career in laboratory science.	**Enhancement:** enhancement is not needed, but SLO will remain due to the extreme importance of safety in the clinical laboratory. (06/29/2017)
		Program Review Reporting Year: 2015-2016 **Target :** Target Met Using a rubric, students were observed and evaluated during laboratory classtimes and exams regarding proper use of personal protective equipment, disinfecting work areas and biohazardous waste disposal. 100% of students were able to achieve this SLO. (12/16/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Laboratory safety is of utmost concern for anyone participating in clinical laboratory education. For this reason, this SLO will remain active and students will continue to be evaluated and the target will remain at 100%.	**Enhancement:** No enhancements are needed, but it is necessary in this field to continue to access this SLO and continue to expect 100% compliance (12/16/2016)
HTEC85B_SLO_2 - Use troubleshooting skills to identify potential errors in laboratory testing. **SLO Status:** Active **Planned Assessment Quarters:** 2015-16 4-Spring	**Exam - Course Test/Quiz -** During a laboratory practical exam, students will be presented with a specific scenario and asked to identify situations that would lead to errors in laboratory testing **Target for Success:** 75%	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met The midterm laboratory exam included a 12 point question giving students a scenario and asking them to identify which situations in the scenario could lead to errors in laboratory testing. Only 7/11 students (64%) were able to successfully perform this task. (06/29/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Reflecting on this data, it is evident that students need more practice in identifying situations which can lead to laboratory testing errors. We had implemented more practice for the students, but still have not met the target.	**Enhancement:** More practice for students was implemented for students Spring 2017, however the target was still not met. We will continue to offer students more opportunities to practice this skill during classromm laboratory sessions. Support could also be used in the MLT skills laboratory. (06/29/2017)
		Program Review Reporting Year: 2015-2016 **Target :** Target Not Met	**Enhancement:** During laboratory classtimes, instructors will provide

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		The midterm laboratory exam included a 10 point question giving students a scenario and asking them to identify which situations in the scenario could lead to errors in laboratory testing. Only 1/12 students (8%) were able to successfully perform this task. The final exam contained 2 of these types of questions. In combination, 67% of the students were able to score a passing grade on these two questions. (12/16/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** It is evident that students have not mastered the skill of identifying situations that can lead to erroneous laboratory results. More practice is required.	additional opportunities for students to practice identifying situations that may affect laboratory testing results. (12/16/2016)
HTEC 85B_SLO_3 - Students will familiarize themselves with student laboratory instrumentation and will perform specific laboratory testing to generate data. Students will calculate, analyze and draw conclusions based on their data. **SLO Status:** Active **Planned Assessment Quarters:** 2015-16 4-Spring	**Laboratory Project -** Students will use laboratory classtime to familiarize themselves with student laboratory instrumentation. They will spend several laboratory periods generating data from these instruments. Students will then present their data, calculations and conclusions in the form of a laboratory notebook. A rubric will be used to access acceptability of their reports. **Target for Success:** 80%	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Students were expected to learn components and basic operation of 7 laboratory instruments. Students used these instruments to generate data, produce calculations, analysis and conclusions regarding this data as related to quality control, correlation, precision, accuracy, carryover and troubleshooting. A rubric was used to access the students ability to meet this SLO. (06/29/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** 92% of the students met or exceeded the target of 80%, with a class mean notebook score = 87%%. Method validation, taught by generating and analyzing data will continue to be taught as it is a concept MLT students must master before entering clinical training.	**Enhancement:** A powerpoint presentation is given in Lab 2 of the quarter outlining Method Validation. As the instructor, I will revise and improve this lecture and emphasize more clearly the protocol for data generation and analysis. Most points were missed on "conclusions" I will emphasis this more in the weekly laboratory sessions. (06/29/2017)
		Program Review Reporting Year: 2015-2016 **Target :** Target Met Students were expected to learn components and basic operation of 7 laboratory instruments. Students used these instruments to generate data, produce calculations, analysis and conclusions regarding this data as related to quality control, correlation, precision, accuracy, carryover and troubleshooting. A rubric was used to access the students ability to meet this SLO. 100% of the students met or exceeded the target of 80%, with a class mean notebook score = 85%. (12/16/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This is an	**Enhancement:** The instructors will continue to implement this SLO as learning and understanding Method Validation and its processes are a basic part of laboratory testing and prepares students for clinical training. (12/16/2016)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
		important SLO, as it relates all the components in laboratory testing connected with Method Validation. This is typically the last class that students take before entering their clinical training and by being successful at meeting this SLO, they are proven ready to enter the clinical environment.	
HTEC 85B_SLO_4 - Given a tube of patient blood, students will enter patient in student lab LIS system, request tests, print requisition and tube label, run given tests, evaluate results, enter results into LIS system, print result report and answer questions regarding the test results. **SLO Status:** Active **Planned Assessment Quarters:** 2016-17 4-Spring **Outcome Creation Date:** 06/29/2017	**Demonstration -** During the final exam, students will demonstrate their ability to use the LIS system to enter, request and print a requisition for a patient. Run the appropriate laboratory tests and enter results into the LIS in an allotted time. **Target for Success:** 75%	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100% of the students were successful at accomplishing this SLO. Their mean score was 24/26. (06/29/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** It is of utmost importance that students demonstrate success in the SLO before beginning their clinical training. 100% student success is accountable to many laboratory practice session opportunities for students.	**Enhancement:** This was the first year for this SLO. As we move forward, the instructors will enhance this SLO by incorporating more required testing or maybe shortening the timeframe. This will further prepare students for the clinical laboratory where productivity and timing is tracked daily. (06/29/2017)

HTEC 85C:Clinical Chemistry I Lecture

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC85C_SLO_1 - Identify sources of error in clinal laboratory tesing and classify them as pre-analytical, analytical and pot-analytical. **SLO Status:** Active	**Exam - Course Test/Quiz -** Exam question on the first quiz and similar quetions asked again on subsequent exams to assess comprehension of Transmittance vs Absorbance concept **Target for Success:** 75%	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Quiz #2: Question 4. In an assay measuring the transmittance (%T) of a sample spectrophotometrically, readings of 70%T for the highest standard and 98% T for the sample would indicate that the analyte concentration in the sample was_____. Class size: 41 Answered correctly: 15 / 41 = 36.6% Answered incorrectly: 26 / 41 = 63.4% Midterm #1: Question 91. In an assay measuring the transmittance (%T) of a sample spectrophotometrically, readings of 65%T for the highest standard and 48% T for the patient sample would indicate that the analyte concentration in the sample was_____. Class size: 41 Answered correctly: 20 / 41 = 48.8% Answered incorrectly: 21 / 41 = 51.2% Quiz #3: Question 9. An assay measuring the transmittance (%T) of a sample spectrophotometrically follows Beer's Law. The highest standard had a reading of 45%T, while readings of 80%T for the lowest standard. If a patient sample reading was 85%T, this would indicate that the analyte concentration in the sample was _____. Answered correctly: 31 / 41 = 75.6% Answered incorrectly: 10 / 41 = 24.3% Question 10. In an assay measuring absorbance of a sample spectrophotometrically, readings of 0.648A for the highest standard and 0.162A for the lowest standard. If a patient sample reading was at 0.700A, this would indicate that the	**Enhancement:** During the 5 weeks, review of this concept was covered after each exam/quiz. (02/19/2016)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		analyte concentration in the sample was _____. Answered correctly: 35 / 41 = 85.4% Answered incorrectly: 6 / 41 = 14.6% (02/19/2016) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Over the course of 5 weeks, there has been a mastery of the transmittance vs absorbance concept with 85% of the students getting the answer correctly.	

HTEC 85D:Clinical Chemistry II Lecture

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
HTEC85D_SLO_1 - Given patient history and chemistry laboratory testing results identify normal and abnormal results and correlate with possible disease states. **SLO Status:** Active **Planned Assessment Quarters:** 2015-16 4-Spring	**Exam - Course Test/Quiz -** Lecture Midterm I: Students were given case study on a patient with urine results. Lecture Final: Students were given a case study concerning a patient with biliary obstruction to determine which presented lab results were inconsistent. **Target for Success:** 75% correct **Comments/Notes:**	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Lecture Midterm 2: Students were given case study on a patient with liver lab results. The mean score was 95% Lecture Final: Students were given a case study concerning a patient with biliary obstruction to determine which presented lab results were inconsistent: The mean score was 75% (01/12/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The target was met for both midterm and final. This demonstrated that students were able to correctly identify which lab results reflected a biliary obstruction. By the final the students were able to recognize which results would be abnormal in biliary obstruction.	**Enhancement:** Case studies appear to be a good way to get students to think critically and to put assimilate abnormal laboratory results to a disease process. Continuing and perhaps adding to the number of case studies or level of difficulty of the studies may be tried. (01/12/2017)

Assessment: Course/Service Four Column

Dept - (BHES) Nursing

NURS 151:Nursing Laboratory Skills for Fundamental (Non-Acute) Nursing

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS151_SLO_1 - Demonstrate competent administration of nonparenteral medications, aseptic techniques, vital signs and verification of nasogastric tube placement. **SLO Status:** Active **Planned Assessment Quarters:** 2016-17 4-Spring **Outcome Creation Date:** 09/21/2014	**Field Placement/Internship -** Students are skills tested on the stated skills for accuracy, proficiency and safety both in the lab setting and in the clinical setting during supervised patient care. **Target for Success:** Students will perform the skills with 90 % accuracy during first time testing or provision of patient care	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 95% of students were successful with skill performance on their first attempt. (06/09/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Our students in this first quarter of the program are very conscientious in spending time practicing their skills. MOST who were not successful during skill performance attributed it to nerves, and were successful in a subsequent retake.	**Enhancement:** Skills criteria sheets available on the Student Nurse Website were updated. Students will continue to have 'mock' skills testing done by senior nursing students in order to assist in accurate skill performance and reduction of nerves during testing. (06/09/2017)

NURS 152:Nursing Laboratory Skills for Fundamental Acute Nursing

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS152_SLO_1 - Demonstrate competent administration of parenteral medications, sterile procedures, insertion of tubes such as nasogastric tube and chest tubes, use of monitoring devices such as glucometers and telemetry. **SLO Status:** Active **Planned Assessment Quarters:** 2016-17 4-Spring **Outcome Creation Date:** 09/21/2014	**Field Placement/Internship -** Students are skills tested on the stated skills for accuracy, proficiency and safety both in the lab setting and in the clinical setting during supervised patient care. **Target for Success:** Students will perform the skills with 90 % accuracy during the first time testing or provision of patient care	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 85- 90 % of students passed skill testing / performance accurately the first time. (06/09/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** These skills are more advanced than those learned in previous quarter since they relate to skill performance and patients in acute care. Students need to spend more time practicing in order to perform them accurately per the criteria outlined and instruction given.	**Enhancement:** Skills criteria sheets available on the Student Nurse Website were updated. Students will continue to have 'mock' skills done by senior nursing students in order to assist in accurate skill performance an reduction of nerves during testing. (06/09/2017)

NURS 153:Nursing Laboratory Skills for Pediatric and Perinatal Patients

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS153_SLO_1 - Demonstrate advanced assessments related to the pediatric patient and the perinatal patient. **SLO Status:** Active **Outcome Creation Date:** 09/21/2014	**Field Placement/Internship -** Students are skills tested on pediatric assessments for accuracy, proficiency and safety both in the lab setting and in the clinical setting during supervised patient care. **Target for Success:** Students will perform the assessments with 90 % accuracy during the first time testing or provision of patient care.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100 % of students were successful with their assessments, with minimal assistance, on their first attempt. (06/09/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The courses that these assessment skills are utilized in, Pediatric Nursing and Perinatal Nursing, are both six week courses. As such, there is a quick and steep learning curve. Students are keenly aware that they must prepare vigorously in order to be successful in them.	**Enhancement:** Skills criteria sheets available on the Student Nurse Website were updated. Students will continue to have 'mock' skills done by senior nursing students in order to assist in accurate assessment performance. All of the assessment skills related to pediatric and perinatal nursing were recently videotaped by the instructor and are available on the CCC network for students to review at any time. (06/09/2017)

NURS 154:Nursing Laboratory Skills for Care of the Older Adult in an Acute Clinical Setting

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS154_SLO_1 - Demonstrate competency in the management of central intravenous catheter procedures,intravenous push medications, soft restraints and advanced sterile procedures. **SLO Status:** Active **Outcome Creation Date:** 09/21/2014	**Field Placement/Internship -** Students are skills tested on the stated skills for accuracy, proficiency and safety both in the lab setting and in the clinical setting during supervised patient care. **Target for Success:** Students will perform the skills with 90 % accuracy during the first time testing or provision of patient care.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100 % of students were successful with skill performance on their first attempt. (06/09/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Demonstration of the skills on the first day of clinical and providing ample time for practice in the skills lab promoted skill proficiency. Small class cohort enabled easy access to equipment and more one-on-one time spent with each student.	**Enhancement:** Skills criteria sheets available on the Student Nurse Website were updated. Student will continue to have 'mock' skills done by senior nursing students in order to assist in accurate skill performance and redution of nerves during testing. (06/09/2017)

NURS 50:Career Opportunities in Nursing

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS50_SLO_2 - Determine the personal potential for success in the field of nursing based on emotional, physical and intellectual abilites. **SLO Status:** Active **Planned Assessment Quarters:** 2013-14 2-Fall **Outcome Creation Date:** 12/15/2013	**Survey -** At end of course students complete a 2 question survey. 1. the class gave me a better understanding of the nursing profession and the scope of nursing practice. 2. The class gave you a better understanding of the emotional, physical and intellectual abilities to be successful in nursing. **Target for Success:** At least 90% of the students would have a better understanding of what the profession is and does. At least 90% of the students able to identify a combination of factors to be successful as a student nurse and a registered nurse	**Program Review Reporting Year:** 2013-2014 **Target :** Target Met 72 students who finished the course in Fall 2013, all stated yes to the 2 questions on the survey (01/09/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** the students were of various educational backgrounds and were overall appreciative of Nursing 50. Their primary goal was to understand the issues and challenges in the nursing profession and be better prepared to move forward in nursing.	**Enhancement:** 1. Provide actual examples when describing nursing concepts. 2. Continue to use "mock job interviews" with the students 3. Engage students participation during concept presentations (01/09/2014)
	Other - Small Group Discussion **Target for Success:** 100% of students will participate in small group discussion and be able to verbalize potential for success	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met All students completed group reflection discussion and was able to state their own potential for success (06/09/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students were able to meet in small groups and discuss their reasons for wanting to join the nursing profession and identify their own potential for success	**Enhancement:** Continue to have this discussion and monitor (06/09/2017)
NURS50_SLO_1 - Differentiate among the various nursing educational programs both the educational preparation and scope of nursing practice. **SLO Status:** Active **Planned Assessment Quarters:** 2013-14 2-Fall	**Exam - Course Test/Quiz -** Midterm exam **Target for Success:** 70% of students will achieve 75% or higher on midterm and final exams	**Program Review Reporting Year:** 2013-2014 **Target :** Target Not Met 87 students Fall Quarter, 2013 (Section 1, only 1 section offered) Q4 48/87 correct; Q9 77/87 correct; Q10 71/87 correct; Q11 74/87 correct; Q12 59/87 correct; Q13 76/87 correct; Q21 0/87 correct; Q38 54/87 correct; Q39 73/87 correct Questions 4, 12, 21, 38 did not have 75% getting correct answer #4 Technical nurse	**Enhancement:** Suggest more emphasis on BSN requirements, both as entry level and ADN to BSN programs. (01/29/2014)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		#12 requirement for master degree program #21 difference between BSN and other nursing education (poorly worded) # 38 most graduates from types of nursing programs Generally able to identify the requirements for various entry level education programs and how they differ. Students had the most difficulty with BSN programs. (01/15/2014) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Generally able to identify the requirements for various entry level education programs and how they differ. Students had the most difficulty with BSN programs.	
	Exam - Course Test/Quiz - Midterm Exam **Target for Success:** 70% of students will achieve 75% or higher on midterm exam	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met 25 of 64 students achieved score of 75% or higher on midterm exam. (06/09/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This is an introductory course and prerequisite for the nursing program. Many students who take this class are in their first quarter of college, and this is potentially their first college level course. The benchmark of 75% is a nursing department requirement to pass courses, so potentially students are not used to meeting this level in order to pass a course.	**Enhancement:** Incorporate a midterm review session during the class session prior to the midterm. Emphasize the difference various nursing educational programs during lecture. (06/09/2017)

NURS 77 (X-Z):Special Projects in Nursing

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS77_SLO_1 - Achieve a score of 80% or better on sample NCLEX exam. **SLO Status:** Active	**Project -** Student will complete a Special Project contract with the Director. Student will complete on-line NCLEX-style questions on a weekly basis. Student will complete a spreadsheet weekly of number of questions completed, number correct, time spent, special area of questions (ie. Pediatrics, Advanced Medical-Surgical, etc). Students will identify areas of weakness. **Target for Success:** By end of Special Project, student will achieve 80 % on a comprehensive sample NCLEX exam.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Students all achieved well above the 80 % benchmark on the sample NCLEX exam. Students were able to identify not only areas of weakness (ie. Pediatrics, Advanced Medical-Surgical nursing), but also question formats that they found difficult (ie. prioritization, delegation, select-all-that apply, etc). Students reported that the Special Project was a good starting place for their review and study for the NCLEX exams required for licensure once they had completed the De Anza nursing program. (06/10/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** For self-motivated students, the Special Projects class is useful to highlight areas requiring review and remediation for success on the NCLEX exam.	**Enhancement:** Make available more resources for NCLEX-type questions for student use. (06/10/2017)

NURS 81:Fundamental Nursing (Non Acute/Sub Acute Care)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS81_SLO_1 - Incorporate patient teaching into the plan of care for a health-deviation of a non-acute elderly client. **SLO Status:** Active	**Project -** Group teaching plan project **Target for Success:** 100% of students will be able to present project with grade of 80% of higher as defined by rubric	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100% of students were able to present their teaching plan projects in class. Based on the teaching plan rubric, students were able to successfully achieve scores of 90% or higher (06/11/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students are often nervous about speaking in front of people, especially to patients. This assignment allows them to work collaboratively with their group to present a teaching plan, as well as submit a written brochure in front of their peers.	**Enhancement:** Continue to use this assignment, but provide group assignments earlier in the quarter so students have ample time to complete assignment. In an effort to bring technology to the teaching plan assignment, consider changing this assignment to a PowerPoint presentation instead of a poster board presentation. (06/11/2017)
NURS81_SLO_2 - Incorporate cultural assessment as part of a holistic approach to assessment of client biopsychosocial healthcare needs. **SLO Status:** Active	**Other -** Cultural assessment paper **Target for Success:** 100% of students will complete paper with 75% or higher grade as defined by rubric	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100% of students achieved 75% or higher as defined by the rubric. (06/11/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students will choose their own person from a different culture to interview. Prior to their interview, they utilize their culture book and review the culture of their interviewee. By doing so allows them to be prepared on the best approach to use when interviewing them. Which methods for eye contact, body language, etc. are appropriate to use for a person of that culture. Students receive detailed instructions and grading rubric beforehand. However, students struggle with APA formatting required for this paper.	**Enhancement:** Provide sample paper, brief APA workshop prior to start of the assignment. (06/11/2017)

NURS 81L:Fundamental Nursing (Non Acute/Sub Acute Care Clinical)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS81L_SLO_1 - Following college regulations and facility protocols, provide safe and client-centered nursing care for one or two patients in a non-acute care setting. **SLO Status:** Active	**Other -** Demonstrate safe and client-centered nursing care at all times **Target for Success:** 90% of students will meet all objectives on the clinical evaluation tool by end of the quarter	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100% of students met all the objectives on the clinical evaluation tool by the end of the quarter. (06/11/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This is the first clinical rotation in the nursing program and students are often overwhelmed and nervous. Students are observed by the instructor in the clinical setting while providing client-centered care. After 3 weeks in the clinical setting, the midterm evaluation is used to provide verbal and written feedback. This allows the students the opportunity to continuously improve their performance in the specific areas noted by the instructor.	**Enhancement:** Continue to provide written and verbal feedback using the clinical evaluation tool during midterm evaluations. Consider utilizing weekly anecdotal notes for additional feedback. (06/11/2017)
NURS81L_SLO_2 - Using Orem's model of nursing and the nursing process, determine client-specific plans of care. **SLO Status:** Active	**Project -** Daily nursing care plans, documented care plan, and critical thinking worksheet **Target for Success:** 100% of students will obtain >75% on these assignments as defined by the rubric.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100% of students obtained >75% on these projects as defined by their rubric. (06/11/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Once the student starts their clinical rotation, they begin writing intensive nursing care plans for a real patient(s) for the first time. By utilizing care planning resources, providing lectures and PowerPoint references along with a sample care plan for their reference has greatly improved the success of their nursing care plans. However, students continue to struggle with applying theory they learn about care plans to the clinical setting, along with APA formatting.	**Enhancement:** Continue with lectures and reference materials. In an effort to make the connection from theory to clinical easier consider offering case studies along with actual videos of patients prior to starting clinical rotation. Practice care plans on those videos/case studies. Provide a brief workshop on APA format. (06/11/2017)

NURS 81P:Pharmacology I

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS81P_SLO_1 - Using Orem's model of nursing, apply the nursing process to 2 specific groups of medications. **SLO Status:** Active_Pending_Revision	**Exam - Course Test/Quiz -** Students have a weekly quiz, a mid-term exam and a final exam **Target for Success:** 90%	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Of all the students tested 95% achieved the 90% target for this Pharmacology I course. Of those who did not, ALL of them were not generic De Anza Nursing Students (the target population), but were 'outside' students who were not familiar with Orem's model of nursing. The students who did not meet the target for success still passed the class, but with a lower score. (10/24/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The generic nursing students met the target for the Student Learning Outcome. As expected, those students not in our nursing program had difficulty with Orem's model of nursing and its application to the nursing process and medication administration.	**Enhancement:** To better meet the non-generic student needs re: Orem's model of nursing, additional educational materials will be made available to them (text, Power Point, student tutors). In this way they will be given the necessary background to meet the targets for success. (10/24/2018)
NURS81P_SLO_2 - Accurately calculate the correct dose of medication. **SLO Status:** Active **Planned Assessment Quarters:** 2016-17 4-Spring	**Exam - Course Test/Quiz -** Students will be given 2 math quizzes per quarter for medication calculation. **Target for Success:** Students will achieve 75% on math calculations for medication calculation.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met All students surpassed the target of 75% correct on math calculations. (06/15/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Instruction for math calculation is limited in this course due to the heavy content level. Despite this, students were well prepared to do the calculations.	**Enhancement:** Encourage students who have difficulty with math calculations to seek instructor for additional help. Make available resources available in the nursing lab to assist with math calculations (on-line question banks, test bank books). Encourage students to work with peer tutors on math calculations (06/15/2017)
NURS81P_SLO_3 - Demonstrate retention of pharmacologic concepts for non-acute patient conditions. **SLO Status:** COR_Update_Necessary **Planned Assessment Quarters:** 2016-17 4-Spring	**Exam - Standardized -** weekly quizzes, computerized final exam **Target for Success:** Students will achieve 75% on exam and test questions related to pharmacology concepts for non-acute patient conditions.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 10 % of students did not achieve the passing grade. Of these students, none were our generic nursing program students, but were students from other colleges. (06/15/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Pharmacology I is taken by nursing students at De Anza College and a few students from other college. Students from the other	**Enhancement:** I will encourage students to utilize instructor office hours for clarification of concepts. I will encourage students to utilize peer tutors from upper level nursing students. I will encourage students to use study groups with other nursing students. (06/15/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		colleges don not have any nursing background which makes it difficult for them to understand pharmacological conditrions for patient-related conditions.	

NURS 82:Acute Fundamentals/Medical Surgical I

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS82_SLO_1 - Apply correct nursing care to pre and post op patients. **SLO Status:** Active	**Exam - Course Test/Quiz -** Midterm examination with NCLEX style questions **Target for Success:** 80% of students will achieve 75% or higher	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met 95% of students achieved 75% or higher on each of the two midterm examinations. (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** While the students overall did very well, the common questions that were missing involved application of theoretical concepts. This is a common occurrence in this course as it is the first time the students are answering NCLEX style questions	**Enhancement:** Continue to utilize NCLEX style questions at end of lecture to review concepts and guide students through how to best answer these questions. (06/08/2017)
	Project - Group Project **Target for Success:** 100% of students will achieve 75% or higher on group project as defined by rubric		
NURS82_SLO_2 - Plan apropriate nursing care for patients with fluid and electrolyte imbalances. **SLO Status:** Active	**Exam - Course Test/Quiz -** Midterm examination with NCLEX style questions **Target for Success:** 80% of students will achieve 75% or higher	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 95% of students obtained 75% or higher on midterm examination covering fluid and electrolyte imbalances. Average score on exam was 83% (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Fluid and electrolyte imbalances is a notoriously difficult content area to master. Students often struggle with differentiating between the different imbalances as many of the signs and symptoms are similar. Students also struggle with prioritization and knowing which intervention to implement first.	**Enhancement:** Utilize online resources and put YouTube vidoes or other references on Canvas to provide additional avenues for learning. (06/08/2017)
	Other - Case Studies **Target for Success:** 80% of students will achieve 75% or higher		

NURS 82L:Acute Fundamentals/Medical Surgical I (Clinical)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS82L_SLO_1 - Demonstrate the safe administration of parenteral medications. **SLO Status:** Active	**Demonstration -** In clinical, demonstrate safe administration of parenteral medications under the supervision of instructor **Target for Success:** 100% of students will achieve with 100% accuracy by end of quarter	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100% of students achieve approximately 90-95% accuracy in parenteral medication by the end of the quarter. Some coaching still required (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students do well with the skills of administering the parenteral medication (via subcutaneous, intramuscular, or intravenous piggyback), but will sometimes forget the overall concept of safe medication administration and fail to identify patient, educate, or utilize bar code scanning without being prompted by instructor.	**Enhancement:** Incorporate demonstration of entire medication administration process during on-campus clinical days so students are able to watch instructors do a "perfect medication pass". Record "perfect medication pass" and post video to instructor website. (06/08/2017)
NURS82L_SLO_2 - Demonstrate the assessment of a pre or post op patient using Orem's theory. **SLO Status:** Active	**Demonstration -** Simulation, demonstration during clinical time **Target for Success:** 100% of students will demonstrate appropriate assessment with 90% by end of quarter	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100% of students are demonstrating appropriate assessments with 85-90% accuracy. (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students continue to struggle with creating a "flow" when completing head to toe assessments. They often remember aspects of the assessment that they missed once they leave the room.	**Enhancement:** More time in the lab using high fidelity simulation and immediate feedback from instructor. (06/08/2017)
NURS82L_SLO_3 - Demonstrate the safe and competent care of one patient in the acute care setting. **SLO Status:** Active	**Other -** Daily clinical paperwork **Target for Success:** 100% of students will achieve 75% or higher as defined by rubric on daily clinical paperwork by end of quarter		
	Project - Concept Care Map **Target for Success:** 100% of students will achieve 75% or higher as defined by rubric	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100% of students achieved 90% or higher on concept maps as defined by rubric. (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Many students initially do not like creating concept maps as they can be viewed as chaotic and unorganized. When they are able to understand the idea and visualize how concept maps help to connect ideas and see the bigger picture,	**Enhancement:** Utilize more concept maps during post-conference at clinical. Have a student give report on their patient and the group will create a concept map on the white board. (06/08/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		many students really enjoy using them.	

NURS 82P:Pharmacology II

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS82P_SLO_1 - Students will integrate pharmacological concepts in the clinical setting. **SLO Status:** Active_Pending_Revision **Planned Assessment Quarters:** 2016-17 4-Spring	**Other -** Students will develop a plan of care for a patient in the clinical setting, which includes pharmacological management of condition: The plan of care should include: medication classification, specific action, expected patient outcomes, and patient teaching priorities. **Target for Success:** Comprehensive patient care plan including mediation management will be evaluated for: complete documented information; pharmacologic attributes specific to their patient; relevant patient teaching information. Medication management care plan will be evaluated per a rubric.	**Program Review Reporting Year:** 2017-2018 **Target :** Target Met All students were able to complete a thorough and patient-specific medication management plan for an assigned clinical patient. All scored in the 90% per the rubric. (10/24/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students appreciated the 'real world' application of pharmacologic concepts to assigned patients. Comments from them reported that they stated they could understand the important role medications had in managing specific patient conditions. Continue to use this assignment.	**Enhancement:** The lead instructor is considering enhancing this clinical-related pharmacology assignment by having students present their findings to classmates. In this way they will share their information and practice their teaching techniques simultaneously. (10/24/2018)
NURS82P_SLO_2 - Students will apply theoretical knowledge about medication interactions during examinations and quizzes. **SLO Status:** Active_Pending_Revision **Planned Assessment Quarters:** 2016-17 4-Spring	**Exam - Course Test/Quiz -** Situation and Condition-specific questions related to medication interactions. **Target for Success:** Students will achieve 85-90% on tests and quizzes for questions related to application of theory of medication interactions to patient situation type questions.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Students routinely met or exceeded the goal of 85-90% on test questions related to medication interactions. (10/24/2018) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** With all instruction for medications, students are taught to assess and reassess for adverse drug reactions and interactions. There is SO much information related to this topic, that the PRIMARY focus we want students to know is what to look for (assessment) related to interactions. Students reported feeling comfortable in doing this.	**Enhancement:** This SLO could be paired with SLO_1 for student presentations on medication management for a specific patient. Their patient teaching could be expanded to include potential interactions and how to assess for them. (10/24/2018)
NURS82P_SLO_3 - Student will develop a teaching plan for medications for a client newly diagnosed with a specific pathology,	**Project -** Students will write an analysis paper on medication covered in Pharmacology II. **Target for Success:** Students will	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met All students met the criteria for passing the assignment per the rubric. Some students excelled, going over and above	**Enhancement:** Students will be encouraged to see instructor during office hours if they have any questions about the nature of

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
such as diabetes, infection. **SLO Status:** COR_Update_Necessary	meet the criteria of the assignment evaluation rubric with 75% accuracy.	the expectations. (06/15/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students are familiar with using rubrics as guidelines for assignment evaluations, and as such, include the required information in the assignment. Student assignment guidelines are clearly outlined at the start of the course.	the assignment. Students will be encouraged to have a peer review their assignment to preview it for grammar, accuracy and content should there be any questions. (06/15/2017)
NURS82P_SLO_4 - Students will integrate pharmacological concepts in acute patient conditions. **SLO Status:** COR_Update_Necessary **Planned Assessment Quarters:** 2016-17 4-Spring	**Exam - Course Test/Quiz -** Students will achieve 75% on pharmacological concepts related to acute patient conditions. **Target for Success:** Students will achieve 75% on exam questions relating to pharmacological concepts of acute patient conditions.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met All but one student (out of 68) did not meet the passing criteria of 75%, (06/15/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Student performance in application of pharmacological concepts improves from the previous Pharmacology course because they are now comfortable with instructor teaching style and expectations.	**Enhancement:** Students will be counseled to attend instructor office hours for additional help as necessary. Students will be referred to peer tutors for additional assistance. Student performance will be scrutinized early in the quarter in order to detect areas of weakness. (06/15/2017)

NURS 83:Perinatal Nursing

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS83_SLO_1 - Apply the theoretical knowledge of pregnancy, birth physiology and perinatal care to specific patient care situations. **SLO Status:** Active	**Exam - Course Test/Quiz -** Midterm and comprehensive final		
	Exam - Course Test/Quiz - Case Study Quizzes **Target for Success:** 100% of students achieve >75% combined score	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100% of students achieved score of at least 75% on five case study quizzes (06/09/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** We were pleased with the level of success. Students had some valid questions about some of the items, but overall felt that the case studies were very helpful.	**Enhancement:** All case studies are being re-vamped for 2017-2018 to include up do date information and evidence. (06/09/2017)

NURS 83A:Pediatric Nursing

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS83A_SLO_1 - Compare the physiologic, cognitive, and psychosocial stages of a toddler and a preschooler. **SLO Status:** Active	**Exam - Course Test/Quiz -** Midterm **Target for Success:** Students will achieve 75 % on their midterm exam.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Students achieve 73 - 86 % on their exam questions on development. (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Pediatric growth and development information is vast in its scope and application. This is taught in week 2 of a 6 week course and tested primarily on the week 3 midterm. It is an intense and compacted course, and students do well to internalize the information in such a short time.	**Enhancement:** I will incorporate comparison charts for developmental differences of pediatric patients into my website offerings. (06/08/2017)
	Other - Case Studies **Target for Success:** Students will achieve 75 % on the questions following the case studies.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met All students completed on-line pediatric case studies, all of which include developmental data and questions. Students read the case studies AFTER reading the assigned readings, listening to lectures and participating in classroom activities. Initial attempts to answer the questions garner scores between 70 and 85 %. (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The case studies are a useful tool in assisting the students to assess their own level of understanding. Also, on-line learning is a format that my students are very comfortable with and report that they like. I encourage students to complete the on-line case study questions as many times as they like, until they master the information.	**Enhancement:** The text I require now has an on-line component that utilizes case study format for evaluation of learning. I will recommend students continue to use this format as a learning tool. (06/08/2017)
NURS83A_SLO_2 - Differentiate the common etiologies of morbidity and mortality in children. **SLO Status:** Active	**Exam - Course Test/Quiz -** Examination questions **Target for Success:** Students will achieve 75 % on questions of morbidity and mortality on exams.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Questions on my exams indicate that students are very competent in understanding concepts of morbidity and mortality in children, achieving greater than 75 %. (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students seem to find this area of pediatric nursing the easiest to comprehend and internalize since these are the patient conditions that they see in the hospital and are involved in their care. The 'real' life situations not only makes the	**Enhancement:** I will use an in-class activity for frequently seen illnesses in pediatric patients to compare and contrast causes, manifestations and nursing care, in order to facilitate internalization of information. (06/08/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	Other - Case Studies **Target for Success:** Students will achieve 75 % on case study follow-up questions on morbidity and mortality in children.	information applicable, but relevant to their practice. **Program Review Reporting Year:** 2016-2017 **Target :** Target Met Completion of assigned on-line case studies related to morbidity and mortality issues in children has helped my students learn the concepts well. Their exam questions on these topics are well answered across the board. (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** On-line case studies really are a method of learning that my students prefer. I will continue to use them.	**Enhancement:** I will look for other on-line sources of case studies related to these topics for my students. I will incorporate case studies into in-class activities. (06/08/2017)

NURS 83AL:Pediatric Nursing (Clinical)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS83AL_SLO_1 - Construct a concept map for a child diagnosed with head trauma from a motor vehicle accident (MVA). **SLO Status:** Active_Pending_Revision	**Project -** Create concept map	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Students all presented their concept maps which include all aspects of patient care data based on: lab values, patient condition, potential complications, changing signs and symptoms, and nursing/ medical interventions. All students were able to complete the assignment at a basic level, with some students providing a more comprehensive mapping of the patient condition. (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Not all students were able to care for a patient who had suffered a head injury, and therefore, found the assignment more difficult as they could not apply information to an experienced clinical situation.	**Enhancement:** I will continue to use concept mapping as a tool for learning, but I will assign topics/ patient conditions that the students will more likely encounter during their clinical rotation (eg. appendicitis, asthma, burns). This will better facilitate the transfer of knowledge to the clinical setting in a more 'relevant' manner. (06/08/2017)
NURS83AL_SLO_2 - Demonstrate a focused physical assessment of an infant admitted with respiratory distress. **SLO Status:** Active	**Demonstration -** Demonstrate assessment on client in clinical setting under supervision of instructor	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met All students were able to satisfactorily demonstrate an assessment of a pediatric patient admitted with respiratory distress. Not all patients were infants, as the patient population varies, but the process of doing a systematic and focused assessment was completed within the appropriate parameters. (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Some students had an easier time doing the assessment than others based on the reaction of the patient. (ie. some patients are more cooperative than others depending on their age, stranger anxiety, experience with children, etc). All found the one-on-one assisted assessment a valuable learning experience.	**Enhancement:** Time permitting, I would incorporate performing a focused assessment on the simulation manikin in the nursing lab as a tool for learning. (06/08/2017)
	Other - Daily clinical paperwork		
NURS83AL_SLO_3 - Construct a concept map for a child diagnosed with a common medical illness. **SLO Status:** COR_Update_Necessary **Planned Assessment Quarters:** 2016-	**Project -** Students will construct a concept map for a child with a medical diagnosis that they encountered in the clinical setting. They will present their concept maps	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Students presented their concept maps which include all aspects of patient care based on: lab values, patient condition, potential complications, changing signs and	**Enhancement:** I will continue to use concept mapping as a tool for learning. Students like it as a learning tool and so do I. Keeping the topic open, will facilitate

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
17 4-Spring	to each other under instructor supervision, thus enhancing peer knowledge levels and practicing their teaching skills. **Target for Success:** Present a complete and concise map of patient condition and required nursing care.	symptoms, and nursing/ medical interventions. (06/21/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** All students were able to complete the assignment at a basic level, with some students providing a more comprehensive mapping of the patient condition.	transfer of knowledge from actual patient situations, making the learning 'real' and relevant for students. (06/21/2017)

NURS 83L:Perinatal Nursing (Clinical)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS83L_SLO_1 - Employ the nursing process in assisting clients to meet universal, developmental and heath deviations self- care requisites during the perinatal period. **SLO Status:** Active	**Other -** Daily clinical paperwork	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met All students spent a day in NICU and created a care plan for an infant, including nursing diagnosis, short and long term goals, interventions and evaluations/modifications. (06/09/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** All students were very successful in finding appropriate nursing diabnoses and the care plans instigated good discussions in postconferences.	**Enhancement:** Consider adding another care plan for students in a bigger group when not all students can go to the NICU. (06/09/2017)
NURS83L_SLO_2 - Identify QSEN ("Quality and Safety in Education of Nurses") KSA factors (knowledge, skill and attitude areas) in at least two clinical days. **SLO Status:** Active **Planned Assessment Quarters:** TBD	**Portfolio Review -** Students will write reflections of their clinical days corresponding to QSEN KSAs. **Target for Success:** 100 % of student will write QSEN-based reflections which are specific for their clinical day experiences.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met All students in the Spring 17 (first six weeks) group wrote QSEN-based reflections that were meaningful and specific. (06/09/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The assignment made students re-examine their clinical day from the perspective of QSEN and allowed them to evaluate their behavior in the context of nursing excellence.	**Enhancement:** I will decrease the number of QSEN KSAs that students will need to address from 3 to 2 as it seems to be sufficient for students to evaluate their own performance from the QSEN perspective. (06/09/2017)

NURS 83P:Pharmacology III

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS83P_SLO_1 - Incorporate medication evaluation and patient/ family teaching into care of the maternal and child population patients. **SLO Status:** Active	**Project -** Group teaching plan	**Program Review Reporting Year:** 2015-2016 **Target :** Target Met Per the rubric used for evaluation, students all achieve 17-20 points out of a possible 20. (06/07/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students do not always like group activities due to differing personalities, outside schedules and personal strengths. By allowing them to self-select their own groups, I hopefully have minimized some of this stress.	**Enhancement:** I will make the assignment known at the first class meeting so students can plan their schedules accordingly. I will make myself available during every office hour to answer any questions that might arise due to the project. I will encourage the students to include this teaching project on their resumes, since patient teaching is such an important part of patient care. (Sometimes if they see the 'future' value in an exercise or project, it seems less odious). (06/07/2017)
NURS83P_SLO_2 - Accurately calculate the correct doses of medications for the maternal and child populations. **SLO Status:** Active	**Exam - Course Test/Quiz -** Quizzes, midterm, final exam	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Students routinely achieve 80 % or higher on the calculation questions for medications for maternal and child populations. (06/07/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Some students really are math phobic. But accurate medication calculations, especially for special patient populations, can make the difference between life and death. I feel the efforts taken to teach these specific math calculations have made the students safer nurses. The experience of USING the math calculations in the clinical setting during their pediatric rotation has reinforced the enormity and seriousness of the task, and the importance of students to develop this skill.	**Enhancement:** I will include extra practice math calculation questions on my webpage, which are more clinically -based math questions of medications frequently used in their patient care. I can have impromptu pharmacology math 'brown bags' should there be students needing extra attention. (06/07/2017)

NURS 83PL:Pharmacology III Laboratory

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS83PL_SLO_1 - Following universal precautions and nursing standards of care, successfully insert, secure and maintain six (6) intravenous catheters. **SLO Status:** Active	**Demonstration -** Demonstrate six (6) venipunctures, three (3) butterflies and three (3) angiocath/cathlons, securing and stabilizing the catheters in appropriate manners using the principles of client safety and aseptic technique	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met By the end of the quarter, all students were able to easily insert and stabilize at least 6 catheters correctly, following principles of asepsis. (06/07/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students were nervous at the start of the class, and many videotaped the demonstrations for later use. By the end of the class, the procedure became routine like any other practiced skill.	**Enhancement:** I typed out the procedure steps for students to follow. I videotaped the procedure while the steps were read. (the videotapes will be made available on my website). I started to play classical music during the lab procedure- students have commented that they have found it soothing. i plan to use it during every lab. I made more practice kits that students can utilize to practice the skill during open lab hours. (06/07/2017)
	Laboratory Project - Under direct supervision of instructor, insert and secure 6 intravenous catheters on simulated arms using CDC approved methods of universal precautions and nursing standards of care. **Target for Success:** By the end of the course and following 12 weeks practice, students will become proficient in this skill.		
NURS83PL_SLO_2 - Following OSHA protocols, maintain an injury-free environment during intravenous insertion and blood-draw procedures. **SLO Status:** Active	**Demonstration -** Demonstrate six (6) venipunctures, three (3) butterflies and three (3) angiocath/cathlons, securing and stabilizing the catheters in appropriate manners using the principles of client safety and aseptic technique	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Students were able to safely perform the skills of IV insertion and blood draw with 100% safety. No injuries or near injuries to report. (06/07/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I have impressed upon the students the absolute need for safety when dealing with Bloodborne pathogens and needles in the lab (and clinical) setting.	**Enhancement:** I have started to use a video demonstrating IV insertion which uses some bad techniques. It stimulates a discussion once students can identify the incorrect procedures. They have reported it helpful. I will use it in all future classes. (06/07/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	Laboratory Project - Utilizing professional and OSHA protocols, students will insert intravenous catheters and draw blood on simulated patient arms. **Target for Success:** Students will maintain a 100% injury free environment while performing blood draws and intravenous insertions on simulated arms.		

NURS 84:Medical/Surgical II (Care of the Older Adult)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS84_SLO_1 - Apply legal and ethical principles to an ethical dilemma. **SLO Status:** Active **Planned Assessment Quarters:** 2012-13 4-Spring **Outcome Creation Date:** 04/08/2013	**Other -** Three page dilemma paper, evaluated by grading rubric. **Target for Success:** Using grading rubric, 100% of students to achieve a minimum of 70% of total points, or 28 points out of a possible 40 points.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100% of students achieved the target, with the highest score of 40 and the lowest score 35 points. (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students choose from a number of ethical dilemmas available, or can choose to develop a dilemma they experienced in their clinical coursework (subject to instructor approval). Students receive detailed instructions, grading rubric, and have an example paper to reference as desired. These resources, as well as the rigorous admission criteria, seem to contribute to a high rate of success on this SLO.	**Enhancement:** I will add a culture component to reflect the De Anza College commitment to equity. (06/08/2017)
NURS84_SLO_2 - Utilizing the nursing process, analyze and apply principles of normal aging in designing a plan of care for an older adult experiencing a chronic health problem. **SLO Status:** Active	**Other -** Group work and presentation **Target for Success:** 80% of student groups will demonstrate application of age-related changes in a group share of a plan of care for one of the following: prostate cancer, complications of fracture, and/or fall prevention.		
	Other - small group discussion **Target for Success:** 80% will be able to design a plan of care		
	Other - small group discussion followed by large group summary **Target for Success:** 80% will be able to design a plan of care for older adult	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met Of the 17 students involved with the small groups and the summary 100% were able to design a plan for an older adult with a chronic health problem (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** The refection includes deciding to break case study work up into "chunks" and assigning each group certain questions instead of having each group complete all questions. Then large group shared all questions at the end. This makes the activity better fit into the class period, and allow more discussion and collaboration in the larger group, and leads	**Enhancement:** Will continue to use this same format of several small group discussion. (06/08/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		to a more complete plan of care. This has worked better in the latter quarters.	

NURS 84C:Critical Thinking in Nursing

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS84C_SLO_1 - Correctly apply critical thiking skills to patient care scenarios. **SLO Status:** Active	**Exam - Course Test/Quiz -** Short-answer quiz, evaluated by grading rubric **Target for Success:** 100% of students will be able to correctly write an inference	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met 14 or 17 students (82%) were able to correctly write an inference. The writings of the other 3 students demonstrated understanding of the concept of an inference, but their language was less precise. (06/11/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** All students were able to understand the concept of an inference, but not all were able to word it correctly. Perhaps we may have a higher success rate if I break down the task into two components: (a) conceptual understanding, and (b) precise language desired	**Enhancement:** I plan to revise the SLOAC quiz to a hybrid-type quiz: 4 questions, multiple-choice, that address each of the two areas ("a" and "b" above) followed by one short-answer prompt directing the student to correctly write an inference based on a patient description (i.e., testing the "overall" understanding). (06/11/2017)

NURS 84L:Medical/Surgical II (Care of the Older Adult) - Clinical

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS84L_SLO_1 - Apply age-related changes and developmental tasks to formulate a plan of care for an older adult. **SLO Status:** Active **Planned Assessment Quarters:** 2012-13 4-Spring	**Other -** Written developmental assessment and applying age-related assessment to plan of care. Evaluated by rubric. **Target for Success:** 100% of students will achieve passing rubric score within 4 submissions.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100% of students achieved a passing rubric score within 2 submissions. All but one student achieved a passing score within 2 submissions. (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students on track but some need reminders. Need to emphasize the application of internal age-related changes and not just wrinkles and gray hair! Most often overlooked changes are in the cardiovascular system and musculoskeletal system. Also, some students have difficulty describing the older adult's progression in their developmental stage (Erikson's).	**Enhancement:** Guidelines and examples will be put up on instructor website (06/08/2017)
	Project - Incorporate age-related changes on written critical thinking worksheet **Target for Success:** Achieve 100 % completion within in 2 attempts		
NURS84L_SLO_2 - Analyzes comprehensive assessment data to identify real problems and predict and minimize potential problems. **SLO Status:** Active	**Other -** Written assignment: Critical thinking worksheet developed utilizing actual clinical experience and patient data. Evaluated with grading rubric. **Target for Success:** 100% of students will demonstrate achievement within 2 submissions of written assignment.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100% achieved. One student required 2 submissions and received coaching by instructor between submissions. (06/08/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students struggle with this assignment. It is the first time they are required to gather and analyze comprehensive patient data. However, most meet grading criteria. Students say that having an example to use as a resource and seeking instructor input/proofreading before assignment is due helps. One student requested and received a tutor to work with on the assignment.	**Enhancement:** Guidelines and examples will be put up on instructor website (06/08/2017)

NURS 85:Advanced Medical-Surgical Concepts

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS85_SLO_1 - Apply the nursing process for adult clients with major respiratory illnesses. **SLO Status:** Active	**Exam - Course Test/Quiz -** Two in-class exams, standardized final exam and class discussions. **Target for Success:** 100% of students will achieve at least 75% cumulative on exams.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met The target was met. The assessment methods proved to be effective. Average grade for in-class assignments was 86.3% with the median grade at 85, which is well above the minimum passing grade of 75%. (06/10/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Course metrics were shared with the program director. Course evaluations were collated. As per course evaluations, student felt both challenged and supported. Exam results were analyzed using point bi-serial statistical analysis. Due to low enrollment, exam data were collected over several quarters to have a large sample and conduct a more robust analysis. Students generally struggled with the amount of information presented in the course. Examination of the course content over six academic terms revealed a significant content drift. In terms of evaluation, the students struggled with the items evaluating higher levels of knowledge (application, analysis and synthesis). The faculty of record develop decision making tool to help students perform at higher level. The tool proved to be effective.	**Enhancement:** The course content will be re-evaluated to scale back the amount of required readings and prevent the content drift. The evaluation will be scaled to include one midterm exam and a standardized final test. In order to continue assisting students with exam taking strategies and facilitate formative evaluation, additional two take-home exams will be introduced. (06/10/2017)
NURS85_SLO_2 - Apply the nursing process for adult clients with major cardiac disease. **SLO Status:** Active	**Exam - Course Test/Quiz -** Two in-class exams, a case study, a take-home ECG exam, standardized final examination and class discussions. **Target for Success:** 100% of students will achieve at minimum of 75% cumulative on exams, and successful completion of assigned case study.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met The overall target was met. The assessment methods proved to be effective. Average grade for in-class assignments was 86.3% with the median grade at 85, which is well above the minimum passing grade of 75%. All students completed take home EKG test with a grade > 90 %. (06/10/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Course metrics were shared with the program director. Course evaluations were collated. As per course evaluations, student felt both challenged and supported. As for SLO 1, the exam results were analyzed using point bi-serial statistical analysis. Due to low enrollment, exam data were collected over several quarters to have a large sample and	**Enhancement:** The course content will be re-evaluated to scale back the amount of required readings and prevent the content drift. The evaluation will be scaled to include one midterm exam and a standardized final test. In order to continue assisting students with exam taking strategies and facilitate formative evaluation, additional two take-home exams will be introduced. (06/10/2017)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
		conduct a more robust analysis. Students generally struggled with the amount of information presented in the course. Examination of the course content over six academic terms revealed a significant content drift. In terms of evaluation, the students struggled with the items evaluating higher levels of knowledge (application, analysis and synthesis). The faculty of record develop decision-making tool to help students perform at higher level. The tool proved to be effective.	
NURS85_SLO_3 - Apply the nursing process for adult clients with complications of diabetes and acute renal disease. **SLO Status:** Active	**Exam - Course Test/Quiz -** Two in-class exams, a standardized final exam and class discussions. **Target for Success:** 100% of students will achieve at least 75% cumulative on exams.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met The overall target was met. The assessment methods proved to be effective. Average grade for in-class assignments was 86.3% with the median grade at 85, which is well above the minimum passing grade of 75%. (06/10/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Course metrics were shared with the program director. Course evaluations were collated. As per course evaluations, student felt both challenged and supported. As for SLO 1 & 2, the exam results were analyzed using point bi-serial statistical analysis. Due to low enrollment, exam data were collected over several quarters to have a large sample and conduct a more robust analysis. Students generally struggled with the amount of information presented in the course. Examination of the course content over six academic terms revealed a significant content drift. In terms of evaluation, the students struggled with the items evaluating higher levels of knowledge (application, analysis and synthesis). The faculty of record develop decision-making tool to help students perform at higher level. The tool proved to be effective.	**Enhancement:** The course content will be re-evaluated to scale back the amount of required readings and prevent the content drift. The evaluation will be scaled to include one midterm exam and a standardized final test. In order to continue assisting students with exam taking strategies and facilitate formative evaluation, additional two take-home exams will be introduced. (06/10/2017)

NURS 85A:Psychiatric/Mental Health Nursing (Theory)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS85A_SLO_1 - Apply own cultural background to concepts of mental health and mental illness. **SLO Status:** Active	**Other -** 1-2 page paper examining mental health from their own cultural perspectives. The paper is pass/fail. **Target for Success:** 100% (Students are able to re-do the paper if not satisfactory)	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100 percent of students have written the paper without a "redo" except for one student who wrote a general paper about culture and did not reference any "own cultural background or perspectives". This student was successful on the second attempt (06/15/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This assignment is very satisfactory as it continues to be a successful way to promote student awareness of their own cultural perspectives.	**Enhancement:** Continue as is. (06/15/2017)
NURS85A_SLO_2 - Design a critical thinking component in relation to the nursing care of a patient with a given psychiatric diagnosis. **SLO Status:** Active	**Project -** Group project **Target for Success:** 85% of students will be successful	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met 100 percent of students participate but "0" percent are successful (06/16/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** This remains a valid and important method to assess this SLO but clearly it is not working. Clearly more needs to be done to improve student success on this SLO.	**Enhancement:** I will evaluate and reconsider what the appropriate expectation is for students to (a) know the definition of a critical thinking question and (b) how to design or "come up with" a critical thinking question for a case study. These will be communicated to students. (06/16/2017)
NURS85A_SLO_3 - Demonstrate knowledge of Alcoholics Anonymous meetings and identify professional implications for the nurse. **SLO Status:** Active	**Other -** Attend AA meeting and submit typed individual activity report	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 100 percent of students are "technically" successful (06/16/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** My expectation is that students will recognize that professional implications include referring a patient to AA when appropriate. I am disappointed when many of them don't recognize this role of the nurse.	**Enhancement:** I will modify the format for reporting on the AA meeting to include a specification for the student's awareness of and/or willingness to refer the patient to AA. (06/16/2017)

NURS 85AL:Psychiatric/Mental Health Nursing (Clinical)

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS85AL_SLO_1 - Demonstrate the use of the nursing process, from assessment through evalutation, as applied to a patient with a psychiatric diagnosis. **SLO Status:** Active	**Other -** Students complete a comprehensive biopsychosocial assessment of each assigned patient and based on the assessment they develop a nursing care plan with nursing diagnoses, objectives, interventions and evaluations for each nursing diagnosis. **Target for Success:** Target for Success: 90% completion rate for each phase of the nursing process without necessity of a "re-do". Current success rate is 75%.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met Thirty percent of students need at least one redo. Ten percent of students need two or even three redo's. (06/16/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Students vary greatly in their writing and assessment skills. I work with each student as needed in order to bring them up at least to a minimum level of success on this SLO. Some need far more than others to reach a minimum standard of success.	**Enhancement:** I will continue to work with each student individually to the degree needed to achieve success. (06/16/2017)
NURS85AL_SLO_2 - Identify concepts that link learning in the clinical setting to knowledge gained from the course textbook. **SLO Status:** Active	**Other -** Students fill out a form each week that I designed entitled "Clinical Conference Planning Form" whereby they identify and describe two theory course (Nsg 85A) concepts from the text that they have observed/experienced during their 85AL clinical experience. **Target for Success:** Target for Success: 95% of students accurately identifying course concepts and writing descriptive clinical examples of each.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met 100 percent of students complete the activity describing their experiences but 60 percent are able to describe the theoretical concept. (06/16/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** I have been accepting the fact that students don't always identify the concept and I even write the concept for them for what they have described.	**Enhancement:** Make students more accountable for recognizing the concept for the clinical event described on the form. Allow one re-do for those who don't name the appropriate concept. (06/30/2020)
NURS85AL_SLO_3 - Analyze own personal responses to selected one-on-one or group therapy patient interactions. **SLO Status:** Active	**Other -** Each week of the course, students monitor their own personal subjective responses to clinical experiences and then they select one experience and write a brief analysis of their personal feeling/response. The analysis includes what they might approach similar experiences in the future.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Not Met Fifty percent success. (06/16/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Ten percent of students are asked to do a re-do due to severe underperformance on this SLO. Ten percent of students do an excellent job. Eighty percent of students are somewhere in between.	**Enhancement:** Devise a better way to explain the exercise to the students. Modify the format to be followed to reflect a better description of the expected outcome. No longer accept a wide range of responses that may not achieve the objective. (06/30/2020)

Student Learning Outcomes (SLOs)	Assessment Methods	Assessment Data Summaries	Enhancements
	Target for Success: Target for Success: 95% achievement of being able to recognize and state a personal emotion/feeling and analyze a possible reason for having experienced that emotion and then being able to articulate a new approach to future similar clinical experiences.	I don't believe all of the students understand the purpose of the assignment even though it is explained in orientation. I have been accepting a wide range of responses that don't truly achieve the purpose of this SLO.	

NURS 85L:Advanced Medical-Surgical Clinical

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS85L_SLO_1 - Analyze the basic and comprehensive assessment of acutely ill adult client to determine the appropriate nursing care. **SLO Status:** Active	**Presentation/Performance -** Daily assessment sheets for every assigned patient, four independent clinical activities, and midterm and final evaluations. **Target for Success:** 100% of students receive overall 'Satisfactory' for the course.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met The overall target was met. Students were evaluated using a standardized evaluation tool that looked into multiple dimensions of nursing practice. (06/10/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Course data were shared with the department faculty in faculty meetings and weekly with other med-surg instructors. Students agreed that the patient assignments were challenging and that they required high levels of application and integration of knowledge. Overall, the student rated their clinical experiences as satisfactory and they noted that there was correlation between the classroom content and clinical practicums. Students struggled with the amount of patient data required for the safe management of care. In addition, daily assessment sheets were organized using Orem's model, which students did not find useful.	**Enhancement:** The daily assessment sheet will be adjusted to reflect the move from Orem's model to the systems approach to patient assessment. Additional clinical partnerships will be explored with the existing clinical partners. New clinical partners will be approached in order to provide students with a variety of experiences. (06/10/2017)
NURS85L_SLO_2 - Using the nursing process provide safe and competent care of two patients in the clinical setting. **SLO Status:** Active	**Presentation/Performance -** Daily assessment sheets for every assigned patient, and midterm and final evaluations. **Target for Success:** 100% of students receive overall 'Satisfactory' for the course.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met The overall target was met. Students were evaluated using a standardized evaluation tool that looked into multiple dimensions of nursing practice. (06/10/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** Course data were shared with the department faculty in department meetings and weekly with other med-surg instructors. At the beginning of the academic term, students generally struggled with the assignment involving multiple patients but, with occasional exception, all students were able to successfully provide care to two moderately unstable patients by midterm of the course. Students who struggled were provided additional support.	**Enhancement:** The daily assessment sheet will be adjusted to reflect the move from Orem's model to the systems approach to patient assessment. Case studies and exercises with the focus on prioritization will be introduced. (06/10/2017)

NURS 86:Leadership/Management in Nursing

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS86_SLO_1 - Demonstrate beginning management skills in nursing. **SLO Status:** Active	**Exam - Course Test/Quiz -** Short-answer take-home quiz, evaluated by grading rubric. **Target for Success:** 100% of students will be able to design a nursing unit assignment that demonstrates safety and observes appropriate scopes of practice.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 17 of 17 students (100%) were able to develop a nursing unit assignment that demonstrated safety and observed appropriate scopes of practice. (06/11/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** All students wrote appropriate and safe nursing assignments, although some underutilized the LVNs in the scenario and overused the RNs. Other students designed nursing assignments that were logistically challenging (e.g., assigning a nurse to care for patients at opposite ends of the nursing unit). These assignments were safe but potentially exhausting for the nurse.	**Enhancement:** I plan to revise the take-home quiz to include a drawing of the hospital unit and include in the directions the need to consider unit logistics in making the nursing assignments. (06/11/2017)
NURS86_SLO_2 - Demonstrate beginning leadership skills in nursing. **SLO Status:** Active	**Presentation/Performance -** Students demonstrate the assigned leadership style (autocratic, democratic, laissez-faire) when presented with a clinical scenario. **Target for Success:** 100% of students will be able to demonstrate the assigned leadership style.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 17 of 17 students (100%) were able to demonstrate the assigned leadership style. (06/11/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** All students participated in a lively and animated demonstration of various leadership styles while in a simulated emergency situation.	**Enhancement:** I plan to continue the current scenarios with no changes, but closely monitor for potential changes if the data falls below 100%. (06/11/2017)

NURS 86L:Leadership/Management Clinical Component

Student Learning Outcomes (SLOs)	*Assessment Methods*	*Assessment Data Summaries*	*Enhancements*
NURS86L_SLO_1 - Provide safe and effective nursing care to 75-100% of a typical nursing patient assignment in clinical setting **SLO Status:** Active	**Field Placement/Internship -** Clinical performance, based on elements of clinical evaluation tool, personal observation and interview with preceptor. **Target for Success:** 100% of students will safely care for 75-100% of typical RN assignment.	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 17 of 17 students (100%) safely cared for 75-100% of typical RN assignment by the completion of their preceptorship. (06/11/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** ll students met the expected benchmark of safely caring for 75%-100% of a typical RN assignment. Several of the students reportedly reached 100% of the typical RN assignment.	**Enhancement:** I plan to more closely track and estimate the number of students who reach 100% of a typical RN assignment, as this is predictive of being able to successfully function as a nurse upon graduation. I do not plan to make 100% be the goal, as it is unrealistic in certain specialized areas (such as emergency or critical care) for a student to achieve. (06/11/2017)
NURS86L_SLO_2 - Using Orem's model of nursing, apply the nursing process to assigned clinical setting **SLO Status:** Active	**Project -** Students prepare and submit a comprehensive nursing care plan (NCP), using the Orem model that includes three correctly worded nursing diagnoses using NANDA-I terminology. **Target for Success:** 100% of students submit a comprehensive nursing care plan, using the Orem model that includes three correctly worded nursing diagnoses using NANDA-I terminology	**Program Review Reporting Year:** 2016-2017 **Target :** Target Met 17 of 17 students (100%) submitted a comprehensive nursing care plan, using the Orem model that includes three correctly worded nursing diagnoses using NANDA-I terminology. (06/11/2017) **Reflection (CLICK ON ? FOR INSTRUCTIONS):** All students (100%) developed comprehensive nursing plans, using NANDA-I and the Orem model. This is not surprising since they have been writing NCPs for six quarters.	**Enhancement:** I plan to continue the current scenarios with no changes, but closely monitor for potential changes if the data falls below 100%. Also I plan to make sure students are informed of the current NANDA-I nomenclature, as it changes every 3 years. Longer-term action (2019?): when the new nursing program curriculum begins in future years I will modify the NCP from an Orem-based theoretical framework to the newly chosen framework. (06/11/2017)