

# Liberal Arts



## 2019

### ANNUAL REPORT OF PROGRAM DATA



UNIVERSITY of HAWAI'I®  
**HAWAI'I**  
COMMUNITY COLLEGE

## 1. Program Description

---

A general and pre-professional education degree consisting of at least 60 Baccalaureate-level semester credits at the 100 and 200 levels provides students with skills and competencies essential for successful completion of a Baccalaureate degree. The issuance of an A.A. degree requires that the student must earn a cumulative 2.0 GPA or better for all courses used to meet degree requirements. The A.A. degree is designed for students who are preparing themselves to transfer to a four-year college or university. (UHCCP #5.203).

### Program SLOs:

1. Communicate Effectively - Speak and write to communicate information and ideas in academic settings.
2. Think Critically - Retrieve, read, and utilize information and synthesize, analyze and evaluate that information to gain understanding and make informed decisions.
3. Reason Quantitatively - Use quantitative, logical and symbolic reasoning to address theoretical and real-world problems.
4. Apply Areas of Knowledge - Utilize methods, perspectives and content of selected disciplines in the natural sciences, social sciences and humanities.
5. Engage as Global Citizens - Demonstrate awareness of the relationship between self, community and the environment, respecting cultural diversity and an understanding of ethical behavior.

## 2. Analysis of the Program

---

### Strengths and weaknesses in terms of demand, efficiency, and effectiveness based on an analysis of the Quantitative Indicators.

According to the ARPD data, the overall health of the Liberal Arts A.A. program at Hawai'i Community College is *unhealthy*. This is due to several factors, including that the number of majors dropped 8% from 894 in 2017-18 to 821 in 2018-19. The drop was felt even more strongly among our Native Hawaiian students where the decrease was 10%. As such, the number of classes taught decreased by 6%, while the number of low-enrolled classes went up slightly.

Our efficiency indicators put our health for this category as *healthy*, which shows that we have been making the necessary changes in our scheduling to cope with lower enrollment. Average class size is 18, and fill rate is 75.3. We have 30 FTE BOR appointed faculty, while the ARPD places analytic FTE faculty at 42. We had to delay filling some faculty positions, using lecturers for those classes, due to austerity measures put in place to achieve a balanced budget.

Our effectiveness indicators put our health for this category as *cautious*. Successful completion (equivalent C or higher) was up 2% in 2018-19, and our withdrawals (grade = W) were down 21% from 604 in 2017-18 to 477 in 2018-19. Persistence fall to spring was up by 3%, but our degrees conferred went down 5% from 221 in 2017-18 to 209 in 2018-19. Our

transfers to UH 4-year institutions also dropped, from 185 in 2017-18 to 144 in 2018-19, a difference of 22%. A considerable number of students - 84, down from 112 the previous year - transferred before obtaining their degrees from HawCC. This is an area of current research and data analysis.

Distance education indicators show that the number of courses dropped by 15%. We've lost some qualified English instructors who can teach online. The LBRT faculty in all departments are now required to complete official training before teaching online, which has limited our ability to add new instructors to our online teaching pool. The college is implementing a badging program starting Spring 2020, which should increase the number of faculty who are trained. We have a lot of new faculty, so we are in a new training period.

The fill rate for DE courses dropped slightly from 84% to 80%, but successful completion remained steady at 69%. Withdrawals were down 28% for DE classes. This is a significant drop, which we attribute to more professional development and better teaching. Persistence from fall to spring improved 4% from 56% in 2017-18 to 60% in 2018-19.

**Significant Program Actions** (new certificates, stop outs, gain/loss of positions, results of prior year's action plan).

**Social Science and Public Services:** With the increase of Early College Social Sciences classes in the high schools, the department has created a special orientation for lecturers teaching these courses in collaboration with the Outreach Coordinator. In 2018-2019, in collaboration with EDvance, a Non-Credit Certificate for Community Health Worker (CHW) was offered that was funded by a Hi-Net grant. This 15-credit Certificate is modelled after UHMC's Community Health Worker Certificate and is in the process of going through the curriculum review committee to become a credit-bearing certificate.

**Humanities:** At the end of 2018, a full-time Digital Media Arts/Creative Media (DMA/CM) instructor retired leaving only one fulltime ART/DMA faculty to run this program. According to STAR's Academic Logic the DMA/CM program with 50 CM majors, 12 DMA majors and an additional 13 Liberal Arts AA with a concentration in ART -- meaning we are serving 75 student majors with only one full-time ART/DMA faculty member. At this point, the position is put on hold by the college. This cost-saving measure will have an increasingly negative effect on both the Liberal Arts and CM/DMA programs if the position is not filled soon. Hwst 107 was accepted as a HAP designated course.

**Math & Natural Science:** The STEM department worked with the Hawaiian Studies AA faculty to create the HWST-STEM certificate. In addition, MNS faculty created a study abroad course (GEOG 292V: Special Topics - Study Abroad) and an Academic Subject Certificate in Global Studies. This course and Certificate give recognition to the international work of the College and provide a venue for credit for students who are interested in seeking international opportunities and career paths. MNS finalized course alignment for science courses throughout the UHCC; 17 courses were modified through the curriculum process to align across the UHCC. Five full-time positions were hired in math and science on both the Manono and Palamanui campuses; four of these were replacement positions and one is a newly created science position for the Palamanui campus.

**English:** The English Department has an unfilled position currently still on hold. We continue to offer our Professional Development Program for interested faculty and lecturers to share

information regarding best practices for teaching English to HawCC students. Also, three English faculty received the HAP designation for specific courses, and we are currently offering three HAP designated courses: Eng 102, Eng 105, and Eng 255.

### 3. Program Student Learning Outcomes

#### a) Program Learning Outcomes (PLOs):

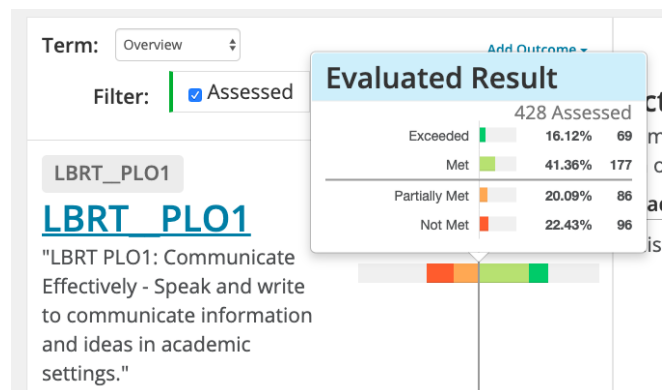
1. Communicate Effectively - Speak and write to communicate information and ideas in academic settings.
2. Think Critically - Retrieve, read, and utilize information and synthesize, analyze and evaluate that information to gain understanding and make informed decisions.
3. Reason Quantitatively - Use quantitative, logical and symbolic reasoning to address theoretical and real-world problems.
4. Apply Areas of Knowledge - Utilize methods, perspectives and content of selected disciplines in the natural sciences, social sciences and humanities.
5. Engage as Global Citizens - Demonstrate awareness of the relationship between self, community and the environment, respecting cultural diversity and an understanding of ethical behavior.

b) **PLOs assessed:** In 2018-19 all five program student learning outcomes were assessed.

#### c) Assessment results:

Score

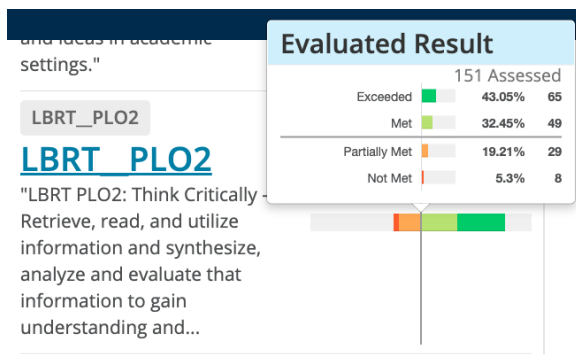
**PLO1-Communicate Effectively** was assessed in fall 2018 through the following courses in the Math and Natural Science Department: BIOL 141, BIOL 141L, and BOT 130L. It was also assessed by the course IS 101 in the Social Science Department in spring 2019. The aggregated results are pictured at right. Of 428 students assessed, 69 (16.12%) exceeded, 177 (41.36%) met, 86 (20.09%) partially met, and 96 (22.43%) did not meet expectations. The primary courses that contributed to the high number of students only partially meeting and not at all meeting expectations were BIOL 141 and IS 101.



In BIOL 141, PLO1 is aligned to "CLO1: Describe the scientific method." Out of 252 students, 142 (56.34%) were below the line. We are reconsidering the need for this Course Learning Outcome (CLO) for this course, Anatomy and Physiology, taken in large part by nursing students. It is not a research or scientific method course, and this CLO is inappropriate.

In IS 101, PLO1 is aligned to "CLO1: Communication - Speak and write to communicate information and ideas in professional, academic and personal settings." Out of 21 students, 11 (52.38%) were below the line. Early college students' scores brought down the attainment average during this assessment period. We are considering actions to improve EC student performance in this course, including different teaching and assessment strategies. We are also working to standardize use of one textbook across all sections taught by different instructors.

**PLO2-Think Critically** was assessed in fall 2018 and spring 2019 through the following courses in the Math and Natural Science Department: BIOC 141, BIOL 100, BIOL 100L, BIOL 141, BIOL 141L, BOT 130, BOT 130L, MATH 135, MATH 231, MATH 242, SCI 124, and SCI 124L. The aggregated results are pictured on the left. Of 151 students assessed, 65 (43.05%) exceeded, 49 (32.45%) met, 29 (19.21%) partially met, and 8 (5.3%) did not meet expectations.



In BIOC 141, PLO2 is aligned to "CLO1: Apply scientific method," "CLO2: Analyze data to solve problems," "CLO3: Apply models or rules to unfamiliar problems," "CLO4: Observe accurately and record measurement precisely," "CLO5: Interpret and construct visual information (such as charts and graphs)." The aggregated results for these CLOs are: 8 students (25%) exceeded, 17 (53.13%) met, 4 (12.5%) partially met, and 3 (9.38%) did not meet expectations. The CLO that stood out as the lowest was CLO3 with 37.5% of students below the line, but this represents only

three students out of eight. The instructor commented that creative problem-solving is a difficult skill for students to learn and for faculty to assess.

In BIOL 100, PLO2 is aligned to "CLO1: Apply scientific method to formulate accurate conclusions," "CLO2: Explain how cellular organelles support homeostasis in the human body" and "CLO4: Identify the causes of common diseases and how they impact organs and organ systems." Students performed better on CLO2 than on CLO4. For CLO2, 82.35% of the 17 students assessed met or exceeded expectations, but for CLO4, only 64.72% did. At Palamanui, this course was taught as an early college course and the lab was not able to be provided for this group during the same semester. The instructor tried to add a few lab activities to the lecture, and this took some of the lecture time away and disrupted the plan for covering all the material by the end of the semester. At Manono, students who took BIOL 100 and BIOL 100L together showed better results on the final exam, as well as a better understanding of the scientific method.

In BIOL 100L, 16 students were assessed, and 81.25% met or exceeded expectations. Three students partially met, and zero students did not meet expectations.

In BIOL 141, PLO2 is aligned to "CLO8: Describe the disorders and homeostatic imbalances of the integumentary system, skeletal system, muscular system, digestive system, respiratory system, and cardiovascular systems of humans." Out of 36 students assessed, nearly 78% exceeded or met the expectation. Students performed better on this CLO than on any of the other seven CLOs for the course.

In the corresponding lab, BIOL 141L, the PLO2 is aligned to "CLO2: List procedural steps on carrying out their experiments and construct an organized, formal lab report." For CLO2, 36 students were assessed, and over 83% of students met or exceeded the expectation.

In BOT 130, the PLO2 is aligned to "CLO1: Apply scientific method to formulate accurate conclusions" and "CLO2: Identify common threats to native plant species in Hawai'i." For these two CLOs, out of 21 students assessed, 84.62% of students met or exceeded the expectations.

In the corresponding lab BOT 130L, PLO2 is aligned to "CLO1: Apply scientific method to formulate accurate conclusions," "CLO3: Distinguish the major plant divisions represented in Hawai'i" and "CLO5: Identify common native plants." For these three CLOs, 78.57% of 21 students met or exceeded expectations.

In IS 101, PLO2 is aligned to "CLO2: Critical Thinking - Make informed decisions through analyzing and evaluating information." Out of 21 students, 12 (57.15%) were below the line. As stated above, early college students' scores brought down the attainment average during this assessment period.

In MATH 135, 20 students were assessed on three CLOs aligned to PLO2: "CLO1: Analyze the graphical and algebraic characteristics of functions, including polynomial, rational, exponential, and logarithmic," "CLO2: Use mathematical modeling techniques to solve problems," "CLO3: Utilize graphing technology to analyze functions." The aggregated results for these CLOs show that 87.5% of the 48 students taking the class met or exceeded expectations.

In MATH 241, the results were not good. While only 8 students were included in this assessment (a typically small class size for MATH 241), 4 of these students, or 50%, only partially met "CLO3: Demonstrate an ability to solve applications involving differentiation," which is aligned to PLO2. Two students, or 25%, did not meet expectations.

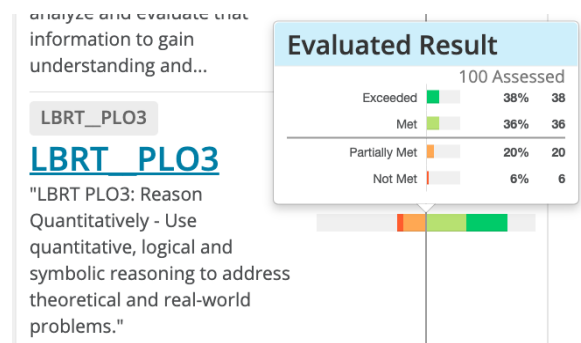
In SCI 124, PLO2 is aligned to "CLO1: Apply scientific method to address issues in the environmental sciences," "CLO2: Describe key ecological processes," and "CLO3: Appraise the effect of human activity on the environment." Notably, none of the 52 students assessed exceeded expectations for any of these CLOs. 55.77%, 61.54%, and 63.46%, respectively, met expectations. For CLO1, 44.23% (23 students) were below the line (partially met or did not meet expectations), for CLO2 38.46% (20 students) were below the line, and for CLO3, 36.54% (19 students) were below the line. It was expected that at least 60% of the students would get 60% of the questions correct for each CLO. The lower-than-usual rate was chosen because, although the questions addressed the CLOs, they did so through knowledge of specific environmental systems and theories, and it was understood that this would lead to a high amount of variation. Therefore, students performed about as expected. There were clear differences in achievement between the three sections, indicating differences in teaching content and style between the instructors.

In SCI 124L, the corresponding lab course, 48% (24 students) met or exceeded expectations, and 52% (26 students) did not meet expectations. "CLO1: Use the scientific method to answer questions," and "CLO3: Gather, analyze and evaluate information" are the two CLOs aligned to PLO2. Assessment notes show they expected 70% of students to successfully obtain each CLO.

In MATH 242, seven students were assessed on the following CLOs that align to PLO2: "CLO1: Solve indefinite integrals analytically," "CLO2: Apply standard techniques of integration, such

as u-substitution, integration by parts. Special forms of trigonometric functions, trigonometric substitution, partial fractions, and various rationalizing techniques," "CLO3: Utilize integration techniques to solve problems in business and the sciences," and "CLO4: Apply series techniques to applications." Faculty expectations were that at least 70% of all students would meet or exceed the course learning outcomes. For CLO1, while all students either partially met, met, or exceeded the expectation, we achieved less than our goal. This is an academically-challenging course and often the concepts can be confused with each other. We found that strategies were not being used to completion. For CLOs2 and 3, results showed that more thorough review time was needed late in the semester. For CLO4, this is the last topic covered in the course. Students spent the majority of their time throughout the semester on integration and application. Students had a difficult time then using series and application to solve. Students that connected the relationship between series and integration did well. Those who did not struggled. It appeared that they were trying to use memorized rules to approach these problems, which are too cumbersome for this to be an effective method.

**PLO3-Reason Quantitatively** was assessed in fall 2018 and spring 2019 through the following courses in the Math and Natural Science Department: MATH 135, MATH 241, and MATH 242. The aggregated results are pictured below. Of 100 students assessed, 38 (38%) exceeded, 36 (36%) met, 20 (20%) partially met, and 6 (6%) did not meet expectations.



In MATH 135, PLO3 is aligned to CLO1, 2, and 3 (see above, page 6). This semester was a closing-the-loop (CTL) follow up assessment. For CLO1, 87.5% of students met or exceeded expectations. Those who did not performed poorly in all areas of the assessment. For CLO2, all students were able to meet or exceed expectations. For CLO3, 81.25% were able to meet or exceed expectations. Again, those students who did not meet the standard performed poorly on all questions.

In MATH 241, PLO3 aligns to "CLO1: Demonstrate the mathematical skills and calculus techniques needed to differentiate multiple types of functions," "CLO2: Demonstrate the mathematical skills and calculus techniques needed to integrate multiple types of functions," and 3 (see above, page 6). For CLO1, all students met the expectation. This course is heavily focused on differentiation and by the final exam, most students are proficient at taking derivatives. For CLO2, 62.5% of students met the expectation. Integration is the final topic for this course and students often mix it up with differentiation. Students performed less well on CLO3; only 25% met the expectation. While students excelled at differentiation, they struggled on how to use it as a strategy to solve equations. Also simple mathematical errors caused incorrect solutions, particularly for equations involving trigonometric expressions. Although several students were scored as partially met, the errors were not regarding the differentiation but regarding the algebra.

In MATH 242, the PLO3 is aligned to CLO1, 2, 3, and 4 (see above, page 6). Aggregated results show that 64.29% of seven students assessed met or exceeded expectations (range: 42.86-71.43). Strong CLOs are 2 and 3, while 1 and 4 were weaker. This is an academically-

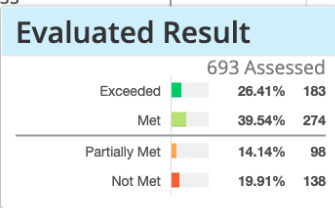
challenging course and often the concepts can be confused with each other. We found that strategies were not being used to completion (see above, page 6).

symbolic reasoning to address theoretical and real-world problems."

### LBRT\_PLO4

## LBRT PLO4

"LBRT PLO4: Apply Areas of Knowledge - Utilize methods, perspectives and content of selected disciplines in the natural sciences, social sciences, and...



**PLO4-Apply Areas of Knowledge** was assessed in fall 2018 and spring 2019 through the following courses in the Math and Natural Science, Humanities, and Social Science Departments: ASAN 120, BIOL 141, BIOL 141L, BOT 130, BOT 130L, and ECON 130. The aggregated results are pictured on the left. Of 693 students assessed, 183 (26.41%) exceeded, 274 (39.54%) met, 98 (14.14%) partially met, and 138 (19.91%) did not meet expectations.

In ASAN 120, the PLO4 aligns to "CLO1: Demonstrate an understanding of the elements important to members of the Japanese culture in relation to its history, values, political/social structure, communication styles, economy, beliefs and/or practices." All students met or exceeded the expectation, with 97.5% (39 out of 40) exceeding the expectation. These results can largely be attributed to the fact that there were 14 students who did not submit their summative paper. Out of the 14 students, nine didn't submit their summative paper even though they attended class the whole semester. These were largely ESL students, a number of whom "disappeared." Blanks were not put in so as not to have an inflated result when faculty randomly drew student work to assess.

In BIOL 141, PLO4 aligns to "CLO2: Discuss basic chemistry, including atomic structure, bonding, organic compounds, fluid balance and pH," "CLO3: Describe cell biology, membranes, organelles, mitosis and meiosis," "CLO4: Describe tissues and membranes; cell types, composition, organization and function," "CLO5: Describe anatomic terminology and the levels of structural organization within the human body," "CLO6: Describe the gross anatomy (parts, physical, characteristics and organization) of the integumentary system, skeletal system, muscular system, digestive system, respiratory system, and cardio-vascular systems of humans," and "CLO7: Discuss the cellular structure and cell physiology of the integumentary system, skeletal system, muscular system, digestive system, respiratory system, and cardio-vascular systems of humans." Aggregated results show that 37.88% of 36 students assessed met or exceeded expectations (range: 25.00-47.22). Many students are not meeting the current learning outcomes of this course. In particular, CLO3, 4, 6 and 7 had more than 60% of students falling into either "developing" or "did not meet" categories, because they did not answer a sufficient number of questions correctly. This course is very content heavy, and the low rate of CLOs attainment reflect the amount of content students were expected to remember and recall at the end of the semester. In general, students seemed to have more difficulty on topics covered earlier in the semester.

In the corresponding lab course, BIOL 141L, PLO4 aligns to "CLO3: Use microscopic observation, digital photography and computer microscopy to identify specific tissues and organ sections and their corresponding anatomical structures," "CLO4: Demonstrate proper techniques to manipulate and dissect fetal pigs and other mammalian organs as required, and



promote a healthy and safe laboratory environment," and "CLO5: Demonstrate a thorough knowledge of the anatomy of the Integumentary, Skeletal, Muscular, Digestive, Respiratory and Circulatory Systems, as well as carry out experiments with cardiovascular pulse and blood pressure." Aggregated results show that 80.96% of 35 students assessed met or exceeded expectations (range: 77.14-88.58).

In BOT 130, PLO4 aligns to "CLO2: Identify common threats to native plant species in Hawai'i," "CLO3: Distinguish the major plant divisions represented in Hawai'i," "CLO4: Describe plant status (Endemic, Indigenous, Polynesian introduction, Introduced, Naturalized (invasive))," and "CLO5: Identify common native plants." Aggregated results show that 84.62% of 13 students assessed met or exceeded expectations. Students were able to process information on most aspects of the class. Hands-on, in-the-field practice helps to solidify plant identification skills and also helps in understanding conservation techniques and concepts. The challenges discussed in the previous assessment were solved by more hands-on opportunities to ID plants during this Closing the Loop re-assessment semester.

In the corresponding lab, BOT 130L, PLO4 aligns to "CLO2: Identify common threats to native plant species in Hawai'i," CLO3 (see above, page 5), and "CLO4: Describe plant status (Endemic, Indigenous, Polynesian introduction, Introduced, Naturalized (invasive))." This semester was a closing-the-loop (CTL) follow up assessment. The percentage expected to achieve the CLOs was 80%. 78.57% of the 14 students assessed met or exceeded the standard.

In ECON 130, PLO4 aligns to "CLO1: Analyze and evaluate the effect of changes in market conditions on market prices and quantities using the supply and demand model," "CLO2: Compare and contrast the characteristics and outcomes of perfectly and imperfectly competitive markets using a basic model of the firm's costs and revenues in both the short and long run," "CLO3: Apply marginal analysis and the economic way of thinking in decision-making," and "CLO4: Apply economic theory to trade (comparative advantage), consumer behavior, labor markets, and other current issues." It was expected that 90% of artifacts examined would meet or exceed expectations. 83% of the 18 students assessed met or exceeded the CLOs. The three students (17%) who did not meet the standard failed to submit the required news analysis as they were disappearers from the course. Strengths of this course are the ability for students to apply economic theories to current issues facing the nation and to be able to provide rationales for these economic events. These real-world applications provide a more in-depth understanding of the concepts that cannot be learned from simply reading the text. One of the main challenges of this course is the outdated and limited material provided with the current OER textbook. It was published in 2017, and although the concepts

are relevant, the numerical data is no longer current. Another challenge faced is students not reading the text material as assigned.

**PLO5-Engage as Global Citizens** was assessed in fall 2018 and spring 2019 through the following courses in the Math and Natural Science, Humanities, and Social Science Departments: ASAN 120, BOT 130, BOT 130L, IS 101, and SCI 124. The aggregated results are pictured on the left. Of 154 students assessed, 60 (38.96%) exceeded, 55 (35.71%) met, 14 (9.09%) partially met, and 25 (16.23%) did not meet expectations.

In ASAN 120, PLO5 aligns to CLO1 (see above, page 7) and "CLO2: Describe and compare traditional and modern Japanese cultural values, and contrast them with one or more additional culture(s)." 70% of students were expected to meet the standard. Out of the 40 students who were assessed, 39 of them exceeded the outcome and the remaining 1 student met the outcome.

In BOT 130, CLO2 (see above, page 8) aligns to PLO5. 84.62% of 13 students assessed met or exceeded the standard.

In BOT 130L, PLO5 aligns to CLOs2 and 4 (see above, page 8). This semester was a closing-the-loop (CTL) follow up assessment. Aggregated results show that 78.57% of 14 students assessed met or exceeded expectations.

In IS 101, PLO5 aligns to "CLO3: Self and Community - Engage in activities demonstrating understanding of one's relationship with one's communities and environments." This semester was a closing-the-loop (CTL) follow up assessment. 42.86% of students (9) met expectations, 42.86% (9) partially met expectations, and 14.29% (3) did not meet expectations for this CLO.

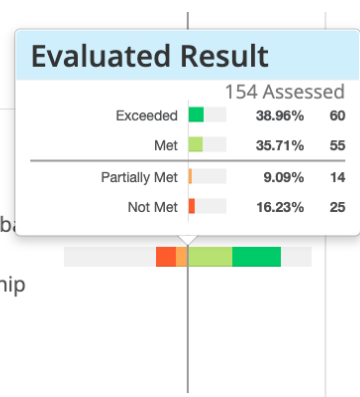
In SCI 124, PLO5 aligns to CLO3 (see above, page 6). 63.46% of students (33) met expectations, 3.85% (2) partially met expectations, and 32.69% (17) did not meet expectations for this CLO.

selected disciplines in the natural sciences, social sciences, and...

LBRT\_PLO5

### LBRT PLO5

"LBRT PLO5: Engage as Global Citizens - Demonstrate awareness of the relationship between self, community, environment, respecting cultural diversity..."



#### d) Changes that have been made as a result of the assessments:

ASAN 120 - The instructor, a lecturer, suggested that we provide more assistance for ESL students, perhaps in-class tutors and English tutoring in the Learning Center. It was also suggested that a prerequisite of ENG 100 be added.

In BIOC 141, the instructor commented that creative problem-solving is a difficult skill for students to learn and for faculty to assess. Instructor plans to add more emphasis on CLO#3 in the future.

For BIOL 100 and 100L, which are corequisites, we will endeavor to make sure that both are scheduled simultaneously at Palamanui. The semester in question, BIOL 100 was offered for a group of early college students without BIOL 100L.

BIOL 141 - We found that students are able to understand anatomical and physiological concepts in the context of disorders and diseases (CLO8) perhaps because the topics are more relevant to them. In order to increase the student success for the other CLOs, we will incorporate more examples of disorders and diseases as we teach the content for the other CLOs (basic chemistry, cell biology, tissues and membranes, cell physiology) to emphasize the connection between these somewhat abstract concepts to real-life examples and situations. One way to do this is to use case studies to incorporate more examples of disorders and diseases as we teach the content for the other CLOs (basic chemistry, cell biology, tissues and membranes, cell physiology) to emphasize the connection between these somewhat abstract concepts to real-life examples and situations. Better CLOs will be developed that encompass the essential knowledge and skills students should demonstrate after taking this course. Instructors will work with other science and nursing faculty to develop CLOs that better align with other courses in the programs. Active learning techniques (such as AVID) to increase student engagement in class to improve student learning will be incorporated. Instructors will identify the best combination of prerequisites for this course so that students are better prepared to tackle the heavy scientific content.

BIOL 141L - We need to focus on working with those students who did not meet standards for CLOs 3 and 4 (~10%). The assessment questions were based on students' ability to connect knowledge to real-life specimens (slides and animal organs). We found that students had low scores on questions that demonstrate their ability to link tissues to an organ and its function when shown a histology slide. Many students spend minimum amount of time in the lab and try to complete the assignments outside of the lab. Instructors need to make sure that students spend time in the lab using the lab resources to learn the materials. We should encourage students to use the entire lab period to complete as much of the assignments as possible. To get a better understanding of student achievement in this course, which has a very large student body (seven sections across two campuses, ~140 students total), we need to make sure that all instructors know how to carry out the assessment plan and follow through on the plan. This plan was not fully developed at the beginning of the semester, and some lecturers had a hard time understanding what they were supposed to do. We need to educate the lecturers at the beginning (before) the semester, so that they are fully on-board from day one. We should also encourage students who are weak writers to meet with writing tutors or science tutors who have experience with lab report writing. Introducing teaching techniques like AVID may help students develop comprehension through writing in the class. Instructors should have examples of what "good" lab reports (and "not so good" reports) look like, and also spend the semester working with the students. Instructors should help students clearly understand the objectives of each lab activity prior to carry out the activity, so that they connect the learned knowledge to the hands-on activity while carrying out the activity or experiment.

BOT 130 - Better summarization of lessons for students by faculty is recommended. Action Plan Strategies include more time for discussion and debriefings after lessons to make sure students grasp the main concepts of the lesson.

BOT 130L - There was a lot of hands-on identification to this final exam. There were both slides and live plant samples for each of the identity questions. However, if the student did not attend class field trips, they were at a disadvantage. The challenge is being able to recognize a plant from only a picture and a part of the plant, since we were not out in the field for the actual exam. Use of better study guides and study sessions before the final exam will help scores.

ECON 130 - The instructor will adapt the OER text to include updated data as well as economic issues as they pertain to Hawaii. She will also provide a variety of resources including: slides, videos, podcasts, economic newsletters, and FRED data to ensure comprehension of topics. Instructor also plans to include weekly quizzes on chapter readings to encourage reading compliance.

In IS 101 - We are considering actions to improve Early College student performance in this course, including different teaching and assessment strategies. We are also working to standardize one syllabus and book across all sections taught by different instructors. A lead instructor has been assigned to the course to oversee a community of practice group.

MATH 135 - Students who perform poorly on chapter exams will be required to visit the tutor and offered more instructor support.

In MATH 241, instructors also continue to emphasize rules and techniques of efficient differentiation, to focus on proper notation, and to provide strategies for integration and differentiation. The instructors will also focus on accuracy and algebraic details and practice equations using differentiation in each area.

In Math 242, instructors discovered that strategies were not being used to completion. They will review finite limits and limit laws and not assume students are comfortable with foundational strategies. They will allow for review and examples in class shown through completion. Series and their applications as applied to integration will be introduced earlier in the semester.

SCI 124 - CLO 2 (relating to ecological processes) appeared to be the most difficult for students. It is likely because there are so many different ecological processes and the understanding of which constitute 'key' processes likely varies between instructors and students, leading to a variable grasp of multitude of ecological processes. There may be a better way to assess this CLO and we will continue to explore alternate models to determine CLO achievement.

SCI 124L - The Hilo section met the objectives for all three CLO but was weakest for CLO 3: presenting data. There is room for improvement for this CLO. Instructors will be encouraged to continue teaching in a similar manner with slightly more emphasis on data analysis. The artifacts submitted for the Palamanui section were, perhaps, not the best choice to address these CLOs. For the next CTL assessment, instructors will ensure that the submitted artifacts allow the CLO to be better assessed.

## **4. Action Plan**

The Liberal Arts action plan for last year included the following goals, which are still in progress:

**1. Complete outstanding 20% reviews to get back on schedule.**

We have made significant progress, but we are still waiting for lists of hard copy documentation of 20% reviews to be compiled for several departments. In the meantime, the Math and Natural Science Department faculty have been completing 20% course reviews whenever a course is assessed. Our goal is still be in compliance by the end of AY 2020.

**2. Improve the quality and increase the quantity of online courses.**

All Liberal Arts departments created or updated their distance education policies last year as planned, leading to improved oversight and training for faculty teaching online. We continue to evaluate our DE course offerings to ensure the quality of teaching and learning. Our goal was, by the beginning of Fall 19 semester to have increased the number of DE courses offered. The table below shows course offerings over the last three years. Considering that our enrollment and, therefore, the total number of courses is decreasing, a more logical goal is to increase the percentage of DE courses. The last line of the table below shows these numbers. Beginning Fall 19, the departments committed to having at least five online courses peer-evaluated each semester.

Distance Education Offerings at Hawai'iCC				
Year	2016	2017	2018	2019
Courses	86	81	72	61
Enrollments	1908	1777	1573	1304
Fill Rate	84%	84%	84%	80%
Successful Completion	71%	69%	70%	69%
Withdrawals	160	187	156	112
Persistence	59%	57%	56%	60%
% DE Courses*	13%	15%	15%	15%

\*Pulled from Star Academic Logic, DE sections/Total sections - VID sections

**3. Create a First-Year-Experience (FYE) program using AVID resources.**

A framework has been outlined for our FYE program that would consist of a 1-credit course tied (co-req) to various 3-credit courses taught by instructors who volunteer to include FYE content into the curriculum. During this AY, these courses will be identified and the instructors trained.

**4. Reevaluate and reconstruct the student advising structure.**

While some progress was made on faculty advising redesign, the work continues in earnest into the 2019-20 AY. The Social Science and Public Services department is piloting a specialized pre-advising/registration session for AJ/SOC/PSY concentrators in collaboration with Student Affairs during the Early Registration period to improve and increase efficiency of their chosen pathway.

## **5. Resource Implications**

---

(physical, human, financial)

We have two science lab coordinator positions that are temporary and should be requested as G-Funded for the future.