

2024-25 ANALYSIS OF INSTITUTIONAL LEARNING OUTCOMES

Analysis completed by:

The ILO Assessment Committee: Susan Lewis, Zip Krummel, Kristen Kane, Annette Byers, Kalie Brunton and Kristen Booth. Support provided by Sara Wade.

Date:

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Section One: Academic Year:

2024-25

A. Institutional Learning Outcome (ILO) Assessed:

#3 - Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives.

(Quantitative Literacy)

B. Competency level target (circled):

Beginning (1)

Developing (2)

Accomplished (3)

Mastery (4)

Section Two: Recommendations, Action, and Analysis from Previous Assessment of ILO.

A. Previous year(s) ILO was assessed:

2019-20

B. List recommendations from previous reviews.

Recommendation 1: The committee recommends faculty continue to support students towards improved proficiency of ILO#5. Instead of focusing on specific dimensions as identified by the results, the committee recommends supporting students towards CGCC's ILO#5 in general, promoting a greater understanding of recognizing the consequences of human, including the students', activity upon the social and natural world on a local, regional, national and potentially global level. The committee determined that focusing on specific dimensions does not make sense at this point due to the need for significant revisions required to the rubric.

Actions: A total 17 instructors listed activities to support students in the achievement of ILO#5 in their Part Bs for course outcomes assessment. Although the Part Bs do not capture all of the ways that instructors support student achievement towards the ILOs during the 2024-25 academic year, the variety of departments (Art, Writing, Manufacturing, Nursing, EMS, HPE, Environmental Science, FYE, ECE, Economics, Psychology and Sociology) suggest that the efforts are widespread. These actions affected 298 students. (Appendix 1) First Year Experience courses, in particular, focused on ILO#5, ensuring that students were supported and assessed in achieving this outcome. Lastly, a college-wide initiative to support ILO#5 – Community and Environmental Responsibility – was reflected in Dr. Lawson's 2024 Welcome Message to faculty and staff, challenging all CGCC employees "to think about and commit to ways we ensure our college and our students can make a positive difference in our community." (Appendix 2)

Results: To be determined during by the ILO Assessment Committee in fall of 2029, when the analysis of the 2028-29 assessment of ILO#5 is completed. **Faculty will continue to support students in the following areas:**

ILO	Area of Focus
1 – Communication	"Content Development" and "Control of Syntax and Mechanics"
2 – Critical Thinking & Problem-Solving	"Evidence" (Critical Thinking) and "Identify Strategies" (Problem Solving)
3 – Quantitative Literacy	"Assumptions"
4 – Intercultural Knowledge & Competence	"Openness" (Encouraging our students to "Initiate and develop interactions with culturally different others")
5 – Community & Environmental Responsibility	All dimensions

Recommendation 2: The committee recommends that the AAC clarify the number of classes offered that address ILO#5, as compared to other ILOs, by tracking classes each year that address all ILOs. Doing so will better support any recommendations related to ensuring students receive sufficient instruction in all ILOs.

Actions: The AAC created a spreadsheet listing all 413 credit courses from the 2024-25 catalog. Using the Course Content Outcome Guides, each course was mapped to the appropriate ILOs. In total, courses that teach to each ILO are as follows:

ILO#1 "Communication" = 294

ILO#2 "Critical Thinking and Problem-Solving" = 391

ILO #3 "Quantitative Literacy" = 150

ILO #4 "Intercultural Knowledge & Competence" = 171

ILO #5 "Community and Environmental Responsibility" = 188

The AAC will update the spreadsheet tracking those courses offered each term, beginning summer of 2025. Completing this project over the next few years will provide a better "big picture" of whether students have opportunities to receive sufficient instruction in all ILOs.

Results: The above list provides a total number of credit courses from the catalog that address each ILO. It is obvious from this list that 71% of credit courses offered by CGCC address ILO #1 (Communication); 95% of credit courses address ILO #2 (Critical Thinking and Problem-Solving); 36% of courses address ILO #3 (Quantitative Literacy); 41% of courses address ILO #4 (Intercultural Knowledge & Competency); and 46% of courses address ILO#5 (Community and Environmental Responsibility). These percentages, however, do not provide the whole picture, as mentioned in the Actions, above, and tracking of courses actually offered should allow the ILO Assessment Committee to have the data to make more informed recommendations. This is an ongoing issue, as tracking will take 5 years - **this recommendation should be continued**. 2025-26 is a General Education program review year and the committee recommends that the General Education department begin to address this issue in their review.

Recommendation 3: The committee recommends that faculty receive training in applying the rubrics to assignments and “norming”. This training could be in the form of a short activity completed during department meetings. For example, the departments could apply the rubric to different assignments, followed by discussions related to the comparison of scores and appropriateness of the different assignments.

Actions: No action has been taken on this recommendation.

Results: The ILO Assessment Committee determined **that this recommendation should be continued.** The committee will request time during Fall In-service of 2026-27, and has created a sub-committee: Kristen Booth, Susan Lewis, Zip Krummel, Kristen Kane and Sara Wade. The sub-committee is tasked with creating a hands-on norming activity for faculty to practice applying the Critical Thinking rubric and Problem-Solving rubric and discuss scoring. The sub-committee will bring its ideas to the ILO Assessment Committee in spring, when it meets to review the revisions for the rubrics of ILO#3 and ILO#5.

Recommendation 4: The committee recommends that the rubric web-form require a brief description of the assignments used for assessing the ILO, as well as a box for instructors to explain whether their assignments worked to assess the ILO and whether they feel the need for a revision to the assignments. The web form could also include an option for faculty to check if they would like some follow-up or support related to revising assignments. These changes will aid the committee in determining whether assignments are appropriate to address the scope of the rubric and whether more support/trainings/workshops are needed to create assignment that are better suited for assessment of the ILOs. Additionally, directions sent to faculty for ILO assessment should include a direct link to the webpage that lists teaching strategies for the specific ILO.

Actions: The web form was updated, requiring a brief description of the assignment, as well as a box for instructors to explain whether assignments met expectations, required future revisions and options for a follow-up. (Appendix 3) Directions did not include a direct link to the webpage that lists teaching strategies for a specific ILO.

Results: The committee found the information on assignments to be helpful in their discussion of the results. The AAC has revised the directions sent to faculty for the 2025-26 ILO assessment to include a direct link to the webpage listing teaching strategies for each ILO. **This recommendation is completed.**

C. Please describe other actions taken that were not based on previous review recommendations.

What assessment, evidence, or need prompted these actions?

After reviewing the revisions of the rubric used to assess ILO #4, Cultural Awareness, the Institutional Assessment Committee decided that the name for ILO#4 should be changed to Intercultural Knowledge and Competence. The outcome itself has not been changed, nor is there any change to how it will be assessed. This change reflects the true nature of the outcome and what CGCC is wanting for students. This change was supported by Instructional Council and the Curriculum Committee.

Rationale: The committee determined that “awareness” was a low standard of achievement and difficult to measure. The rubric used for this outcome is titled Intercultural Knowledge and Competence, and the dimensions of the rubric speak to that, more than “awareness”. Since, there is one dimension that measures “cultural self-awareness”, “awareness” isn’t lost as a part of intercultural

knowledge and competence. This change ensures that “awareness” remains part of a larger goal, while recognizing that it is not the entirety of the goal.

Section Three: Overview of Process (es) used to Evaluate Competency:

A. Overview of methodology used for assessment:

During the 2024-25 academic year, faculty assessed students in the achievement of ILO#3 *“Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (Quantitative Literacy)”* for the second time. Faculty initially assessed student achievement of this ILO in 2019-20. Instructors used the [Quantitative Literacy Rubric](http://www.AAC&U.org/) to score student work. This rubric was adapted by the ILO Assessment committee from the AAC&U’s (Association of American Colleges and Universities) LEAP (Liberal Education and America’s Promise) Value (Valid Assessment of Learning in Undergraduate Education) rubrics (<http://www.AAC&U.org/>). The rubric was the same rubric used to assess students on the quantitative literacy ILO in 2019-20.

Course selection guidelines:

- Include courses that students are more likely to be taking closer to graduation (“sophomore” or 200 level courses)
- Include General Education courses that address ILO#3 as a “major” or “minor” component
- Include Career and Technical Education courses that include an outcome that aligns with ILO#3
- Ensure that the selected courses have suitable assignments that can be scored using the modified AAC&U rubric

Instructors were then responsible for scoring the student artifacts using the rubric, and submitting the results to a web form. Instructors also had the option to include a rationale or analysis to help explain student scores. (Appendix 4)

In looking at the methodology, it is important to remember that assessment of Institutional Learning Outcomes is different than Course Outcomes Assessment or Instructor Evaluations: CGCC is compiling information on student achievement of ILOs in order to be analyzed by the Institutional Learning Outcomes Assessment Committee and shared with CGCC faculty to determine where adjustments and improvements need to be made. Assessment of Institutional Learning Outcomes is not about an individual instructor or an individual course: the purpose is to obtain a global snap-shot of student ability and the institution’s ability to effect change and improvement through the implementation of focused teaching strategies.

B. Summary of timeline and steps in assessment process:

1) One month prior to start of term: The AAC looked at the CCOGs of courses and selected those courses that met the ILO assessment course selection guidelines. A list of suggested courses was sent by the instructional services administrative assistant (ISAA) to each department chair (DC) for consideration. DCs responded either confirming the selection or recommending revisions.

2) One to two weeks prior to start of term: Once a course was confirmed by the DC, instructors were contacted via email by the ISAA informing them that their course had been selected for ILO assessment. Information about the process of assessing ILOs was provided, as were directions and the appropriate rubric.

3) 2nd – 3rd week of term: the AAC contacted the instructors to confirm that they had an appropriate assignment that could be scored using the Quantitative Literacy rubric. If it was determined an instructor did not have an appropriate assignment for this purpose, the AAC worked with the instructor to develop an appropriate assignment.

4) 6th week of term: a check-in/reminder email that included the instructions and scoring rubrics was emailed to all participating instructors

5) End of term - week after end of term: Instructors scored student assignments using the rubric and input the totals for each category of the rubric in the web form. The AAC compiled the results at the end of each term into a spreadsheet.

6) Beginning of summer term: the AAC compiled the results for all terms.

7) Fall term in-service week 2025: The ILO Assessment Committee met to review and analyze the ILO assessment results. The committee:

- compared current assessment results with 2019-20 results
- analyzed the effectiveness of faculty interventions over the past 5 years
- reviewed previous recommendations and evaluated whether each recommendation had been completed or whether it was continued
- made new recommendations as needed
- reviewed the ILO assessment process and made recommendations for improvement

8) Once the results and analysis report are posted to the web, the AAC will send out an email informing faculty of the results, the focus of instruction and links to both the results and report.

9) Faculty will be reminded of their commitment to implement strategies to support students in achievement of ILO#1, #2, #3, #4 and #5 when they complete Part A of Course Outcomes Assessment.

10) Faculty will list the strategies they implemented to support student achievement of ILO#1, #2, #3, #4 and #5 when they complete Part B of Course Outcomes Assessment.

C. Sampling information:

289 students were enrolled in 21 courses from 9 disciplines. A total of 281 student artifacts were scored using the Quantitative Literacy rubric by the instructors of those courses.

12 faculty were involved in the assessment of the ILO:

Fall Term: Ed Andree (BI 233), Annette Byers (MTH 211), Bryan Despain (AMT 272), John Evans (STAT 234Z), Todd Meislahn (BA 211Z), Carol Thorn (NRS 234), Terri Tuthill (NRS 237), David Wagonblast (EC 202), Lori White (NRS 221) and Abel Wolman (MTH 251).

Winter Term: Annette Byers (MTH 212), Bryan Despain (AMT 282), Jarett Gilbert (PS 202), David Wagonblast (EC 201) and Abel Wolman (MTH 252).

Spring Term: Ed Andree (BI 233), Annette Byers (MTH 213), Bryan Despain (AMT 261), Chris Dodson (MFG 290), Todd Meislahn (BA 213Z) and David Wagonblast (EC 202).

The sampling size from the first assessment of ILO #3 in 2019-20 was slightly larger, with 385 students enrolled in 23 courses from 6 disciplines with a total of 321 student artifacts scored.

Assessment Instrument(s):

The Quantitative Literacy rubric was adapted from LEAP Value Rubrics (<http://www.AAC&U.org/>). The original VALUE initiative in 2007-09 involved teams of faculty and other educational professionals from over 100 higher education institutions engaged over many months to develop 16 VALUE rubrics for the LEAP Essential Learning Outcomes. Each rubric was developed from the most frequently identified characteristics or criteria of learning for each of the 16 learning outcomes. Drafts of each rubric were then tested by faculty with their own students' work on over 100 college campuses.

Per Recommendation 2 from the [Report 2016-17 ILO#2 Critical Thinking and Problem-Solving](#), the ILO Assessment Committee replaced the names of each level from the rubrics with numbers, anticipating that the adapted numbered student achievement levels would be less influential on instructor decisions, and encouraging instructors to instead, focus on the performance indicators for guidance.

1. Data Analysis Procedures.

Once instructors scored the student artifacts using the adapted LEAP Value Rubric, results were gathered by the AAC and presented to the ILO Assessment Committee.

5 faculty and the director of curriculum and academic assessment (DCAA) were involved in the analysis process: Kristen Booth, Kalie Brunton, Annette Byers, Kristen Kane, Zip Krummel, and Susan Lewis.

Section Four: Results and Analysis

A. ILO#3 Assessment Results:

A total of 289 students were enrolled in the courses that participated in the assessment of the ILO; of those students, 281 students completed the assignments and were scored using the rubric. A total of 77% of students achieved a score of accomplished or better, with 16% of students scored into developing, 5% scored into beginning and 2% scored into not demonstrated. A total of 13% of students were scored into not applicable, meaning that the assignments used for the assessment could not be used to assess a dimension or did not require students to demonstrate certain knowledge, skills or attitudes related to the rubric.

In the individual category of "Interpretation," 80% of students scored as accomplished or better. 79% of students scored into accomplished or better in the category of "Representation". 78% of students scored into accomplished or better for "Calculation", "Application/Analysis" and "Communication". The category of "Assumptions" had the lowest percentage of students scored into accomplished or better at 71%.

Table 1: Results of 2024-25 Assessment of Student Achievement of ILO#3 (Quantitative Literacy)

Institutional Learning Outcome #3: Quantitative Literacy	Through their respective disciplines, CGCC students who earn a degree can: Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (<i>Quantitative Literacy</i>)						
Total Number of students enrolled in assessed courses: 289 Total # of students who completed scored assignment: 281	Mastery	Accomplished	Developing	Beginning	Not Demonstrated	Not Applicable	Total Percentage for Accomplished or better
Interpretation: TOTALS	138	77	43	7	5	11	79.63%
Representation: TOTALS	103	86	34	11	4	43	79.41%
Calculations: TOTALS	138	32	35	8	4	64	78.34%
Application/Analysis: TOTALS	133	70	40	13	5	20	77.78%
Assumptions: TOTALS	93	58	48	12	3	67	70.56%
Communication: TOTALS	132	77	32	20	7	13	77.99%
Total Number of Students Scored	737	400	232	71	28	218	77.45%
Total Percentage of Students Scoring into Level	50.20%	27.25%	15.80%	4.84%	1.91%	12.93%	
Total Percentage of Students who Scored Accomplished or Better	77.45%						

Section Five: Analysis of Results

A. Analysis, discussion and implications of current year results

The overall score of 77% does not meet the 80% target for the Strategic Priority of Advancing equitable student learning and educational outcomes, requiring that “Students will demonstrate proficiency in institutional learning outcomes”. No dimension of the rubric met the 80% benchmark.

Of particular interest to the committee was the number of students scored into Not Applicable (N/A) in the category of “Assumptions”. Since assumptions are foundational to understanding the validity of data, how it should be represented and thus interpreted, applied and analyzed, the committee was concerned that so many assignments did not incorporate this criterion into the assessment. The committee discussed whether some of the faculty may not understand what is meant by “assumptions”. It was determined, upon examination of the rubric, that the glossary, definitions and descriptors of the criteria were confusing and most likely did not support faculty in gaining an understanding of what was required by the rubric. Further, if faculty don’t understand “assumptions” then this lack of understanding could trickle down to students, either leading to a deficiency in teaching the concept or in not teaching it correctly.

The committee also considered that faculty may be assuming that only one assignment should be used for this assessment, hence N/A for those criteria that aren't met by that one assignment. Faculty on the committee who had participated in this assessment spoke to the rubric, in its entirety, as difficult to apply to one assignment. The AAC suggested that the directions and emails may also imply that only one assignment should be used for this assessment.

The committee also discussed concern about the number of students scored into the level of "Mastery". Since the committee had decided in 2019-20 that "Accomplished" was a reasonable expectation for community college students, they were struck by the fact that over 50% of students were scored into the level of Mastery. The committee wondered whether faculty are associating the grades of A, B, C, D and F when they see the numbers 4, 3, 2, 1, 0 on the top of the scoring rubric.

These discussions led the committee to consider whether the results are indicative of student learning, teaching or the applicability of the assignment. In particular, were the results affected by challenges with the rubric, faculty's ability to understand and apply the rubric, and/or student ability in the area of "assumptions"? Considering that all factors most likely contributed to the category of "Assumptions" having the lowest student achievement, the committee decided that this is an area that still needs some focus.

B. Comparative analysis of results from multiple years.

All dimensions saw an increase in the percentage of students who were scored into Accomplished or better when compared to the [2019-20 Results](#) (Appendix 5). Overall, there was an 16% increase for students who scored into Accomplished or better (Table 2).

Of note is the increase in the percentage of students scoring into Accomplished or better in the dimensions that faculty have been focusing on for the past 5 years: "Application/Analysis" saw an increase of 25% of students scored into Accomplished or better and "Assumptions" saw an increase of 19% of students scoring into accomplished or better. With the exception of "Communication", which saw a 27% increase, these dimensions had the greatest growth of all dimensions.

Table 2: Comparison of 2019-20 and 2024-25 Results from Assessment of Student Achievement of Quantitative Literacy

Institutional Learning Outcome #3: Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (<i>Quantitative Literacy</i>)			
Year of Assessment	2019-20	2024-25	Comparative Difference
Total Number of Students who completed scored assignments	321	281	-40
Total Percentage of Students Scored as Accomplished or Better	60.97%	77%	16%
Quantitative Literacy Rubric Dimensions			
	2019-20 Total Percentage for Accomplished or better	2024-25 Total Percentage for Accomplished or better	Comparative Difference
Interpretation: TOTALS	74%	80%	6%
Representation: TOTALS	64%	79%	15%
Calculation: TOTALS	72%	78%	6%
Application/Analysis: TOTALS	53%	78%	25%
Assumptions: TOTALS	52%	71%	19%
Communication: TOTALS	51%	78%	27%

There was an overall increase in student achievement for Quantitative Literacy of 16%, with all dimensions showing an increase in student achievement from 2019-20. The categories of “Interpretation” and “Calculation” showed a 6% increase; “Representation” had a 15% increase; the two areas of focus had a significant increase of 19% for “Assumptions” and 25% for “Application/Analysis”. Lastly, “Communication” had the largest increase with 27% more students scoring into this category in 2025-26’s assessment.

Given the committee’s discussion in Section 5/A, the validity of such a big increase in overall student achievement, as well as the significant increase in the dimension of “Assumptions” was considered. The committee noted, however, that the baseline set in 2019-20 left much room for improvement and that the college may not see such significant jumps in student achievement in future assessments for ILO#3.

In the last 5 years, faculty have also developed more familiarity with ILOs, the ILO assessment process, applying the rubric to student work and the rubrics overall. This better understanding may also influence how/what faculty are teaching. Evidence gathered by the AAC from Part B’s of Course Outcomes

Assessment that requires faculty to list strategies that they incorporated into their instruction lends support to the increase in student achievement of the two highlighted dimensions. Keeping in mind that the COA process does not gather all strategies, due to the limitation of assessing one course per instructor per year, the 47 strategies reported (see Appendix 1) indicate that faculty in most departments have made efforts to promote student achievement in the two focus dimensions.

The committee also surmised that the largest increase in student achievement, 27% in the dimension of “Communication” may be explained by the focus on the ILO Communication in so many other courses.

The increase in faculty awareness of why assessment is done, as well as more experience in, and understanding of ILO assessment may thus trickle down to student ability.

C. Recommendations and Action Items

1. What actions are recommended be taken as a result of the assessment?

Recommendation 1: The area of focus should continue on “Assumptions”. Despite the committee’s reservations about the contributing factors to the results, it’s clear that this dimension continues to be an area that students struggle in.

Recommendation 2: The rubric sub-committee should focus on the glossary when re-working the Quantitative Literacy rubric as part of the Rubric Redesign project. It’s important that the criteria and descriptors accurately guide faculty in applying the rubric. The sub-committee should also consider re-ordering the dimensions to better align with the process of using data to make informed decision.

Recommendation 3: Clarification of certain areas of the ILO assessment process is required. The AAC should ensure that all directions and emails clearly communicate that the goal is for all criteria to be covered, whether this objective requires one assignment or more than one assignment. Additionally, it should be stressed to faculty that the level of “Accomplished” meets the college’s expectation, and that “Mastery” is not expected.

2. Describe how these action items are related to recommendations from the current General Education Program Review? Include how will these changes affect the General Education program.

The most current [General Education Program Review \(2017-2020\)](#) did not include any recommendations that had relevancy to ILOs. The [2016 General Education Program Review](#)’s 2nd recommendation, however, was to “*Revamp the program to align it more fully with its mission, especially its goals of providing a common experience and preparing students for the roles as citizens of the US and the world.*” As described in the General Education Program’s Mission, CGCC’s common educational experience “*is defined by CGCC’s Institutional Learning Outcomes and is developed primarily through a set of general education course requirements that all students take, regardless of their major. Ultimately, the mission of the General Education program at CGCC is to provide our students with a common experience and set of skills that prepare students for success in their majors, as citizens of the US and the world and in their personal and professional lives after graduation.*” The action of CGCC faculty intentionally providing resources and extra support for students to improve achievement in quantitative literacy implicitly supports the General Education Program’s Recommendation 2 by making changes to course curriculum and delivery to better support students in the process of quantitative literacy.

See Recommendation 2 in Section 2.C, pg. 2.

Section Six: Evaluate the Assessment Strategy

A. List assessment strategy recommendations from previous reviews, summarize actions taken in response to recommendations

The following recommendation is a combination of Recommendations 3, 4 and 5 from [the analysis of the assessment strategies related to the 2019-20 assessment of ILO #3 Quantitative Literacy](#).

Recommendation 3-5. *The committee recommends that faculty continue to have opportunities for workshops that address ILOs. Workshops designed around the ILOs would support faculty in teaching to the ILOs with intentionality. Suggestions for workshops include norming activities that would increase the familiarity with the rubrics, as well as workshops that would support faculty in designing assignments that support teaching to and assessing the ILOs.*

Actions: Previous ILO analysis reports have listed workshops that focused on developing assignments that could be assessed using the rubrics for [ILO #1](#), [ILO#2](#) and [ILO#4](#). As described in section One/D of the [ILO#4 analysis report](#), a faculty professional development coordinator position was created in 2021, and faculty began to take greater responsibility and leadership in faculty professional development opportunities. As a result, combined with time constraints of in-services, the Curriculum and Academic Assessment Department (CAAD) has stepped back from offering these workshops.

A Faculty Coffee Hour offered in May 2025 focused on Community Based Learning Projects, which pertained to creating assignments related to ILO#5. Workshops offered during the 2025 Spring In-Service addressed Integrating Math Across the Curriculum, which could support creating assignments that address ILO#3.

In 2023-24's report, it was suggested that "CAAD will research other methods to send out assessment information or practice training opportunities, including:

Hands-on activities for department meetings

- Video directions
- Exit surveys for graduating students that ask them to report on how they feel their college experience helped them attain each ILO
- Training videos"

No actions have been taken by CAAD on the above.

Results: Instead of workshops, the committee revised this recommendation to an in-service "norming" activity (See Recommendation 3 in Section 2.C, pg. 2.) Since the AAC already offers individual instruction, training and support to every instructor who is assigned an ILO assessment, videos (related to training & directions) are unnecessary and probably would not be watched. In future reports, **Recommendation 3, Section 2.C will encompass this recommendation.**

The following recommendations are from the [analysis of the assessment strategies related to the 2020-21 assessment of ILO #1 Communication](#):

Recommendation 3: *The change from Core Learning Outcomes to Institutional Learning Outcomes reinforces the concept that these outcomes span what all degree-seeking students should attain by the time they graduate. The use of the rubrics to score student work helps lead to consistency. For the student, the rubrics offer an explanation of the standard that CGCC expects students to attain before they leave the college with their 2-year degree. The ILO Assessment Committee, however, expressed concern that students may struggle with understanding the expectations required to meet*

“Accomplished” or better. The committee recommends that the rubrics be re-worked over the next two years to make them more-student friendly, and that they should be shared more widely with students.

Actions: The committee created 3 sub-committees to work on the problem-solving (Kristen Booth, Zip Krummel and Andrea LoMonaco), cultural awareness (Kristen Kane, Annette Byers and Leslie Berry) and community and environmental responsibility (Susan Lewis, Kalie Brunton, Leslie Berry, Kristen Kane) during the 2024-25 year. All sub-committees completed the work over two to three meetings, totaling 6 hours per subcommittee. The first two rubrics listed, have been reviewed by the ILO Assessment Committee and approved by Instructional Council. Due to time limitations in spring 2025, the ILO Assessment Committee will review the rubric for ILO#5 in spring of 2026 when it convenes to review the rubric for ILO#3.

Results: The re-worked problem-solving and intercultural knowledge and competence rubrics have been posted to the ILO website. The AAC sent an email to inform faculty of the updated rubrics. The quantitative literacy rubric will be worked in the same manner in 2025-26.

This recommendation will be continued through 2025-26 until all rubrics are revised to be more student-friendly.

Addendum to Recommendation 3: The ILO #5 Community and Environmental Responsibility Rubric requires significant change. The ILO Assessment Committee recommends that the ILO#5 Rubric Subcommittee address the following during the revision process:

- Alignment between the requirements/dimensions of the rubric and the requirements of CGCC’s Community and Environmental Responsibility ILO
- Clarify the definition of “global.”
- Determine whether the concept of “global” is necessary to the level of “Accomplished” considering that the majority of CGCC 100 and 200 level courses that address ILO#5 may not address the effects of human social and environmental activity on a global level.
- Consider that the “global” scale be left as a requirement for “Mastery” and that the level of “Accomplished” is revised to be local, regional and/or national. The revisions to the rubric should ensure that “Accomplished” does not project beyond the intention of the college’s ILO.

Actions: The ILO#5 Rubric Subcommittee discussed the above recommendation during their first meeting.

Results: The ILO#5 Rubric Subcommittee determined that the categories of “global self-awareness” and “understanding global systems” were meant to encompass “global” as part of a worldwide system that incorporated knowledge at a personal, local/community, national and global level. The subcommittee decided that the definition provided on the rubric: *“the complex and overlapping worldwide systems, including natural systems (those systems associated with the natural world including biological, chemical, and physical sciences) and/or human systems (those systems developed by humans such as cultural, economic, political, and built), which operate in observable patterns and often are affected by or are the result of human design or disruption. These systems influence how life is lived and what options are open to whom. Students need to understand how these systems 1) are influenced and/or constructed, 2) operate with differential consequences, 3) affect the human and/or natural world, and 4) can be altered”* - was sufficient in defining “global”.

The subcommittee also determined that with access to the world wide web, it was reasonable for CGCC students to attain an expansion of understanding of all these systems, within each level, focusing instead on the sophistication of their understanding as determined by the level of the verbs used in the descriptors.

The ILO subcommittee decided that CGCC's Community and Environmental Responsibility Learning Outcome should instead be revised to address a more sophisticated level of understanding and ability to 'Recognize **and evaluate** the consequences of human activity upon our social and natural world.' The sub-committee will bring this recommendation to the ILO Assessment Committee in spring, when it meets to review the revisions for the rubrics of ILO#3 and ILO#5.

B. Were the assessment methods accurate indicators of student achievement of the Institutional learning outcome? Why or why not? Recommendations for changes.

Given that the assessment methods and LEAP rubrics developed by the AAC&U, have been tested and widely adopted by post-secondary institutions across the US, it is probably safe to say that the assessment methods were accurate indicators of student achievement.

The committee did discuss some concerns about the limitations of the assessment methods:

- Faculty may be more comfortable with the rubric in the second assessment of ILO#3 which may have contributed to a difference in how they scored student work

Section Seven: Appendices

Include any assessment method (i.e., rubric), table of results, comments from instructors

1. Report on Evidence of Focused Instruction to Improve Student Achievement of ILO#5 2024-25
2. 2024 Welcome Message from President Lawson (email sent January 23, 2024)
3. Assignments Scored Using the Quantitative Literacy Rubric
4. Instructor Comments/Analysis from the 2024-25 Assessment of ILO#3
5. 2019-20 Results for Assessment of ILO#3 Quantitative Literacy

Appendix 1: Report on Evidence of Focused Instruction to Improve Student Achievement of ILO#5 2024-25

Term	Course Prefix & #	Course Title	Number Enrolled/ Scheduled for Assessment	Support for institutional effort to support students in improving achievement for ILO#5
F24	ART252	Ceramics I	11	Community and Environmental Responsibility - the group problem solving exercise allows the students to appreciate the power of the group to develop creative solutions for some of the issues they experience in the class.
W24	MFG202	Tube & Pipe Fabrication 2	13	Through applications of solutions to real life scenarios, students are brought into project management scenarios with industry partners as well as community project committees. This real world application of the foundations built in our classroom has shown a large gain in confidence

Term	Course Prefix & #	Course Title	Number Enrolled/ Scheduled for Assessment	Support for institutional effort to support students in improving achievement for ILO#5
				building within the students and in their own abilities to move forward into a working environment.
W25	MFG211	CAD Design for CNC Manufacturing 1	10	This year has been full of changes. The largest supportive change has been focusing individual attributes of each project to all 5 ILO's in order to promote a broader understanding of how our world is shaped and defined. This has achieved my goal of generating students ability to change perspective and allow for alternating viewpoints toward a common goal.
W25	MTH280	Aluminum GTAW/TIG Welding	19	Our program is designed to curtail carbon emissions explicitly through teaching lean manufacturing principles and advanced strategies to reduce raw material usage, supply chain length and fabrication timeline.
F24	NRS237	Clinical Pharmacology for Nursing 1	32	Added topics to support awareness of bioterrorism in the United States.
W25	NRS222	Nursing in Acute Care II and End-of-Life Care	27	Included in mental health, SDS, ED, and EMS CBLAs.
SP25	NRS212	Foundation of Nursing in Acute Care I	27	ILO #5: I identified how our communities overlap and are interconnected throughout the term.
SP25	EMS106	EMS Part II	10	Explanation of Course Objectives and Competency Integration With the implementation of Competency-Based Assessment (CBA), students are required to engage in reflective learning and demonstrate applied knowledge throughout the course. The following summarizes how course objectives are met and integrated with Oregon Health Authority (OHA) competencies: Community and Environmental Responsibility The EMT's role in public health, safety, and disaster response is emphasized through classroom discussion and simulation. Students learn about scene safety, environmental hazards, and care in underserved or rural communities. Concepts are reinforced through clinical experiences involving community-based care, mass casualty scenarios, and environmental emergencies.
F24	HPE295	Health & Fitness for Life	16	ILO #5- Community and Environmental Responsibility: This is achieved during week 10 in their readings, lectures, and Discussion Forum when we discuss the Social Determinants of Health.

Term	Course Prefix & #	Course Title	Number Enrolled/ Scheduled for Assessment	Support for institutional effort to support students in improving achievement for ILO#5
SP25	ESR173	Environmental Science: Geological Perspectives	5	ILO5 always addressed in the ESR classes but it was a change to focus on a long term project with Gorge Rebuild IT and that's new this year.
F24	FYE100	First Year Experience	17	This course was re-developed as a general education elective, so the curriculum was updated to emphasize community and environmental responsibility (community learning project that required students to collaborate with their community within a pathway of their choice and reflect on their social, environmental, and cultural responsibilities)
W25	ECE234	Inclusion of Children with Special Needs	31	Students are presented with videos of people with diverse abilities speaking about their needs and experiences in the classroom. Students are required to find children's books about compassion/inclusion and various disabilities to share during forums and with their students. Students are also expected to think about how to engage the family in an inclusive classroom.
W25	EC201	Principles of Economics: Microeconomics	32	Focus on using real life examples to motivate students in providing a reasonable analysis of theory to support (or not) written media articles. This includes defining the situation and estimation of results from changes in supply and demand and other economic forces. This would include local, national and global environment.
W25	FYE100	First Year Experience	9	ILO #5: Community and Environmental Responsibility: Central to the Community Learning Project, where students connected personal, academic, and civic goals.
SP25	PSY213	Introduction to Behavioral Neuroscience	14	I added information and a couple forums to address community responsibility, especially the ethics of how research is conducted and funded, and the ethics of conducting research on the elderly and children/adolescents, related to treatment, and what this means to inclusiveness.
SP25	SOC206	Social Problems	19	The readings encourage community and environmental responsibility (ILO#5). Their awareness of this learning outcome shows up in their discussion posts.
SU24	WR121Z	Composition I	6	ILO #5: Encouraging students to write about local issues relevant to their lives (Community and Environmental Responsibility)

Appendix 2: 2024 Welcome Message from President Lawson (email sent January 23, 2024)

..... In my first year as your college president, I considered transitioning back to a shorter, less complicated message of hope and good wishes. Yet, after thinking about it and reflecting on the legacy of the Reverend Dr. Martin Luther King, I determined we have an intellectual responsibility as an institution of higher learning to speak truth and to meet challenges head-on. It's hard to reduce that to a simple, upbeat message in our current context marked by rising domestic tensions and wars abroad.

None of this is to say I've given up on optimism. Indeed, maintaining optimism is more important than ever. Optimism, however, is not based on an aversion to difficulties; it confronts those directly as an ethical stance. Optimism, as journalist Josh Marshall explains, "is a moral posture toward the world we find ourselves in. If everything seems great, there's no need for optimism. The river of good news just carries you along." So, as a college community, let's take an optimistic stance, one that engages the world and steadfastly confronts the challenges before us.

We have significant issues to address as a society, ranging from the mounting consequences of climate change, to the critical need to confront systemic racism, to rising assaults on truth and our democratic institutions that are symptomatic of growing political radicalization. Our college can't pretend to be able to solve these issues alone, but we do have a part to play and we should not shrink from taking action appropriate to our vision and mission. We need to reflect deeply on our role as educators and how we influence the ideas and values that our students, and we, as representatives of the college, take out into the world.

So I challenge us — I challenge you as a CGCC employee — to think about and commit to ways we ensure our college and our students can make a positive difference in our community.

For faculty, I challenge you to review the college's institutional learning outcomes and our pedagogical practice. Do they meet the needs of our students given the rising levels of inequality and the social-political forces that have led to a high level of polarization in our society? Do they sufficiently align with the newly drafted CGCC mission statement to "empower all students through learning, and [to] support inclusive prosperity throughout our community"? Answers to these questions are likely never final and the work of effective teaching is always evolving. As a first step, Vice President Gilbert and I would like to call an all-faculty meeting in the near future to discuss and potentially to map out how we can respond, meet our college mission, and prepare our students to contribute to a thriving community as individuals, as family members, and as residents of the Gorge.

For staff, I challenge you to review our policies and practices to ensure we are doing everything in our power to provide equitable access to our programs. And I challenge you to continue offering the support for our students to yield equitable outcomes regardless of the circumstances our students, or prospective students, face in their lives and educational histories. To respond to the challenges of our rapidly changing times, we can all recognize the need for continuous innovation and integration across areas of the college. I'm eager to convene staff to tackle these issues and to improve equity in educational access and outcomes for our students. Stay tuned.

Finally, I challenge all of us to commit to the Guiding Principles we have tentatively identified as a college: namely, that in our interactions with each other, our students, and members of the community we will uphold the principles of open communication, respect, integrity, collaboration, inclusion, and equity.....

Appendix 3: Assignments Scored Using the Quantitative Literacy Rubric

AMT 261 – Despain: AMT FAA General Math assessment. Utilizing graphs, tables and equations to interpolate temperature ranges for aircraft thermal expansion rates, wire gage selection for aircraft circuits and equation interpretation and evaluation for hydraulic and pneumatic system regulation calculations.

AMT 272 – Despain: Workbook - calculate thermal and volumetric efficiencies for reciprocating engines. Determine total displacement of various heat engines. Using graphs/tables determine mixture settings for different power settings.

AMT 282 – Despain: A short quiz requiring math computation problems both story a formula, that one might encounter on the job in Aircraft Maintenance. The results of their tests were then discussed in class to render information regarding their understanding of the application of the information gathered.

BA 211Z – Meislahn: Evaluates the students' ability to prepare financial statements (analyzing, calculating, and coding transactional data), interpret the final results, and communicate those insights to company management.

BA 213Z – Meislahn: Review Balance Sheet and Income Statement for "Family Furniture, Inc." to calculate liquidity, solvency, and profitability ratios for the purpose of analyzing the company's financial position and performance from 20X1 and 20X2.

BI 233 – Andree: Research based presentation on bodily systems physiology, pathology and medical assessment.

BI 233 – Andree: Group presentation with citations of quantitative research surrounding a body system or pathology. Students created a document and presentation with APA citations. They synthesized quantitative data to create relevance, analyze outcomes and integrate these findings into a larger narrative.

EC 201 – Wagenblast: Economan has been infected by the competitive bug. He takes over the Friendly Space Trooper Agency (FSTA) and makes it the only sweet deal available in the galaxy. The only variable input he employs is labor. He is currently producing 150 units of super-duper Trooper service and selling them for \$20 apiece. He is considering the possibility of hiring an additional full-time employee. Economan estimates that daily output would increase to 160 units if he hired this additional person and that he would be able to sell all of those units at a price of \$19 each. What is the MRP of labor equal to in this situation? Assuming that Economan takes the price of labor as a given, what is the maximum daily wage that would make it in his best interest to hire this additional employee? (Economan needs to have you explain your answer to him fully to award you full credit and the chance to be an honorary space cadet in the FSTA. Points are given for attempting to blast off.)

EC 202 – Wagenblast: In 1993, Congress failed to pass President Clinton's \$16 billion economic stimulus package intended to create jobs. A major criticism was that his new government spending was not matched by tax increases. Assume (for this problem) a similar situation exists now and the U.S. economy is below full employment and Congress had passed a law that requires that an increase in government spending of \$16 billion be matched or balanced by an equal increase in taxes. The MPC = 0.75 and aggregate demand must be increased by \$20 billion to reach full employment. Will the economy reach full employment if Congress increases spending by \$16 billion and increases taxes by the same amount? Show or describe why or why not for full credit.

EC 202 – Wagenblast: Calculate and interpret: Real Income changes Real Output goal from a fiscal policy prescription Real Output outcome from consumer spending changes and multiplier effects

MFG-290 – Dodson: The assignment I chose was a production project sample. Students were tasked with developing a manufacturing process for a unique item in a small scale for data gathering. From this process, with consideration for Hands on Time cost, Tooling Expenditures, Material Expenditures, they were asked to interpolate costs on 2 scales, increasing production volume by 200% and 800%. Finally they were asked to provide 3 scenarios to manufacture the product, one where Time Cost was removed, one with two changes made to tooling (specifically to reduce time), and one with changes made to material size to show how the process could be optimized based on best selection of materials.

MTH 212 – Byers: Quiz #5 and Quiz #6

MTH 213 – Byers: Identifying Qualitative Graphs. Plotting points on the quadrant plane Graphing lines using the formula $y = mx + b$ Determining how to find parallel and perpendicular lines based on their slopes Predicting a qualitative graph based on the size and shape of a container. When water is poured into the container time (independent variable) and height of the water in the container (dependent variable) are graphed.

MTH 251 – Wolman: Derive the formula for the area of a circle in terms of the limit over inscribed regular polygons.

MTH 252 – Wolman: Problem set concerning Riemann integral.

NRS 234 – THORN: Assignment - Students were given laboratory results of 3 patients. With this data, the students needed to make calculations with the data provided to ascertain the patient's fluid status as well as their acid base balance. Upon completion of their calculations, students needed to make clinical judgments regarding the clinical manifestations they might see in their patients based on the patient's fluid status and acid base balance. Students presented their information/calculations and rationale to their peers utilizing modality of their choice.

NRS237 - Tuthill: The Med-Cabinet Survey is a two-part assignment that first ask the student to survey a home medication cabinet for OTC medications. The student researches the data presented to the general public on the use of OTC medication and compares to the best practice recommendations for healthcare providers on the use of the medication. This portion requires the student to present the required information on the medications in a table format. The second part of the assignment requires the student to design a patient teaching informational pamphlet based on the gathered data in the first part of the assignment as it applies to a selected age group of patients.

PS202 – Gilbert: Writing an Advocacy Letter to an Oregon Legislator - Students will engage in the legislative process by researching legislator stances, gathering data from three (3) reputable sources (containing numerical/statistical data) to support your group's shared position on that stance, and crafting a well-structured advocacy letter that clearly presents your viewpoint. Students will learn how to effectively advocate for issues, understand the legislative process, and develop their communication, quantitative literacy, community and environmental responsibility skills.

STATS 243Z – Evans: In this assignment, students are to develop an alternative hypothesis at odds with a null hypothesis, collect data in order to test their hypothesis, then use the data to calculate the strength of the evidence against the null hypothesis. Each of these steps (except perhaps the last step) takes quite a while, so I mention the project on the first day of class, and regularly. We study sampling techniques right before their first exam, so right after that they are expect to get to work in earnest designing a sampling method to get the data they need. Of course students have never done anything like this so they need a lot of feedback from me. Once this part is finalized, they can collect the data they need. There are a lot of things to worry about in this part of the project, which they have to show they accounted for. For example, what are likely sources of bias (the statistics meaning of bias), lurking

variables, and so on. Once this is done then they can actually do the data analysis part. We don't get to that until week 8 or 9, so that just leaves the last part of the term to wrap it all up into a well written report of what they did. (which is why this assignment works well for the written communication outcome as well.)

Appendix 4: Instructor Comments/Analysis from the 2024-25 Assessment of ILO#3

Dimension: Interpretation

- AMT 272 (F24) - The one student has experience as an engineer and manager with a previous career demonstrating quantitative literacy. Practice makes perfect. . .
- BA 211Z (F24) - Most students had a decent grasp of interpreting the data
- EC 202 (F24) - Most did fairly well with accurate explanations, while a few showed more thoughtful insights and additional feedback loops from initial changes.
- MTH 211 (F24) - Students had a strong understanding of the multiplication methods presented in the project. Each person needed to show their process of working the problems in a small group and then decide which of the 4 methods they preferred. As a class we also did sample problems of the 4 methods.
- NRS 237 (F24) Students showed the ability to collect, and compare data to support positive patient outcomes.
- STAT 243Z (F24) - Projects from fall 24 were probably over all the worst projects I have received in quite a while. We spent more class time talking about it than usual as well, so I am not quite sure what the issue was. But in general papers didn't address most things in any sort of depth, and in some cases even some of the calculations were incorrect. That is pretty unusual since that is the easiest part. So over all, the scores are going to be on the low side, though it was really the communication aspect that was lacking more than anything else.
- AMT 282 (W25) - Some world experience is exhibited by those more mature individuals that are able to more accurately interpret and conclude trends presented. All are able to do the "math," trends are a bit trickier to interpret.
- EC 201 (W25) - 63% of submissions had fairly accurate explanations from mathematical results.
- BA 213Z (SP25) - This assignment measured a combination of quantitative content from BA 211Z and BA 213Z. Some students appeared to have better recall than others of the earlier (BA 211Z) course.
- EC 202 (SP25) - 71% of students got a 3-score or better. Most did well in providing accurate explanations of the information presented in math forms. One did not really demonstrate while the rest did not exert more needed information to adequately express the situation.
- MFG 290 (SP25) - From the students sample projects. 70% were able to clearly articulate what their data represented and make clear projections as to the trend seen in differing scenarios.
- MTH 213 (SP25) - The one student who scored a 2 was absent on the day we worked on this assignment. The student did not have time to go back to watch the video and complete the assignment. Three students interpreted the information accurately and were able to use a graph to explain their work.

Dimension: Representation

- AMT 272 (F24) - the former engineer is more literate than the others. All were able to demonstrate QL competency.
- BA 211Z (F24) - Some students had difficulty converting their correct understanding of the data into the correct mathematical representation

- EC 202 (F24) - Again, most did well with understanding the abstractions, with a few that gave more insights about secondary feedback loops from the initial changes.
- MTH 211 (F24) - The purpose of this project was for students to explore 4 methods of multiplication to deepen their understanding of how to teach and learn multiplication algorithms. Rather than only using the standard algorithm for long multiplication, students explored other methods using the same numbers. The result was a skillful demonstration of the 4 methods.
- NRS 237 (F24) Data collected was not required to be presented in mathematical terms. The data was presented in a table format to support the language used in patient education and communication. This area was not applicable to the assignment.
- AMT 282 (W25) - The "math" was completed properly. The results were expressed in proper form and in the proper units.
- EC 201 (W25) - 80% of submissions competently converted the information in the assignment into the desired mathematical portrayal.
- AMT 261 (SP25) - 1 student found it difficult to express themselves through the format provided, i.e a demonstration at the white board in front of their peers. The task was completed but only after a measured amount of peer coaxing. We are supportive as a class to help our peers become less anxious in presenting arguments to support their views and interpretation of data. This assertiveness training is essential for one to be secure in their position as an AMT.
- BA 213Z (SP25) - Like my comments on "Interpretation," above, students demonstrated varying levels of recall from the earlier (BA 211Z) course.
- EC 202 (SP25) - students managed a 3-score or better on this. 5 students converted the information but portrayal was only partial, while one student did not comprehend the assignment.
- MFG 290 (SP25) - 60% of students were able to completely convert their data and analyze the data to complete the project.
- MTH 213 (SP25) - Three students accurately interpreted all of the components of the assignment. Three students missed one or more questions on the assignment.

Dimension: Calculation

- BA 211Z (F24) - Generally, students could calculate the math correctly. This may be partially attributed to students having taken BA 104-Applied Business Math fall term as well and this BA 211Z assignment completed at the end of the term.
- EC 202 (F24) - This was a tough determination, as not all scored 100% on ALL calculations in the observed assignment. I gave higher consideration for the fiscal policy exercise, then real income, and a lower consideration to real output with spending changes. Fiscal policy calcs by itself among the group would rank higher with real output changes from spending the lowest.
- MTH 211 (F24) - All students who completed the assignment successfully worked the multiplication problems. Problems were worked using the 4 multiplication methods so a self checking mechanism was built into the project.
- NRS 237 (F24) All students showed the ability to adequately calculate dosages for OTC medications in connection to the requirements of the selected patient population. Students showed the ability to collect, and compare data to support positive patient outcomes.
- STAT 243Z (F24) - As mentioned above, it was surprising how many messed up the calculations; that is the easiest part of the project!
- AMT 282 (W25) - The "math" was completed properly. The results were expressed in proper form and in the proper units.

- EC 201 (W25) - 63% of submissions had successful calculations to the problem.
- MTH 212 (W25) - The math skills students demonstrated were solid.
- AMT 261 (SP 25) - Some students just need to be more careful in double checking their work and using the tells that will assure their correct calculations.
- BA 213Z (SP25) - Students generally computed correct answers to financial ratios and calculations, but did not determine all of the calculations necessary to comprehensively analyze the condition of the company.
- EC 202 (SP25) - 65% of students scored 3 or better on this part. 4 students presented partial calculations for full credit (but may have got the interpretation correct) while 2 students did not offer any calculations but answered close to correct.
- MFG 290 (SP25) - 90% of students were able sufficiently able to demonstrate all calculations needed to solve this task.
- MTH 213 (SP25) - Six of the students correctly calculated the equations on the assignment. One student missed the difference between the slopes of parallel versus perpendicular lines.

Dimension: Application/Analysis

- AMT 272 (F24) - All passed with sufficient demonstrated aptitude.
- BA 211Z (F24) - Their judgements are pretty good, but far from comprehensive. This is primarily due to their lack of experience in the workplace to fully understand all of the implications of the data.
- EC 202 (F24) - With their calculations, particularly in fiscal policy, most did reasonably well in coming to a conclusion.
- NRS 237 (F24) Students showed the ability to analyze researched data and apply the information in a communication style that would increase the knowledge of the selected patient population.
- STAT 243Z (F24) - The technique of hypothesis testing is pretty cut and dried, so I would say not really applicable here.
- AMT 282 (W25) - All students showed that they understood the purpose behind the knowledge derived from the calculations and how they connect to the industry expectations.
- EC 201 (W25) - 76% of submissions drew reasonable or at least competent judgements from their results
- MTH 212 (W25) - Two students could have extended their conclusions for the problems.
- PS 202 (W25) - Using credible data sources, each containing numerical or statistical data, most students drew reasonable conclusions about the import and context for their data in supporting their stance to a legislator.
- AMT 261 (SP25) - Table interpretation can sometimes throw an individual off when they choose not to consider the implications. It is an inherent struggle with some younger individuals that have not matured to seriously consider the ramifications. These matters are often covered in Human Factors discussion and review of aviation accident reports.
- BA 213Z (SP25) - Students generally made plausible judgments about the data, but only one student had any in-depth assessment of changes the company needed to address.
- EC 202 (SP25) - 53% of students scored 3 or better on this. 7 students analyzed the data and presented basic conclusions without more thought to ramifications. One student had no clue.
- MFG 290 (SP25) - 80% of students were able to analyze their data enough to draw reasonable conclusions.
- MTH 213 (SP25) - Four students accurately predicted the qualitative graphs using different shaped containers. Two students did not have the x and y axis labeled correctly, but the general shape of the graph was correct. One student did not do this section of the assignment.

Dimension: Assumptions

- AMT 272 (F24) - Some stumbling in their expression, but all were able to justify their outcomes.
- BA 211Z (F24) - Same as my prior comment - lack of experience. This is an introductory course in accounting - students are mostly just trying to figure out the concepts and how to perform the tasks properly.
- EC 202 (F24) - Most of the assignment was pretty straightforward with little assumption making, but overall some made a few interesting observations.
- MTH 211 (F24) This was not part of the assignment.
- NRS 237 (F24) All students showed the ability to estimate the health literacy of a patient population and present information on the use of OTC medication in a visual presentation that would reduce the risk of patient harm in the community setting.
- STAT 243Z (F24) - This right here! It always amazes me how little those outside of math understand the importance of assumptions. In math those assumptions literally determine which equations are used for the models involved. And different equations often provide vastly different answers to posed questions. This project is different in that there is really only one assumption; you can't choose between different assumptions. That assumption is that the data is more or less normally distributed, or at least reasonably symmetrically distributed. However, that assumption should be communicated in the final project. Students this term seemed to forget this requirement....
- AMT 282 (W25) - All students discussed the results of the calculations and described how the information derived would be used to successfully accomplish various job tasks.
- EC 201 (W25) - 76% of submissions had competent judgements about their appropriate assumptions to their answers.
- MTH 212 (W25) - This was not included in the questions on the quizzes.
- PS 202 (W25) - Generally speaking, students demonstrated how their chosen quantitative data sources were important to understanding their stance to legislators in an advocacy letter.
- BA 213Z (SP25) - There were no assumptions - all data was provided.
- EC 202 (SP25) - 59% of students scored 3 or better for this one. 5 students did describe rationales but lacked explaining certain assumptions to the answer. Two students had wrong assumptions.
- MFG 290 (SP25) - 80% of students were able to draw a reasonable rationale for their assumptions.

Dimension: Communication

- AMT 272 (F24) - I had to make up an entirely extra assignment for this particular ILO assessment. The FAA curriculum places these elements of the training throughout the program in bits and pieces as needed for the specific lesson. I had to draw them out from the normal lesson plan to provide enough concentrated quantitative exercise to gather sufficient data.
- BA 211Z (F24) - Same as my prior comment - lack of experience. This is an introductory course in accounting - students are mostly just trying to figure out the concepts and how to perform the tasks properly.
- EC 202 (F24) - Overall, most communicated their findings well and defended their positions (in lieu of some minor miscalculations). The zero ones did not complete the response portion of the assignment.
- MTH 211 (F24) - Each student effectively communicated the discoveries they made while doing this assignment. First students worked in groups of 3 to discuss their preferred multiplication

method. Then in the larger group, a volunteer worked a different multiplication problem using their preferred method.

- NRS 237 (F24) - All students showed the ability to communicate the required information in a visual format.
- STAT 243Z (F24) As mentioned above - it was a disappointing set of projects.
- AMT 282 (W25) All were able to express their arguments with quantitative reflection and numerical certainty in interpreting task oriented directions.
- EC 201 (W25) - 83% communicated effectively how they got their results mathematically from the information provided and what their conclusions were, based on their results.
- MTH 212 (W25) - Students did not need to present this material to their peers or instructor.
- PS 202 (W25) - I was impressed at how confident and diligent the students were at connecting their data to their overall stance/argument, all while maintaining a narrative thread. For many, it was very natural how they used quantitative data to illustrate their points.
- AMT 261 (SP 25) - Half of the students did a good job at tying their calculations to support for their positions on the analyses performed. The remainder did only a fair job, making very general statements without specific numerical accuracy.
- BA 213Z (SP25) - This assignment measured a combination of quantitative content from BA 211Z and BA 213Z. Some students appeared to have better recall than others of the earlier (BA 211Z) course.
- EC 202 (SP25) - 59% of students scored 3 or better. 5 students got the right answer but did not effectively communicate how they got there. One student got it right but did not give any supporting evidence and one student had no clue.
- MFG 290 (SP25) - 90% of students were able to connect data with few minor implications in their work.
- MTH 213 (SP25) - When we had a class discussion about the project, students were able to clarify their results. Having a variety of containers to view was fun. Each student talked about what they thought the graphs would look like if water were poured into the containers. As a class, we made some changes to the predictions. Then students completed their write up of for the assignment. I think the class discussion was helpful for students to compare their predictions to what we discussed in class.

Appendix 5: 2019-20 Results for the Assessment of ILO#3 – Quantitative Literacy

Institutional Learning Outcome #3: Quantitative Literacy		Through their respective disciplines, CGCC students who earn a degree can: Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (<i>Quantitative Literacy</i>)					
Total Number of students enrolled in assessed courses: 385 Total # of students who completed scored assignment: 321	Mastery	Accomplished	Developing	Beginning	Not Demonstrated	Not Applicable	Total Percentage for Accomplished or better
Interpretation: TOTALS	124	113	51	27	6	0	73.83%
Representation: TOTALS	120	87	76	13	25	0	64.49%
Calculations: TOTALS	131	83	42	16	27	22	71.57%
Application/Analysis: TOTALS	83	88	94	43	13	0	53.27%
Assumptions: TOTALS	97	62	62	55	32	13	51.62%
Communication: TOTALS	105	60	51	73	32	0	51.40%
Total Number of Students Scored	660	493	376	227	135	35	60.97%
Total Percentage of Students Scoring into Level	34.90%	26.07%	19.88%	12.00%	7.14%	1.85%	
Total Percentage of Students who Scored Accomplished or Better	60.97%						