



# COSUMNES RIVER COLLEGE

OFFICE OF RESEARCH & EQUITY

## **2022 – 2023 Assessment of Institutional Learning Outcomes**

Excerpt from the 2022-2023 Graduate Exit Survey

Report authored summer 2023

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## Executive Summary

Each year, the Research Office administers its Graduate Exit Survey, which contains a series of questions that ask graduates to self-assess how well they demonstrate the college's Institutional Learning Outcomes (ILOs). This report outlines the results of the 2022-2023 ILO assessment, as well as a five-year longitudinal analysis of the Institutional Learning Outcomes.

### 2022-2023 Institutional Learning Outcomes Findings

For each of the six ILOs, the average rating for each skill/ability was greater than 4.0. An average rating of 4.0 or higher indicates that graduates feel they are able to demonstrate each ability/skill Well or Very well. ILO skill 4.4 (the ability to *demonstrate empathy, civility, and equitable conflict resolution*) received the highest average rating, 4.5. ILO skill 1.3 (the ability to *apply mathematical skills, including algebra, to problem solve for both occupational and personal purposes*) received the lowest average rating, though still at 4.1. Statistical analyses tested for differences across respondent race, gender, age group, income level, first generation status, veteran status, Career & Academic Community (CAC), and primary course modality. A difference was found for student age group such that graduates age 25 and older were more likely to rate items under ILO 1, *Relevant Knowledge, Quantitative Reasoning, and Critical Habits of Mind*, higher than their peers. A difference was also found for student gender such that male students were more likely to rate ILO 1.6, *adapt to new challenges and pursuits*, lower than their peers.

### 2018-2023 Longitudinal Institutional Learning Outcomes Findings

As the ILO Assessment has been embedded into the Graduate Exit Survey for the past five years, the Office of Research & Equity is able to conduct a longitudinal analysis that aggregates findings across these years. From the 2018-2019 survey administration through the 2022-2023 cycle, graduates' average self-ratings for each ILO did not change significantly. However, when aggregating findings across five years, several statistically significant differences for various student demographic groups were found, as outlined below:

- Consistent with last year's evaluation, male graduates self-rated lower than their peers on items under ILO 2, *Effective Communication in Professional and Personal Situations*, ILO 4, *Cultural Understanding, Social Justice, and Equity*, and ILO 6, *Creativity*.
- There are several significant differences by student race/ethnicity on ILOs 1, 2, 3, 4, and 6:
  - Consistent with last year's evaluation, Black/African American graduates and graduates of an Unknown race self-rated lower on ILO 1.3, *Apply mathematical skills, including algebra, to problem solve for both occupational and personal purposes*.
  - Consistent with last year's evaluation, African American students and Hispanic/Latinx students self-rated higher than their peers on ILO 3.3, *Demonstrate ability to update skills to accommodate rapid change in society's technological landscape*, and ILO 4.2, *Participate in society with respect, empathy, and appreciation for human diversity*.
- There is a newly emergent significant difference by age for items under ILO 1, *Relevant Knowledge, Quantitative Reasoning, and Critical Habits of Mind*, and ILO 3, *Adaptability*, such that graduates age 25 and older self-rated higher than their peers.
- Consistent with prior evaluations, first generation graduates self-rated higher than graduates who were not first generation college students on items under ILO 1, 3, 5, and 6.

- Consistent with prior evaluations, graduates with an income below the poverty level and low-income graduates self-rated higher on items under ILO 3, *Adaptability*, ILO 5, *Competence in Social Responsibility and Sustainability*, and ILO 6, *Creativity*.

## Background and Methodology

Each year, the Research Office administers its Graduate Exit Survey, which contains a series of questions that ask graduates to self-assess how well they demonstrate the college’s Institutional Learning Outcomes (ILOs). The 2022-2023 Graduate Exit Survey was electronically administered in May 2023 to 1,586 students who either graduated in summer or fall 2022 or petitioned to graduate in spring 2023, with a 22% response rate (N=352). The respondents to the 2022-2023 Graduate Exit Survey were representative of the graduating class in terms of race, first generation status, income level, and foster youth status, but despite targeted sampling, male graduates and younger graduates were underrepresented among respondents. Differences in the demographic representation of students who received the survey and students who responded is outlined in Table 1 below.

Table 1. 2022-2023 Graduate Exit Survey Demographic Representation

| Group                          | % Respondent Population | % Target Population | Difference |
|--------------------------------|-------------------------|---------------------|------------|
| <b>Gender</b>                  |                         |                     |            |
| Female                         | 65.34%                  | 60.09%              | 5.25%      |
| Male                           | 32.39%                  | 38.08%              | -5.69%     |
| Non-binary                     | 0.57%                   | 0.25%               | 0.32       |
| Unknown / Not reported         | 1.70%                   | 1.58%               | 0.12       |
| <b>Race</b>                    |                         |                     |            |
| African American / Black       | 10.51%                  | 7.12%               | 3.39%      |
| Asian                          | 28.13%                  | 29.95%              | -1.82%     |
| Filipino                       | 4.55%                   | 5.80%               | -1.25%     |
| Hispanic / Latinx              | 25.85%                  | 26.10%              | -0.25%     |
| Multi-Race                     | 7.95%                   | 7.00%               | 0.95%      |
| Native American                | 0.00%                   | 0.25%               | -0.25%     |
| Other Non-White                | 0.57%                   | 0.25%               | 0.32%      |
| Pacific Islander               | 1.42%                   | 1.51%               | -0.09%     |
| Unknown                        | 1.42%                   | 1.58%               | -0.16%     |
| White                          | 19.60%                  | 20.43%              | -0.83%     |
| <b>Age Group</b>               |                         |                     |            |
| 24 or Younger                  | 46.02%                  | 55.04%              | -9.02%     |
| 25 or Older                    | 53.98%                  | 44.96%              | 9.02%      |
| <b>First Generation Status</b> |                         |                     |            |
| First Generation               | 32.39%                  | 28.94%              | 3.45%      |
| Not First Generation           | 67.61%                  | 71.00%              | -3.39%     |
| Unknown                        | 0.00%                   | 0.06%               | -0.06%     |
| <b>Income Level</b>            |                         |                     |            |
| Below Poverty                  | 29.06%                  | 28.31%              | 0.75%      |
| Low                            | 22.79%                  | 23.77%              | -0.98%     |
| Middle and Above               | 35.04%                  | 36.07%              | -1.03%     |
| Unable to Determine            | 13.11%                  | 11.85%              | 1.26%      |
| <b>Veteran Status</b>          |                         |                     |            |

| Group                      | % Respondent Population | % Target Population | Difference |
|----------------------------|-------------------------|---------------------|------------|
| Veteran                    | 3.69%                   | 2.33%               | 1.36%      |
| Not Veteran                | 96.31%                  | 97.67%              | -1.36%     |
| <b>Foster Youth Status</b> |                         |                     |            |
| Foster Youth               | 0.85%                   | 1.01%               | -0.16%     |
| Not Foster Youth           | 99.15%                  | 98.99%              | 0.16%      |

## 2022 – 2023 Institutional Learning Outcomes Analysis

Survey respondents are asked to self-assess how well they demonstrate the college’s Institutional Learning Outcomes. Table 2 below displays the average rating per skill/ability identified within each of the six ILOs. For each of the six ILOs, the average rating for each skill/ability was greater than 4.0. An average rating of 4.0 or higher indicates that graduates feel they are able to demonstrate each ability/skill Well or Very well. ILO skill 4.4 (the ability to *demonstrate empathy, civility, and equitable conflict resolution*) received the highest average rating, 4.5. ILO skill 1.3 (the ability to *apply mathematical skills, including algebra, to problem solve for both occupational and personal purposes*) received the lowest average rating, though still at 4.1. See table 2 below for the average rating of each ILO. Further disaggregations of the ILO ratings can be found in the [Graduate Exit Survey Power BI report](#).

Table 2. 2022-2023 Institutional Learning Outcomes, Average Ratings

| Institutional Learning Outcomes (ILOs)  | Mean | Number of Respondents |
|---|------|-----------------------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well                        |      |                       |
| <b>ILO 1: Relevant Knowledge, Quantitative Reasoning, and Critical Habits of Mind</b>                                   |      |                       |
| 1.1: Solve complex problems   | 4.3  | 257                   |
| 1.2: Conduct basic research: collect, evaluate, and analyze relevant facts and information                              | 4.4  | 254                   |
| 1.3: Apply mathematical skills, including algebra, to problem solve for both occupational and personal purposes         | 4.1  | 254                   |
| 1.4: Employ qualitative evaluation measures   | 4.2  | 255                   |
| 1.5: Examine, reflect upon, and evaluate one's own thinking   | 4.4  | 253                   |
| 1.6: Adapt to new circumstances, challenges, and pursuits   | 4.5  | 254                   |
| <b>ILO 2: Effective Communication in Professional and Personal Situations</b>   |      |                       |
| 2.1: Utilize principles of critical thinking and logic to inform, persuade, or otherwise participate in discourse       | 4.4  | 256                   |
| 2.2: Write and verbally communicate in a clear, well-organized manner appropriate to the purpose, audience, and setting | 4.4  | 256                   |
| 2.3: Demonstrate analytical and discerning listening and reading practices  | 4.4  | 256                   |
| 2.4: Employ graphic, creative, aesthetic, or non-verbal forms of expression   | 4.3  | 256                   |
| <b>ILO 3: Adaptability</b>  |      |                       |
| 3.1: Incorporate what is learned to make positive personal and professional changes                                     | 4.4  | 253                   |
| 3.2: Use technology effectively for career, information, academic, and personal purposes                                | 4.5  | 251                   |
| 3.3: Demonstrate ability to update skills to accommodate rapid change in society's technological landscape              | 4.4  | 248                   |

| Institutional Learning Outcomes (ILOs)  | Mean | Number of Respondents |
|---|------|-----------------------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well  |      |                       |
| <b>ILO 4: Cultural Understanding, Social Justice, and Equity</b>  |      |                       |
| 4.1: Appreciate artistic expression, aesthetics, languages, and traditions across cultures  | 4.4  | 255                   |
| 4.2: Participate in society with respect, empathy, and appreciation for human diversity   | 4.5  | 253                   |
| 4.3: Be mindful of divergent perspectives accompanied by awareness of personal prejudices and biases when considering issues  | 4.5  | 252                   |
| 4.4: Demonstrate empathy, civility, and equitable conflict resolution   | 4.5  | 248                   |
| <b>ILO 5: Competence in Social Responsibility and Sustainability</b>  |      |                       |
| 5.1: Recognize the individual's responsibility in local, national, and global matters   | 4.2  | 251                   |
| 5.2: Address, through ethical reasoning, issues of social, political, and environmental well-being in the workplace, the greater community, the government, and the world                                       | 4.3  | 251                   |
| <b>ILO 6: Creativity</b>  |      |                       |
| 6.1: Employ inspiration and imagination in synthesizing existing ideas and material to generate original work such as novel solutions to problems, alternatives to traditional practices, and other innovations | 4.3  | 256                   |
| 6.2: Extend or challenge current understanding or expression through experimentation and divergent thinking   | 4.3  | 251                   |
| 6.3: Exhibit persistence until efforts lead to a successful outcome   | 4.4  | 248                   |

Statistical analyses tested for differences across respondent race, gender, age group, income level, first generation status, veteran status, Career & Academic Community (CAC), and primary course modality. A difference was found for student gender such that male students were more likely to rate ILO 1.6, *adapt to new challenges and pursuits*, lower than their peers ( $F(3, 249) = 3.26, p < 0.05$ ).

Table 3. 2022-2023 Institutional Learning Outcomes, Average Ratings, Gender

| Institutional Learning Outcomes (ILOs)   | Female     | Male      | Nonbinary | Unknown/<br>Not reported |
|--|------------|-----------|-----------|--------------------------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well |            |           |           |                          |
| <b>ILO 1: Relevant Knowledge, Quantitative Reasoning, and Critical Habits of Mind</b>            |            |           |           |                          |
| 1.6: Adapt to new circumstances, challenges, and pursuits  | 4.54 (160) | 4.27 (88) | 4.33 (3)  | 5.0 (2)                  |

A difference was also found for student age group such that graduates age 25 and older were more likely to rate items under ILO 1, *Relevant Knowledge, Quantitative Reasoning, and Critical Habits of Mind*, higher than their peers:

- ILO 1.1 ( $F(1, 254) = 6.73, p < 0.05$ )
- ILO 1.2 ( $F(1, 251) = 4.83, p < 0.05$ )
- ILO 1.4 ( $F(1, 252) = 5.92, p < 0.05$ )

Table 4. 2022-2023 Institutional Learning Outcomes, Average Ratings, Age Group

| Institutional Learning Outcomes (ILOs)   | 24 or younger | 25 or older |
|--|---------------|-------------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well |               |             |
| <b>ILO 1: Relevant Knowledge, Quantitative Reasoning, and Critical Habits of Mind</b>            |               |             |
| 1.1: Solve complex problems  | 4.17 (121)    | 4.41 (135)  |
| 1.2: Conduct basic research: collect, evaluate, and analyze relevant facts and information       | 4.31 (119)    | 4.50 (134)  |
| 1.4: Employ qualitative evaluation measures  | 4.03 (120)    | 4.28 (134)  |

## 2018 – 2023 Longitudinal Institutional Learning Outcomes Analysis

Table 5 below shows the average ratings for each ILO for 2018-2019 through 2021-2023. No significant changes in graduates' self-reported ratings were found over this time period. Further disaggregations of the ILO ratings can be found in the [Graduate Exit Survey Power BI report](#).

Table 5. Longitudinal Institutional Learning Outcomes, Average Ratings

| Institutional Learning Outcomes (ILOs)  | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 |
|---|-----------|-----------|-----------|-----------|-----------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well                        |           |           |           |           |           |
| <b>ILO 1: Relevant Knowledge, Quantitative Reasoning, and Critical Habits of Mind</b>                                   |           |           |           |           |           |
| 1.1: Solve complex problems   | 4.3 (232) | 4.3 (352) | 4.2 (269) | 4.3 (163) | 4.3 (257) |
| 1.2: Conduct basic research: collect, evaluate, and analyze relevant facts and information                              | 4.5 (231) | 4.3 (347) | 4.3 (269) | 4.5 (163) | 4.4 (254) |
| 1.3: Apply mathematical skills, including algebra, to problem solve for both occupational and personal purposes         | 4.1 (232) | 4.0 (352) | 4.0 (269) | 4.1 (163) | 4.1 (254) |
| 1.4: Employ qualitative evaluation measures   | 4.2 (232) | 4.1 (348) | 4.1 (267) | 4.2 (161) | 4.2 (255) |
| 1.5: Examine, reflect upon, and evaluate one's own thinking   | 4.5 (231) | 4.5 (350) | 4.5 (268) | 4.6 (163) | 4.4 (253) |
| 1.6: Adapt to new circumstances, challenges, and pursuits   | 4.5 (231) | 4.4 (350) | 4.4 (265) | 4.5 (162) | 4.5 (254) |
| <b>ILO 2: Effective Communication in Professional and Personal Situations</b>   |           |           |           |           |           |
| 2.1: Utilize principles of critical thinking and logic to inform, persuade, or otherwise participate in discourse       | 4.4 (231) | 4.3 (353) | 4.3 (267) | 4.5 (163) | 4.4 (256) |
| 2.2: Write and verbally communicate in a clear, well-organized manner appropriate to the purpose, audience, and setting | 4.5 (232) | 4.4 (351) | 4.4 (267) | 4.5 (163) | 4.4 (256) |
| 2.3: Demonstrate analytical and discerning listening and reading practices  | 4.5 (229) | 4.3 (353) | 4.4 (266) | 4.4 (163) | 4.4 (256) |
| 2.4: Employ graphic, creative, aesthetic, or non-verbal forms of expression   | 4.2 (230) | 4.2 (352) | 4.2 (263) | 4.2 (162) | 4.3 (256) |
| <b>ILO 3: Adaptability</b>  |           |           |           |           |           |
| 3.1: Incorporate what is learned to make positive personal and professional changes                                     | 4.5 (231) | 4.4 (352) | 4.3 (265) | 4.4 (163) | 4.5 (253) |
| 3.2: Use technology effectively for career, information, academic, and personal purposes                                | 4.4 (231) | 4.4 (350) | 4.4 (266) | 4.4 (163) | 4.5 (251) |
| 3.3: Demonstrate ability to update skills to accommodate rapid change in society's technological landscape              | 4.3 (229) | 4.3 (352) | 4.2 (265) | 4.3 (163) | 4.4 (248) |
| <b>ILO 4: Cultural Understanding, Social Justice, and Equity</b>  |           |           |           |           |           |

| Institutional Learning Outcomes (ILOs)  | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 |
|---|-----------|-----------|-----------|-----------|-----------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well  |           |           |           |           |           |
| 4.1: Appreciate artistic expression, aesthetics, languages, and traditions across cultures  | 4.4 (231) | 4.3 (352) | 4.3 (266) | 4.3 (163) | 4.4 (255) |
| 4.2: Participate in society with respect, empathy, and appreciation for human diversity   | 4.5 (231) | 4.5 (353) | 4.5 (266) | 4.5 (163) | 4.5 (253) |
| 4.3: Be mindful of divergent perspectives accompanied by awareness of personal prejudices and biases when considering issues  | 4.5 (231) | 4.5 (353) | 4.5 (266) | 4.5 (162) | 4.5 (252) |
| 4.4: Demonstrate empathy, civility, and equitable conflict resolution   | 4.5 (231) | 4.5 (352) | 4.5 (266) | 4.4 (162) | 4.5 (248) |
| <b>ILO 5: Competence in Social Responsibility and Sustainability</b>  |           |           |           |           |           |
| 5.1: Recognize the individual's responsibility in local, national, and global matters   | 4.3 (230) | 4.3 (353) | 4.3 (266) | 4.3 (162) | 4.2 (251) |
| 5.2: Address, through ethical reasoning, issues of social, political, and environmental well-being in the workplace, the greater community, the government, and the world                                       | 4.3 (227) | 4.3 (353) | 4.3 (264) | 4.4 (162) | 4.3 (251) |
| <b>ILO 6: Creativity</b>  |           |           |           |           |           |
| 6.1: Employ inspiration and imagination in synthesizing existing ideas and material to generate original work such as novel solutions to problems, alternatives to traditional practices, and other innovations | 4.2 (230) | 4.2 (352) | 4.2 (266) | 4.3 (163) | 4.3 (256) |
| 6.2: Extend or challenge current understanding or expression through experimentation and divergent thinking   | 4.2 (230) | 4.2 (352) | 4.3 (265) | 4.3 (162) | 4.3 (251) |
| 6.3: Exhibit persistence until efforts lead to a successful outcome   | 4.4 (228) | 4.3 (350) | 4.4 (264) | 4.4 (160) | 4.4 (248) |

## Differences in Aggregated Longitudinal ILO Ratings Across Demographic Groups

Several trends from the past few years' ILO Assessments appear persistent in a longitudinal analysis. These trends include statistically significant differences by student gender, race/ethnicity, age group, income level, foster youth status, and student CAC as determined by their reported major.

### Gender

Similar to prior trends, there is a significant difference by gender for the following ILOs, such that male students scored the items lower than their female peers. Table 6 displays each of these ILOs disaggregated by respondent gender.

- ILO 2.1 (F(3, 1268) = 2.90,  $p < 0.05$ )
- ILO 2.2 (F(3, 1267) = 4.43,  $p < 0.01$ )
- ILO 2.4 (F(3, 1261) = 2.73,  $p < 0.05$ )
- ILO 4.1 (F(3, 1265) = 3.98,  $p < 0.01$ )
- ILO 4.2 (F(3, 1264) = 4.31,  $p < 0.01$ )
- ILO 4.4 (F(3, 1256) = 3.71,  $p < 0.05$ )
- ILO 6.3 (F(3, 1248) = 3.86,  $p < 0.01$ )

Table 6. 2018-2023 Institutional Learning Outcomes Average Ratings, Gender

| Institutional Learning Outcomes (ILOs)  | Female     | Male       | Nonbinary | Unknown/<br>Not reported |
|---|------------|------------|-----------|--------------------------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well                        |            |            |           |                          |
| <b>ILO 2: Effective Communication in Professional and Personal Situations</b>   |            |            |           |                          |
| 2.1: Utilize principles of critical thinking and logic to inform, persuade, or otherwise participate in discourse       | 4.40 (831) | 4.29 (418) | 4.33 (3)  | 4.1 (20)                 |
| 2.2: Write and verbally communicate in a clear, well-organized manner appropriate to the purpose, audience, and setting | 4.46 (830) | 4.33 (418) | 5.00 (3)  | 4.2 (20)                 |
| 2.4: Employ graphic, creative, aesthetic, or non-verbal forms of expression   | 4.24 (828) | 4.13 (415) | 5.00 (3)  | 4.11 (19)                |
| <b>ILO 4: Cultural Understanding, Social Justice, and Equity</b>  |            |            |           |                          |
| 4.1: Appreciate artistic expression, aesthetics, languages, and traditions across cultures                              | 4.41 (829) | 4.26 (417) | 5.00 (3)  | 4.3 (20)                 |
| 4.2: Participate in society with respect, empathy, and appreciation for human diversity                                 | 4.54 (829) | 4.42 (416) | 4.67 (3)  | 4.15 (20)                |
| 4.4: Demonstrate empathy, civility, and equitable conflict resolution   | 4.54 (823) | 4.40 (414) | 4.67 (3)  | 4.35 (20)                |
| <b>ILO 6: Creativity</b>  |            |            |           |                          |
| 6.3: Exhibit persistence until efforts lead to a successful outcome   | 4.43 (818) | 4.29 (411) | 5.00 (3)  | 4.4 (20)                 |

### Race/Ethnicity

Similar to prior evaluations, there is a significant difference by race for the following ILOs:

- ILO 1.1 (F(9, 1265) = 1.90,  $p < 0.05$ )
  - Filipino students self-rated lower than their peers
  - Students of an Unknown race self-rated lower than their peers
- ILO 1.3 (F(9, 1262) = 3.55,  $p < 0.001$ )
  - Asian students self-rated higher than their peers
  - African American students self-rated lower than their peers
  - Students of an Unknown race self-rated lower than their peers
- ILO 2.2 (F(9, 1261) = 2.01,  $p < 0.05$ )
  - Asian students self-rated lower than their peers
  - Native American students self-rated lower than their peers
- ILO 3.3 (F(9, 1249) = 2.52,  $p < 0.05$ )
  - African American students self-rated higher than their peers
  - Hispanic students self-rated higher than their peers
- ILO 4.2 (F(9, 1258) = 2.07,  $p < 0.05$ )
  - African American students self-rated higher than their peers
  - Hispanic students self-rated higher than their peers
  - Multi-race students self-rated higher than their peers
- ILO 6.3 (F(8, 994) = 2.18,  $p < 0.05$ )
  - Filipino students self-rated lower than their peers
  - Asian students self-rated lower than their peers



Table 7. 2018-2023 Institutional Learning Outcomes Average Ratings, Race/Ethnicity

| Institutional Learning Outcomes (ILOs)  | African American | Asian         | Filipino     | Hispanic / Latinx | Multi-Race   | Native American | Other Non-White | Pacific Islander | Unknown      | White         |
|---|------------------|---------------|--------------|-------------------|--------------|-----------------|-----------------|------------------|--------------|---------------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well                        |                  |               |              |                   |              |                 |                 |                  |              |               |
| <b>ILO 1: Relevant Knowledge, Quantitative Reasoning, and Critical Habits of Mind</b>                                   |                  |               |              |                   |              |                 |                 |                  |              |               |
| 1.1: Solve complex problems   | 4.36<br>(135)    | 4.26<br>(343) | 4.07<br>(68) | 4.32<br>(314)     | 4.25<br>(85) | 4.00<br>(3)     | 4.00<br>(2)     | 4.36<br>(14)     | 3.87<br>(23) | 4.25<br>(343) |
| 1.3: Apply mathematical skills, including algebra, to problem solve for both occupational and personal purposes         | 3.80<br>(136)    | 4.18<br>(341) | 4.01<br>(68) | 4.05<br>(313)     | 3.96<br>(85) | 3.33<br>(3)     | 4.00<br>(2)     | 4.36<br>(14)     | 3.43<br>(23) | 4.00<br>(287) |
| <b>ILO 2: Effective Communication in Professional and Personal Situations</b>   |                  |               |              |                   |              |                 |                 |                  |              |               |
| 2.2: Write and verbally communicate in a clear, well-organized manner appropriate to the purpose, audience, and setting | 4.50<br>(136)    | 4.31<br>(341) | 4.34<br>(67) | 4.43<br>(311)     | 4.44<br>(85) | 3.67<br>(3)     | 4.50<br>(2)     | 4.64<br>(14)     | 4.52<br>(23) | 4.48<br>(289) |
| <b>ILO 3: Adaptability</b>  |                  |               |              |                   |              |                 |                 |                  |              |               |
| 3.3: Demonstrate ability to update skills to accommodate rapid change in society's technological landscape              | 4.38<br>(135)    | 4.22<br>(337) | 4.24<br>(67) | 4.40<br>(309)     | 4.08<br>(84) | 4.0<br>(3)      | 4.00<br>(2)     | 4.50<br>(14)     | 4.13<br>(23) | 4.32<br>(285) |
| <b>ILO 4: Cultural Understanding, Social Justice, and Equity</b>  |                  |               |              |                   |              |                 |                 |                  |              |               |
| 4.2: Participate in society with respect, empathy, and appreciation for human diversity                                 | 4.57<br>(136)    | 4.41<br>(341) | 4.40<br>(67) | 4.60<br>(310)     | 4.61<br>(85) | 4.33<br>(3)     | 5.00<br>(2)     | 4.36<br>(14)     | 4.52<br>(23) | 4.45<br>(287) |
| <b>ILO 6: Creativity</b>  |                  |               |              |                   |              |                 |                 |                  |              |               |
| 6.3: Exhibit persistence until efforts lead to a successful outcome   | 4.50<br>(132)    | 4.27<br>(335) | 4.21<br>(67) | 4.46<br>(309)     | 4.40<br>(86) | 4.33<br>(3)     | 4.00<br>(2)     | 4.31<br>(13)     | 4.43<br>(23) | 4.42<br>(282) |

Age

There is a newly emergent significant difference by age for items under ILO 1 and ILO 3, such that graduates age 25 and older self-rated higher than their peers.

- ILO 1.1 (F(1, 1273) = 13.84,  $p < 0.001$ )
- ILO 1.4 (F(1, 1263) = 5.46,  $p < 0.05$ )
- ILO 1.6 (F(1, 1262) = 5.92,  $p < 0.02$ )
- ILO 3.1 (F(1, 1264) = 7.80,  $p < 0.01$ )
- ILO 3.3 (F(1, 1257) = 5.36,  $p < 0.0$ )

Table 8. 2018-2023 Institutional Learning Outcomes Average Ratings, Age

| Institutional Learning Outcomes (ILOs)   | 24 or younger | 25 or older |
|--|---------------|-------------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well |               |             |
| <b>ILO 1: Relevant Knowledge, Quantitative Reasoning, and Critical Habits of Mind</b>            |               |             |
| 1.1: Solve complex problems  | 4.19 (617)    | 4.34 (658)  |
| 1.4: Employ qualitative evaluation measures  | 4.08 (614)    | 4.19 (651)  |
| 1.6: Adapt to new circumstances, challenges, and pursuits  | 4.39 (615)    | 4.48 (649)  |
| <b>ILO 3: Adaptability</b>   |               |             |

| Institutional Learning Outcomes (ILOs)   | 24 or younger | 25 or older |
|--|---------------|-------------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well           |               |             |
| <b>ILO 1: Relevant Knowledge, Quantitative Reasoning, and Critical Habits of Mind</b>                      |               |             |
| 3.1: Incorporate what is learned to make positive personal and professional changes                        | 4.35 (610)    | 4.46 (656)  |
| 3.3: Demonstrate ability to update skills to accommodate rapid change in society's technological landscape | 4.24 (605)    | 4.35 (654)  |

### Income Level

Similar to prior evaluations, across five years, graduates with an income below the poverty level and low-income students self-rated higher on ILO 3, Adaptability, ILO 5, *Competence in Social Responsibility and Sustainability*, and ILO 6, *Creativity*.

- 3.1 (F(3, 1262) = 3.10,  $p < 0.05$ )
- 3.2 (F(3, 1259) = 4.52,  $p < 0.01$ )
- 3.3 (F(3, 1255) = 5.08,  $p < 0.01$ )
- 5.1 (F(3, 1260) = 3.69,  $p < 0.05$ )
- 6.1 (F(3, 1265) = 3.37,  $p < 0.05$ )
- 6.2 (F(3, 1258) = 3.05,  $p < 0.05$ )
- 6.3 (F(3, 1248) = 3.70,  $p < 0.05$ )

Table 9. 2018-2023 Institutional Learning Outcomes Average Ratings, Income Level

| Institutional Learning Outcomes (ILOs)  | Below Poverty | Low        | Middle and Above | Unable to Determine |
|---|---------------|------------|------------------|---------------------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well  |               |            |                  |                     |
| <b>ILO 3: Adaptability</b>  |               |            |                  |                     |
| 3.1: Incorporate what is learned to make positive personal and professional changes   | 4.50 (369)    | 4.41 (301) | 4.36 (469)       | 4.31 (127)          |
| 3.2: Use technology effectively for career, information, academic, and personal purposes  | 4.47 (367)    | 4.47 (299) | 4.37 (470)       | 4.23 (127)          |
| 3.3: Demonstrate ability to update skills to accommodate rapid change in society's technological landscape  | 4.36 (365)    | 4.37 (299) | 4.26 (468)       | 4.08 (127)          |
| <b>ILO 5: Competence in Social Responsibility and Sustainability</b>  |               |            |                  |                     |
| 5.1: Recognize the individual's responsibility in local, national, and global matters   | 4.39 (368)    | 4.34 (300) | 4.23 (469)       | 4.17 (127)          |
| <b>ILO 6: Creativity</b>  |               |            |                  |                     |
| 6.1: Employ inspiration and imagination in synthesizing existing ideas and material to generate original work such as novel solutions to problems, alternatives to traditional practices, and other innovations | 4.30 (370)    | 4.25 (301) | 4.13 (470)       | 4.15 (128)          |
| 6.2: Extend or challenge current understanding or expression through experimentation and divergent thinking   | 4.33 (369)    | 4.31 (300) | 4.19 (466)       | 4.17 (127)          |
| 6.3: Exhibit persistence until efforts lead to a successful outcome   | 4.45 (361)    | 4.42 (299) | 4.35 (466)       | 4.21 (126)          |

### First Generation Status

Across four years, first generation students self-rated higher than their non-first generation peers on several skills in ILOs 1, 3, 5, and 6. Table 10 displays the average scores for each of these ILOs disaggregated by first generation status.

- 1.1 (F(1, 1273) = 16.11,  $p < 0.001$ )
- 1.2 (F(1, 1264) = 4.14,  $p < 0.05$ )
- 1.3 (F(1, 1270) = 17.90,  $p < 0.001$ )
- 1.4 (F(1, 1263) = 6.57,  $p < 0.05$ )
- 1.6 (F(1, 1262) = 6.60,  $p < 0.05$ )
- 3.1 (F(1, 1264) = 11.64,  $p < 0.001$ )
- 3.3 (F(1, 1257) = 10.16,  $p < 0.001$ )
- 5.1 (F(1, 1262) = 9.39,  $p < 0.001$ )
- 5.2 (F(1, 1257) = 4.06,  $p < 0.05$ )
- 6.1 (F(1, 1267) = 9.09,  $p < 0.01$ )
- 6.2 (F(1, 1260) = 5.92,  $p < 0.05$ )

Table 10. 2018-2023 Institutional Learning Outcomes Average Ratings, First Generation Status

| Institutional Learning Outcomes (ILOs)  | First Generation | Not First Generation |
|---|------------------|----------------------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well  |                  |                      |
| <b>ILO 1: Relevant Knowledge, Quantitative Reasoning, and Critical Habits of Mind</b>   |                  |                      |
| 1.1: Solve complex problems   | 4.39 (383)       | 4.21 (892)           |
| 1.2: Conduct basic research: collect, evaluate, and analyze relevant facts and information  | 4.44 (376)       | 4.21 (892)           |
| 1.3: Apply mathematical skills, including algebra, to problem solve for both occupational and personal purposes   | 4.20 (381)       | 3.96 (891)           |
| 1.4: Employ qualitative evaluation measures   | 4.23 (377)       | 4.10 (888)           |
| 1.6: Adapt to new circumstances, challenges, and pursuits   | 4.51 (377)       | 4.40 (887)           |
| <b>ILO 3: Adaptability</b>  |                  |                      |
| 3.1: Incorporate what is learned to make positive personal and professional changes   | 5.51 (380)       | 4.36 (886)           |
| 3.3: Demonstrate ability to update skills to accommodate rapid change in society's technological landscape  | 4.41 (375)       | 4.25 (884)           |
| <b>ILO 5: Competence in Social Responsibility and Sustainability</b>  |                  |                      |
| 5.1: Recognize the individual's responsibility in local, national, and global matters   | 4.40 (380)       | 4.25 (884)           |
| 5.2: Address, through ethical reasoning, issues of social, political, and environmental well-being in the workplace, the greater community, the government, and the world                                       | 4.38 (378)       | 4.28 (881)           |
| <b>ILO 6: Creativity</b>  |                  |                      |
| 6.1: Employ inspiration and imagination in synthesizing existing ideas and material to generate original work such as novel solutions to problems, alternatives to traditional practices, and other innovations | 4.32 (378)       | 4.17 (891)           |
| 6.2: Extend or challenge current understanding or expression through experimentation and divergent thinking   | 4.34 (378)       | 4.22 (884)           |

### Career & Academic Community (CAC)

There were statistically significant differences in the ratings of graduates by CAC, such that Business and Computer Science (BCS) students self-rated lower than their peers on items in ILO 4, *Cultural Understanding, Social Justice, and Equity*. This is an emergent finding that was not present in prior analyses. Note that uneven sample sizes across the CACs may effect results. For a full breakdown of ILO ratings by CAC, see the [Graduate Exit Survey Power BI report](#).

- ILO 4.1 (F(10, 665) = 2.15,  $p < 0.05$ )
- ILO 4.2 (F(10, 672) = 2.21,  $p < 0.05$ )

Table 11. 2018-2023 Institutional Learning Outcomes Average Ratings, CAC

| Institutional Learning Outcomes (ILOs)   | ACDT         | AFNR         | AME          | BCS           | ELS          | GE          | HHS          | SBS           | SME          |
|--|--------------|--------------|--------------|---------------|--------------|-------------|--------------|---------------|--------------|
| ILO Survey Items' Likert Scale: 1= Not at all, 2: Not very well, 3=Somewhat, 4=Well, 5=Very well |              |              |              |               |              |             |              |               |              |
| <b>ILO 4: Cultural Understanding, Social Justice, and Equity</b>                                 |              |              |              |               |              |             |              |               |              |
| 4.1: Appreciate artistic expression, aesthetics, languages, and traditions across cultures       | 4.64<br>(33) | 4.27<br>(11) | 4.49<br>(51) | 4.22<br>(192) | 4.69<br>(16) | 4.60<br>(5) | 4.31<br>(87) | 4.46<br>(178) | 4.28<br>(93) |
| 4.2: Participate in society with respect, empathy, and appreciation for human diversity          | 4.73<br>(33) | 4.36<br>(11) | 4.69<br>(51) | 4.35<br>(192) | 4.81<br>(16) | 4.60<br>(5) | 4.41<br>(87) | 4.56<br>(177) | 4.47<br>(92) |

## Considerations for future Institutional Learning Outcomes Assessments

Now that the ILO Assessment has been expanded into a longitudinal assessment for the past five years, the Office of Research & Equity offers the following considerations:

1. This assessment relies on graduates' self-perceived ratings of their ability to carry out each of the institutional learning outcomes based on their education at CRC. As CRC continues to expand its capacity to assess course student learning outcomes, the college should explore rolling these outcomes up into the ILOs so that we can better quantify ILO attainment using course- and program-level assessments. Currently, course student learning outcomes are linked to program student learning outcomes in the [Program Review](#) process. Using tools such as Canvas Gradebook, we have new capacity to connect different levels of student learning outcomes and potentially more quantitatively evaluate the ILOs.
2. Any statistical analysis is prone to Type I error, and, as the longitudinal ILO assessment has been expanded, it is clear that annual statistical analyses may be more prone to these errors than the longitudinal analysis. Notably, students' average ratings do not vary much from year to year. The Research & Equity Office recommends relying more on the five-year longitudinal assessment than annual findings to inform decision-making, while still monitoring annual changes.