**LBHC Program learning outcome report (2022-23)**

**I. General information**

| **Degree name** | Mathematics  |
| --- | --- |
| **Degree option names** | Math and pre-engineering |
| **Date report submitted** | 07/10/2023 |
| **Program faculty who contributed to this report** | Jonah, Dorci, Amber |
| **Program learning outcome** (refer to your program learning outcomes curriculum map and plan for the PLO to be formally assessed this year) | Analyze math facts, concepts, and relationships (through written work elucidating organizational computation steps, providing an explanation of a solution where appropriate and hand drawing graphs of functions and other relations). |
| **Course that formally assesses this program learning outcome at its highest level** (see program learning outcome curriculum map and plan) | MA 121 |
| **Number of students assessed for this program learning outcome** | 46 |
| **Semester students were assessed** (e.g., fall 2023) | Fall 2022, spring 2023, summer 2023 |

**II. Assessment of indicators for the program learning outcome** (add more rows if necessary)

| **Break down your program learning outcome into indicators** (maybe taken from rubric): Students should be able to…  | List the most significant **teaching and learning activities** used by faculty to facilitate the learning of each PLO indicator in their class(es) | List the **graded assignment(s) that formally assesses** each indicator at its highest level | **Results of assessment:** For each indicator, record the % or # of students who performed below, at, or above expected levels (or enter whatever information makes sense to you) | **Overall, how well did the students perform on each indicator?** (insert an “X” before the appropriate statement) |
| --- | --- | --- | --- | --- |
| Analyze math facts | Group work, lecture, discussion, examples on board | Quizzes, tests, assignments (work is required to be shown) | Below expected levels: 30%At expected levels: 55% Above expected levels: 15%  | Below expected levelsX At expected levels Above expected levels |
| Analyze math concepts | Group work, lecture, discussion, examples on board, vocab sheets | Quizzes, tests, assignments (work is required to be shown) | Below expected levels: 30%At expected levels: 55% Above expected levels: 15%  | Below expected levelsX At expected levels Above expected levels |
| Analyze math relationships | Group work, lecture, discussion, examples on board | Quizzes, tests, assignments (work is required to be shown) | Below expected levels: 30%At expected levels: 55% Above expected levels: 15%  | Below expected levelsX At expected levels Above expected levels |

**III. Overall assessment of this program learning outcome** (please be thorough in all responses)

| **Overall, how well did the students perform on this PLO?** (insert an “X” before the appropriate statement) | Below expected levelsX At expected levels Above expected levels |
| --- | --- |
| **Analyze assessment of PLO indicator results in section II:** What does the information in section II suggest to you about the performance expectations, the teaching strategies, and student learning?  | In general most students performed at an expected level with math facts, concepts, and relationships. They struggle most with solving for the indicated variable, word problems, and graphing.  |
| **Next steps:** Plans for reinforcing effective teaching and learning strategies and for improving student learning (clearly identify what will be done, by whom, by when, and how you will assess the impact of the changes) | Incorporate more time, instruction, and group work in areas/sections that involve solving for indicated variables, word problems, and graphing.  |
| **Projected semester of implementing “next steps”** | Fall 2023 |
| **Results of “next steps” implementation on student learning – this section is to be completed the following year** (describe how the implementation of the above “next steps” impacted student learning in the program)  |  |
| **Date “results of ‘next steps’ implementation” section above submitted** |  |
| **Suggestions** for improving this report or process (if any) |  |