**UA Rich Mountain**
**Assessing Student Learning**
**Course Outcomes Report**
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**Spring 2021**

## 1. Purpose

The Course Outcomes Report supplies information each semester regarding student learning on the course level. This report must be submitted to your division chair by the last day of the semester. Data from this report will be integrated into the annual Program Outcomes Report on Student Learning.

## 2. Background

Course Name: Biological Science Course # BIOL154

## 3. Course Outcome(s) being assessed this semester

**Think of the evidence of student learning activity or project. Choose ONE outcome for this course.**
*Type outcome here*

Strategic Goals: Select the Goal(s) associated with the Course Outcomes(s) being assessed this semester.

☐Goal One: Mission Driven
☐Goal Two: Operate with Integrity
☐Goal Three: Provide High Quality Education
☒Goal Four: Continuous Quality Improvement
☐Goal Five: Effective & Efficient Operations

Related Program Outcome: Students will apply tools,technology to develop research skills to learn scientific methods correctly to make critical observation, hypothesis, data analysis. identify, locate, and process information.

Related GELO category: Choose as many as apply.
☐ Thinking critically
☐ Communicating effectively
☐ Using technology
☐ Conducting relevant research

## 4. Evidence of Student Learning

Describe the classroom activity/tools related to **course** objective (What did they do for the class which was tied to this objective? Was it a project? Discussion? Quiz?)

Describe Activity: As an instructor of the subject, I lead and guide my biological science students on lecture and lab activities. In current project, students were assigned to prepares the tip of a root of an onion to observe the different stages of mitosis during plant cell division. My role as a mentor, students were asked to focus on relevant major points, important concept along critical observation and thinking in the given title. To do so, students also observe prepared slides of Whitefish blastula and green onion root tips. I strongly believe thatstudent should have better understanding to differencetiate between animal and plance cell division. Moreover, students should collect original research articles including review articles and web search to explain the importance of mitosis during growth and development and its significance in "apoptosis",a process where old cells are replaced by newly formed cells during mitosis, and "cancer" a challenging chronic disease.
However, current report does not explain much about the data obtained from lab work, but it supports to my students to collect data, analysis data and make a hypothesis on the basis of their observations. Current project was really helpful for students to prepare a report in the format of mini riview article to understand the significance of mitosis that explain how cancer cells develop due to faliur of mitosis in human body. Also, students significantly improve their way of criticall thinking on apoptosis and its significance in the control of cancer development when mitosis fails. This would help students to expend horizon of their knowledge in the area of regulatory mechanism of apoptosis and uncontrol growth of cancer that how a single mistake during mitosis can be lethal. Students also develop their skill to write mini-review professionally. Current lab activity gave opportunity to my students to express their own idea and participate in their research activities and experience. Also, this kind of activities encourage students to discus in group where they can share their idea to make project work better that has better value.

**5. Reflection**

**A.** What was the result of this activity? (How do you know that students satisfied the course objective being measured?)

Students succefully completed the project and it was found that over 90 percentage of the students could get satisfactory result to fulfil the requirements of project goal.

**6. Enter course data**

Number of students in your course(s) who met course objectives: 22

Enter the number of students total in your course section(s): 20

Enter the percent (%) of students achieving this course objective. (Data will be used on Program Outcomes Report under Evidence of Student Learning.) 90

**7. Response to data:** Will you change how you teach as a result of this assessment?

Choose only one of the narration options below. If curricular changes are needed, briefly explain any changes planned for course improvement. If no changes are needed, indicate the rationale in the space provided below.

☐Changes(s) needed. *Type here*

☒No change(s) needed

***Attach anonymous student samples of each activity along with the grading rubric / scale.**

**** Attach any meeting minutes associated with this assessment**