**Executive Summary**

(After completing the questions on the next few pages, please replace this area with a written executive summary of the questions that follow, including your data analysis, findings, action plan, and improvements you have already made. This will be the top sheet of your report. This summary should be at least a paragraph, and can definitely be longer if desired.)

The courses in the Biological Sciences, including Botany are successful in enabling students to meet some of the Institutional Learning Outcomes. In Botany, lectures and laboratory assignments promote the engagement of the students and the active learning of botanical facts and concepts. Students are required to do science and to think critically about numerous botanical questions. During botany laboratory sessions students are encouraged to work collaboratively, through the comparing of data and observations and by reporting their analysis of data to their peers. The goal is to have them think deeper and to want to discover how life works. Data collected this during the spring 2015 semester shows this group to be highly proficient.

**Faculty Included in the Preparation and Sharing of this Report:**

Elizabeth McInnes

**Please provide a brief and cogent narrative in response to each of the following questions.**

1. Provide a quantitative analysis for each ILO your CLOs inform. Provide the total number of students who passed/total number of students assessed in each ILO column *and* the corresponding ILO passing rate as an aggregated percentage.

**INSTITUTIONAL LEARNING OUTCOMES Students Passed/Assessed TOTAL RATE**

Communication

1. *Articulate ideas through written, spoken, and visual forms appropriately N/A N/A*

*and effectively in relation to a given audience and social context.*

1. *Utilize interpersonal and group communication skills, especially those that N/A N/A*

*promote collaborative problem-solving, mutual understanding, and teamwork.*

1. *Mindfully and respectfully listen to, engage with and formally respond to the N/A N/A*

*ideas of others in meaningful ways.*

1. *Plan, design, and produce creative forms of expression through music, speech, N/A N/A*

*and the visual and performing arts.*

Creative, Critical and Analytical Thinking

1. *Analyze differences and make connections among intellectual ideas, academic N/A N/A*

*bodies of knowledge and disciplinary fields of study.*

1. *Develop and expand upon innovative ideas by analyzing current evidence and N/A N/A*

*praxis, employing historical and cultural knowledge, engaging in theoretical*

*inquiry, and utilizing methods of rational inference.*

1. *Utilize the scientific method and solve problems using qualitative and N/A N/A*

*quantitative data.*

1. *Demonstrate the ability to make well-considered aesthetic judgments. N/A N/A*

Cultural Literacy and Social Responsibility

1. *Interpret and analyze ideas of value and meaning exhibited in literature, N/A N/A*

*religious practices, philosophical perspectives, art, architecture, music, language,*

*performance and other cultural forms.*

1. *Describe the historical and cultural complexities of the human condition in its N/A N/A*

*global context, including the emergence and perpetuation of inequalities and the*

*interplay of social, political, economic and physical geographies.*

1. *Analyze and evaluate the value of diversity, especially by collaborating with N/A N/A*

*people of different physical abilities and those with distinct linguistic, cultural,*

*religious, lifestyle, national, and political backgrounds.*

1. *Demonstrate a pragmatics of ethical principles, effective citizenship, and social N/A N/A*

*responsibility through cross-cultural interactions, volunteerism, and civic*

*engagement.*

Information and Technology Literacy

*1. Effectively access information and critically evaluate sources of information. N/A N/A*

*2. Analyze, synthesize and apply information practically and ethically within N/A N/A*

*personal, professional and academic contexts.*

*3. Identify, utilize and evaluate the value of a variety of technologies relevant to N/A N/A*

*academic and workplace settings.*

Personal and Professional Development

*1. Identify and assess individual values, knowledge, skills, and abilities in order to set N/A N/A*

*and achieve lifelong personal, educational, and professional goals.*

*2. Practice decision-making that builds self-awareness, fosters self-reliance, and N/A N/A*

*nourishes physical, mental, and social health.*

*3. Apply skills of cooperation, collaboration, negotiation, and group decision-making. 35/37 95%*

*4. Exhibit quality judgment, dependability, and accountability while maintaining N/A N/A*

*flexibility in an ever-changing world.*

1. Reflect on, consider and analyze the data you have. ***What does your CLO data tell you about how your students are achieving ILOs?*** *Be detailed, descriptive and analytical* in this qualitative assessment of each ILO in relation to your CLO data. **Are your results satisfactory?**

Data collected on the Botany CLOs during Spring 2015 demonstrates that our botany students have a firm understanding of how the scientific method is used by scientists to solve problems. Students are encouraged to work collaboratively during lab investigations and to recognize how scientists communicate the results of their research. Students worked together during laboratory sessions and analyzed plant stem cross sections to discern differences between monocotyledonous and dicotyledonous plants. Our students then report and discuss their discoveries and observations. Students were able to demonstrate their ability use their knowledge acquired in lab to solve problems given during a lab practical exam.

Data collected shows that students are meeting their course and general education learning outcomes. Botany students were highly proficient.

1. Your department and the college should be making improvements based on student learning outcomes assessment, and we need to continue to document and share the improvements and progress you have already made. Did you make any changes in your CLO statements or analysis during the last 4-year cycle? Did you receive funding for resources requests that were aimed to improve assessment results? Did you make any improvements in the areas of teaching and instruction processes, your courses, or your program? *Please explain your accomplishments and provide details about your efforts.*

Changes to the CLO statements for Botany 101 were not made during the last 4 year cycle. In the past 4 years, our biology department has made purchases for the replacement of materials used during botany lab activities (new plant presses, herbarium materials, prepared microscope slides, light banks). New discoveries and advances in the biological sciences, including botany occur constantly. As a result, changes and improvements in laboratory activities are always taking place. In the past few years, Blackboard has been used as a course enhancement. All lecture presentations and notes are posted for student review following class meetings. Changes are continually being made to this course in response to the needs of our students. Our goal is student success and preparation for transfer.

1. **Action Plan.** Based on the assessments and analysis you have provided, please consider what changes or improvements you would like to make, which might include updating your CLO statements, modifying course outlines, rethinking instruction efforts, using different assessment instruments, asking for additional resources to improve assessment results, etc. ***Based on the analysis, provide an action plan for improvement that draws on your assessment results and efforts.***

Data collected shows that students are meeting their course and general education learning outcomes. In the sciences, it is essential to keep up to date with current research and advancements. For this class, I plan on continuing to keep this course up to date with recent advancements as well as the course content descriptions of the California C-ID; and to change aspects as needed to support our Biological Science majors.