Bachelor of Science
Biology Program
Program Learning Outcomes Assessment Report 1446H

1. Program Information

Program:	Bachelor of Science in Biology
Qualification Level:	Bachelor of Biology
Department:	Biology
College:	Science
Institution:	University of Tabuk
Academic Year:	1446 H
Location:	Main campus (Male & Female) Umluj (Female)

2. General Overview

The assessment report highlights student performance and can be compared to the anticipated learning outcomes of the program. The findings and analysis are utilized to drive ongoing enhancements to the academic program, following a structured planning, implementation, evaluation, and refinement process.

The report offers a synopsis and automatically generates an aggregate result for all assessments completed by male and female students in each course. It is crafted according to the PLOs measurement plan, which employs both direct and indirect methods to assess the PLOs. The document outlines the outcomes of the PLOs assessment, conducts a thorough analysis of those results, and provides recommendations, and suggestions for future enhancements.

This report summarizes our assessment activities for the learning outcomes of the Bachelor of Biology program at the Faculty of Science, Tabuk University for the academic year 1446. The report is based on assessment data gathered during the first and second semesters of AY 1446.

3. Progress report of the previous year 1445 H

No	Recommendation	Action	results
1	The program must make efforts to achieve the new target.	Implement all improvement plans contained in the program report for the year.	Improving in PLOs level

4. PLOs Direct Assessment Results 1446 H

During the academic year 1446, the Biology Program conducted a thorough assessment of its Program Learning Outcomes (PLOs) using the Direct Method. This approach allows for a precise and measurable evaluation of student performance in various areas of knowledge, skills, and values. The evaluation process was divided into different PLO categories, such as Knowledge (K1, K2), Skills (S1, S2, S3, S4, S5, S6), and Values (V1, V2), for both male and female students in the main campus and Umluj. The goal of this structured analysis was to determine the program's effectiveness in teaching essential competencies, as well as to identify strengths and areas for improvement. Table 1 provides an overview of the direct assessment results for male and female students in different locations, while Table 2 offers a detailed breakdown of the levels of CLOs used to calculate the actual achievement levels for each PLO shown in Table 1.

Table 1.1 *Results of direct measurement of PLOs (Male and Female in Tabuk)*

	Female PLOs		K1	K2	S1	S2	S3	S4	S5	S6	V1	V2
Tabuk	Male	Target	78%	78%	78%	78%	78%	78%	78%	78%	78%	78%
		Actual	83.2 %	79.2 %	83.9 %	81.0 %	82.83 %	83.77 %	82.11 %	79.34 %	90.9%	80.3%
		Internal	79.56 %	79.16 %	78.53 %	80.31 %	79.97 %	79.14 %	78.24 %	79.08 %	78.52 %	78.85 %
		New Target	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%
	Female	Target	78%	78%	78%	78%	78%	78%	78%	78%	78%	78%
		Actual	79.9 %	80.48 %	82.13 %	80.2 %	81.04 %	79.9 %	85.20 %	88.12 %	82.56 %	89.74 %
		Internal	79.71 %	77.68 %	82.38 %	80.40 %	80.84 %	77.86 %	80.32 %	82.48 %	79.40 %	79.79 %
		New Target	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%
	Total	Target	78%	78%	78%	78%	78%	78%	78%	78%	78%	78%
		Actual	81.55 %	79.84 %	83.01 %	80.54 %	80.50 %	81. 8 %	83.63 %	83.71 %	86.63 %	85.02 %
		Internal	79.68 %	77.59 %	81.71 %	80.38 %	80.68 %	78.06 %	80.02 %	82..06 %	79.29 %	79.66 %
		New Target	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%

Table 1.2 *Results of the direct evaluation conducted in 1446 H in Umluj*

PLOs		K1	K2	S1	S2	S3	S4	S5	S6	V1	V2
Female (Umluj)	Target	78%	78%	78%	78%	78%	78%	78%	78%	78%	78%
	Actual	80.13%	79.1%	79.2%	79%	79.65%	79.6%	79.68%	80.24%	82%	80.17%
	Internal	77.60%	76.88%	79.55%	80.77%	79.10%	77.67%	78.88%	80.63%	80.03%	81.57%
	New Target	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%

Table 2. *The actual levels of CLOs that were used to calculate the actual levels of PLOs.*

PLO	Gender	BIO 0401		BIO 0403		BIO 0420		BIO 0430		BIO 0452		BIO 0457		BIO 0491		Weighted Average
		# of stud.	Actual	# of stud.	actual	# of stud.	actual	# of stud.	actual	# of stud.	Actual	# of stud.	Actual	# of stud.	Actual	
K1	Male					9	88%	6	75%	5	75%	4	95%			**83.2%**
	Female (Tabuk)					140	77.5%	56	80%	44	75%	65	88%			**79.9%**
	Female (Umlj)					48	75%	54	80%	59	88%	15	79%			**80.13%**
	Total	**PLO (K1): Demonstrate the basic concepts, theories, and fundamentals of biology, the related disciplines, and their applications. The total average of the direct assessment**														**80.1%**
K2	Male	24	78.1%	6	80%			6	79.2%			4	79.2%			**79.2%**
	Female (Tabuk)	34	81%	60	80%			56	80%			65	80.48%			**80.48%**
	Female (Umlj)	74	79%	48	79.4%			54	79.8%			15	78.1%			**79.1%**
	Total	**PLO (K2): Recognize methods of analyzing and solving problems in different branches of biology. The total average of the direct assessment**														**79.3%**

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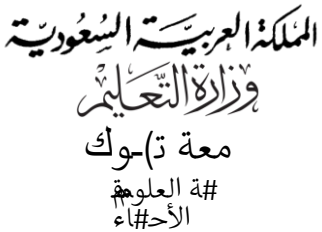

PLO	Gender	BIO 0401		BIO 0403		BIO 0420		BIO 0430		BIO 0452		BIO 0457		BIO 0491		Weighted Average
		# of stud.	Actual	# of stud.	actual	# of stud.	actual	# of stud.	actual	# of stud.	Actual	# of stud.	Actual	# of stud.	Actual	
S1	Male	24	95%	6	75%	9	86%					4	75%			**83.9%**
	Female (Tabuk)	34	90%	60	80%	140	76%					65	80%			**82.13%**
	Female (Umlj)	74	79.2%	48	79.4%	48	89.1%					15	89%			**83.2%**
	Total	**PLO (S1): Apply fundamental principles to the analysis of relevant biology and related disciplines. The total average of the direct assessment**														**82.3%**
S2	Male			6	74%			6	75%	5	75%	4	100%			**81.0%**
	Female (Tabuk)			60	80%			56	78%	44	75%	65	82%			**80.2%**
	Female (Umlj)			48	80%			54	80%	59	77%	15	79%			**79.0%**
	Total	**PLO (S2): Carry out the experimental techniques appropriate for different fields and specializations within biology. The total average of the direct assessment**														**79.64%**

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PLO	Gender	BIO 0401		BIO 0403		BIO 0420		BIO 0430		BIO 0452		BIO 0457		BIO 0491		Weighted Average
		# of stud.	Actual	# of stud.	actual	# of stud.	actual	# of stud.	actual	# of stud.	Actual	# of stud.	Actual	# of stud.	Actual	
S3	Male	24	72%			9	88%	6	75%			4	100%			82.83%
	Female (Tabuk)	34	78%			140	86%	56	82%			65	100%			82.74%
	Female (Umlj)	74	90%			48	85%	54	92%			15	81%			82.95%
	Total	PLO (S3): Evaluate literature critically to be utilized in evidence-based practice and conducting research. The total average of the direct assessment														82.84%
S4	Male			6	71%	9	75%			5	80%	4	100%			83.77%
	Female (Tabuk)			60	80%	140	83%			44	80%	65	81.9%			81.9%
	Female (Umlj)			48	78%	48	79%			59	80%	15	79%			82.6%
	Total	PLO (S4): Use appropriate information technologies to optimize the biological field. The total average of the direct assessment														82.88%

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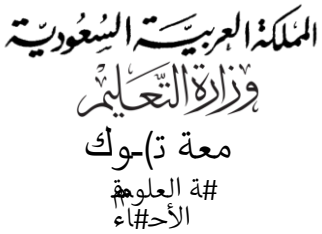

PLO	Gender	BIO 0401		BIO 0403		BIO 0420		BIO 0430		BIO 0452		BIO 0457		BIO 0491		Weighted Average
		# of stud.	Actual	# of stud.	actual	# of stud.	actual	# of stud.	actual	# of stud.	Actual	# of stud.	Actual	# of stud.	Actual	
S5	Male	24	79%			9	84%			5	75%			6	100%	**82.11%**
	Female (Tabuk)	34	70%			140	76%			44	91%			65	100%	**85.20%**
	Female (Umlj)	74	85%			48	86%			59	88%			41	82%	**85.68%**
	Total	**PLO (S5): Solve problems in various complex contexts in one or more disciplines related to the field of Biology. The total average of the direct assessment**														**84.2%**
S6	Male			6	79%			6	79%	5	80.5%			6	79.2%	**79.34%**
	Female (Tabuk)			60	94%			56	70%	44	88%			65	100%	**88.12%**
	Female (Umlj)			48	84%			54	81.7%	59	88.7%			41	90%	**85.24%**
	Total	**PLO (S6): Communicate effectively using oral, written, and visual modes to science-literate and general audiences. The total average of the direct assessment**														**84.5%**

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PLO	Gender	BIO 0401		BIO 0403		BIO 0420		BIO 0430		BIO 0452		BIO 0457		BIO 0491		Weighted Average
		# of stud.	Actual	# of stud.	actual	# of stud.	actual	# of stud.	actual	# of stud.	Actual	# of stud.	Actual	# of stud.	Actual	
V1	Male	24	100%	6	75%					5	84%			6	100%	**90.9%**
	Female (Tabuk)	34	70%	60	88%					44	76%			65	100%	**82.56%**
	Female (Umlj)	74	88.2%	48	85%					59	86%			41	85%	**86%**
	Total	**PLO (V1): Collaborate and effectively engage in self-learning to perform tasks and activities on time, whether working independently or in a group. The total average of the direct assessment**														87.**0%**
V2	Male	24	100%					6	73%			4	85%	6	100%	**80.3%**
	Female (Tabuk)	34	90%					56	78%			65	80%	65	100%	**89.74%**
	Female (Umlj)	74	87.2%					54	88%			15	89.0%	41	88.1%	**88.17%**
	Total	**PLO (V2): Commit to ethical conduct in scientific research, professional fields, and community tasks. The total average of the direct assessment**														**86.0%**

Analysis (Based on Table 1)

1. Knowledge and Understanding Domain

PLO-K1: Demonstrate the basic concepts, theories, and fundamentals of biology, the related disciplines, and their applications.

- The results reveal that the learning outcome was attained by 83.2% of male students and 79.9% of female students in the main campus, 80.13% of females in Umluj. These percentages exceeded both the internal and target benchmarks. The successful achievement of the learning outcome by the students in overall.

PLO-K2: Recognize methods of analyzing and solving problems in different branches of biology.

- The results reveal that the learning outcome was attained by 79.27% of male students and 80.48% of female students in the main campus, 79.1% of females in Umluj. These results surpass both the target and internal benchmarks.

2. Skills Domain

PLO- S1: Apply fundamental principles to the analysis of relevant biology and related disciplines.

- The results indicate that male students achieved a score of 83.9% and 82.13% of female students in the main campus, 83.2% of females in Umluj. These percentages exceed both the designated targets and internal levels, suggesting that both male and female students have successfully applied fundamental principles to the analysis of relevant biology and related disciplines.

PLO- S2: Carry out the experimental techniques appropriate for different fields and specializations within biology.

- Male students attained a score of 81% and 80.20% of female students in the main campus, 79% of females in Umluj. Since these percentages are greater than the set target standards, it indicates that neither male nor female students have reached the desired level of carrying out the experimental techniques appropriate for different fields and specializations within biology.

PLO- S3: Evaluate literature critically to be utilized in evidence-based practice and conducting research.

- Male students achieved a score of 82.83% and 82.74% of female students in the main campus, 82.95% of females in Umluj. These results demonstrate the successful acquisition of skills to evaluate literature critically to be utilized in evidence-based practice and conducting research.

PLO- S4: Use appropriate information technologies to optimize the biological field.

- Male students achieved a rate of 83.77% of male students and 81.9% of female students in the main campus, 82.6% of females in Umluj. This percentage surpasses both the target and internal benchmarks, indicating the successful attainment of the skill to use appropriate information technologies to optimize the biological field by both male and female students.

PLO- S5: Solve problems in various complex contexts in one or more disciplines related to the field of Biology.

- Male students obtained a score of 82.11% of male students and 85.20% of female students in the main campus, 85.68% of females in Umluj. Since this percentage exceeds both the internal and target levels, it suggests that both male and female students have achieved proficiency in solving problems in various complex contexts in one or more disciplines related to the field of Biology.

PLO- S6: Communicate effectively using oral, written, and visual modes to science-literate and general audiences.

- Considering that male students attained a score of 79.34% and 88.12% of female students at the main campus, 85.24% of females in Umluj. The male students didn't achieve the target and the female students have successfully surpassed both the internal and target benchmarks, it can be inferred that only female students have effectively demonstrated proficiency in their oral, written, and visual communication skills. The program also has to focus on male students to hence their communication abilities.

3. Values Domain

PLO-V1: Collaborate and effectively engage in self-learning to perform tasks and activities on time, whether working independently or in a group.

- The male students achieved a result of 90.9.% of male students and 82.56% of female students in the main campus, 86% of females in Umluj, both surpassing the established target and internal criteria. This indicates that the students have effectively showcased their ability to collaborate and effectively engage in self-learning to perform tasks and activities on time, whether working independently or in a group.

PLO-V2: Commit to ethical conduct in scientific research, professional fields, and community tasks.

- Male students attained a score of 80.3% of male students and 89.74% of female students in the main campus88.17% of females in Umluj. These scores notably surpass the designated target and internal benchmarks, signifying that both male and female students have successfully fulfilled the learning outcome of committing to ethical conduct in scientific research, professional fields, and community tasks.

Summary:

Exceeding targets: The results from the evaluation are predominantly positive with both male and female students exceeding the set targets in all PLOs.

5. PLOs Indirect Assessment Results 1446 H

This report outlines an evaluation of the indirect method utilized to assess the Program Learning Outcomes (PLOs) of the Biology program. The analysis is based on data collected from a survey administered to graduating students, employers, and alumni. Unlike direct assessments that scrutinize student work or performance, the indirect method relies on perceptions and feedback to measure the attainment of learning outcomes. It encompasses a thorough evaluation across three main categories: Knowledge and Understanding, Skills, and Values. The survey findings offer valuable insights into the program's effectiveness in meeting its educational goals, paving the way for a detailed examination of both strengths and areas needing improvement. The tables below present the results of the indirect assessment of each PLO for males, and females in the main campus and Umluj in the academic year 1446, while Table 3 displays the beneficiaries' average satisfaction levels with the PLOs. Additionally, the report includes information on the targets, response rates for beneficiaries, which encompass graduating students, employers, and alumni, and the new targets.

The following table shows the results of the indirect evaluation conducted in 1446 H

<table>
<tr><th rowspan="2">PLO</th><th rowspan="2">Branch</th><th rowspan="2">Section</th><th colspan="3">Results of Indirect PLO assessment</th><th rowspan="2">Average</th></tr>
<tr><th>SSS</th><th>ASS</th><th>ESS</th></tr>
<tr><td rowspan="4">Knowledge and Understanding

(K1): Demonstrate the basic concepts, theories, and fundamentals of biology, the related disciplines, and their applications.</td><td rowspan="2">Tabuk</td><td>Male</td><td>4.44</td><td rowspan="2">4.41</td><td rowspan="2">4.43</td><td rowspan="2">4.44</td></tr>
<tr><td>Female</td><td>4.39</td></tr>
<tr><td>Umluj</td><td>Female</td><td>4.52</td><td>4.57</td><td>4.5</td><td>4.53</td></tr>
<tr><td colspan="5">PLO(K1): The total average of indirect assessment</td><td>4.43</td></tr>
</table>

PLO	Branch	Section	Results of Indirect PLO assessment			Average
			SSS	ASS	ESS	
Knowledge and Understanding **(K2): Recognize methods of analyzing and solving problems in different branches of biology.**	Tabuk	Male	4.32	4.21	4.66	4.38
		Female	4.21			
	Umluj	Female	4.40	4.57	4.5	4.49
	PLO(K2): The total average of indirect assessment					4.37

PLO	Branch	Section	Results of Indirect PLO assessment			Average
			SSS	ASS	ESS	
Skills **(S1): Apply fundamental principles to the analysis of relevant biology and related disciplines.**	Tabuk	Male	4.59	4.53	4.5	4.56
		Female	4.62			
	Umluj	Female	4.44	4.5	4.83	4.59
	PLO(S1): The total average of indirect assessment					4.56

PLO	Branch	Section	Results of Indirect PLO assessment			Average
			SSS	ASS	ESS	
Skills **(S2): Carry out the experimental techniques appropriate for different fields and specializations within biology.**	Tabuk	Male	4.46	4.48	4.43	4.46
		Female	4.42			
	Umluj	Female	4. 42	4.35	4.5	4.42
	PLO(S2): The total average of indirect assessment					4.4

PLO	Branch	Section	Results of Indirect PLO assessment			Average
			SSS	ASS	ESS	
Skills **(S3): Evaluate literature critically to be utilized in evidence-based practice and conducting research.**	Tabuk	Male	4.39	4.48	4.46	4.43
		Female	4.41			
	Umluj	Female	4.46	4.28	4.5	4.41
	PLO(S3): The total average of indirect assessment					4.42

PLO	Branch	Section	Results of Indirect PLO assessment			Average
			SSS	ASS	ESS	
Skills **(S4): Use appropriate information technologies to optimize the biological field.**	Tabuk	Male	4.45	4.44	4.43	4.44
		Female	4.46			
	Umluj	Female	4.42	3.85	4.6	4.39
	PLO(S4): The total average of indirect assessment					4.40

PLO	Branch	Section	Results of Indirect PLO assessment			Average
			SSS	ASS	ESS	
Skills **(S5): Solve problems in various complex contexts in one or more disciplines related to the field of Biology.**	Tabuk	Male	4.3	4.3	4.33	4.32
		Female	4.37			
	Umluj	Female	4.28	4.71	4.6	4.53
	PLO(S5): The total average of indirect assessment					4.42

PLO	Branch	Section	Results of Indirect PLO assessment			Average
			SSS	ASS	ESS	
Skills **(S6): Communicate effectively using oral, written, and visual modes to science-literate and general audiences.**	Tabuk	Male	4.36	4.21	4.31	4.39
		Female	4.4			
	Umluj	Female	4.36	4.42	4.42	4.43
	PLO(S6): The total average of indirect assessment					4.4

PLO	Branch	Section	Results of Indirect PLO assessment			Average
			SSS	ASS	ESS	
Values **(V1): Collaborate and effectively engage in self-learning to perform tasks and activities on time, whether working independently or in a group.**	Tabuk	Male	4.34	4.30	4.43	4.4
		Female	4.37			
	Umluj	Female	4.4	4.5	4.48	4.46
	PLO(V1): The total average of indirect assessment					4.43

PLO	Branch	Section	Results of Indirect PLO assessment			Average
			SSS	ASS	ESS	
Values **(V2): Commit to ethical conduct in scientific research, professional fields, and community tasks.**	Tabuk	Male	4.47	4.21	4.56	4.52
		Female	4.53			
	Umluj	Female	4.45	4.43	4.83	4.57
	PLO(V2): The total average of indirect assessment					4.54

SSS Students satisfaction Survey with the PLOs, data taken from Program Evaluation Survey "PES"

Table 4. *Results of indirect measurement of PLOs*

PLOs		K1	K2	S1	S2	S3	S4	S5	S6	V1	V2
Total	Target	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	Actual	4.43	4.4	4.56	4.4	4.42	4.40	4.42	4.4	4.43	4.54
	Internal	4.13	4.13	4.31	4.15	4.20	4.12	4.12	4.11	4.22	4.30
	New Target	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6

Survey Results:

1. Knowledge and Understanding Domain:

According to the survey findings, both male and female participants in different locations surpassed the pre-set targets and internal benchmarks as last year. This demonstrates a solid understanding of concepts, theories, and fundamentals of Biology and their methods of analyzing and solving problems in different branches of biology for both genders, reflecting the effectiveness of the program in imparting foundational biology knowledge.

2. Skills Domain:

The survey results presented in Table 3 indicate that students are generally successful in achieving the Program Learning Outcomes (PLOs) as the last year. This indicates that students have developed their ability to improve their skills.

3. Values Domain:

Survey results show that the program has successfully met its objectives for the Values, Independence, and Responsibilities (PLOs) Program Learning Outcomes (PLOs). This indicates that students have developed their ability to collaborate and engage effectively in self-learning to perform tasks and activities on time, whether they are working independently or in a group. Students also demonstrated, through a survey of their opinions and the opinions of employers, a strong commitment to ethical behavior in scientific research, professional fields, and societal tasks. Moreover, they actively participate in various scientific tasks, projects, and teamwork.

6. Program Learning Outcomes Assessment Results for 1445 H

The following table shows the results of the PLOs assessment that took place in 1445 H

PLO	Code	Target	Actual Value		Total actual value	Internal benchmark	New Target
			Direct	Indirect			
Knowledge							
Demonstrate the basic concepts, theories, and fundamentals of biology, the related disciplines, and their applications.	K1	D:78% of students obtain the grade assigned to this outcome	79.8%	4.43 (85.5%)	84.1%	D:79.55%	D:79%
		ID: Level of satisfaction must be at least 4.4(88%)				ID: 4.13	ID:4.5
		TSV: 83.2%				TSV:80.77%	TSV:84.0%
Recognize methods of analyzing and solving problems in different branches of biology.	K2	D:78% of students obtain the grade assigned to this	78.3%	4.4 (88.7%)	83.3%	D:77.16%	D:79%

		outcome					
		ID: Level of satisfaction must be at least 4.4 (88%)				ID: 4.13	ID:4.5
		TSV: 83.2%				TSV: 79.34%	TSV:84.0%
Skills							
Apply fundamental principles to the analysis of relevant biology and related disciplines.	S1	D:78% of students obtain the grade assigned to this outcome	82.3%	4.56 (90.8%)	85.7%	D:80.68%	D:79%
		ID: Level of satisfaction must be at least 4.4 (88%)				ID:4.31	ID:4.5
		TSV: 83.2%				TSV:82.89%	TSV:84.0%
Carry out the experimental techniques appropriate for different fields and specializations within biology.	S2	D:78% of students obtain the grade assigned to this outcome	79.4%	4.4 (88.7%)	83.2%	D:80.73%	D:79%
		ID: Level of satisfaction must be at least 4.4 (88%)				ID:4.15	ID:4.5
		TSV: 83.2%				TSV:81.64%	TSV:84.0%
Evaluate literature critically to be utilized in evidence-based practice and conducting research.	S3	D:78% of students obtain the grade assigned to this outcome	82.7%	4.42 (88.9%)	85.2%	D:79.97%	D:79%
		ID: Level of satisfaction must be at least 4.4 (88%)				ID:4.2	ID:4.5
		TSV: 83.2%				TSV:81.58%	TSV:84.0%
Use appropriate information technologies to optimize the biological field.	S4	D:78% of students obtain the grade assigned to this outcome	82.1%	4.40 (88.7%)	84.7%	D:78.33%	D:79%
		ID: Level of satisfaction must be at least 4.4 (88%)				ID:4.12	ID:4.5
		TSV: 83.2%				TSV:79.96%	TSV:84.0%
Solve problems in various complex contexts in one or more disciplines related to the field of Biology.	S5	D:78% of students obtain the grade assigned to this outcome	84.2%	4.42 (88.9%)	86.1%	D:79.28%	D:79%
		ID: Level of satisfaction must be at least 4.4 (88%)				ID:4.12	ID:4.5
		TSV: 83.2%				TSV:80.53%	TSV:84.0%

Communicate effectively using oral, written, and visual modes to science-literate and general audiences.	S6	D:78% of students obtain the grade assigned to this outcome	84.5%	4.4 (88.7%)	86.3%	D:81.04%	D:79%
		ID: Level of satisfaction must be at least 4.4 (88%)				ID:4.11	ID:4.5
		TSV: 83.2%				TSV:81.5%	TSV:84.0%
Values							
Collaborate and effectively engage in self-learning to perform tasks and activities on time, whether working independently or in a group.	V1	D:78% of students obtain the grade assigned to this outcome	87.0%	4.43 (89.7%)	88.0%	D:78.95%	D:79%
		ID: Level of satisfaction must be at least 4.4 (88%)				ID:4.22	ID:4.5
		TSV: 83.2%				TSV:81.13%	TSV:84.0%
Commit to ethical conduct in scientific research, professional fields, and community tasks.	V2	D:78% of students obtain the grade assigned to this outcome	86.0%	4.54 (90.1%)	87.6%	D:79.5%	D:79%
		ID: Level of satisfaction must be at least 4.4 (88%)				ID:4.3	ID:4.5
		TSV: 83.2%				TSV:82.10%	TSV:84.0%

***Total Actual Value = 60% of direct results + 40% of Indirect results**
****Internal benchmark = Refers to the previous year performance**

I. Strengths:

- The program has comprehensively covered the basic concepts, theories, and fundamentals, of biology, and related disciplines as well as the required skills which indicates that the students receive an effective and well-rounded education through the program.
- The achievement of the learning outcomes (CLOs) in all branches and the main campus (except K2 for the female section in the main campus) indicates the effectiveness of the teaching strategies and assessment methods used in providing the students with the required knowledge and understanding as well as skills and values provided by the program.

- Students have acquired skills in applying fundamental principles, solving problems in various complex contexts in the field of Biology as well as oral communication, particularly in dissemination of scientific information to varied audiences.
- Students have become highly aware of importance of the teamwork and the ethics standards of the biological sciences and related research.
- Students' performance has improved in most of the indicated PLOs in the knowledge and understanding, skills, and values domains compared to previous years.

II. Recommendation for next year

- None.

7. Action Plan for continual improvement

Program learning outcomes action Plan for continual improvement							
No	**Recommendation**	**Action**	**responsibility**	**Time Frame**		**Support needed**	**Performance indicator**
				Start	**End**		
1	The program must make efforts to achieve the new target.	Implement all improvement plans contained in the program report for the year.	Programs and Study Plans Committee	Beginning of next year 1447.	End of next year 1447.	NA	Improving in PLOs level

8. Report Approving Authority

Council / Committee	**THE DEPARTMENT OF BIOLOGY COUNCIL**
Reference No.	**… /1446 H.**
Date	**… /…/1446 H**