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جامعة تبوك
University of Tabuk

Bachelor of Science in Biology Program Quality Manual

Department of Biology

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Declaration:

We, The BSc Biology Program at Tabuk University, hereby declare our commitment to upholding the standards and affirm our dedication to quality assurance. We strive to deliver a program that meets the needs and expectations of our stakeholders, while continuously improving and adapting to evolving demands. We will establish and maintain robust quality assurance processes to monitor and evaluate our program›s effectiveness and efficiency. Regular reviews, assessments, and audits will be conducted to ensure that our program meets or exceeds the established standards.

Definitions:

Quality: It is a measure of how well an object, product, service, or process meets or exceeds established standards, requirements, or expectations.

Academic quality: Refers to the standard of excellence in educational institutions and programs. It encompasses various aspects related to learning experience, curriculum, teaching methods, faculty, resources, and student outcomes.

Quality assurance: is a systematic and ongoing process that institutions and organizations implement to ensure and enhance the quality, effectiveness, and standards of education and related services provided to students.

Academic standards: refer to a set of criteria and benchmarks that define the expected level of knowledge, skills, and competencies that students should attain in a specific field or discipline within the context of higher education

Quality system: Refers to a comprehensive framework and a set of documented policies, procedures, processes, and resources that a program implements to ensure and manage the quality of its academic programs, teaching, research, and related activities.

Policies: are formal statements or guidelines that define an organization›s principles, rules, and procedures. They serve as a framework for decision-making, governing various aspects of an organization›s operations, behaviour, and interactions.

Procedures: Are step-by-step instructions or guidelines that outline the specific actions and processes required to carry out a particular task or achieve a specific outcome within an organization.

Tasks and Activates: Tasks are typically specific, well-defined, and focused actions that can be completed within a relatively shorter timeframe. Activity typically refers to a broader, more encompassing unit of work. It represents a larger, more complex set of actions or operations that are performed to achieve a specific objective or goal.

Forms: Refer to structured documents or templates used to collect, record, and organize information in a standardized format.

Records: Refer to any documented information, data, or evidence that is created, received, maintained, and used by an individual, organization, or system as evidence of activities.

Course: is a structured educational program or unit of study offered by an educational institution.

Determinants: Determinants refer to the factors or influences that shape the development of some program components.

Instructor: Also known as a teacher or educator, is an individual responsible for facilitating the learning process and guiding students in their educational journey.

Course coordinator: Also known as course manager, is an individual who oversees the planning, development, and overall management of a specific course or a group of related courses within an educational institution.

Program Committees: Program committees are established to facilitate collaborative decision-making, address specific program-related issues, and ensure representation from relevant stakeholders.

Faculty Members: Faculty members are responsible for delivering courses, designing curricula, and providing academic guidance to students. They contribute their expertise and knowledge to ensure high-quality teaching and learning within the program.

Abbreviations

To enhance readability and streamline the manual's content, we have included a list of commonly used abbreviations and their corresponding full forms in the following section.

UT: University of Tabuk.
FOS: Faculty of Science.
NCAAA: National Commission for Academic Accreditation and Assessment
NQF: National Qualification framework.
CES: Course evaluation surveys
PES: Program evaluation survey
SES: Student experience survey
SSS-AC: Academic staff Satisfaction survey
SSS-AD: Administrative staff satisfaction survey
EES: Employer Evaluation survey
SES: Self-evaluation scales.
SWOT: Strength weakness opportunities and threats analysis.
SSRP: Self-evaluation report for programs.
KPI: Key performance indicators.
CR: Course report.
APR: Annual program report.
CLOs: Course learning outcomes.
PLOs: Program learning outcomes.
HOD: Head of Department.
DQC: Development and quality committee.
FQC: Facilities and equipment committee.
MEWG: measurement and evaluation working group.
PLOWG: PLOs working group.
GAWG: Graduate attributes working group.
OPWG: Operational plan working group.
CLOWG: CLOs working group.
KPIWG: Key performance indicators.

Introduction

Purpose:

This comprehensive manual serves as a guide to ensure the highest standards of quality in BSc Biology Program's activities, procedures, responsibilities, and reporting. By adhering to the guidelines outlined in this manual, we aim to achieve excellence, efficiency, and continuous improvement in all aspects of BSc Biology Program. This manual provides a clear framework for maintaining consistency, accountability, and transparency throughout the BSc Biology Program's lifecycle.

The manual encompasses a wide range of essential components related to quality assurance. It outlines the various activities carried out within the BSc Biology Program, including planning, implementation, monitoring, and evaluation. Additionally, it provides detailed procedures and protocols to follow to ensure the smooth execution of these activities. Clear roles, responsibilities, and accountabilities are assigned to different stakeholders involved in the BSc Biology Program, fostering a collaborative and results-oriented approach. Moreover, the manual establishes comprehensive reporting mechanisms to track progress, identify areas for improvement, and communicate program outcomes to relevant stakeholders. It further ensures that all quality-related processes operate within a unified framework that maintains coherent standards and seamless alignment between the main campus and Umluj branch.

Scope:

This manual applies to all personnel involved in the BSc Biology Program, including program managers, staff members, and relevant stakeholders. It encompasses all stages of the program, from planning to evaluation and improvement.

Document Control:

This manual is version-controlled and maintained by the BSc Biology Program administration office. Any revisions or updates to the manual will be documented, and the latest version will be made available to all relevant personnel.

Quality System

The BSc Biology Program implements a comprehensive and integrated quality system designed to ensure excellence across all aspects of the program while maintaining full alignment between the main campus and Umluj branch. This unified framework guarantees consistency, coherence, and high standards in curriculum delivery, teaching, assessment, and student support services in main campus and Umluj branch.

Clearly defined Program Learning Outcomes (PLOs), Course Learning Outcomes (CLOs), and Graduate Attributes guide curriculum design and implementation, and standardized assessment methods are consistently applied to evaluate student achievement and provide timely, actionable feedback.

Through continuous program evaluation and data-driven decision-making, the quality system enables ongoing improvements, ensuring that the BSc Biology Program achieves distinguished outcomes while meeting the evolving needs of students and professional standards in main campus and Umluj branch.

Biology Program Overview

The Department of Biology was established under the decision of the Board of Higher Education in the academic year 1429/1430 H. The numerous aspects of Biology and their applications are the main topics of study in the Department of Biology. In 1443, the Department of Biology offered postgraduate programs leading to a master›s degree in Biodiversity.

Reasons for Establishing the BSc Biology Program:

The establishment of the BSc Biology Program responds to the growing national and global demand for highly competent biologists capable of contributing to scientific advancement, innovation, and sustainable development. As the Kingdom moves toward a knowledge-based economy aligned with Vision 2030, the need for qualified biological scientists has become increasingly critical across research institutions, industrial sectors, governmental bodies, and community-focused organizations. The program aims to develop a skilled national workforce equipped with advanced biological knowledge, modern analytical competencies, and the ability to address real-world challenges in diverse biological fields. As well as follows:

1- To develop a modern scientific program that encompasses various aspects of biological, environmental, and biotechnological sciences, aligned with benchmark comparisons of similar programs offered by leading national, regional, and international institutions.
2- To enhance students' skills and equip them with the competencies required to compete effectively in accordance with labor market needs.
3- To align with the strategic directions of the Kingdom, as outlined in Vision 2030, as well as with the priorities of the College of Science and regional development initiatives.

The BSc Biology Program's mission:

The primary focus of the **BSc Biology Program** is defined by its new statement of mission. The new mission addresses instruction, research, and community service, also it explains the department's character, individuality, and its harmony with the mission and vision of the faculty and the University of Tabuk. The new mission of the **BSc Biology Program** propagates a message that resonates with students, faculty members, and all stakeholders, in such a way that reflects the uniqueness of the **BSc Biology Program** and provides a constant reminder to all the stakeholders of why the program is developed.

The Statement of Mission of the Department of Biology is as follows:

Providing a distinguished academic program in biological sciences within a stimulating educational environment to graduate qualified cadres with knowledge and skills that meet the needs of the labor market and support

The BSc Biology Program goals:

G1. Developing a stimulating academic environment that meets the needs of the beneficiaries of the biology program.

G2. Graduating distinguished cadres in the fields of biology, environment and biotechnology in a manner consistent with the needs of the labor market.

G3. Strengthening the scientific research system in the field of biology and innovation to develop the educational process and contribute to societal issues.

G4. Developing community partnerships to raise community awareness and action regarding the sustainability of the environment.

The development and quality management goals:

The quality assurance management system has the following main goals:

1. To ensure good practices for quality assurance processes.
2. To ensure continuous improvement of the BSc Biology Program.
3. To ensure high-quality outcomes.

The BSc Biology Program Learning Outcomes:

Learning outcomes of the BSc Biology Program are specified clearly in the program specification using the National Qualification Framework (NQF) provides three learning domains.

PLOs	PLOs Code
Knowledge and understanding	
Illustrate knowledge and comprehension of basic biological principles, concepts, and theories, including their applications in different aspects.	K1
Describe methods for analyzing and solving problems in the field of Biology and Environmental Sciences.	K2
Skills	
Apply fundamental principles to the analysis of relevant biology and environmental issues.	S1
Carry out experimental techniques appropriate for different fields and specializations within biology.	S2
Evaluate literature critically to be utilized in evidence-based practice and conducting research.	S3
Apply effectively the up-to-date technologies in different biological field.	S4
Solve problems in various complex contexts in one or more disciplines related to the field of Biology.	S5
Communicate effectively using oral, written, and visual modes to science-literate and general audiences.	S6
Values, Autonomy and Responsibility	
Demonstrate the ability to work independently and as a member, or as a team leader in the group in accordance with the rules that guide professional decisions.	V1
Show ethical conduct in scientific research, professional fields, and community tasks.	V2

The BSc Biology Program graduate attributes:

1. Proficiency in Biology.
2. Familiar with biological techniques.
3. Creative and innovative.
4. Effective communicator.
5. Specialized in Biology and its applications.
6. Aware of environmental sustainability.

The HOD is advised by five Department Committees on all matters affecting the department.

The organizational structure of the BSc Biology Program:

The BSc Biology Program has a well-designed organizational structure of tracking and reporting, on its operational objectives and it establishes mechanisms for academic governance and decision-making within the program, and clearly defines the roles and responsibilities of faculty members, administrators, and staff within the program, Figure

1. The organizational structure of the BSc Biology Program has been developed through collaboration with relevant stakeholders, including faculty members, students, alumni, and industry representatives.

The BSc Biology Program 's organizational structure aligns with the overall mission, vision, and strategic goals of the University of Tabuk, and supports and contributes to accomplishing its objectives.

The standards followed by the BSc Biology Program in building its organizational structure are:

1) Alignment with Institutional Mission and Strategic Goals.
2) Adherence to institutional policies.
3) Alignment with Accreditation standards and Quality Assurance.
4) Support the BSc Biology Program's mission,
5) Enhance the intended outcomes.
6) Responsive to the stakeholders› needs.
7) Clarity of Roles and Responsibilities.
8) Flexibility and Adaptability to the changing needs.

The establishment of the organizational structure of the BSc Biology Program went through multiple steps that included Identifying Program Components and outcomes. Identify the number and qualifications and the expertise of faculty members. Consult all relevant internal and external stakeholders. Identify the support services required for the program, such as academic advising, career services, research and training support, student support services, and community services. Determine the

committees and councils required for The BSc Biology Program governance and decision-making. Define the purpose, composition, and responsibilities of each committee. Determine the reporting relationships within the BSc Biology Program, through identifying the hierarchical structure, including positions such as department chairs, The BSc Biology Program coordinators, and faculty members. And finally, determine who reports to whom and establish clear lines of authority and communication.

The organizational structure of the BSc Biology Program goes through regular assessment and review in order to adapt it to the changing needs.

Objective

- Ensure compatibility between the department's tasks and activities and the university's tasks and activities.
- Ensure that all members of the department are involved in the management and implementation of work and decision-making.
- Ensure full alignment between the main campus and Umluj branch in the implementation of all academic and quality assurance tasks, through unified procedures, shared reporting mechanisms, and consistent follow-up by the Department Council.

Execution Responsibility: Head of Department

Reference

- Organizational structure of the university
- Requirements of the National Centre for Academic Evaluation and Accreditation
- Guide to the governance structure of Tabuk University
- Tabuk University organizational structure guide for the colleges
- Tabuk University college and Dean›s Office Duties and Responsibilities Documents

Procedures

1- Prepare a detailed list of academic and administrative activities in the department.
2- Determine the organizational relationships of these activities with various departments and units of the college at different levels.
3- Establish a network that allows for consistency with the organizational structure of the university, ensuring alignment in information sharing, plan implementation, and decision-making without overlap or duplication.
4- Distribute tasks, responsibilities, assignments, and implementation mechanisms.
5- Determine the follow-up mechanism through the departmental council.
6- Create maps with job descriptions.

Outcomes

- Minutes of the approvals of the organizational structure.
- Maps with job descriptions.

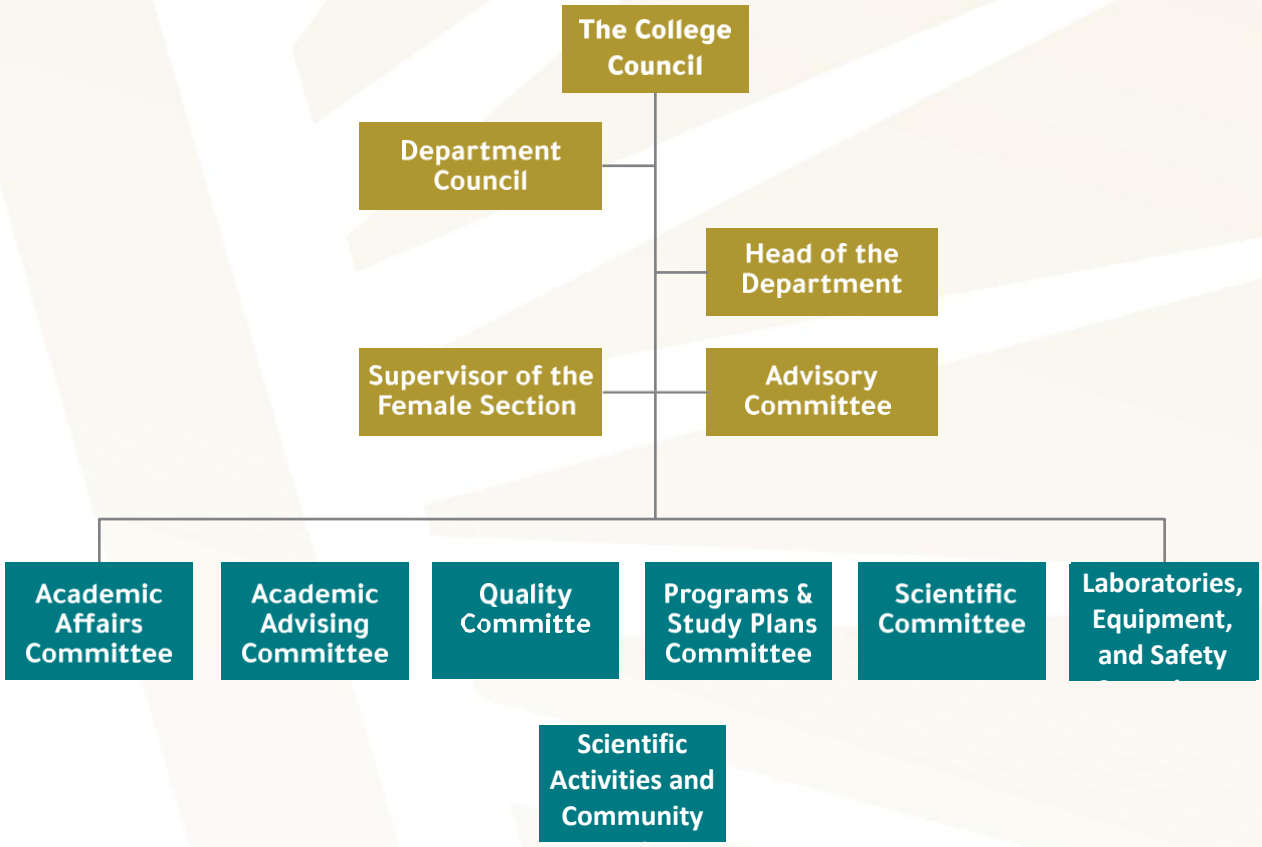


Figure 1: The BSc Biology Program Organizational Chart

The HOD is responsible for initiating and maintaining policies within the BSc Biology Program that promote and support learning, teaching, research, and community outreach. Also, the HOD is responsible for ensuring that the Department functions take place according to policies and regulations established by the institution, Faculty of Science. The HOD is accountable to the faculty council for the performance of their duties.

Department Council Overview

Objective:

Examines and discusses all departmental tasks and work, makes recommendations and decisions, and enforces appropriate policies.

- Chairman of the Council: Head of the Department
- Council Members: All faculty members of the department
- Secretary of the Council: Assigned faculty member

Responsibilities and Tasks

1- Curriculum and Academic Materials:

Propose study plans, curricula, textbooks, and references to the department Council.

2- Faculty Appointment and Promotion:

Recommend the appointment and promotion of faculty members, lecturers, and teaching assistants.

3- Research and Publication:

Study scientific research projects, encourage research activities, and assist in publishing completed research.

4- Academic Activities:

Distribute lectures, exercises, and training to faculty members and teaching assistants.

5- Postgraduate The BSc Biology Program:

Propose plans for postgraduate programs and admission criteria.

6- Teaching Authority:

Teach courses within the specialization after approval by the University Council.

7- Committee Formation:

Form permanent and temporary committees to fulfill the department's needs.

8- Decision-Making and Oversight:

Consider subjects referred to by the dean, the college council, or the college deputies.

Reference

Task guide for leadership positions in colleges and supporting deanships at Tabuk University

Council Input and Referrals

The Department Council receives input from various committees, as well as information referred to them by the Head of the Department, the Dean, College Council, or College Vice-Deans. This input may come in the form of minutes or letters.

Council outputs

Minutes of the meetings submitted to the dean of the college or the college council.

Duties, Responsibilities, and Powers of Department Employees

Department Management - Head of Department

- **Description:** The head of the department is a distinguished faculty member with scientific and administrative competences. They are appointed by the Rector of the University, upon the proposal of the Dean of the Faculty, for a two-year term, with the possibility of reappointment.

•Main Objective: Oversee the academic, financial, and administrative affairs of the department and enforce the rules and regulations of the University Council and related decisions.

Overall Objectives

1- Fulfillment of the mission and objectives of the department.
2- Realize the objectives and policies of the university.
3- Chair the Departmental Council and oversee the organization and its affairs.
4- Communicate minutes of Council meetings to the Dean and ensure the application and implementation of Council decisions and recommendations.
5- Oversee the implementation of the decisions of the University Council concerning the department.
6- Oversee the operational plan of the department and follow up on its implementation.
7- Oversee the work of the departmental committees and monitor the implementation of their work.
8- Work on meeting the academic, research, and administrative needs of the department.
9- Oversee the preparation of the academic plan for the department and the implementation of academic changes following the capacity of the electronic registration portal.
10- Oversee the educational process and curriculum development while ensuring academic alignment across the main campus and Umluj branch in the implementation of plans, teaching strategies, evaluation methods, and quality assurance procedures.
11- Work on the academic development of the department and research.
12- Monitor compliance with quality requirements and academic accreditation in relation to the department.
13- Represent the department in activities and meetings related to the department within and outside the university within the scope of authority.
14- Coordinate the Department's partnership relations with relevant authorities within and outside the University within the limits of delegated authority.
15- Submit reports to the Dean on the progress of work in the department and on any academic or behavioral problems or breaches of job duties by any member of the department and follow up on the implementation of Dean’s instructions in this regard.
16- Prepare and submit to the Dean a comprehensive annual report on the development of the
17- academic, research, and administrative performance of the Department.
18- Carry out any other tasks assigned by the Dean within the scope of their mandate.

Authorities and Capacities

1- Allocation of academic load among faculty members.
2- Assignment of academic advisors.
3- Assignment of a faculty member to serve as a course coordinator for each course taught in the degree The BSc Biology Program.
4- Approval of course grades.
5- Recommendation to involve other faculty members in grading final exam questions or assigning others to assist with grading.
6- Preparation of performance reports for faculty members.
7- Recommendation for faculty members' participation in continuing education courses within and outside the university.
8- Assignment of a faculty member who is not teaching the course to prepare final examination questions for the course, if necessary.

Documentation

Reports, correspondence letters, data.

Department Management - Chief of Department at Female Section

Description:

The supervisor of the department at the female section is a distinguished faculty member with scientific and administrative competences. They are appointed by the Rector of the University, upon the proposal of the Dean of the University, the Vice-Dean of the University, and the Head of the Department. The assignment is for a two-year term and may be renewed.

Main Objective:

Oversee the academic, financial, and administrative affairs of the department in the Women's Section in consultation with the Vice Deanship and the Department Head and enforce the rules and regulations of the Council of Higher Education and the decisions issued accordingly.

Overall Objectives

1- Fulfillment of the mission and objectives of the department.

2- Realization of the university's goals and policies.

3- Implementing the decisions of the Department Council and the University Council in relation to the department.

4- Oversee the operational plan of the department and follow its implementation in the female department.

5- Oversee the management of the educational, research, administrative, financial, and cultural affairs of the department in the female division in consultation with the female Vice-Dean and the Head of the Department.

6- Submit a regular report to the Vice-Dean of the University and the Head of the Department on the progress of the work of the female department.
7- Monitoring the department's examination performance in the female section.
8- Receiving complaints from female students, providing guidance and counseling, and resolving related issues in accordance with university policies and regulations.
9- Overseeing the processes of admission, registration, academic advising, and equivalency of courses in the department in the female division.
10- Prepare and submit to the Vice Faculty and Head of the Department a comprehensive annual report on the progress of the academic, administrative, and research performance of the Department in the Female Section.

Authorities and Capacities

1- Recommend that final exam questions be graded by another faculty member or that others be assigned to grade them.
2- Approval of course grades.
3- Distribution of course and academic loads to female faculty members.
4- Recommend that department personnel participate in continuing education courses within the university.

Documentation

Periodic reports on the progress of academic, administrative, and research performance, correspondence.

Department Management - Council Secretary

Description:

The secretary of the council is a distinguished faculty member with scientific and administrative competences. They are appointed by the Rector of the University, upon the proposal of the Dean of the University, the Vice-Dean of the University, and the Head of the Department. The assignment is for a two-year term and may be renewed.

Main Objective:

Organize and document the work of the Departmental Council and be responsible for enforcing the Council system.

Overall Objectives

1- Preparation of the Council's agenda.
2- Coordinate with committees involved with the Council agenda to gather necessary documents and records.
3- Prepare and send invitations to the members of the Council and take necessary measures to hold the meetings.
4- Edit minutes and submit them for voting in the Council system, along with all documentation.

Authorities and Capacities

Vote

Documentation: correspondences, minutes of meeting.

Department Management - Department Secretariat

Description:

An employee of the college administration who is assigned by the department head to perform secretarial work for the department head.

Main Objective:

Performing department secretarial work

Overall Objectives

1- Coordinate and track preparation for meetings of departmental councils and committees and ensure readiness of facilities at designated meeting locations.
2- Print meeting schedules, write and document meeting minutes.
3- Archive minutes of councils and committees, both on paper and electronically.
4- Ensure that all minutes, letters, and correspondence related to council and committee minutes are printed, reviewed, and forwarded to the appropriate college and university offices.

Authorities and Capacities

- **None**

Documentation

Correspondence, inventory, and related reports.

Department Employees – Faculty member

Job Title:

Faculty member

Main Goal:

To educate and guide students, contribute to curriculum development, and advance research and community service.

Objectives

1. **Teaching courses and providing academic advising to students.**
2. **Participating in curriculum design and development.**
3. **Contributing to scientific research and community service.**

Department Employees - Academic Advisor

Job Title:

Academic Advisor

Main Goal:

Supporting and assisting the Academic Affairs and Student Counseling Committee.

Objectives

1- Assisting the students in their academic activities.

2- Identifying the student's interests and suggesting various programs offered by the department's Academic Affairs and Academic Advising Committee and the college's Academic Advising Department to teach them relevant skills.

3- Recognizing the problems of weak students and providing academic support by nominating them for various programs offered by the Academic Affairs and Academic Advising Committee in the department and the Academic Advising Unit at the college.

Documentation

- Minutes of meetings
- Files related to weak and gifted students.

Department Employees - Course Coordinator

Job Title:

Course Coordinator

Main Goal:

Supporting and assisting the development and quality committee.

Objectives

1- Elaboration of the course specification.

2- Assist new faculty with documentation processes, course report preparation, and file requirements to document quality work in the course.

3- Monitor the academic process and faculty engagement, ensuring unified implementation of courses, learning outcomes, and assessment methods across the main and Umluj branch through continuous coordination with instructors in all locations.

4- Preparation of the combined course report.

5- Coordinate meetings with course members to discuss issues related to course quality assurance management.

Documentation

1- Meeting minutes

2- The combined course reports

3- Attachments to the course quality file.

Employees - Program Coordinator

Job Title:

Program coordinator

Main Goal:

To oversee and enhance both the academic and administrative aspects of the Biology Bachelor Program, ensuring its quality, effectiveness, and full alignment with

Objectives

1- **Supervising the academic process of the program and following up on the preparation and implementation of the study plan for the bachelor's program and ensuring its alignment with accreditation standards.**
2- **Supervising the development and updating of the curricula and the intended learning outcomes of the program.**
3- **Following up on teaching plans and ensuring their alignment with the approved course specifications.**
4- **Preparing a comprehensive annual report on the progress of the educational and research process.**
5- **Supervising the students' study plans (graduation plans and registration follow-up) and the admission criteria.**
6- **Responding to inquiries from students and faculty members related to the program.**
7- **Preparing the periodic reports related to the program and submitting them to the department chair.**
8- **Implementing quality and academic accreditation systems.**
9- **Following up and evaluating the program according to the program's academic performance indicators and providing improvement and development plans.**
10- **Organizing orientation meetings for new students regarding the program and the study plan.**
11- **Following up on the evaluation of students' performance.**
12- **Ensuring the implementation of academic advising and promoting scientific and cultural student activities related to the program (seminars, workshops).**

Documentation

Meeting Minutes, Curriculum and Study Plan Files, Course Reports + Attachments, Teaching Plans, Student Study & Graduation Plans, Registration Follow-up, Student Performance Records, Correspondence (program-related only), KPI & Quality Reports, Annual Program Report, Improvement Action Plans, Orientation Materials, Periodic Reports.

Employees - Laboratory Technician

Job Title:

Laboratory Technician

Main Goal:

To ensure laboratory safety and operational readiness by maintaining equipment functionality, implementing safety procedures, and supporting practical teaching and research activities in compliance with quality and accreditation standards.

Objectives

1. Ensure the safe operation and readiness of laboratories and equipment for teaching and research activities.
2. Operate, inspect, and maintain laboratory equipment and instruments, including preventive and corrective maintenance.
3. Apply and monitor laboratory safety procedures, emergency plans, and safe handling of chemicals and materials.
4. Prepare and update inventory records for equipment, chemicals, and consumables, and report their status.
5. Support practical courses by preparing laboratories, materials, and equipment in coordination with faculty members.
6. Assist in laboratory inspections, risk identification, incident reporting, and implementation of corrective actions.
7. Participate in safety training, awareness activities, and compliance with quality assurance and accreditation requirements.
8. Prepare brief technical reports on laboratory conditions, safety compliance, and improvement needs.

Documentation

1. Laboratory equipment and instruments inventory records.
2. Preventive and corrective maintenance logs for laboratory equipment.
3. Equipment inspection and acceptance reports upon receipt.
4. Chemical inventory records, including hazardous materials tracking.
5. Laboratory safety policies, procedures, and emergency response guidelines.
6. Incident and near-miss reporting forms with corrective action records.
7. Periodic laboratory inspection and risk assessment reports.
8. Laboratory readiness and equipment status reports.
9. Training and safety workshop attendance records.
10. Equipment tracking and utilization records.
11. Quality assurance and accreditation-related laboratory documentation.
12. Periodic technical and safety reports submitted to the department or committee.

Regulating and Following Up the Work of Main Committees in the Department

Domain: All work aspects that directly affect the implementation, management, and follow-up of the department's main tasks.

Objective

- Implementing the department's study and work plans, which are the guarantor of achieving the department's goals and mission.
- Ensuring the participation of many faculty members in the main campus and Umluj branch, each according to their competence, in the management and execution of the work
- Carrying out corrective and preventive actions as quickly as necessary to produce quality work.
-

Implementation Responsibility: Head of the department, Chief of the department at the female section, chair of the committee.

References Requirements for the standards of the National Center for Academic Accreditation and Assessment Quality guide.

Policies

- All program employees agree to implement the study and operational plans approved for the program, as well as the policies, rules, and regulations, without modification.
- If there are developments that require extraordinary action or a change in the implementation of the approved plans for the program, staff or program executive committee heads may present the proposed change and their rationale to program leadership. They may NOT begin implementing the change prior to receiving approval from authorities at either level, such as the department or college (depending on the level of the proposed change and according to the job description in the approved program/college organizational handbook).
- All The BSc Biology Program staff and program executive committees are responsible for creating and maintaining files and records documenting the performance of their assigned duties and activities in both paper and electronic formats.
- All documents will be maintained in the department's electronic cloud.

Procedures

1- The work of the Department's committees is related to the implementation of the various tasks assigned to them by the head of the Department, as well as to the initiatives of the operational plan and the work assigned to them.

2- Each committee receives the initiatives of its work plan, as well as the work assigned to it that is consistent with the tasks assigned to it.

3- Committees develop a work plan for operational initiatives and for all types of work assigned to them.

4- Responsibilities and a timeline are distributed for each process in the plan, and the participation of all faculty members on the main campus and Umluj branch in the implementation of the plan is considered.

5- The committee's business plan is presented to the departmental council for discussion and recommendation for approval and is forwarded to the college council.
6- The plan is communicated to all faculty members on the main campus and Umluj branch and supporting units of the college.
7- Each unit coordinator manages the work plan initiatives assigned to them. The committee chair manages the remaining tasks assigned to them, each according to the approved work plan.
8- The Unit Coordinator meets with the Support Unit at the College level to appropriately coordinate the implementation of operational initiatives. The Committee Chair meets with the relevant college to obtain technical support and assistance necessary to complete assigned tasks according to the established schedule.
9- The committee chair and department head monitor the good functioning of processes and procedures through reports on a weekly basis.
10- An integrated report on the progress of the work plans, especially the operational plan, is submitted monthly to the Department Council.
11- At the end of the academic year, each of the unit coordinators and committee chairs conduct a self-assessment of the proper implementation of the action plans by comparing the performance indicator to the target.
12- After the initial self-assessment, the committee develops an improvement plan to address the aspects that need improvement to meet the performance requirements.
13- The strategic planning unit coordinator in the department prepares the final report for the operational plan based on the self-assessment reports of the proposed initiatives and improvement plans with supporting evidence.
14- The Development and Quality Committee undertakes a review of the report in its annual form assessing the extent to which the requirements of the performance report are being met and the quality of the supporting documentation.
15- The Departmental Development and Quality Committee reviews the evidence and testimony of accomplishments collected at the level of each initiative by all committees of the BSc Biology Program.
16- The report is presented to the Department Council, and the head of each committee explains the obstacles that may have hindered the implementation process and presents for discussion the improvement plans developed by their committee.
17- The department council submits the performance report and improvement plans with recommendations to the college council for approval and inclusion in next year's work plan and forwards them to the appropriate funding agencies.

Output

Minutes of Meetings / completion reports / improvement plans.

Committees

1. Advisory Committee:

1. Establish channels to encourage cooperation and communication between the program administration, employers, and graduates in a way that serves the interests of faculty and students.
2. Provide advice and recommendations for the academic development of the program.
3. Exchange opinions on matters important to the program's developmental progress.

2. Academic Affairs Committee

1- Preparing and reviewing the study schedules in coordination with the College Academic Affairs Committee.
2- Identifying the department's needs of academic courses, the number of sections, and the needs of students expected to graduate.
3- Supervising student registration procedures and add/drop processes.
4- Supervising examinations and excuses.
5- Preparing the examination and invigilation schedule for each academic semester.
6- Providing statistics related to the preparation of the annual report for the department's programs.
7- Preparing a quarterly executive plan for the committee's tasks and members' responsibilities.
8- Submitting a periodic report to the department chair on the committee's activities and presenting it to the Department Council.

3. Academic Advising Committee

1- Supervising and following up on the performance of academic advisors in the department and coordinating with them, and preparing an academic advising plan at the beginning of each academic year.
2- Explaining the most important instructions, regulations, and systems related to student affairs for various academic actions such as (warning and dismissal - lifting restrictions - deferment and interruption of study - apology - transfer - expulsion from the university - honors - academic difficulties - visiting student), and preparing students by familiarizing them with all rules and instructions related to the department, college, and university.
3- Reviewing students' academic problems raised by academic advisors and seeking to resolve them with the department administration.

4- Coordinating and following up with the Graduates and Training Unit at the college to enable program students to obtain training opportunities that align with achieving the learning outcomes specified for the course.
5- Building a database of talented and struggling students in the department and preparing special programs for them.
6- Monitoring student absences in the department and identifying students with high absenteeism in coordination with the academic advisors in the department.
7- Representing the academic department in the Graduates and Training Unit at the college and participating in preparing and implementing the operational plan related to graduates and student activities
8- Contributing to creating a graduates' database and updating it periodically in coordination with the Graduates and Training Unit at the college.
9- Inviting graduates to various department occasions and motivating them to participate in its different activities, and identifying problems faced by the department's graduates in coordination with the Graduates and Training Unit at the college.
10- Contributing to creating job opportunities for graduates of the department programs by identifying companies and institutions in both public and private sectors related to the specialization in coordination with the Graduates Unit at the college, and helping prepare graduates for the labor market by enhancing their competencies and refining their skills through a set of training programs and workshops in coordination with the concerned committees and units.
11- Preparing a student activities plan in line with the initiatives of the operational plan, following up on its implementation in coordination with the Graduates and Training Unit at the college, and working to motivate department students to participate in various university events.
12- Working on integrating students with special needs into activities and providing them with appropriate care in coordination with the concerned units.
13- Improving communication between the program administration and students in a way that serves and achieves the success of the educational process.
14- Taking the opinion of program beneficiaries from students regarding what is offered to them in the program in various activities and increasing students' participation rate in various program activities by disseminating the program's message, objectives, organizational decisions, and achievements among student beneficiaries.
15- Preparing a quarterly implementation plan for the committee's work and the members' tasks
16- Submitting to the Head of the Department a periodic report on the committee's activities and presenting it to the Department Council.

4. Quality Committee

1. Semester Tasks Related to Course Report:

a. Reviewing course reports and ensuring that all necessary requirements are completed.

b. Reviewing the course development plan included in the course reports and preparing the necessary recommendations; then submitting them for presentation and approval by the Department Council, provided that this does not exceed the first week of the semester following the one in which the courses were offered.

c. Implementing the work plans included in the semester course reports after approval by the Department Council.

2. Annual Tasks Related to Program Report:

a. Reviewing the annual program reports and ensuring that all necessary requirements are completed.

b. Reviewing the work plans included in the annual program report and preparing the necessary recommendations; then submitting them for presentation and approval by the Department Council, provided that this does not exceed the fourth week from the beginning of the new academic year.

c. Implementing the work plans included in the annual program reports after approval by both the Department Council and the College Council.

5. Programs & Study Plans Committee

1- Developing the academic plan for the department's programs according to the standards of the University's Programs and Curricula Committee, in coordination with the College's Programs and Curricula Committee.
2- Reviewing the development of the program's courses.
3- Reviewing and auditing the program description and course descriptions.
4- Reviewing the characteristics of graduates and the program's learning outcomes.
5- Proposing external evaluators and reviewers, as well as benchmarking for the program, and utilizing their feedback in program development.
6- Participating in the preparation and implementation of the program's operational plan related to the committee's tasks.
7- Periodic evaluation of academic plans through feedback and recommendations from faculty members, evaluators, reviewers, and graduates, and submitting proposals for appropriate actions according to the university regulations.
8- Reviewing requests for course equivalency in the program according to the equivalency rules and regulations in force at the university, and submitting a report to the Head of the Department.
9- Preparing a quarterly implementation plan for the committee's work and members' tasks.
10- Submitting to the Head of the Department a periodic report on the committee's activities and presenting it to the Department Council.

6. Scientific Committee

1- Reviewing the promotion applications of the department's faculty members in accordance with the executive and procedural rules established by the University Scientific Council.
2- Studying the eligibility for printing and publishing books authored by the department's faculty members.
3- Participating in the preparation and implementation of the program's operational plan in the field of scientific research and studies.
4- Reviewing the requests submitted by the department's faculty members to attend scientific seminars and conferences in accordance with the executive and procedural rules established by the University Scientific Council.
5- Identifying the needs for faculty members and their equivalents and reviewing the applications of candidates for faculty positions in the department in partnership with the Operational Plan Committee and the Performance Indicators Measurement.
6- Following up on scholarship applications for teaching assistants and lecturers.
7- Establishing a scientific research database and updating it periodically.
8- Establishing and updating a database of research groups, research papers, and projects published by faculty members.
9- Encouraging faculty members in the department to publish scientific work in globally ranked scientific journals.
10- Organizing and coordinating the management of conferences, workshops, seminars, scientific and cultural events, and scientific competitions in the department and supervising their implementation.
11- Organizing mechanisms for research collaboration with relevant entities.
12- Preparing a quarterly executive plan for the committee's tasks and members' responsibilities.
13- Submitting a periodic report to the department chair on the committee's activities and presenting it to the Department Council.

7. Laboratories, Equipment, and Safety

1. Developing and establishing a developmental plan for student and research laboratories in the department
2. Overseeing the installation and operation of received equipment, inspecting it to ensure compliance with specifications upon receipt, and verifying readiness and suitability for use before approval for teaching or research activities.
3. Establishing a preventive periodic maintenance plan for equipment and devices, activating maintenance contracts with specialized companies, and organizing maintenance and repair work for laboratory devices, equipment, and technical facilities.
4. Preparing periodic inventories of devices, equipment, and chemicals, and submitting a semester-based inventory report (functional – needs maintenance – out of service).

5. Monitoring laboratory needs of equipment, tools, chemicals, and hazardous materials in coordination with faculty teaching practical courses, preparing required requests, evaluating procurement offers, and submitting them to administration with documentation.
6. Participating in preparing and implementing the operational plan of the program regarding laboratories and equipment.
7. Developing a detailed execution plan for laboratory-related tasks and submitting periodic reports to the administration covering laboratory conditions, equipment status, compliance with safety standards, as well as improvement needs and recommendations, according to approved templates, and presenting them to the department council.
8. Preparing and updating laboratory safety policies and procedures, including emergency plans, fire safety, first aid, and chemical storage.
9. Supervising the implementation of safety systems inside the laboratories and ensuring compliance by faculty members, technicians, and students.
10. Conducting periodic inspection rounds to identify risks inside laboratories, documenting them, and submitting reports to the administration.
11. Organizing training programs and workshops on safety practices and proper use of laboratory equipment and chemicals for all department members.
12. Preparing illustrated safety guides and awareness posters inside laboratories to promote a safety culture.
13. Establishing a tracking system for laboratory equipment indicating its status and readiness level.
14. Documenting incidents or near-misses occurring inside laboratories, analyzing their causes, and providing recommendations to prevent recurrence.
15. Defining key performance indicators (KPIs) to monitor the committee's work, such as equipment functionality rate, number of training sessions, safety compliance level, and number of incidents or mitigated risks.
16. Ensuring alignment of committee policies and practices with academic and program accreditation requirements related to laboratories and equipment.
17. Participating in evaluation visits from accreditation bodies and demonstrating laboratory readiness and applied safety procedures.
18. Submitting quarterly and annual reports to administration that include laboratory conditions, equipment status, compliance with safety standards, achievements, and challenges.

Scientific Activities and Community Service Committee

1- Providing various student activities aimed at developing and enhancing students' personal skills.
2- Organizing scientific field trips for department students to connect theoretical course content with real-world and field experience.
3- Documenting all activities and events of the department.
4- Conducting training courses and workshops that serve the community.
5- Delivering awareness lectures for different community groups after coordination with the College Deanship and relevant administrative units.

Academic program management system at the main campus and Umluj Branch

The BSc Biology Program at the University of Tabuk has established full alignment between the main campus and Umluj branch campus through a comprehensive and integrated governance framework. This structure ensures clear reporting lines, transparent communication channels, and consistent decision-making processes across both campuses, fostering institutional coherence and academic excellence.

The Head of the Biology Department at the main campus directly supervises academic operations in Umluj branch, utilizing regular coordination meetings, standardized reporting mechanisms, and continuous follow-up to ensure adherence to policies and program standards. A unified Department Council, composed of program coordinators from both the main and Umluj branch, oversees curriculum development, course delivery, learning outcomes, assessment strategies, and quality assurance practices, thereby maintaining uniform academic standards across both campuses.

To guarantee parity in student learning experiences and outcomes, study plans, course specifications, teaching strategies, and assessment tools—including examinations, grading rubrics, and evaluation procedures—are standardized and implemented consistently across both campuses. A single academic calendar and examination schedule further ensure that all students are assessed under identical conditions, promoting equity and transparency. Departmental decisions, quality assurance directives, and academic guidelines are communicated simultaneously to both campuses to reinforce coherence, accountability, and full institutional integration.

The academic program management system is structured around three interrelated processes: learning and teaching, research, and community engagement. These processes are fully integrated to define the program's identity and align with the three core functions of the university. Each process is continuously monitored and refined to ensure consistency, excellence, and alignment across both campuses., and the details of these processes are as follows:

1- Teaching and Learning Processes (Academic Program Management):

The teaching and learning processes are one of the main pillars of the BSc Biology Program, in addition to the processes of research and community service. These processes are based on the BSc Biology Program mission Providing graduates with biological sciences through an exceptional curriculum and supportive learning environment to prepare them to compete in Labor Market and scientific research and to serve community" which is consistent with university's mission " To offer a distinguished university education that prepares university graduates with the knowledge, capabilities, and skills needed by the community and developmental projects in the Tabuk region within an exceptional education and administrative environment that promotes innovative research." Consequently, BSc Biology Program at the University of Tabuk strives to produce graduates with competitive specialized skills in biology filed that contribute to generating and applying knowledge as a catalyst for development.

The BSc Biology Program has directed its attention towards providing outstanding education, both in the quality of the design of the academic program it offers to its undergraduate in determining the characteristics of graduates and the learning outcomes that they should achieve at the end of their educational career when they graduate from the program. To accomplish this, the program has allocated the necessary resources to provide learning resources.

The HOD directly supervises the design and development of academic programs for the undergraduate stage through the Study Plans and Programs Committee in cooperation with the Development and Quality Committee.

-Regulations of study and examination for the BSc Biology Program:

The BSc Biology Program at the main campus and the academic programs in The Head of the Biology Department at the main campus directly supervises academic operations in Umluj branch must adhere to the study regulations, examination and rules governing them to ensure the standardization of all procedures for both sites.

Quality assurance processes

The educational quality of the biology program at the main campus and in The Head of the Biology Department at the main campus directly supervises academic operations in Umluj branch is the responsibility of biology departments in both sites that offer the academic program at the main campus and in Umluj branch, in addition to the role of all faculty members and specialized committees and based on this concept, the biology program at the main campus and Umluj branch is committed to verifying the quality of the teaching and learning process through the following procedures:

- Commitment to standardize course specifications and program specifications in biology program offered at the main campus and Umluj branch of both male and female sections, taking into account the procedures and mechanisms followed in the procedural guide of the program and study plan at the University of Tabuk.
- The commitment of faculty members in coordination with the course coordinator to teach the approved course specification, which is communicated to students at the beginning of the semester with an explanation of its objectives, content, vocabulary, philosophy, teaching strategies used, and various evaluation strategies used.
- After completing the course, the faculty member prepares the course report according to the model of the National Center for Academic Accreditation and Assessment in coordination with the course coordinator to prepare a unified course report for the main campus and Umluj branch in both male and female sections and approve it by the program coordinator.
- The unified course reports for the main campus and Umluj branch in both male and female sections are compiled to prepare the unified annual program report for the biology program by the program coordinator and approved by the competent councils.
- Submit the unified annual program report and the reports of the unified courses to the main campus and the Umluj branch in both male and female sections for review and approval. The university then will present university-wide review reports for all academic programs to the Higher Committee for Academic Accreditation and Quality Assurance.

-Procedures for ensuring the quality of the educational process at the BSc Biology Program:

It includes procedures to ensure the quality of the educational process in the BSc Biology Program on the main campus and Umluj branch with the solidarity of all parties related to the program and includes the following procedures:

- Identify a coordinator for each course to supervise compliance with the course specification and the application of teaching, learning and assessment strategies contained in all groups at the main campus and Umluj branch of both male and female sections.
- Review the tests by the course coordinator to ensure the objectivity, comprehensiveness and understanding of the course content and its relevance to the learning outcomes in the course.
- The BSc Biology Program coordinator is the link between the course coordinators and the program management; the program coordinator collects proposals related to the development of courses to the competent committees and councils in the academic program.

2- Research Processes:

The BSc Biology Program develops an operational plan for research, provided that it is unified at the main campus and Umluj branch in accordance with the strategic plan of the FOS and UT, taking into account the following points:

- Environmental analysis to determine the current status of scientific research and research services in the BSc Biology Program at the main campus and Umluj branch.
- Determining the research objectives according to the results of the environmental analysis of the academic program at the main campus and Umluj branch and the executive plans to achieve those goals.
- Identify priorities for research in BSc Biology Program to keep pace with local and global developments in line with the needs of society and executive plans to achieve those priorities.
- Providing the laboratories and research labs the BSc Biology Program needs at the main campus and Umluj branch.
- Diversification of research partnerships and diversification of sponsors.

- Work to improve the level of research results for faculty members in the main campus and Umluj branch.
- Establishing and updating an electronic database that allows publishing of the research production of the academic program employees at the main campus and Umluj branch.

3- Community Service Operations:

The BSc Biology Program develops an operational plan for community service, provided that it is unified at the main campus and in Umluj branch of the university in accordance with the strategic plan of the FOS and UT, taking into account the following points:

- Environmental analysis to determine the current community service status and community participation in the BSc Biology Program at the main campus and Umluj branch.
- Determining the objectives of community service and community participation according to the results of the environmental analysis of the BSc Biology Program at the main campus and in the program Umluj branch and the executive plans to achieve those goals.
- Work to consolidate the community relationship between the BSc Biology Program and the various community entities.
- Work to encourage the employees of the BSc Biology Program to participate widely in community work to serve the community.

Map for Managing Academic Program Operations at the Main Campus and Umluj Branch

The alignment model between the main campus and Umluj branch is designed to ensure that the assessment methodology is achieved. This methodology ensures that all inputs, processes, and outputs are standardized for the academic program at the main campus and Umluj branch. The following are key characteristics of this alignment:

Operations	Foundations Concepts	Implementation	Outcomes
Learning and teaching processes	•National Qualifications Framework 2023 •Saudi Standard Classification of Educational Levels and Occupations •Procedural guide of the program and study plan • The general framework of the characteristics of graduates at the University of Tabuk •Program and Study Plan Procedural Guide •Program and Study Plan Powers Matrix •University of Tabuk Guide •Institutional Quality Assurance Guide •Procedural Guide for Establishing and Operating Advisory Committees in Colleges and Academic Programs •Procedural guide for benchmarking and independent opinion •Functional Tasks Guide for Colleges and Academic Departments at the University of Tabuk •Centralized Testing Guide at the University of Tabuk •Accreditation requirements from the National Center for Academic Accreditation and Assessment	Obligation to carry out the procedures mentioned in the guides	Consistence of the BSc Biology Program with the requirements of the university
	Program specification	•Implementation of the unified program specification (Teaching Methods – Target Outcomes – Assessment Methods)	Annual Report of the Unified Program

Learning and teaching processes	Unified Course specifications	Implement course specifications	Course Reports
	Unified Learning Outcomes Measurement Plan	Implementation of the standardized measurement cycle	Report on measuring all learning outcomes of the program
	Program Advisory Committee	Presentation to the Advisory Committee and implementation of recommendations	Report on the performance and outcomes of the Committee
	KPIs and benchmarking	Data collection and analysis	Key Indicators Measurement and Benchmarking Report
	Relevant surveys	Collecting and analyzing relevant surveys	Related Findings Surveys Report
	Academic Program Operational Plan	Implementing the objectives of the operational plan of the academic program	Periodic performance reports of the program›s operational plan
	Formation of committees at the program level and their tasks	Implementation of the tasks of the committees	Report on the performance and outcomes of the committees
	Unified Quality Assurance Guide for the Program	Commitment to implement the procedures set out in the Guide	Quality Committee
Research Processes	Strategic and Executive Plan of the University Strategic and Executive Plan of the College Evidence of research at the university	Building an operational plan for research included in or independent of the program›s operational plan	Research Database Reports for Research Production Performance Indicators and Targets
Community Service Operations	Operational Plan for Community Service Operations in the College Strategic and Executive Plan of the College	Building an operational plan for community service that is included in or independent of the programs operational Plan	

The National Academic Accreditation

The National Academic Accreditation Framework:

The NCAAA (National Commission for Academic Accreditation and Assessment) in Saudi Arabia is a governmental organization responsible for ensuring the quality of higher education institutions and programs within the country. It was established in 2004 as an independent agency under the supervision of the Ministry of Education. The NCAAA plays a crucial role in promoting and maintaining the quality of higher education in Saudi Arabia. Through its accreditation and quality assurance processes, it aims to improve educational standards. The NCAAA evaluates and assesses the quality and standards of education provided by universities, faculties, and academic programs across various disciplines.

The NCAAA (National Commission for Academic Accreditation and Assessment) in Saudi Arabia has developed a set of standards for higher education institutions and programs. These standards serve as benchmarks to ensure the quality and effectiveness of education provided by universities, faculties, and academic programs. The NCAAA standards for program quality assurance categorize all activities that take place within the programs in the following general five areas:

Table 1: Academic Accreditation Committees responsibilities.

	NCAAA Standard	Responsible Committee
Standard 1	Management of Program Quality Assurance	The Quality Committee
Standard 2	Teaching and Learning	Programs and Study Plans Committee The Quality Committee
Standard 3	Students	Academic Supervision Committee
Standard 4	Teaching Staff	
Standard 5	Learning Resources	Learning Resources and Facilities Committee
All standards	All standards	The Head of The Program All Committee

Close Quality Loop cycle:

Closing the quality loop involves a series of steps aimed at addressing feedback and improving the quality of a program. Here are the steps along with a detailed explanation of each:

Step 1: Planning

1. **Gather Feedback:** The first step is to gather feedback from stakeholders such as students, faculty members, employers, and other relevant parties. This can be done through surveys, focus groups, interviews, or any other means of collecting input.
2. **Analyze Feedback:** Once the feedback is collected, it needs to be thoroughly analyzed. This involves categorizing and identifying common themes, strengths, weaknesses, and areas for improvement. The goal is to gain a comprehensive understanding of the feedback received.
3. **Identify Improvement Points:** Based on the analysis, specific improvement points should be identified. These are the areas that require attention and enhancement within the program. It could be related to curriculum, teaching methods, resources, support services, or any other aspect of the program.
4. **Develop Action Plan:** After identifying the improvement points, an action plan should be developed. This plan outlines the steps, strategies, and resources needed to address the identified areas of improvement. It should be specific, measurable, achievable, relevant, and time-bound (SMART) to ensure effective implementation.

Step 2: Implementing

5. **Implement Changes:** The next step is to implement the changes outlined in the action plan. This may involve revising the curriculum, providing additional training or support to faculty members, improving resources or facilities, or enhancing student services. The changes should be implemented systematically and monitored closely.

Step 3: Evaluating

6. **Monitor Progress:** It is essential to monitor the progress and effectiveness of the implemented changes. Regular evaluation and assessment of the improvements help determine if they are achieving the desired outcomes. This can be done through ongoing data collection, student feedback, performance indicators, or other evaluation methods.

Step 4: Review and Refine

7.Adjust and Refine: Based on monitoring and evaluation, adjustments and refinements should be made as necessary. This step involves making modifications to the implemented changes or strategies to ensure continuous improvement. It requires flexibility and a willingness to adapt based on the evolving needs of the program and its stakeholders. Achievable, relevant, and time-bound (SMART) to ensure effective implementation.

By following these steps, the quality loop can be effectively closed, ensuring that feedback is acknowledged, improvements are made, and the overall quality of the program is enhanced. This iterative process promotes continuous improvement and allows the program to adapt and meet the changing needs of its stakeholders.

A very important point that must be activated during continuous development processes:

Communication and Engagement: Effective communication and engagement with stakeholders throughout the process are essential. Regularly updating students, faculty members, and all relevant parties on the progress made, changes implemented, and outcomes achieved are necessary. This keeps stakeholders informed and involving them in this information enhances their sense of belonging and collaboration.

The BSc Biology Program employs a variety of assessment methods to comprehensively evaluate student progress and provide timely feedback for improvement. Additionally, the BSc Biology Program quality system includes a rigorous program evaluation process that allows it to continuously assess its effectiveness, make data- informed decisions, and implement enhancements to meet the evolving needs of the students as well as the industry demands. The approval of adjustments or modifications of any component in the program has to adhere to the authority matrix presented in Table 2.

Table 2: The approval levels of modifications that take place within the University of Tabuk.

Intended curriculum changes	Final Level of Approval
Program Level	
Changing the admission requirements, changing the certificate name or updating graduation requirement.	University Council
Updating program›s mission, objectives, program title, program duration (total number of years/levels/ hours), updating program learning outcomes, program specification, study plan, and adding co-requisites or prerequisites.	Programs and study plans Committee at UT.
Changes in the ordering of PLOs, program co-requisites or pre-requisites and course code, updating program KPIs,	Programs and study plans administration at UT.
Updating the facilities, operational plan, dropping pre-requisites.	Faculty Council.
Course Level	
Updating course specification (changing exceed more than 25% of course specification and can affect learning outcomes)	Programs and study plans Committee at UT.
Course code	Programs and study plans administration at UT.
Course teaching strategies, less than 25% change in course specification, reference materials, distribution of topics/ weeks, methods for assessment; measurement, and evaluation grading systems, changes in course policies and regulations.	Department Council.

The BSc Biology Program Development and Review Cycles

Curriculum Level review and development:

The curriculum generally details the teaching, learning, and examination materials for all the courses in the program. The curriculum of the BSc Biology Program is planned and developed according to the University of Tabuk policies and procedures, program mission goals and outcomes, the needs of the students, the needs of the local community, and the academic and professional body's requirements.

The BSc Biology Program curriculum development process goes through the following four major phases:

Phase 1: Planning

During these curriculum development phases, the program and study plans committee has done research collected and analyzed data regarding:

1. Issues and trends of Biology education in the local area and nationwide. Identifying key issues and trends allows the program and study plan committee to design an appropriate Curriculum that is responsive to the needs of the students, the local community, and the professional bodies and assess.

2. Resources that can be provided to implement the curriculum.

3. Policies and guidelines from the Faculty, University, and national education and accreditation bodies.

The data sources include exam papers, assignments, lecture notes, textbooks, surveys of students, faculty members, professional bodies and local community, surveys of students, faculty members, local community and local. The work done in this phase will inform the curriculum development.

Phase 2: Developing

During this curriculum development phase, the program and study plans committee has reviewed and decided on the following:

1. Learning Outcomes: Identify what appropriate learning outcomes students must acquire by the end of the program.
2. Contents: Refer to instructional materials and resources needed to facilitate an effective learning experience.
3. Learning experience: Refer to all the activities devised for learners to reinforce learning.
4. Sequence of learning experience: How the learning experiences should be organized to ensure the effectiveness of instructions.

Courses made by the program and study plans committee about curriculum goals and outcomes are motivated by the following factors.

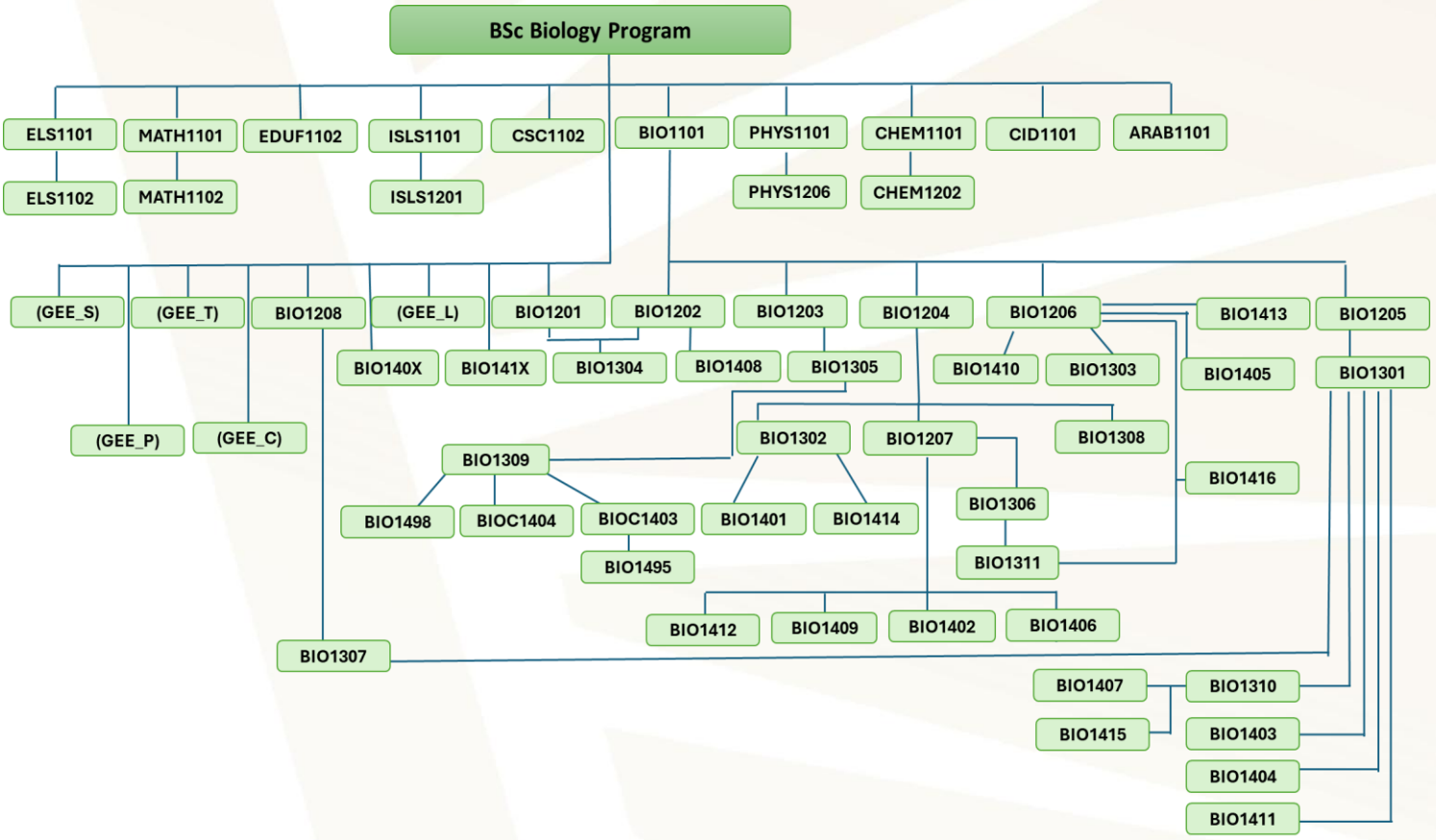
1. The subject matter.
2. The National Standard Policies on education.
3. The needs of the learners.
4. Local Community.

The outcomes of all these efforts are documented in the BSc Biology Program and course specification. The templates of these specifications are designed and provided by the NCAAA.

The curriculum Flow Chart: The Biology department offers a wide range of courses in pure and applied Biology for its majors and for students in other disciplines. The Program prerequisite flowchart has been designed to assist students and faculty advisors in planning and mapping out their path to graduation see Figure 2.
at the University of Tabuk. Monitoring the implementation of a curriculum is crucial to ensure that the intended goals and objectives are being achieved and that the curriculum is effectively meeting the needs of the students and stakeholders. By monitoring the implementation of a curriculum, the BSc Biology Program can identify areas for improvement and make necessary adjustments to ensure the Curriculum's effectiveness and alignment with the desired learning outcomes.

BSc Biology Program has a course coordinator for every course in the curriculum. The course coordinator oversees the planning, development, and overall management of a specific course, and serves as a central point of contact for faculty, students, and administrators involved in the course and works to create an optimal learning environment that supports student success and achievement of program outcomes.

BSc Biology Program



Phase 3: Implementation and Monitoring:

This stage starts after the final approval by the higher authority.
The primary role of the course coordinators is to ensure the smooth functioning and effective delivery of the course they are responsible for. The responsibilities of a course coordinator include:

1. **Collaborating with faculty and subject matter experts to develop and update the course curriculum.**
2. **Coordinating the scheduling and sequencing of courses, determining the course offerings for each term or semester, and ensuring the availability of necessary resources, such as classrooms, equipment, and instructional materials.**
3. **Working with instructors to develop instructional materials that effectively support laboratory courses and practical activities.**

4. materials, resources, and assessments that support the course objectives and enhance student learning experiences.
5. Supporting and coordinating the efforts of instructors teaching the course(s), providing guidance on instructional strategies, assessment methods, and classroom management. Facilitating communication and collaboration among instructors, ensuring consistency in course delivery.
6. Monitoring and evaluating the quality and effectiveness of the course(s) through various means, such as collecting and analyzing student feedback, conducting course evaluations, and assessing student performance and outcomes.
7. Prepare a comprehensive combined course report that addresses the key aspects of the course and communicates the progress, achievements, and challenges related to the course, as well as action plans for continual improvements to all stakeholders.

Phase 4: Evaluation and Reporting

The course coordinators, report to the programs and study plans committee, as well as the quality assurance committee.

At the end of each term, a departmental meeting is held to discuss issues related to the course delivery, which includes, teaching strategies, students' results, Learning outcomes, action plans for improvement, as well as feedback from students and stakeholders. Figure 3 shows the time plan for preparing course reports, and approval of improvement plans, while Figure 4 shows the course report preparation cycle.

Figure 3: The course report cycle for continual improvements.

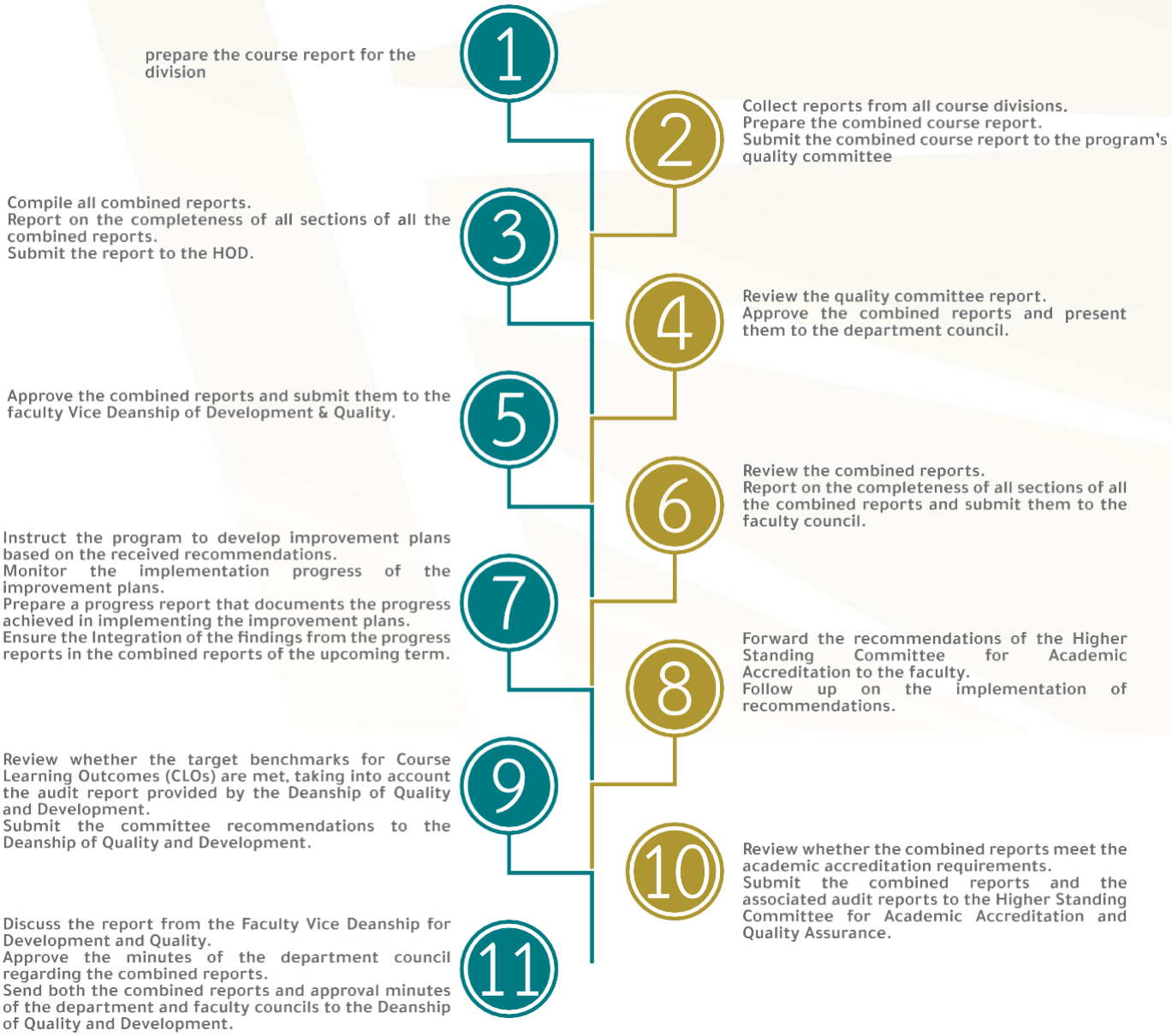


Figure 4: The course report preparation process.

01

Preparing course report for each section.
Course instructor.
18thWeek.

02

Perparing combined course report for all sections.
Cource Coordinator.
1st Week from the next semester.

03

Review of combined courses reports for all courses.
Program Coordinator.
1st Week from the next semester.

04

Preparing suitable recommendations for all courses.
Program Quality Committee.
2nd Week from the next semester.

05

Approval of improvement plans for all courses in this semester.
Department Council.
3rd Week from the next semester.

Based on the findings presented in course reports and feedback from students and stakeholders, action plans are developed to make necessary adjustments to the curriculum implementation, which may include modifying teaching strategies, revising learning materials, or adapting assessment methods as needed. The approval and implementation of any modifications are conducted using the university templates, forms, policies, and procedures as well as the authority matrix for approval of modifications as shown in Table 3.

Table3: The approval levels of modifications that take place within the University of Tabuk

Intended curriculum changes	Final Level of Approval
Program Level	
Changing the admission requirements, changing the certificate name or updating graduation requirement.	University Council
Updating program›s mission, objectives, program title, program duration (total number of years/levels/ hours), updating program learning outcomes, program specification, study plan, and adding co-requisites or prerequisites.	Programs and study plans Committee at UT.
Changes in the ordering of PLOs, program co-requisites or pre-requisites and course code, updating program KPIs,	Programs and study plans administration at UT.
Updating the facilities, operational plan, dropping pre-requisites.	Faculty Council.
Course Level	
Updating course specification (changing exceed more than 25% of course specification and can affect learning outcomes)	Programs and study plans Committee at UT.
Course code	Programs and study plans administration at UT.
Changes in course policies and regulations	Faculty Council
Course teaching strategies, less than 25% change in course specification, reference materials, distribution of topics/ weeks, methods for assessment; measurement, and evaluation grading systems, changes in course policies and regulations.	Department Council.

Program Level review:

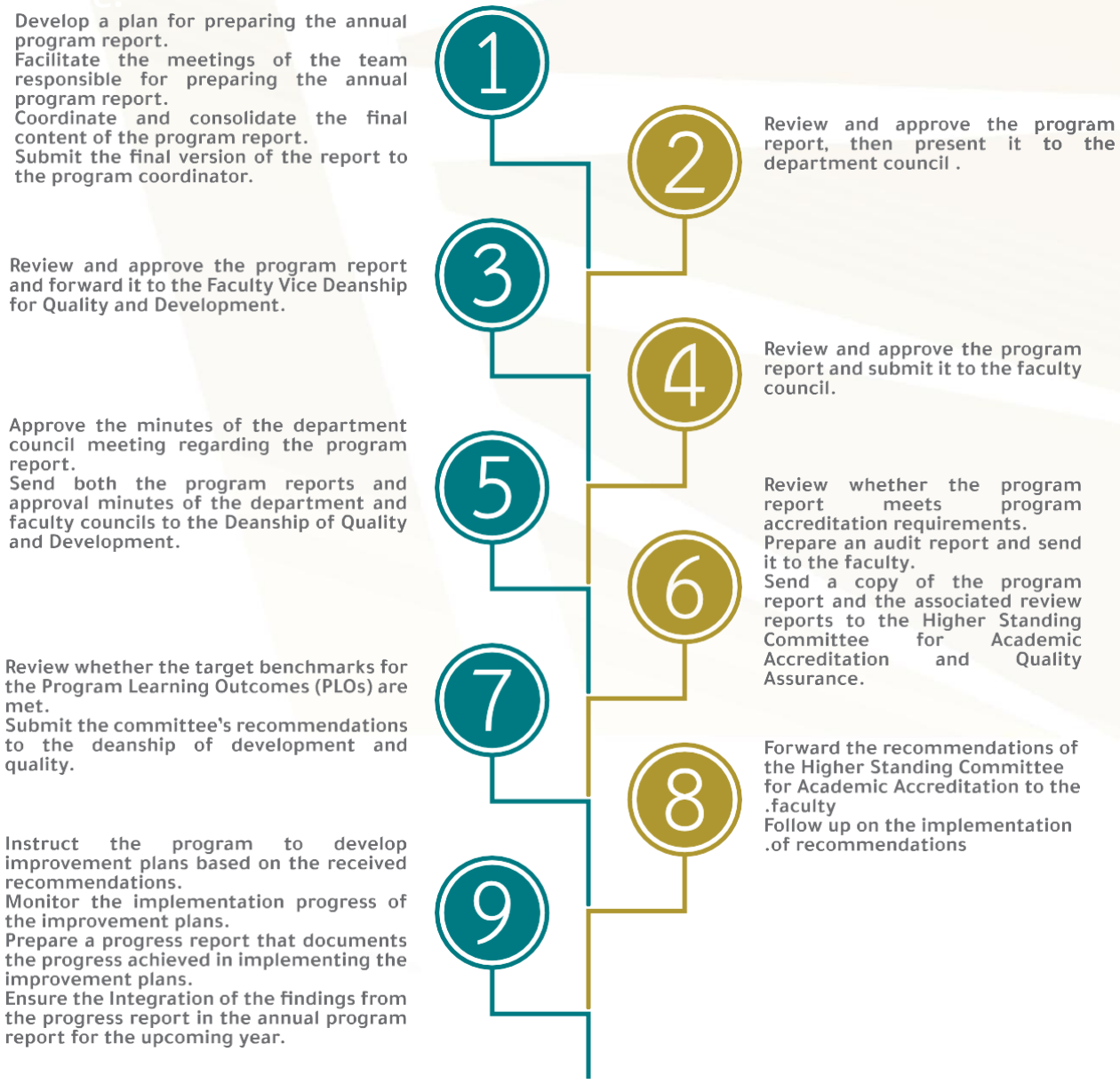
The annual program review is one of the mechanisms adopted by the BSc Biology Program to ensure that the program is on continual quality progress in order to meet the highest standards of academic excellence. The BSc Biology Program goes through two review cycles, an annual review cycle, and a five-year review cycle. Figure 5 shows the program assessment process cycle.

Figure 5 shows the program assessment process cycle.

The Annual Review Cycle:

The annual Program review starts by collecting data using the standard university templates and forms of course reports, students, graduates, faculty members, and admin staff surveys as well as professional bodies surveys. Data analysis, action plans, and performance indicators are documented in the annual program report. At the end of the academic year, the HOD sends the program report to the vice dean of development and quality who is responsible for ensuring that the report is well-written and meets all quality standards recommended by the University of Tabuk and the NCAAA. The BSc Biology Program is responsible for implementing the proposed improvement plans for quality improvements. The whole review process is presented in Figure 6. Tables 3 and 4 show the quality assurance activities and time frame at the program level.

Figure 6: The annual program report preparation



Minor Program Modifications:

Minor modifications are essential for continual improvement. Minor modifications include name changes, contact and address, exam procedures, and timing. Minor modifications are managed by the HOD in conjunction with the Program and Study Plans Committee. Once a minor modification has been approved it will be publicized via the department website to all stakeholders.

Major Program Modification:

Major change includes Significant changes to admission or program requirements, Significant changes to courses and curriculum, Changes to admission requirements, learning outcomes, and/or delivery mode. Proposals for major program changes should clearly justify the rationale behind any proposed modification. All major modifications require a recommendation for approval by the University Curriculum Committee. To ensure alignment with the university and the NQF polices the department program and study plans committee uses the templates, documents, instructions, and guidelines regarding program modifications which are available on the University Curricula Committee website.

Program Closure:

To make an informative decision about a program closure data about assessing program demand, financial impacts, trends of student enrollment, industry trends, and student outcomes should be collected and analyzed. Reasons for closing a program include:

1. Low enrolment
2. Lack of faculty resources
3. Changing higher education landscape
4. Making room for new opportunities
5. Shifting students' interests
6. Changing external contexts

Proposals for program closure should clearly articulate the reasons for closing the program using the memo template provided by the University Curriculum Committee, also timeline plan for action must be in place to take care of all the expected consequences and guarantee a well synchronization with the university system. The Ministry of Higher Education is the final approval agency for any program closure. Table 4 presents the program evaluation matrix and Table 5 shows the roles of faculty members, and students in planning, quality assurance, and decision-making.

Table 4: The quality assurance procedures at the course and program levels.

Activity	End of term	Annually	Responsibility
Course evaluation survey	✓		Course coordinators
Post-Term meeting	✓		Course coordinators
Course report (CR)	✓		Course instructors + Course coordinators
Course file submission	✓		Course coordinators
Students experience survey		✓	MEWG
Program evaluation survey		✓	MEWG
Faculty members satisfaction survey		✓	MEWG
Employers evaluation survey		✓	HOD+MEWG
Academic advising survey		✓	Academic advising committee
Operational plan report		✓	OPWG
Program KPI report		✓	KPIWG
Annual program report (APR)		✓	APRWG
Annual program report revision		✓	Deanship of Development and quality
Approval of the APR and CR		✓	FOS council
Action plan preparation & distribution		✓	DQC
Action plan execution & assessment		✓	DQC

Table 5: Time frame of program evolution.

Activity name	Start of semester	End of semester	annually	Bi-annual	Every 5 years
Program level activities					
Program specification review					✓
Course evaluation surveys		✓			
Course report preparation		✓			
Course recommendation reporting		✓			
Course file preparation and submission		✓			
Employer evaluation survey			✓		
Alumni evaluation survey			✓		
Program SWOT analysis preparation and reporting					✓
Program KPI report preparation and analysis			✓		
Annual program report preparation			✓		
Annual program report revision			✓		
Recommendations and conclusion			✓		
Program self-study report development					✓
Course report		✓			
Course recommendations report	✓				
Course file		✓			
Student evaluation surveys		✓			
External program assessment				✓	

Activity	Monthly	Beginning of the term	End of the term	Annually	Every 5 years
Review of program and course specifications, learning outcomes and study plan					✓
Review of mission, graduates attributes and operational plan					✓
SWOT analysis report					✓
Self-evaluation scales report					✓
Self-study report (SSRP)					✓

Table 6: Program evaluation matrix.

Activity	Responsibility	Annually	Responsibility
Effectiveness of teaching and assessment methods	HOD, faculty, students, alumni, employers	Exam results, CR, and CES Post-term meeting HOD-students meeting Interviewers Peer review	End of each term
		PLOs assessment APR HOD-students meeting PES AES SSS-AC EES Meeting and interviews	Annually
		SES	Mid of the program
Learning outcomes	HOD, faculty, students, alumni, employers	CR CES Post-term meeting course coordinators-students meeting	End of each term
		APR PES AES EES SSS-AC	Annually
		SES	Mid of the program
Effectiveness of leadership	HOD, Faculty members, Admin staff	Staff performance evaluation forms. HOD, Faculty members, evaluation surveys. SSS-AC SSS-AD	Annually

Activity	Responsibility	Annually	Responsibility
Overall quality of the program	Students, graduates, Faculty members, HOD, Admin staff, Employers, Advisory committee, Independent reviewers	CRAPR Operational plan report KPIs report PLOs report Stakeholders surveys report Focused group Discussion Advisory committee meetings	Annually
Partnerships	HOD, Faculty members, Students, Advisory committee	CR APR Operational plan Stakeholders surveys Advisory committee meetings	Annually

Table 7: Role of faculty members, students in planning, quality assurance and decision making.

Activity	Teaching staff	Employee	Responsibility
Planning	Involved in formulation of program mission, Goals, graduate attributes, preparing program specification, preparation of course specifications. Head and members in the department council, and committees. Participate in measuring CLOs and PLOs.	Members in the advisory committee. Participate in SWOT analysis (operational planning) Provide feedback and proposals for improvements.	Members in the following committees: Program and study plan committee. Academic Affairs committee. Academic advisory committee. quality committee Scientific committee Laboratories, Equipment, and Safety Committee
Quality assurance	Feedback through, meetings, academic staff satisfaction survey. Members of the quality committee.	Admin staff and technicians' satisfaction survey. Members in the accreditation committees.	Participate in the evaluation of the quality of courses and the program. Participate in developing the improvement plans through various surveys (CES, PES, AES) Academic advising survey. Program Mission and goals survey. Preparation for the SES

Decision making	HOD, Department council members, Committees, course coordinators, Participate in developing the improvement plans (CR,APR, operational plan, KPIs report)	Members in the program committees. Participate in the SWOT analysis.	Participate in decision making through: Advisory committee.
	Participate in reviewing and improving the study plan.	Provide proposals for improvements.	Academic advisory committee. Developing the annual community services and students activities plans. Make suggestions regarding priorities of improvements.

Every five years the BSc Biology Program conducts a comprehensive program review and deliberation, which might lead to major or minor program modifications.

The Five-Year Periodic Evaluation

The BSc Biology Program follows procedures to manage quality assurance according to a set schedule. It starts from planning to implementation, through measuring performance and evaluating the results achieved that lead to periodic and regular review and improvement

The BSc Biology Program follows practical steps to conduct the annual course to ensure its quality according to a specific time frame and procedures. As well as developing plans that achieve the mission and objectives of the program, implementation of operations according to the matrix of powers, and evaluate performance through the use of data and various activities that lead to the review and development of annual improvement plans to achieve the mission and objectives of the program.

The program conducts a comprehensive periodic assessment every five years after the completion of the program cycle and reports on the overall level of quality, identifying strengths and weaknesses. Plans for improvement; and follow up on their implementation. This assessment includes all aspects of the BSc Biology Program, including the study plan, program learning outcomes, academic policies and procedures based on changes and stakeholder proposals.

The program conducts continuous quality audit and control based on the results of stakeholder surveys, operational plan reports and Advisory Committee recommendations and in accordance with the updated forms of the National Qualifications Framework (NCAAA) while adhering to the authority matrix approved by the University. In parallel with the updating of the university strategic plan every 5 years, the program revises its mission and goals to ensure consistency with the faculty and university mission and goals and updates its operational plan. In order to maintain the quality of the Bachelor of BSc Biology Program a self-evaluation of the program must be conducted every five years to ensure that it remains in compliance with the requirements for recertification. The self-evaluation process involves stepping back from the ongoing process and reviewing all areas of the program based on current developments over a specified period. The Agency for Quality and Development organize 4 committees (Figure 7 and Table 7) headed and managed.

Higher Committee for Academic Accreditation

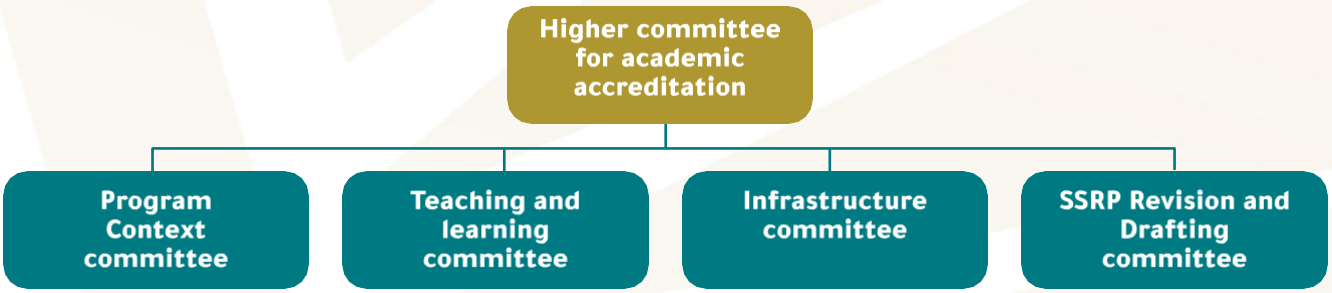


Figure 7: Academic Accreditation Committees

The four committees are responsible for evaluating the accreditation of best practices and quality assurance in the six program accreditation standards developed by the National Commission on Academic Accreditation and Evaluation (NCAAA) to prepare the SSRP.

Table 8: Academic Accreditation Committees responsibilities.

	NCAAA Standard	Responsible Committee
Standard 1	Management of Program Quality Assurance	The Program Context Committee
Standard 2	Teaching and Learning	Programs and Study Plans Committee
Standard 3	Students	Academic Supervision Committee
Standard 4	Teaching Staff	
Standard 5	Learning Resources	Learning Resources and Facilities Committee
All standards	All standards	SSRP Revision and Drafting Committee

The Program Context Committee

1. Ensuring that the mission and goals of the program are consistent with the mission and goals of the faculty and university.
2. Reviewing the awareness of the beneficiaries with the program's mission and goals and the mechanisms, regulations and administrative flowchart structures within the program.
3. Monitoring the progress towards achieving program goals.
4. Reviewing the program's quality processes and ensuring their consistent implementation across the main campus and Umluj branch.
5. Measurement of KPIs related to the standards and formulation of the improvement plan, and follow up the implementation of the improvement plan.
6. Preparation of the necessary evidences and documents to prove the good practice.
7. Preparing the self-evaluation report for standard 1 &2.
8. Participating in preparing the program self-study report.

Teaching and Learning Committee

1. Preparation of the necessary evidences and documents to prove the good practice as stipulated.
2. Measurement of KPIs relate and formulation of the improvement plan and follow up the implementation of the improvement plan.
3. Following up the teaching and assessment processes, students' achievement, and graduate employability, while ensuring alignment across both campuses in teaching and learning practices.
4. Following up on the preparation, submission and revision of the Academic Advising Committee Report
5. Following up on the implementation of new faculty members' preparation program
6. Following up on the preparation of the faculty member training plan and training report.
7. Checking the update of teaching staff database and follow-up on the updating of the teaching staff CVs.
8. Following up on the preparation and approval of the annual community services plan and the submission of the annual report in coordination with community working group.
9. Measurement of KPIs related to the standard and formulation of the improvement plan, and follow-up on the implementation of the improvement plan.
10. Preparing the necessary evidence and documents to demonstrate good practices.

11. Preparing the self-evaluation report.
12. Participating in preparing the program self-study report.

Infrastructure Committee

1.Following up on provision of the appropriate learning resources according to the national/international standards and submitting reports to faculty administration.
2.Following up on provision of appropriate facilities and equipment resources according to the national/international standards and submit reports to faculty administration.
3.Following up on compliance with safety and security precautions in the faculty facilities.
4. Measurement of KPIs related to the standard and formulation of the improvement plan and follow up the implementation of the improvement plan.
5. Preparation of the necessary evidences and documents to prove the good practice as stipulated in the standard guide.
6. Preparing the self-evaluation report.
7. Participating in preparing the program self-study report.

SSRP Revision and Drafting Committee:

1. Collection of all five standards and their evidence from the other committees.
2. Revision of SSRP and successive iteration of all standards.
3. Drafting and finalizing the SSRP.

Key Performance Indicators and Benchmarking

They are specific forms of evidence used by the faculty to provide evidence and measure the of quality performance. The KPIs are one of the most important tools for assessing the quality of academic programs according to the criteria and rules of the NCAAA, and are among the most prominent practices that contribute to decision-making and follow-up processes and continuous development and improvement.
The NCAAA has identified 17 KPIs at the program level all of which are in line with the evolving program accreditation standards. These indicators are the minimum to be periodically measured, and the academic program can use additional performance indicators if it believes they are necessary to ensure the quality of the program. One program KPI is added to the 17 KPIs of the NCAAA as it is believed to add valid information for assessing and evaluating the performance of the BSc Biology Program.

1- Levels of Each KPI

It is expected that the program measures the KPIs with benchmarking using the appropriate tools, such as (Surveys, Statistical data, etc.) according to the nature and objective of each indicator, as well as determining the following levels for each indicator:

Actual performance
Refers to the finding determined when the KPI is measured or calculated. It represents the actual reality of the present situation. A finding benchmark is also an internal benchmark.

1.1 Targeted performance level:

Refers to the anticipated performance level or desired outcome for a KPI. A target benchmark is also an internal benchmark.

1.2 Internal reference (Internal benchmark):

Refer to benchmarks that are based on information from inside the program or institution. Internal benchmarks include target or finding benchmark data results from previous years.

1.3 External reference (External benchmark)

Refer to benchmarks from similar programs that are outside the institution, it refers to other institutions (national or international).

1.4 New target performance level

Refers to the establishment of a new or desired performance level or goal for the KPI that is based on the outcome of the KPIs analysis.

Analysis:

Refers to a comparison and contrast of the benchmarks to determine strengths and recommendations for improvement.

2- Selection of KPIs based on

1. The 11 NCAAA Program KPIs
2. BSc Biology Program KPIs.

A report is prepared annually describing and analyzing the results of each indicator with precise and objective identification of strengths and aspects that need improvement. For each KPI, an acceptable target level to be achieved is set based on the program strategic goals, the comparative data of the internal and external benchmarking. For each KPI the following values are measured:

Target KPI: which is determined according to the KPIs measurements of the internal and external benchmarking. Hence, it is the new target KPI of the former academic year.

Actual KPI: which is the actual level of the current year's performance.

New target KPI: which is determined in consideration of the actual benchmark.

-For the achieved target KPI level, a holding of the new targeted level is kept for an -additional year to establish and maintain the good practice before setting an increment of the new target KPI.

A 5% growth rate is considered acceptable improvement of the practice when setting a new target KPI level.

-If the target is not achieved so the previous target will be held as a new target for the year after, with investigating the reasons and delineating a plan for improvement to reach the targeted performance.

-The target of the KPI is determined based on the future plan for faculty strategic plan, internal and external benchmarking.

3- Sources of data:

- The BSc Biology Program operational plan reports.
- Reports on stakeholder surveys
- Program evaluation survey (PES).
- Courses' evaluation surveys (CES).
- Student experience survey (SES).
- Academic staff Satisfaction survey (SSS-AC)
- Administrative staff satisfaction survey (SSS-AD).
- Employer Evaluation survey (EES).
- Stakeholder satisfaction with learning resources report.
- Official students' records obtained for the university secured internal system (e- register).
- BSc Biology Program records from the vice deanship for postgraduate and research.
- Scopus and ISI databases.

4- Data analysis methodology:

All data analysis is performed using an automated Excel sheet developed by the BSc Biology Program.

The outcome of all KPIs values is presented as a percentage to calculate the final performance of the BSc Biology Program indicators for the academic year of interest. Rates of growth (increment) or decline (decrement) are calculated in the comparative and trending analysis of the current performance with internal and external benchmarking. Figure 8 shows the KPIs assessment cycle.

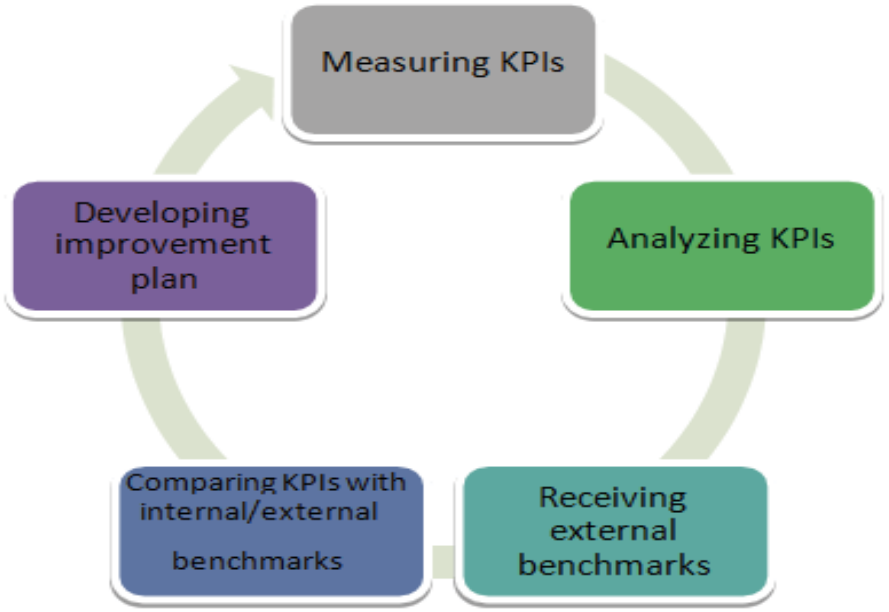


Figure 8: KPIs annual assessment cycle.

Code	Indicator	Goal	Time for measurement	Data Measurement Provider	Measurement Responsibility	Measurement Tools
KPI-P-01	Students' Evaluation of quality of learning experience in the program	Measuring the educational quality of the program	Every academic year	Head of MEWG	Head of MEWG	Survey
KPI-P-02	Students' evaluation of the quality of the courses	Measuring the educational quality of the program	Every academic semester	Course coordinator	Head of MEWG	Survey
KPI-P-03	Completion rate	Measuring the educational quality of the program	Every academic year	Head of the Academic Affairs committee	Head of MEWG	Reports
KPI-P-04	First-year students retention rate	Measuring the educational quality of the program	Every academic year	Head of the Academic Affairs committee	Head of MEWG	Reports
KPI-P05	Students' performance in the professional and/or national examination	Measuring the educational quality of the program	NA	NA	NA	NA
KPI-P-06	Graduates' employability and enrolment in postgraduate programs	Measuring the quality of graduates characteristics, and the extent of employers satisfaction, and the labor market's need for them	Every academic year	Alumni coordinator	Head of MEWG	Statistical data and analysis
KPI-P-07	Employers› evaluation of the program graduate proficiency	Measuring the quality of graduates characteristics and employers satisfaction with them	Every academic year	Alumni coordinator	MEWG	Survey

Code	Indicator	Goal	Time for measurement	Data Measurement Provider	Measurement Responsibility	Measurement Tools
KPI-P-08	Ratio of students to teaching staff	Measuring the educational quality of the program	Every academic year	Annually at the end of the academic year	Head of Academic Affairs committee	Reports
KPI-P-09	Percentage of publications of faculty members	Measuring the educational quality of the program	Every academic year	Annually at the end of the academic year	Head of Scientific committee	Reports
KPI-P-10	Rate of published research per faculty member	Measuring the educational quality of the program	Measuring the quality of the axis of scientific research	Every academic year	Head of Scientific committee	Reports
KPI-P-11	Citations rate in refereed journals per faculty member	Measuring the quality of the axis of scientific research	Annually at the end of the academic year	Every academic year	Head of Scientific committee	Reports

Benchmarking and Improvement Cycle

Benchmarking the BSc Biology Program offers numerous benefits and holds great importance in ensuring its continuous improvement and quality enhancement. Firstly, benchmarking allows for a systematic comparison of the program's performance, practices, and outcomes against established standards, best practices, or similar programs in other institutions. This process provides valuable insights into areas of strength and areas that require improvement, paving the way for informed decision-making and targeted interventions.

Benchmarking also fosters collaboration and knowledge sharing among institutions. Through benchmarking initiatives, BSc Biology Program can engage in meaningful dialogue, exchange ideas, and learn from one another's successes and challenges. This collaborative approach encourages the sharing of best practices, resources, and expertise, ultimately benefiting both faculty and students.

Another significant benefit of benchmarking is its role in enhancing program outcomes and student learning experiences. By identifying areas where the Biology Program may be falling short, benchmarking enables targeted interventions to improve teaching methodologies, assessment practices, and student support systems. It facilitates evidence-based decision-making, leading to program enhancements that directly impact on student success, retention rates, and overall satisfaction.

Furthermore, benchmarking the BSc Biology Program contributes to institutional accountability and quality assurance. It provides a clear framework for setting performance targets, monitoring progress, and demonstrating the program's effectiveness to internal and external stakeholders. This transparency and accountability foster confidence in the program and assure students, faculty, parents, and employers that the BSc Biology Program meets and exceeds industry and academic standards.

Stakeholders Surveys

Stakeholder surveys play a crucial role in assessing and improving the BSc Biology Program by gathering valuable feedback and insights from various stakeholders involved. Stakeholder surveys offer numerous benefits and hold significant importance for the BSc Biology Program. These include:

Benchmarking and Improvement Cycle

1. **Comprehensive Feedback:** Surveys allow stakeholders, such as students, faculty, staff, and other relevant parties, to provide their perspectives, experiences, and opinions on the BSc Biology Program. This comprehensive feedback helps institutions understand the strengths and weaknesses of the program from multiple viewpoints.

2. **Program Evaluation:** Stakeholder surveys serve as a tool for program evaluation by collecting quantitative and qualitative data. Institutions can use this data to assess the effectiveness of the BSc Biology Program, measure progress towards goals, and identify areas for improvement.

3. **Continuous Improvement:** The feedback gathered from stakeholders through surveys helps identify areas that require improvement. Institutions can use this information to make data-informed decisions and implement changes to enhance the BSc Biology Program continuously.

4. **Stakeholder Engagement:** Conducting surveys demonstrates an institution's commitment to stakeholder engagement. It shows that the institution values the opinions and experiences of stakeholders and actively seeks their input and involvement in shaping the BSc Biology Program.

5. **Enhanced Satisfaction:** Surveys enable institutions to gauge stakeholder satisfaction levels with the BSc Biology Program. By addressing concerns and making improvements based on feedback, institutions can enhance stakeholder satisfaction and create a positive educational environment.

6. **Strategic Decision-making:** The data obtained from stakeholder surveys can inform strategic decision-making processes. Institutions can use this data to allocate resources effectively, prioritize areas of improvement, and make informed decisions that align with stakeholder needs and expectations.

7. **Accreditation and Recognition:** Stakeholder surveys provide evidence of stakeholder engagement, program assessment, and continuous improvement efforts. This can be valuable for accreditation purposes and external recognition, showcasing the institution's commitment to delivering a high-quality BSc Biology Program.

The basics of surveys design:

There are a number of general principles that should be followed if stakeholder surveys are to be as useful as possible:

1. **It must be made clear to respondents that all survey responses are anonymous.**
2. **Formulate questions to revolve around objectives**
3. **Some open-ended questions should be included to permit respondents to comment on additional matters of concern.**
4. **Distribute in similar ways and at similar times and comparisons are made between comparable institutions.**
5. **The validity of responses depends on having a reasonable response rate. Normally at least 50% is essential.**
6. **To encourage stakeholders' participation, actions taken in response to stakeholders' feedback are made available on the department website.**

The surveys used by the BSc Biology Program:

1-Course Evaluation Survey:

a. A course evaluation survey is distributed at the end of each course. It is recommended that this survey be distributed in each course once each year.
b. The survey does not directly assess the quality of teaching by individual instructors. However, the evaluation of the course is seen as a reasonable measure of the quality of teaching in a way that minimizes personal issues that could inhibit responses from students.
c. The survey asks questions about a number of aspects of each course. The final question is intended to provide a summary question that might be used as a general quality indicator.

2- Student Experience Survey:

a. This survey is intended as a general survey that is distributed to all students mid-way through their program of program.
b. The survey deals with the student's life at the institution including both major elements of the program in which they are enrolled and a number of general items relating to services and facilities.

3- Program Evaluation Survey:

a. This survey is conducted annually. It is intended for use at the time students have finished their program and are about to graduate. It is recommended to be distributed shortly before final year classes are finished so their opinion of the total program at that stage can be assessed.

b. The questions include a number of items about the program itself together with some items that deal with their life as a students at the institution. As for the other surveys the final question is a summary item that might be used as a general quality indicator.

4- Alumni Evaluation Survey:

a. A survey of alumni is conducted annually. The target alumni are those graduates from the last year earlier and 1 year earlier.

b. This instrument captures quantitative rankings about their experience in the program and PLO's, enrolment in post-graduate program, and employability.

5- Staff Satisfaction Surveys:

The BSc Biology Program uses two surveys Academic Staff Satisfaction Survey and Administrative Staff Satisfaction survey to collect feedback from faculty and staff.

a. These two surveys are conducted on an annual basis aiming to assess the staff satisfaction about the program and services offered to them.

b. In the context of improving efficiency, an important precondition is continuously measuring employee satisfaction.

c. The results of these surveys are directed primarily at designing processes and activities, as well as defining short-term and long-term measures to improve satisfaction and motivation.

6- Employers Evaluation Survey:

This survey is conducted on an annual basis aiming to assess the level of satisfaction among employers about the outcomes of the program and also used to assess the PLOs

7- Academic Advising Satisfaction Survey:

The main objective of Academic Advising is to support students in identifying and attaining their educational, personal, and career objectives. The aim is to foster their growth as independent learners, facilitate exploration of available resources, and maximize their university experience at the University of Tabuk. Academic Advising is an ongoing and consistent process that relies on establishing a strong working relationship between the Advisor (Faculty) and Advisee (Student). This necessitates regular and meaningful interactions between the advisor and advisee. Both the advisor and the student have a shared responsibility to actively engage in the academic advisement process.

Response Scale:

It is recommended that each item in the surveys be responded to using a five-point scale. The recommended scale is:

1. **Strongly agree (5).**
2. **Agree (4).**
3. **Neutral (or undecided) (3).**
4. **Disagree (2).**
5. **Strongly disagree (1).**

Survey	Area of Evaluation	Target group	Distribution Responsibility	Distribution Timing	The Uses of the Survey
1. Course Evaluation Survey	Course quality	Students	Course instructors	End of the course	KPI-P02- Average student overall rating of course quality on five-point scales -Course report
2. Student Experience Survey	The student›s academic life in the educational institution, including the basic components of the program in which the student is registered	Students who have passed half of the program›s duration	MEWG	Annually	KPI-P01- Students› Evaluation of Quality of learning experience in the Program
3. Program Evaluation Survey	Final-year students' satisfaction with program, services, facilities, and program management	Final-year students of the program	MEWG	Annually	KPI-P01- Students› evaluation of the quality of learning experiences in the program
4. Alumni Evaluation Survey	Alumni satisfaction with the program	Alumni	MEWG	At least 6 months after their gradua-tion	KPI-P01- Students› evaluation of the quality of learning experiences in the program
5. Faculty Satisfac-tion Survey	Academic staff members› satisfaction with the Program, management, Organization environment, Quality management, Educational process, Program mission, PLOs, Facilities and services, Scientific research Community service	Academic staff members›	MEWG	Annually	Measure faculty members Satisfaction

Survey	Area of Evaluation	Target group	Distribution Responsibility	Distribution Timing	The Uses of the Survey
6. Employers Evaluation	Employers' satisfaction with program outcomes	Employers	MEWG	It is submitted to the employers one year after the student's graduation	KPI-P07- Employers' assessment of the competency of program graduates
7. Academic Advising Satisfaction Survey	Students' satisfaction with the academic advising service and academic advisor	All Students	Academic advising coordinator	Annually	Students› satisfaction with the academic advising

Quality Procedures

Quality Procedures

Developing a component within a program requires a systematic approach to ensure its effectiveness and alignment with program goals. This chapter presents the general frameworks followed by the BSc Biology Program to develop the its core components.

Mission and Development Goals

The mission and goals of the BSc Biology Program were developed to motivate the efforts of the students, faculty members, and all stakeholders and provide them with a clear direction for the future state of the program.

The mission statements and goals clearly provide a view of why the BSc Biology Program exists, and where it wants to be and they create a target for the operational planning of the program. In developing its mission and goals the BSc Biology Program followed a systematic procedure that ensures consideration of key factors and stakeholders' input. The BSc Biology Program's mission and goals are widely circulated among internal and external stakeholders to provide them with a clear direction for the future state of the program. The mission and goals are periodically reviewed allowing them to evolve in response to changing needs and advancements in the field of Biology. In the following, the details of the development procedure are presented.

Determinants The factors shape the articulation of the program's mission and goals.	**Alignment with the UT's mission:** • Align the program›s mission and goals with the overall vision, mission, and values of the UT. • Consider the strategic priorities, objectives, and core principles of the UT. • Ensure that the program›s mission and goals contribute to the UT's broader goals and strategic plans. **Compliance with the Accreditation Standards:** • Compliance with the requirements and standards set by the NQF ensures program quality, standards, and recognition. **Needs Assessment and Analysis:** • Identify and analyze the specific needs, problems, or challenges that the program seeks to address. **Target Population:** • Define the target population or beneficiaries of the program. • Consider their characteristics, demographics, socio-economic status, and specific needs or concerns. • Tailor the program›s mission and goals to effectively address the identified needs of the target population.

Determinants The factors shape the articulation of the program's mission and goals.	**Stakeholder Input and Engagement:** • Engage relevant stakeholders throughout the program planning process. • Seek input, feedback, and perspectives from stakeholders, including program staff, beneficiaries, community members, partners, and experts. **External Factors and Context:** • Assess the external factors and contextual influences that may impact the program. • Consider political, economic, social, technological, and environmental factors that shape the program›s operating environment. • Adapt the program mission and goals to respond to the opportunities and challenges presented by the external context. **Resources:** • Consider the availability and allocation of resources to support the program›s implementation. • Assess the financial, human, material, and technical resources required to achieve the program goals. • Align the program mission and goals with the resource capacity. • Legal and Ethical Considerations: • Comply with applicable laws, regulations, ethical and Islamic standards in shaping the program›s mission and goals. • **Research and Evidence:** • Review existing research, studies, and evidence related to the program›s focus area. • Incorporate relevant findings and lessons learned from research and evidence into the program›s mission and goals. **Collaboration and Partnerships:** • Identify potential partners and collaborators who can contribute to the program›s mission and goals. • Consider partnerships with community organizations, government agencies, non-profit organizations, academic institutions, and private sector entities. **Evaluation and Learning:** • Plan for ongoing monitoring, evaluation, and learning throughout the program›s lifecycle. • Incorporate evaluation findings, lessons learned, and feedback from stakeholders to refine and adjust the program mission and goals. • Continuously assess the program›s effectiveness, impact, and relevance to ensure continuous improvement.
Specifications Guidelines for developing clear and well-articulated mission and goals statements.	**Clarity and Conciseness:** • Ensure that the mission and goals are clearly articulated in a concise and easily understandable manner. • Use simple and straightforward language to avoid ambiguity or confusion.

Specifications Guidelines for developing clear and well-articulated mission and goals statements.	**Specificity and Measurability:** • Make the mission and goals specific and measurable to provide clear direction and enable effective tracking of progress. • Clearly define the expected outcomes, targets, or metrics associated with each goal. **Alignment with UT's Values and Vision:** • Ensure that the program›s mission and goals align with the overall values, vision, and strategic direction of the UT. **Relevance and Significance:** • Ensure that the mission and goals are relevant to the program›s purpose, target population, and the identified needs or problems. **Achievability and Realism:** • Set mission and goals that are achievable within the program›s scope, available resources, and timeframe. **Time-bound:** • Define a specific timeframe or deadline for achieving the goals to provide a sense of urgency and focus. • Break down long-term goals into shorter-term objectives or milestones to track progress effectively. **Stakeholder Involvement:** • Involve relevant stakeholders, such as program staff, beneficiaries, partners, and funders, in the process of articulating the mission and goals. • Seek input and feedback from stakeholders to ensure that their perspectives and needs are considered. **Inspiring and Motivating:** • Craft a mission statement and goals that inspire and motivate program stakeholders by conveying a sense of purpose, impact, and value. • Use language that evokes enthusiasm, commitment, and a shared sense of responsibility. **Flexibility and Adaptability:** • Allow for flexibility and adaptability in the mission and goals to accommodate changes in the program›s context, emerging opportunities, or evolving needs. • Ensure that the goals can be revised or adjusted if required while maintaining alignment with the program›s overall purpose.
Responsibilities	The mission and goals working group.
Development and Approval team	Head of the Programs and Study Plans Committee.

Procedure	**1. Establish Mission and Goals Development working group:** • **a. The Programs and study plans committee forms a working group comprising faculty members, program coordinators, administrators, and other stakeholders responsible for developing and approving the mission and goals.** • **b. The working group will oversee the entire process and ensure collaboration and representation from different perspectives.** **2. Conduct internal and external Analysis:** • **a. Conduct SWOT Analysis: Conduct a thorough analysis of the internal strengths, weaknesses, opportunities, and threats (SWOT) of the academic program.** • **b. Conduct Market Analysis: Analyze the market relevant to the program. Identify trends, emerging needs, and potential opportunities. Assess the competitive landscape and benchmark against similar programs to identify unique selling propositions and differentiation factors.** • **c. Conduct Stakeholder Analysis: The mission and goals working group conduct a workshop with stake holders (Students, Alumni, Employers, Faculty members, and Administrative staff) to understand their needs, expectations, and aspirations related to the program, and to gather their inputs and insights.** **3. Draft Mission Statement: Based on the information gathered and analysis conducted, the mission and goals working group drafts a preliminary mission statement and program goals. The mission and goals working ensure alignment with the UT's mission and strategic priorities. Also, the mission statement should capture the program's unique contributions and aspirations.** **4. Seek Feedback and Revision: The mission and goals working group shares the draft mission statement and goals with stakeholders, seeking their feedback, suggestions, and revisions.** **5. Refine and Finalize: Based on the feedback the mission and goals working group revise and refine the mission statement to ensure it accurately represents the program's identity, purpose, and values. Ensure that the mission complies with the specifications outlined previously.** **6. Develop program Goals:** • **a. After finalizing the mission statement, the mission and goals working group identifies the specific goals that the BSc Biology Program intends to achieve in alignment with its mission.** • **a. Ensure that the goals are measurable, achievable, relevant, and time-bound (SMART).** • **b. Consider the BSc Biology Program's unique strengths, student needs, and evolving industry expectations.** **7. Seek Feedback and Revision:** **The mission and goals working group share the draft program goals with faculty, staff, and other relevant stakeholders for feedback and suggestions to refine the program goals.**

Procedure	**8. Refine and Finalize Program Goals:** **Based on the feedback received, the mission and goals working group revise and refine the program goals to ensure they align with the program›s mission, address student needs, and reflect current trends in the relevant field. Ensure that the goals are SMART. The mission and goals working group submits the finalized mission and goals to the HOD.** **9. Approval from Relevant Authorities:** **The HOD presents the finalized mission statement and goals to the departmental council for approval. After the approved by the departmental council, the mission statement and goals go through the approval process shown in table 2. At any stage of approval suggestions for further refinement of the mission and goals are carried by the mission and goals working group.** **10. Communicate Approved Mission and Goals:** **The mission and goals working group share the approved mission statement and program goals with all relevant stakeholders, including faculty, students, staff, and external accrediting bodies. Ensure that everyone involved in the program is aware of the approved mission and goals and their significance for program direction and decision-making.**
Notes	**The Program Mission and Goals are revised every 5 years.**
Outputs	**1. Meeting minutes with Stakeholders (Advisory committee meeting, Faculty members meeting, Administrative staff meeting).** **2. Feedback reports.** **3. SWOT analysis (Internal and external Analysis report).** **4. Approval of mission and goals from the relevant authorities.**
Appendices	**1. The UT strategic plan governance guide.** **2. UT strategic plan.** **3. FOS strategic plan.** **4. Matrix of Authority of study plans and academic programs.**

Operational Plan Development

The BSc Biology Program operational plan defines the targets that needs to be achieved in order for the program to execute its mission and goals. They plan uses performance indicators to gauge the success of the BSc Biology Program in achieving its goals

Determinants The factors shape the development of the program's operational plan.	**Program Goals and Objectives:** • Clearly defined goals: Establish clear and specific program goals that articulate the desired outcomes and impact. • Measurable objectives: Develop measurable objectives that outline the specific targets to be achieved within the program›s timeframe. **Stakeholder Engagement and Collaboration:** • Stakeholder identification: Identify and engage relevant stakeholders, including program staff, students, and employers. • Collaboration and input: Foster collaboration among stakeholders to ensure diverse perspectives and expertise are considered in the development of the operational plan. • Stakeholder roles and responsibilities: Define the roles and responsibilities of each stakeholder in implementing and supporting the program. **Resource Assessment and Allocation:** • Resource identification: Identify the necessary resources, including funding, personnel, facilities, equipment, and technology, required to implement the program. • Resource availability: Assess the availability and accessibility of resources, considering potential limitations or constraints. • Resource allocation: Allocate resources effectively, considering the priorities, needs, and feasibility of different program components and activities. **Program Activities and Timeline:** • Activity planning: Determine the specific activities and tasks required to achieve the program goals and objectives. • Activity sequencing: Establish a logical sequence and order of activities, ensuring dependencies and prerequisites are considered. • Timeline development: Develop a realistic timeline that outlines the start and end dates, milestones, and key deliverables for each activity. **Monitoring and Evaluation Framework:** • Performance indicators: Define relevant and measurable indicators to track progress, monitor program implementation, and assess outcomes. • Data collection and analysis: Determine the methods, tools, and frequency of data collection to monitor program activities and evaluate their effectiveness. • Evaluation criteria: Establish evaluation criteria and standards to assess the success and impact of the program.

Determinants **The factors shape the development of the program's operational plan.**	• **Communication and Reporting:** • **Communication plan: Develop a communication plan that outlines how information will be shared among stakeholders, both internally and externally.** • **Reporting mechanisms: Establish reporting formats and channels to provide regular updates on program progress, achievements, challenges, and lessons learned.** • **Stakeholder engagement in communication: Engage stakeholders in the communication and reporting process, ensuring transparency and accountability.** **Continuous Improvement and Adaptation:** • **Learning and feedback loops: Incorporate mechanisms for capturing feedback, lessons learned, and insights from program implementation to inform ongoing improvements.** • **Flexibility and adaptability: Build flexibility into the operational plan to accommodate changing circumstances, emerging needs, and evolving program priorities.** • **Iterative planning: Continuously review and update the operational plan based on feedback, evaluation results, and the dynamic nature of the program.**
Specifications **These specifications help ensure the operational plan is comprehensive, actionable, and aligned with the program's goals and objectives.**	**1. Program Analysis and Planning:** • **Conduct a needs assessment: Identify the target population and assess their needs and requirements that the program aims to address.** • **Review existing data and research: Gather and analyse relevant data, and reports.** • **Define program goals and objectives: Clearly articulate the desired outcomes and impact the program aims to achieve.** • **Conduct a SWOT analysis: Assess the program›s strengths, weaknesses, opportunities, and threats to inform the planning process.** • **Establish program priorities: Determine the key areas of focus and the order of importance for program activities.** **2. Stakeholder Engagement and Collaboration.** **3. Resource Assessment and Allocation.** **4. Activity Planning and Sequencing.** **5. Performance Monitoring and Evaluation:** **6. Communication and Reporting.** **7. Continuous Improvement and Adaptation.**
Responsibilities	**The Programs and Study Plans Committee.**
Development and Approval team	**Head of the Programs and Study Plans Committee.**

Procedure	**• Establish operational working group (OPWG):** The HOD together with the Programs and Study Plans Committee identifies the operational plan working group (OPWG). The OPWG is responsible for overseeing the entire process of developing and approving the operational plan and ensuring collaboration and representation from different perspectives as well as monitoring the progress of the program in achieving its target goals. **• Review Program Data and Assessment Results:** The OPWG conducts a comprehensive review of the program data, including: • Program Mission and Goals. • Faculty Strategic Plan. • Improvement Priorities identified in previous Operational Plan Progress Reports. • Improvement Plans associated with improvement priorities from various committees within the department. • Improvement Plans and Improvement Priorities are mentioned in the Annual Report and Course Reports. • Improvement Priorities derived from Performance Indicators Reports and Benchmarking. • Opinion Surveys Reports. • Alumni Characteristics and Learning Outcomes Reports. • Improvement Priorities mentioned in Self-Evaluation Standards and Self-Study Report. **• Identify Areas for Improvement:** Based on the review of program data and assessment results, the OPWG analyse the data to identify areas that require improvement and potential areas for growth. This could include curriculum enhancements, faculty development, student support services, assessment practices, or any other relevant aspect **• Set Improvement Objectives and Strategies:** a. What do we want to achieve? The OPWG establishes clear and measurable improvement objectives for each identified area and ensures that the objectives are aligned with the program›s goals. b. How will we achieve our objectives? The OPWG determines the strategies and approaches to address each improvement objective. **• Share the Improvement Objectives and Strategies:** The OPWG communicates the improvement objectives and strategies to the relevant committees.

Procedure	**Draft the operational plan:** The OPWG combines improvement plans from all committees in the operational plan format **Seek Feedback and Revision:** To ensure that the Operational plan is comprehensive, actionable, and aligned with the program›s objectives, the HOD presents the Operational at the department council seeking their input and feedback to ensure their support. **Refine and Finalize:** Based on the feedback from faculty members the OPWG revise and refine the operational plan. The HOD submits the revised operational plan to the vice dean for development and quality for final review. Any suggestion from the vice dean for development and quality will be discussed and carried out by the OPWG. **Obtain Approval from Relevant Authorities:** The final draft of the operational plan will be submitted to the faculty council for approval. **Communicate Approved Operational Plan:** The communication of the approved operational plan helps ensure that stakeholders are well-informed, aligned, and actively involved in the program›s implementation of the operational plan **Implement Action Plans:** The committees Initiate the implementation of the action plans according to the defined timelines and responsibilities. **Monitor Progress:** The OPWG Continuously monitors the progress of the operational plan against the established timelines and KPIs to track the implementation of the action plans, and hence provide a systematic way to measure the program goals. **Evaluate Results** The OPWG assesses the results and outcomes of the implemented action plans, and compares the actual results against the established targets or benchmarks. This analysis helps assess whether the program is on track to achieve its goals and identifies areas that require improvement or further attention.

Procedure	**Report on the Outcomes:** The OPWG regularly reports on the progress made toward achieving the target objectives to the coordinator of the strategic plan at the faculty level, and from there to the relevant higher authority at UT. At the end of the academic year, the OPWG prepares a comprehensive report on the achievements of the Operational plan. **Seek Feedback:** The operational plan report will then be presented to the department council for discussion. Based on the feedback, strategies, action plans, and resource allocation may be modified to address any identified issue or make necessary improvements for the succeeding year›s improvement cycle. **Final Approval of the Achievement Report:** The final operational plan report will then be submitted to the vice dean of development and quality, and then to the department and faculty councils for final approval.
Reports	Action plans of committees. Operational plan. Reports on the progress of in executing the action plans. Meeting mites on (OPC, Advisory committee, Departmental council, Faculty council, Committees)
Appendices	5. The UT strategic plan governance guide. 6. UT strategic plan. 7. FOS strategic plan. 8. Tasks and duties of councils, and committees.

Measuring the Program's Goals

Measuring program goals allows for the evaluation of program effectiveness and provides valuable feedback for continuous improvement. Data and evidence gathered during the measurement process are crucial to support decision-making, where data-driven decision-making ensures that program improvements are based on objective information rather than assumptions. Also measuring program goals helps identify areas where students may need additional support or where curriculum adjustments may be necessary.

The BSc Biology Program Regularly monitors and evaluates progress towards the goals. Use KPIs to assess whether the desired outcomes are being achieved. Take the necessary actions to enhance the performance based on the assessment results and benchmarks.

Determinants The factors shape the influence the measurement of the program goals.	**1. Goal Clarity and Specificity:** • Clearly defined metrics: Establish clear and specific metrics or indicators that align with each program goal, allowing for objective measurement. • Operational definitions: Provide operational definitions for each metric, ensuring consistent interpretation and application during the measurement process. • Timeframe: Determine the appropriate timeframe for measuring goal attainment, considering short-term and long-term targets. **Compliance with the Accreditation Standards:** • National standards: Compliance with the NQF standards often involves the use of specific indicators, assessment methods, and reporting frameworks, to ensure a high-quality measurement process and outcomes. **2. Data Collection Methods and Tools:** • Quantitative measures: Identify quantitative data collection methods, such as surveys, assessments, or institutional records, to capture numerical data related to the program goals. • Qualitative measures: Incorporate qualitative data collection methods, such as interviews, focus groups, or reflective essays, to gather in-depth insights and perspectives on goal attainment. • • Valid and reliable tools: Select valid and reliable measurement tools or instruments that align with the specific metrics and goals being assessed. **3. Data Analysis and Interpretation:** • Data processing: Develop a systematic process for collecting, organizing, and analyzing the data collected for each program goal. • Data interpretation: Apply appropriate statistical or qualitative analysis techniques to interpret the collected data and derive meaningful insights regarding goal attainment. • Benchmarking: Compare program data against relevant benchmarks or established standards to provide context for interpreting the results.

Determinants The factors shape the influence the measurement of the program goals.	**4. Stakeholder Engagement:** • Stakeholder involvement: Engage relevant stakeholders, such as students, faculty, alumni, and employers, in the measurement process to gather diverse perspectives and ensure the validity and relevance of the data. • Communication and feedback: Establish mechanisms for communicating measurement results to stakeholders and seeking their feedback and input on the findings. • Collaborative data analysis: Foster collaboration among stakeholders in analyzing and interpreting the measurement data, facilitating a shared understanding of program goals and their measurement. **5. Continuous Improvement and Action Planning:** • Assessment of progress: Regularly assess and track progress towards program goals to identify areas of success and areas for improvement. • Actionable insights: Use the measurement results to generate actionable insights and recommendations for program improvement or refinement. • Action planning: Develop action plans based on the measurement findings, outlining specific steps to be taken to address identified gaps or enhance performance in relation to the program goals. **6. Ethical Considerations:** • Data privacy and confidentiality: Adhere to ethical standards and regulations regarding data privacy and confidentiality, ensuring that data collected for measurement purposes is handled securely and responsibly. • Informed consent: Obtain informed consent from participants involved in data collection, ensuring their understanding of the purpose, procedures, and potential uses of the data. • Transparent reporting: Maintain transparency in reporting measurement results, providing clear explanations of the methods, findings, and limitations of the measurement process.
Quantitative Metrics Quantitative metrics provide objective data that can be measured numerically.	**Completion rate:** The proportion of undergraduate students who completed the program in minimum time in each cohort. First-year students› retention rate: Percentage of first-year undergraduate students who continue at the program the next year to the total number of first-year students in the same year. Graduates employability and enrolment in postgraduate programs: Percentage of graduates from the program who within a year of graduation were: Employed within 12 months, Enrolled in postgraduate programs during the first year of their graduation to the total number of graduates in the same year. Ratio of students to teaching staff: Ratio of the total number of students to the total number of full-time and full-time equivalent teaching staff in the program

Quantitative Metrics **Quantitative metrics provide objective data that can be measured numerically.**	**published research to the total number of full-time or equivalent faculty members during the year).** **Citations rate in refereed journals per faculty member:** **The average number of citations in refereed journals from published research per faculty member in the program (total number of citations in refereed journals from published research for full-time or equivalent faculty members to the total research published).**
Qualitative assessment **Qualitative assessments provide subjective insights and feedback from various stakeholders.**	**Students› Evaluation of Quality of learning experience in the Program:** **Average of the overall rating of final year students of the quality of learning experience in the program, satisfaction with the various services offered by the program (restaurants, transport, sports facilities, academic, vocational, psychological guidance...), student satisfaction with the adequacy and diversity of learning sources (references, periodicals, information databases... etc.) on a five-point scale in an annual survey.** **Students› evaluation of the quality of the courses:** **Average of students› overall rating for the quality of courses on a five-point scale in an annual survey.** **Employers› evaluation of the program graduates› proficiency:** **Average of the overall rating of employers for the proficiency of the program graduates on a five-point scale in an annual survey.**
Responsibilities	**HOD, OPWG.**
Development & Approval	**HOD,** **UT strategic planning unit.** **Vice dean of development and quality.** **Faculty council.** **Advisory committee.** **Administrative staff** **Students, Alumni, and Employers.** **All committees.**
Procedure	**Plan Development: The OPWG will oversee the entire process for measuring program goals, and the development of the program goals measurement plan. The OPWG measures the BSc Biology Program goals annually through the achievements of the program's operational plan. Where the BSc Biology Program's operational plan includes specific KPIs and target benchmarks that are connected to the program goals.** **Monitor Progress: The OPWG Continuously monitors the progress of the operational plan against the established timelines and KPIs to track the implementation of the action plans, and hence provide a systematic way to measure the program goals.** **Evaluate Results: The OPWG assesses the results and outcomes of the implemented action plans, and compares the actual results against the established targets or benchmarks. This analysis helps assess whether the program is on track to achieve its goals and identifies areas that require improvement or further attention.**

Procedure	**Report on the Outcomes:** The OPWG reports on the progress made toward achieving the program goals and submits the report to the HOD. **Seek Feedback:** The report will then be presented to the department council for discussion. Based on the feedback, strategies, action plans, and resource allocation may be modified to address any identified issue or make necessary improvements for the succeeding year improvement cycle. **Final Approval of the Achievement Report:** The final report will then be submitted to the vice dean of development and quality, and then to the department and faculty councils for final approval.
Note	The previous year actual values is taken as an internal benchmark. To ensure full alignment across the main campus and Umluj branch, the reporting and approval process follows unified templates, timelines, and review mechanisms, ensuring equal participation and transparency in decision-making.
Reports	Report on measurement of program goals and improvement plans. Meeting mites on (OPWG, Departmental council, Faculty council)
Appendices	1. UT 2nd strategic plan. 2. FOS 2nd strategic plan. 3. Department of Biology Operational Plan. 4. UT benchmarking procedural guide.

BSc Biology Program Study Plan

The BSc Biology Program has a detailed study plan showing the courses, their classification, their sequence, the number of accredited hours, their pre/co-requisites, the classification of courses; required, elective, and university/ faculty/department requirements. The study plan ensures the balance between the general and specialty requirements, and between theoretical and skill aspects, and it takes into account the sequencing and integration of the courses. The program study plan considers the adequate requirements in accordance with international practices and similar programs.

Determinants These factors are essential to develop study plans that align with academic requirements, meet industry standards, cater to student needs, and provide a high-quality educational experience	**1. Academic Requirements:** • Accreditation and regulatory standards: Ensuring compliance with accreditation requirements and NQF regulations. • Curriculum guidelines: Adhering to established guidelines or frameworks set by UT. • Credit hours and course sequencing: Adhering to the total credit hours required for the program set by the NQF. • Curriculum structure: Choose a course sequencing that ensures a logical and progressive learning experience. **2. Program Goals and Objectives:** • Defining the overarching goals and objectives of the program. • Aligning the study plan with the program›s mission and intended learning outcomes. • Balancing the breadth and depth of knowledge in the chosen field of study. **3. Industry or Professional Standards:** • Considering the expectations and requirements of relevant professions. • Incorporating competencies and skills necessary for successful employment in the field. • Staying updated with emerging trends and technological advancements in the field of Biology. **4. Prerequisites and Core Courses:** • Identifying prerequisite courses or knowledge required for advanced courses. • Designating core courses that provide foundational knowledge and skills within the discipline. • Ensuring a logical sequencing of courses to build upon previously acquired knowledge. **5. Electives and Specializations:** • Offering a range of elective courses that allow students to customize their study plan. • Providing specialized tracks or concentrations within the program to cater to specific interests or career paths. • Balancing breadth and depth by offering a variety of elective options.

Determinants **These factors are essential to develop study plans that align with academic requirements, meet industry standards, cater to student needs, and provide a comprehensive and relevant educational experience.**	**6. Faculty Expertise and Resources:** • Leveraging the expertise and research interests of faculty members to design and offer relevant courses. • Considering the availability of faculty resources and ensuring adequate coverage of essential subject areas. • Facilitating faculty development and keeping them updated with advancements in the field. **7. Student Needs and Feedback:** • Considering the interests and aspirations of prospective students. • Gathering feedback from current students regarding their preferences and areas of interest. • Incorporating mechanisms for student input and ongoing evaluation of the study plan. **8. Institutional Resources and Constraints:** • Considering the availability of facilities, equipment, and infrastructure necessary for delivering the program. • Addressing any resource constraints, such as faculty availability, budget limitations, or scheduling challenges. • Balancing the program requirements with the overall institutional capacity. **9. External Stakeholder Input:** • Incorporating feedback and input from external stakeholders, such as industry professionals, alumni, or advisory boards. • Engaging employers or professional associations to identify skill gaps and ensure program relevance. • Building partnerships and collaborations to provide opportunities for internships, practicums, or industry projects. **10. Ongoing Evaluation and Continuous Improvement:** • Implementing mechanisms for regular evaluation and assessment of the study plan›s effectiveness. • Analysing student performance data and feedback to identify areas for improvement. • Staying abreast of changes in the field and updating the study plan accordingly.
Responsibilities	• HOD. • Programs and Study Plans ommittee.
Development and Approval team	• Program coordinator. • Programs and study plans committee • Advisory committee • Academic staff members
Inputs	• Program mission and goals. • Program and course learning outcomes. • Benchmark program. • The national framework for studying qualification.

Procedure

Establish Study plan working group (SPWG):

- The HOD together with the Programs and Study Plans Committee identifies the study plan working group (SPWG). The SPWG is responsible for overseeing the entire process of developing, modifying, and approving the study plan, and ensuring
- collaboration and representation from different perspectives.

1. Needs Assessment and Goal Setting:

- The Programs and Study Plans Committee conducts a thorough needs assessment in order to:
- Identify the purpose of the study plan and the target audience.
- Conduct a needs assessment by analysing factors such as program requirements, industry trends, student interests, and feedback.
- Set clear goals and objectives for the study plan, aligning them with the program›s mission and intended learning outcomes.

2. Curriculum Design and Course Selection:

- In designing the curriculum and identifying courses the Programs and Study Plans Committee performs the following:

- 1. Review and analyse the program›s curriculum guidelines, accreditation
- requirements, and regulatory standards.
- 2. Determine the core courses, prerequisites, and elective options based on the program›s objectives and the needs of the students.
- 3. Consider the logical sequencing of courses, ensuring a progressive development of knowledge and skills.
- 4. Explore opportunities for specialization or concentration areas within the study plan.

- **Draft the operational plan:** Based on the conducted review and needs assessment, the Programs and Study Plans Committee articulates the first draft of the Study plan.

- **Share with the department council:** To ensure that the study plan is comprehensive, actionable, and aligned with the program›s objectives, the HOD presents the study to the department council seeking their input and feedback to ensure their support. Based on the feedback from faculty members the SPWG revise and refine the study plan.

3. Seek Stakeholder Feedback and Revision:

- The SPWG shares the revised draft of the study plan with the Advisory committee and stakeholders, seeking their feedback and suggestions. Based on the feedback from the Advisory committee members the SPWG revise and refine the study plan for the second time.

Procedure	• **4. Seek FOS Feedback and Revision:** **The HOD submits the revised draft of the study plan to the FOS's Programs and study plans committee, seeking their feedback and suggestions. Based on the feedback from the FOS's Programs and study plans committee the SPWG revise and refine the study plan. The final revised draft will then be submitted to the FOS council, seeking their feedback and suggestions. Based on the feedback from the faculty council the SPWG revise and refine the study plan.** **Seek UT Feedback and Revision: The final draft of the study plan will then be submitted through UT's Bena electronic gate to the UT's deanship of academic affairs. The study plan will then go through an internal review by the deanship of academic affairs as well as an external reviewer. Based on the feedback from the deanship of academic affairs and the external reviewer the SPWG revise and refine the study plan.** **Obtain Approval: The final draft of the study plan will then be submitted to the deanship of academic affairs for approval.** **Communicate Approved Study Plan: The approved study plan is publicized to all stakeholders and included in the program specification as well as the departmental handbooks and website.**
Reports	• **Program study plan.** • **Team's meeting minutes.** • **Department council meeting minutes.** • **Faculty council meeting minutes.**
Appendices	• **National qualification framework.** • **University program and plan guide.** • **The UT Matrix of authority for study plans development.**

Graduate Attributes

Graduate attribute statements typically describe the specific skills, knowledge, and qualities that students are expected to possess upon completion of their studies. The BSc Biology Program graduate attributes are approved, and publicly disclosed, and the program has a mechanism in place to gather feedback from stakeholders. Their perspectives can provide valuable insights into the effectiveness of the program and the attributes it fosters.

Determinants Are the factors that shape the development of the desired graduate attributes	**1. Program and Institutional Mission and Goals:** • Mission: Aligning the graduate attributes with the broader mission and vision of the program or institution. • Program goals: Reflecting the specific goals and objectives set by the program to develop well-rounded graduates with the desired attributes. **2. Stakeholder Expectations and Input:** • Employer expectations: Considering the needs and expectations of employers and industry stakeholders to ensure that the graduate attributes align with the demands of the job market. • Alumni feedback: Gathering feedback from program graduates to understand the strengths and areas for improvement in the development of graduate attributes. • Professional organizations: Aligning the graduate attributes with the expectations and requirements set by relevant professional bodies. **3. Educational Standards and Guidelines:** • National standards: Adhering to educational standards or guidelines established by NQF. • Professional standards: Aligning the graduate attributes with professional standards or competency frameworks relevant to the field of study or profession. **4. Societal Perspectives:** • Social responsibility: Including attributes that foster ethical behavior, social awareness, and a commitment to making a positive impact on society. **5. Discipline-specific Factors:** • Field-specific knowledge and skills: Identifying the specific attributes that are essential within the discipline or field of study. • Critical thinking and problem-solving: Including attributes that promote analytical thinking, problem-solving abilities, and the ability to apply knowledge in practical situations. • Research and innovation: Incorporating attributes that encourage research skills, creativity, and the ability to contribute to new knowledge or innovation in the field. **6. Personal and Professional Development:** • Lifelong learning: Including attributes that promote a commitment to continuous learning, adaptability, and the ability to acquire new knowledge and skills throughout one's career. • Communication and collaboration: Incorporating attributes that foster effective communication, teamwork, and the ability to work collaboratively with others. • Leadership and management: Including attributes that develop leadership skills, strategic thinking, and the ability to manage projects or teams.

Determinants **Are the factors that shape the development of the desired graduate attributes**	**7. Assessment and Evaluation:** • **Assessment methods: Considering the appropriate assessment methods and strategies to measure the development of graduate attributes effectively.** • **Alignment with assessment criteria: Ensuring that the graduate attributes align with the assessment criteria and rubrics used to evaluate student performance.** • **Feedback and improvement: Incorporating opportunities for feedback and continuous improvement of the graduate attributes based on assessment results and stakeholder feedback.**
Specifications **guidelines for articulating graduate attributes that are clear and effective.**	**1. Clarity and Specificity:** • **Clear language: Use clear and concise language to articulate graduate attributes, avoiding ambiguity.** • **Specificity: Clearly define each attribute and provide a clear description of what it entails, including the knowledge, skills, or qualities that encompass the attribute.** • **Action-oriented: Use action verbs to describe observable behaviors or actions that demonstrate the attribute.** **2. Comprehensive Coverage:** • **Holistic approach: Ensure that the graduate attributes cover a broad range of areas, including academic knowledge, technical skills, personal qualities, and professional competencies.** • **Core attributes: Identify the essential attributes that all graduates should possess, regardless of their specialization or field of study.** • **Disciplinary-specific attributes: Include attributes that are specific to the discipline or field of study, reflecting the unique requirements and expectations of that area.** **3. Measurability and Assessment:** • **Measurable outcomes: Ensure that the attributes are observable, measurable, and assessable, allowing for the evaluation of student attainment.** • **Assessment methods: Consider appropriate assessment methods and strategies that align with each attribute, providing opportunities for students to demonstrate their development.**
Responsibilities	• **HOD,** • **Programs and Study Plans Committee.**
Development & Approval	• **HOD,** • **Programs and Study Plans Committee.** • **Faculty members.** • **Program council.** • **Faculty council** • **Advisory committee.** • **Administrative staff.** • **Stakeholders.** • **Vice deanship of development and quality** • **DQC.**

Procedure	**Establish Graduates Attributes working group (GAWG):** • The HOD together with the Programs and Study Plans Committee identifies the study plan working group (GAWG). The GAWG is responsible for overseeing the entire process of developing, modifying, and approving the graduate attributes, and ensuring collaboration and representation from different perspectives. • **Collect Data:** The GAWG reviews the following: • The program mission, goals, and PLOs • The UT graduate attributes. • The previous graduate attributes. • The NQF requirements for the relevant level. • The UT manual for programs and study plans. • Benchmark national and international programs. • The new development in Biology and its applications. **Draft the Graduates' Attributes:** Based on the data collected in the previous step, the DQC formulates the BSc Biology Program's first draft of the graduate attributes. **Share with the department council:** To ensure that the graduate attributes align with their expectations and requirements for graduates, the HOD presents the graduates' attributes at the department council seeking their input and feedback to ensure their support. Based on the feedback from faculty members the GAWG revised and refined the graduates› attributes. **1. Seek Stakeholder Feedback and Revision:** • The HOD shares the revised draft of the graduates› attributes with the Advisory Committee and stakeholders, seeking their feedback and suggestions. Based on the feedback from the Advisory committee members and stakeholders the GAWG revise and refine the study plan. • Obtain Approval: The final draft of the study plan will then be submitted to the department council and the FOS council for approval. • Communicate Approved Study Plan: The approved graduate attributes are publicized to all stakeholders and included in the program specification as well as the departmental handbooks and website.
Reports	• Approved BSc Biology Program graduate attributes. • Feedback reports from stakeholders. • Meeting minutes and reports of the GAWG. • Meeting mites on (Advisory committee, Departmental council, Faculty council)
Appendices	1. The NQF requirements. 2. The UT guide for programs and study plans. 3. The UT authority matrix for programs and study plans approval.

Program Learning Outcomes

Program learning outcomes statements are broad statements that describe the knowledge, skills, and abilities that students are expected to acquire upon completion of a program of study. These statements provide an overview of the overarching goals and outcomes of the program.

Determinants The factors that influence the development and formulation of the Program learning outcomes.	**1. Program Mission and Goals:** • Mission statement: Aligning the program learning outcomes with the overall mission and purpose of the program. • Program goals: Reflecting the specific goals and objectives set by the program, which may include knowledge acquisition, skill development, or professional competencies. **2. Professional Standards and Accreditation:** • Accreditation requirements: Ensuring that the program learning outcomes meet the standards and requirements set by accrediting bodies or regulatory agencies. • Professional standards: Aligning the learning outcomes with the standards and competencies established by relevant professional organizations or industry stakeholders. **3. Stakeholder Input and Expectations:** • Employer expectations: Considering the needs and expectations of employers and industry stakeholders to ensure that the program learning outcomes align with the demands of the job market. • Alumni feedback: Gathering feedback from program graduates to understand the strengths and areas for improvement in the program›s learning outcomes. • Student input: Incorporating student perspectives and input to address their needs, interests, and career aspirations. **4. Discipline-specific Factors:** • Body of knowledge: Reflecting the essential knowledge base and core concepts of the discipline or field of study. • Skills and competencies: Identifying the specific skills and competencies that students should develop throughout the program, such as critical thinking, problem-solving abilities, or research skills. • Ethical considerations: Incorporating ethical principles and considerations relevant to the discipline or field. **5. Educational Trends and Best Practices:** • Educational research and evidence: Considering current research and evidence-based practices in teaching and learning to shape the program learning outcomes. • Pedagogical approaches: Incorporating effective pedagogical approaches and instructional strategies that align with the program›s goals and learning outcomes. **6. Program Context and Resources:** • Program structure and sequencing: Ensuring that the learning outcomes are sequenced and structured in a logical progression throughout the program, building upon foundational knowledge and skills. • Faculty expertise: Considering the expertise and qualifications of faculty members to ensure that the learning outcomes are achievable and aligned with their areas of expertise. • Available resources: Taking into account the resources, facilities, and technologies available to support the achievement of the program learning outcomes.

	7. Continuous Improvement and Evaluation: • Assessment and evaluation considerations: Establishing an ongoing assessment and evaluation process to monitor and measure student achievement of the learning outcomes. • Feedback and program review: Incorporating feedback from faculty, students, and external stakeholders to continuously review and improve the program learning outcomes. • Alignment with program assessment: Ensuring that the learning outcomes align with the assessment methods, criteria, and rubrics used to evaluate student performance.
Specifications: **The guidelines for crafting clear, concise, and measurable Program learning outcomes.**	**1. Clarity and Specificity:** • Clear language: Use clear and concise language to articulate program learning outcomes, avoiding ambiguous or vague terms. • Specificity: Ensure that each learning outcome is specific and measurable, describing the intended knowledge, skills, or competencies that students should acquire by the end of the program. • Action verbs: Use action verbs to describe observable and measurable behaviours or actions that students should be able to demonstrate. **2. Cognitive Levels:** • Cognitive levels: Consider the cognitive levels set by the NQF, to ensure a balanced and progressive set of learning outcomes that encompass a range of cognitive skills. • Higher-order thinking: Include learning outcomes that require higher-order thinking skills, such as critical thinking, analysis, synthesis, and evaluation. **3. Measurability:** • Measurable outcomes: Ensure that the learning outcomes are observable and measurable, allowing for assessment and evaluation of student achievement.
Responsibilities	• HOD, the program learning outcomes working group (PLOWG).
Development & Approval	• HOD, the program learning outcomes working group (PLOWG). • Advisory committee.
Inputs	• BSc Biology Program's Mission, goals, and graduate attributes. • UT graduate attributes. • National qualification framework standards.
Procedure	**Establish Program Learning Outcomes Working Group (PLOWG):** • The HOD together with the Programs and Study Plans Committee identifies the program learning outcomes working group (PLOWG). The PLOWG is responsible for overseeing the entire process of developing, modifying, and approving the PLOs, and ensuring collaboration and representation from different perspectives. • **Collect Data: The PLOWG reviews the following:** • The program›s mission, and goals. • The previous PLOs. • The NQF requirements for the relevant level. • Benchmark national and international programs. • The UT manual for programs and study plans. • The new development in Biology and its applications. • **Conduct Needs Assessment:** The Programs and Study Plans Committee conducts a thorough needs assessment to: • Identify the knowledge, skills, and competencies required for success in the program›s field or discipline • Review industry trends, professional standards, labour market demands, and peer programs. • **Draft the PLOs:** Based on the conducted review and needs assessment, the Programs and Study Plans Committee articulates the first draft of the PLOs that are aligned with the learning activities, teaching strategies, and assessment methods.

Specifications: **The guidelines for crafting clear, concise, and measurable Program learning outcomes.**	**Share with the department council:** **To ensure that the PLOs align with the program mission, goals, the NNQF requirements as well as stakeholders› expectations, the HOD presents the graduates› attributes at the department council seeking their input and feedback to ensure their support. Based on the feedback from faculty members the PLOWG revise and refine the PLOs.** **Seek Stakeholder Feedback and Revision:** **The HOD shares the revised draft of the PLOs with the advisory committee and stakeholders, seeking their feedback and suggestions. Based on the feedback from the advisory committee members and stakeholders the PLOWG revise and refine the PLOs.** **Seek FOS Feedback and Revision:** **The HOD submits the revised draft of the PLOs to the FOS's Programs and Study Plans Committee, seeking their feedback and suggestions. Based on the feedback from the FOS's Programs and study plans committee the SPWG revise and refine the PLOs. The revised draft will then be submitted to the FOS council, seeking their feedback and suggestions. Based on the feedback from the faculty council the PLOWG revise and refine the PLOs.** **Seek UT Feedback and Revision:** **The revised draft of the study plan will then be submitted through UT's Bena electronic gate to the UT's deanship of academic affairs. The study plan will then go through an internal review by the deanship of academic affairs as well as an external review. Based on the feedback from the deanship of academic affairs and the external reviewer the PLOWG revise and refine the PLOs.** **Obtain Approval: The final draft of the PLOs will then be submitted to the deanship of academic affairs for approval.** **Communicate Approved PLOs: The approved PLOs are publicized to all stakeholders and included in the program specification as well as the departmental handbooks and website.**
Reports	• **Approved BSc Biology Program's PLOs.** • **Meeting minutes and reports of the Programs and study plans committee.** • **Feedback reports from stakeholders.** • **Meeting mites on (Advisory committee, Departmental council, Faculty council)**
Appendices	• **4. The BSc Biology Program's mission, goals, and study plan.** • **5. The NQF requirements.** • **6. The UT authority matrix for programs and study plans approval.**

Course Learning Outcomes

Course learning outcome statements provide a clear indication of the knowledge, skills, and abilities that students are expected to acquire or demonstrate by the end of the course. They serve as a guide for instructors and students, setting expectations and providing a framework for learning and assessment.

Determinants: **The factors that influence the development and formulation of the CLOs.**	**1. Alignment with the PLOs and the course objectives:** • Accreditation requirements: Ensure that the CLOs are directly connected and serve the PLOs. • Mission and vision: Ensure that the CLOs directly contribute to the attainment of the overall course objectives. **2. Subject or Discipline-specific Factors:** • Body of knowledge: Reflecting the essential knowledge base and core concepts of the subject or discipline. • Skills and competencies: Identifying the specific skills and competencies that students should develop in the course, such as analytical skills, problem-solving abilities, or practical application of knowledge. • Ethical considerations: Incorporating ethical principles and considerations relevant to the subject or discipline. **3. Stakeholder Expectations and Input:** • Industry or professional expectations: Considering the expectations and requirements of employers, professional organizations, or industry stakeholders to ensure that the learning outcomes align with the needs of the field. • Alumni feedback: Gathering feedback from former students or alumni to understand how the course can better prepare students for their future careers or further education. • Student input: Incorporating student perspectives and input to ensure that the learning outcomes address their needs, interests, and aspirations. **4. Educational Standards and Guidelines:** • National or regional standards: Adhering to educational standards or guidelines established by government bodies or educational authorities. • Professional standards: Aligning the learning outcomes with professional standards or competency frameworks relevant to the subject or discipline. • Best practices: Considering established best practices and research-based evidence in teaching and learning when developing the learning outcomes. • **5. Program or Course Context:** • Prerequisite knowledge and skills: Considering the prior knowledge and skills that students are expected to have before enrolling in the course. • Course progression: Aligning the learning outcomes with the overall progression and structure of the course, building on previous courses, or preparing students for subsequent courses. • Course modality: Considering the mode of delivery (e.g., face-to-face, online, hybrid) and any specific considerations related to the course format. **6. Assessment and Evaluation:** • Assessment methods: Considering the appropriate assessment methods and strategies to measure student achievement of the learning outcomes effectively. • Alignment with assessment criteria: Ensuring that the learning outcomes align with the assessment criteria and rubrics used to evaluate student performance. • Feedback and improvement: Incorporating opportunities for feedback and continuous improvement of the learning outcomes based on assessment results and student feedback.

Specifications: **The guidelines for crafting clear, concise, and measurable CLOs.**	**1. Cognitive Levels:** • Cognitive levels: Consider the cognitive levels set by the NQF to ensure a balanced and progressive set of learning outcomes that encompass a range of cognitive skills. • Higher-order thinking: Include learning outcomes that require higher-order thinking skills, such as critical thinking, analysis, synthesis, and evaluation. **2. Clarity and Specificity:** • Clear language: Use clear and concise language to articulate course learning outcomes, avoiding ambiguous or vague terms. • Specificity: Ensure that each learning outcome is specific and measurable, describing the intended knowledge, skills, or competencies that students should acquire by the end of the course. • Action verbs: Use action verbs to describe observable and measurable behaviours or actions that students should be able to demonstrate. **3. Measurability and Assessment:** • Measurable outcomes: Ensure that the learning outcomes are observable and measurable, allowing for assessment and evaluation of student achievement. • Assessment methods: Consider the appropriate assessment methods and strategies that align with each learning outcome, providing opportunities for students to demonstrate their attainment of the outcomes.
Responsibilities	• HOD, • Programs and Study Plans Committee. • Course coordinators.
Development & Approval	• HOD, • Programs and Study Plans Committee. • Advisory committee. • Faculty members.
Inputs	• BSc Biology Program's mission, goals, graduate attributes, and PLOs. • BSc Biology Program's study plan. • National qualification framework standards.
Procedure	**Establish CLOs working group:** • The HOD decides on course coordinators and assigns roles and responsibilities regarding the CLOs development. The Programs and Study Plans Committee holds workshops to train faculty members in writing CLOs. • Collect Data and Review: The course coordinators review the following: • The program mission, goals, PLOs, and graduate attributes, • The NQF requirement for the relevant level. • The curriculum framework. • knowledge, and intended career paths. • Benchmark national and international programs. • The UT manual for programs and study plans. • ●The new development in Biology and its applications. • Conduct Needs Assessment: The course coordinators conduct a thorough needs assessment to identify the knowledge, skills, and competencies required for success in the program›s field or discipline, and review industry trends, professional standards, labour market demands, and peer programs. • Draft the CLOs: Based on the conducted review and needs assessment, the course coordinators articulate the first draft of the CLOs that are aligned with the learning activities, teaching strategies, and assessment methods, and submit them to the Programs and Study Plans Committee.

Procedure	**Share with the department council:** • To ensure that the CLOs align with the program mission, goals, the NQF requirements as well as stakeholders› expectations, the HOD presents the CLOs at the department council seeking their input and feedback to ensure their support. Based on the feedback from faculty members the course coordinators revise and refine the CLOs. **Seek Stakeholder Feedback and Revision:** • The HOD shares the revised draft of the PLOs with the advisory committee and stakeholders, seeking their feedback and suggestions. Based on the feedback from the advisory committee members and stakeholders the course coordinators revise and refine the CLOs. **Obtain Approval:** • The final draft of the CLOs will then be submitted to the department council for approval. **Communicate Approved PLOs:** • The approved CLOs are publicized to all stakeholders and included in the courses specifications.
Reports	• Approved BSc Biology Program's PLOs. • Meeting minutes and reports of the Programs and study plans committee. • Feedback reports from stakeholders. • Meeting mites on (Advisory committee, Departmental council, Faculty council).
Appendices	• The BSc Biology Program's mission, goals, and study plan. • The NQF requirements. • The UT authority matrix for programs and study plans approval.

Students Assessments

Determinants: The factors that influence the quality and effectiveness of student assessments.	
	1. Alignment with Learning Objectives and Standards: • Curriculum alignment: Ensuring that assessments measure the intended learning outcomes outlined in the curriculum. • Standard alignment: Align assessments with external standards or benchmarks relevant to the subject or discipline. • Depth and breadth of coverage: Assessing a wide range of knowledge, skills, and competencies outlined in the curriculum. **2. Validity and Reliability:** • Content validity: Ensuring that the assessment measures what it intends to measure. • Construct validity: Assessing the underlying construct or concept being evaluated. • Criterion-related validity: Establishing a relationship between the assessment and an external criterion. • Inter-rater reliability: Consistency of assessment results when scored by different evaluators. • Test-retest reliability: Consistency of assessment results when administered to the same students at different times. **3. Clarity and Transparency:** • Clear assessment instructions: Provide explicit directions to students on how to complete the assessment. • Transparent assessment criteria: Clearly articulating the standards and expectations for student performance. • Rubrics and scoring guides: Providing detailed guidelines for evaluating and scoring student work. • Consistent grading practices: Ensuring consistent application of assessment criteria across different evaluators. **4. Fairness and Equity:** • Bias reduction: Minimizing potential bias in assessment content, language, and administration. • Accommodations: Providing appropriate accommodations for students with disabilities or special needs. • Cultural sensitivity: Ensuring assessments are sensitive to diverse cultural backgrounds and experiences. • Accessibility: Ensuring that assessments are accessible to all students, including those with physical or sensory disabilities. **5. Authenticity and Relevance:** • Authentic tasks: Designing assessments that reflect real-world applications and contexts. • Relevance to student experiences: Ensuring assessments are meaningful and relatable to students› lives and interests. • Transferability of skills: Assessing students› ability to apply their knowledge and skills in different contexts. **6. Ethical Considerations:** • Privacy and confidentiality: Protecting students› personal information and ensuring the confidentiality of assessment results. • Ethical administration: Conducting assessments in a fair and unbiased manner, adhering to ethical guidelines.

Determinants: **The factors that influence the quality and effectiveness of student assessments.**	• **7. Feedback and Revision:** • **Clear instructions: Provide detailed and explicit instructions on what students are expected to do for the assessment task.** • **Task format: Specify the format of the assessment task, such as essay, multiple-choice questions, project, presentation, or performance-based task.** • **Resource requirements: Identify any specific resources, materials, or references students may need to complete the task.** • **Time constraints: Specify the time limit or deadline for completing the assessment task.** **2. Assessment Criteria and Rubrics:** • **Criteria for evaluation: Clearly define the criteria for assessing student performance, such as content knowledge, critical thinking, creativity, or presentation skills.** • **Rubrics: Provide a detailed rubric that breaks down the assessment criteria into specific levels or descriptors, indicating the expectations for each level of performance.** **3. Scoring and Grading Guidelines:** • **Scoring system: Specify the scoring system or scale to be used for evaluating student responses (e.g., 100-0, letter grades, or performance levels).** • **Grading standards: Define the standards for each grade or performance level, including the specific criteria or benchmarks for achieving each level.** • **Consistency: Provide guidelines to ensure consistent scoring and grading across different evaluators or multiple sections of the same assessment.** **4. Accommodations and Special Considerations:** • **Accommodations for diverse learners: Specify any accommodations or modifications that should be provided to students with disabilities or special needs to ensure a fair and equitable assessment.** • **Language considerations: Clarify any language accommodations for students who are English language learners or have language proficiency challenges.** • **Special circumstances: Outline any special circumstances or considerations that may affect the administration or scoring of the assessment (e.g., extended time, alternative format).** **5. Ethical Considerations:** • **Academic integrity: Include guidelines regarding academic honesty, plagiarism, and proper citation practices in the assessment task.** • **Confidentiality: Ensure guidelines for maintaining the confidentiality of student assessments and results.** • **Fairness: Address any potential biases or sources of unfairness in the assessment task or scoring process and provide guidelines to mitigate them.**
Responsibilities	• **Course coordinators.** • **The examinations committee.** • **MEWG.**

Procedure	**The examinations committee is responsible for:** • Develop and review exam policies, procedures, and guidelines to ensure fairness, security, and integrity. • Establish exam rules and regulations, such as guidelines on academic integrity, exam conduct, and use of resources. • Communicate the exam policies and procedures to faculty, and students. • Collaborate with faculty and administrators to develop exam schedules and timelines. • Ensure that exam dates, times, and venues are communicated to students and faculty members. • Coordinate with relevant departments or individuals to arrange necessary resources and facilities for the exams. • Establish procedures and guidelines for accommodating students with special needs or disabilities during exams. • Establish procedures and guidelines for accommodating students with special needs or disabilities during exams. • Monitor the exam venues to maintain a secure and controlled environment, minimizing the risk of cheating or misconduct. • Address any issues or irregularities that may arise during the exam, such as student concerns or technical difficulties. • 1. Before the exam, the timetables and exams committee sends the exam blue-print to the course coordinators. • 2. Course coordinators hold a meeting with the course instructors to determine the format of the exam, duration, number of questions, weightage, and any specif-ic rules or policies to be followed during • the exam, and select appropriate exam questions that align with the exam blue-print, course content, and learning objectives as well as level of difficulty, cogni-tive skills to be assessed. The course coordinators submit the exam questions with the model answers to the MEWG. • 3. The MEWG holds meetings with course coordinators, and reviews exams to ensure clarity, accuracy, and alignment with the course content and objectives, adherence to the policy of questions distribution over learning domains, and thea dherence to the blueprint of the exam. Course coordinators share the MEWG feed-back with the course instructors. • 4. After the primary grader completes grading the exams, a sample of grad-ed exams will be cross-checked by the course coordinator or a faculty member who taught the same course before. The cross-checker verifies the accuracy and consistency of the primary grader's assessments. The primary grader and cross-checker engage in discussion and collaboration to address any discrepancies or disagreements. If necessary, they seek input from the course coordinator or subject matter experts. After discussion and consensus, the primary grader and cross-checker finalize the grades. • 5. The finalized students' grades are entered into the e-register system. The HOD revise the entered data for approval.

Procedure	• 6. The final results are approved by the vice dean and the grades are released to the students on their UT student's accounts. • • 7. The student is allowed to submit a formal request for a grading revision to the head of the academic affairs committee. The head of the academic affairs committee assigns a designated independent reviewer, to assess the complaint objectively. If necessary, the designated person consults with the original grader or instructor to discuss the grading decision. • 8. The student request and the reviewer report are communicated to the HOD. If the complaint is valid and HOD contacts the primary grader to adjust the grade on the e-register accordingly. If the original grading decision was appropriate, a detailed explanation is provided to the student, addressing their concerns. • 9. After the exams, the examinations committee identifies areas for improvement in the exam design, content, or administration, and makes necessary adjustments for future exams or courses. • 10. Course coordinators and instructors are responsible for preparing course reports and submitting them together with samples of students' work to the MEWG. • 11. The CLOs are measured by the course coordinator using an excel sheet designed by the measurement and evaluation coordinator where each CLOs is aligned with its relevant PLOs and hence the aligned PLOs can be measured accordingly. • 12. The MEWG follows up the preparation of course reports and all related evidence of students' work with instructors and course coordinators. • 13. Based on the course reports, the MEWG prepares a list of recommendations and action plans for further improvements. • 14. The final draft of course reports together with the list of recommendations and action plans for improvements are submitted to the HOD. • 15. The HOD presents the final draft of course reports, recommendations, and action plans to the departmental council for discussion and approval. From there the course report follows the cycle presented in figure 4.
Reports	• Samples of students' work. • Course reports. • Exams model answers. • Exam Schedule. • Students' attendance of exams sheet. • Course coordinators and instructors' meeting minutes. • MEWG meeting minutes and reports. • Sample of students complains (if any) • Sample of cross-checkers reports. • Department council meeting for course reports and action plans approvals.

Program learning outcomes assessment

Program learning outcomes statements are broad statements that describe the knowledge, skills, and abilities that students are expected to acquire upon completion of a program of study. These statements provide an overview of the overarching goals and outcomes of the program.

Determinants **These factors enhance the measurement of program learning outcomes, leading to more accurate and meaningful assessment results.**	**1. Curriculum and Instruction:** • Curriculum design and learning objectives • Alignment of learning outcomes with instructional materials • Teaching methods and strategies used to promote learning **2. Assessment and Evaluation:** • Selection of appropriate assessment methods • Development of clear rubrics and scoring criteria • Use of valid and reliable assessment tools • Consistency in assessment practices **3. Faculty and Staff:** • Faculty expertise and training in assessment practices • Collaboration among faculty members for assessment alignment • Support and resources provided for professional development **4. Learning Environment:** • Classroom dynamics and student engagement • Availability of resources and support services • Inclusion of authentic and meaningful learning experiences **5. Student Factors:** • Student motivation and engagement • Prior knowledge and skills • Individual learning styles and abilities **6. Institutional Support:** • Institutional commitment to assessment practices • Allocation of resources for assessment efforts • Policies and guidelines supporting assessment activities • Data collection and analysis systems **7. Data Collection and Analysis:** • Efficient data collection processes • Use of appropriate data management systems • Sound data analysis techniques • Regular feedback loops for improvement **8. Stakeholder Engagement:** • Involvement of various stakeholders (e.g., faculty, students, employers, accrediting bodies) in the measurement process • Incorporation of feedback from stakeholders in assessment practices **9. Continuous Improvement:** • Culture of assessment and continuous improvement • Use of assessment results for program enhancement • Regular review and revision of learning outcomes and assessment method
Responsibilities	• Course coordinators & instructors. • PLOWG.

Procedure	• The PLOWG is responsible for the whole process of measuring and reporting on the PLOs. • BSc Biology Program's PLOs are measured annually directly through measuring the achievement of the related CLOs in the courses in which mastery level (M) is achieved, as identified in the PLOs-courses mapping matrix. • BSc Biology Program's PLOs are measured annually indirectly using stakeholder surveys (Program evaluation survey, Graduates evaluation survey, and Employers evalua- tion survey). • The CLOs are measured by the course coordinator using an Excel sheet designed by the measurement and evaluation coordinator where each CLOs is aligned with its relevant PLOs and hence the aligned PLOs can be measured accordingly. • The actual value of PLO measurement is defined as a sum of 40% of the indirect result and 60% of the direct result. PLOs achievement is presented as a percent- age in the PLOs annual report. • The PLO achievement is benchmarked internally with the previous year's achieve- ment, and the satisfactory performance and improvement is compared to the stated target benchmark for the year before.
Reports	• CLO Excel sheet of measurements. • PLOs annual report. • Stakeholders surveys and reports.

Professional development

- The BSc Biology Program in collaboration with the deanship for development and quality provide the necessary training to the teaching staff on learning and teaching strategies and assessment methods identified in the program and course specifications, along with the effective use of modern and ad- vanced technology; and their use is monitored.
- The teaching staff and employees of the program have the appropriate orientation, technical training, and support for the effective use of resources and means of learning.
- Teaching staff participate in professional and academic development programs in accordance with a plan that meets their needs and contributes to the development of their performance.
- The program management is committed to developing and improving the professional skills and capabilities of the supportive technical and administrative staff to keep up with modern developments.

Determinants: These factors are essential for improving faculty member's professional growth.	**1. Pedagogical Skills and Teaching Strategies:** • Mastery of effective teaching methods and instructional strategies. • Familiarity with diverse pedagogical approaches and learning theories. • Ability to engage students, promote active learning, and foster critical thinking. • Competence in creating and delivering engaging and well-structured lessons. **2. Subject Matter Expertise:** • Depth of knowledge and expertise in their respective disciplines. • Awareness of current research and developments in their fields. • Ability to convey complex concepts and theories in a clear and understandable manner. • Proficiency in staying updated with advancements and emerging trends in their subject areas. **3. Technology Integration:** • Proficiency in using educational technology tools and platforms. • Familiarity with digital resources and online learning environments. • Ability to integrate technology effectively into teaching and learning activities. • Competence in leveraging technology for assessment, communication, and collaboration. **4. Assessment and Evaluation:** • Understanding various assessment methods and strategies. • Knowledge of designing valid and reliable assessments. • Ability to analyze and interpret assessment data to inform instruction. • Competence in providing constructive feedback to students and using assessment for continuous improvement. **5. Inclusive Teaching and Diversity:** • Recognition of diversity and inclusivity in the classroom. • Knowledge of strategies to create an inclusive learning environment. • Ability to address the diverse needs of students, including those with disabilities or from different cultural backgrounds. • Competence in fostering a supportive and respectful classroom climate. **6. Professional Development and Scholarship:** • Commitment to ongoing professional development and growth. • Engagement in scholarly activities, such as research, publications, and conference presentations. • Aptitude for integrating research and evidence-based practices into teaching. • Proficiency in staying informed about the latest developments and best practices in higher education.

Determinants: **These factors are essential for improving faculty member's professional growth.**	• **7. Communication and Interpersonal Skills:** • Effective communication skills, both verbal and written. • Ability to engage and connect with students, colleagues, and other stakeholders. • Competence in facilitating discussions, promoting active participation, and managing classroom dynamics. • Proficiency in providing feedback and constructive criticism to students. **8. Collaboration and Teamwork:** • Ability to collaborate effectively with colleagues and engage in team-based projects. • Aptitude for interdisciplinary collaboration and integration of multiple perspectives. • Competence in working collaboratively with other faculty members and staff to enhance teaching and learning experiences. • Proficiency in fostering a positive and supportive learning community. **9. Institutional Policies and Requirements:** • Understanding of institutional policies, procedures, and guidelines related to teaching and professional development. • Awareness of accreditation requirements and standards. • Compliance with institutional expectations and standards for teaching quality. • Proficiency in aligning teaching practices with institutional goals and objectives.
Responsibilities	• Course coordinators & instructors. Scientific.
Procedure	• 1. The head of the department reviews all the training needs of the committee members according to the tasks assigned to them contained in the improvement plans and limits them to the training needs report. • 2. A survey is distributed to faculty members for needs assessment. • 3. The department raises its training needs to the vice dean who in turn submits them to the deanship of development and quality which is authorized to provide training programs to develop skills after the training programs are officially announced by the dean of development and quality at the university the program coordinator directs and urges all its members to attend when the training programs are opened to all specially members who need performance improvement. • 4. If the places are specified, the program will nominate members according to their tasks or needs to improve performance.
Reports	• A letter to the deanship for development and quality with various training needs of the faculty staff members.
Appendices	• Controls and standards of training at the University of Tabuk.

Course Report

The BSc Biology Program ensures the quality of teaching through:

- Verifying the effectiveness of the teaching strategies used to achieve the CLOs and taking the necessary measures according to the established procedures.
- Identifying the administrative difficulties that the academic staff members faced during the course.
- Standing on the results and estimates of students, studying the variation in the distribution of grades between the different divisions and the factors that affected them, and identifying priorities for improvement.
- Verifying the extent to which the quality loop is closed at the level of the course by following up on the percentage of completion of the proposed improvement plan for the previous year
- Develop an improvement plan appropriate to the recommendations reached, by the end of preparing the course report

The academic staff member should:

- Adhere to what is stated in the course specification.
- Follow the course improvement plan.
- Be committed to measuring the extent to which the CLOs are achieved, according to the blueprint and matrix prepared by the department.

Determinants These factors ensure that course reports become valuable tools for evaluating, improving, and ensuring the effectiveness of educational courses.	• Ensuring Accuracy and Objectivity: • By considering these factors, the course report can be prepared in a manner that is accurate, objective, and fair. • Enhancing Quality Assurance: • By evaluating various aspects such as course content, teaching methods, assessments, and student feedback, the report highlights areas of strength and identifies areas that need improvement. This feedback is crucial for course instructors and administrators to make informed decisions about instructional strategies, curriculum development, and resource allocation. • Informing Curriculum Development: • By providing feedback on the alignment of learning outcomes with instructional strategies, and helping in the refinement and enhancement of the curriculum. This information is vital for ensuring • that the course remains up to date, meets the needs of the learners, and aligns with industry standards or academic requirements. • Guiding Instructional Design: • The course reports inform instructional designers and educators about the effectiveness of their teaching approaches and help in identifying areas where modifications or enhancements may be needed. • Promoting Continuous Improvement: • The identification of strengths and weaknesses enables instructors and administrators to implement targeted interventions, refine teaching practices, and allocate resources more effectively. • Enhancing Student Engagement and Satisfaction: • The course reports identify areas where students may need additional support, clarity, or engagement. This information can be used to enhance student engagement, satisfaction, and overall learning outcomes. • Meeting Accreditation and Evaluation Requirements: • The course reports can provide evidence of compliance with quality assurance measures, accreditation guidelines, and institutional policies. This is particularly important for educational institutions seeking accreditation or undergoing periodic evaluations.

Responsibilities	• HOD. • DQC. • Course coordinators and instructors.
Development and Approval team	• DQC. • Course coordinators and instructors.
Inputs	• Course specification • course reports of the previous year • Students' list (e-register) • CLOs blueprint and measurement report. • Students' results. • Grade distribution. • Course meeting minutes. • Peer-Peer review reports • Sample of teaching methods
Procedure	• 1. The instructors measure CLOs in their sections (using the provided Excel sheet). • 2. The instructors complete all the NCAAA course report sections which include, analysis of grade distribution, a report on the previous year, improvement plan. • 3. The course coordinator holds a meeting with the instructors to discuss the student's results and the extent to which the CLOs are achieved, the students' and staff's feedback, and the appropriate improvement plan for the proposed recommendations. • 4. The course coordinator collects the course report for all the sections and prepares a single combined report. The combined reports are submitted to the DQC. • 5. The DQC reviews the reports and communicates their insight and feedback to the course coordinators. • 6. Based on the DQC feedback the course coordinators carry out the proposed adjustments, and submit the finalized combined report to the DQC. The DQC submits the combined reports to the HOD. • 7. The HOD presents the combined reports to the departmental council for approval. The approved reports are then submitted to the faculty council for approval. • 8. The faculty council discusses and approves the collective report in addition to the post-course meeting minutes of the department. • 9. The approved collective report and the course reports are submitted to the deanship of development and quality, and from there the course report follows the approval cycle shown in figure 4.
Reports	• Program study plan. • Course coordinators' minutes. • DQC meeting minutes. • Department council meeting minutes. • Faculty council meeting minutes.
Appendices	• National qualification framework. • University program and plan guide. • The UT Matrix of Authority for study plans development.

Program Specification

Determinants These factors ensure that course reports become valuable tools for evaluating, improving, and ensuring the effectiveness of educational courses.	1. Planning and Analysis: • Identify the need for a new program or the revision of an existing program. • Conduct a thorough analysis of the target audience, industry demands, and stakeholder expectations. • Define the scope, goals, and objectives of the program specification development process. • Establish a project team or committee responsible for overseeing the development process. 2. Research and Benchmarking: • Gather information on similar programs offered by other institutions or organizations. • Conduct industry research to identify emerging trends, best practices, and skill requirements. • Review relevant accreditation standards, regulatory guidelines, and educational frameworks. 3. Stakeholder Engagement: • Engage with key stakeholders, including faculty members, industry professionals, students, and employers. • Seek input and feedback on program goals, learning outcomes, curriculum design, and assessment methods. • Incorporate stakeholder perspectives to ensure relevance, alignment, and buy-in. 4. Program Design and Development: • Define the program structure, including the components, courses, and credit distribution. • Develop a curriculum framework that outlines the sequencing and progression of courses. • Clearly articulate the program's learning outcomes and competencies. • Design course specifications, including learning activities, instructional methods, and assessment strategies. 5. Iterative Review and Feedback: • Share the draft program specification with the project team, stakeholders, and subject matter experts for review. • Gather feedback and suggestions for improvement. • Revise and refine the program specification based on the feedback received. • Conduct multiple iterations of review and revision to enhance the quality of the program • specification. 6. Alignment and Compliance: • Ensure the program specification aligns with the institutional mission and strategic goals. • Verify compliance with NQF standards, and peer programs benchmarks. 7. Approval and Documentation: • Submit the finalized program specification for internal revision and approval processes. • Follow the institution's guidelines and procedures for program approval and documentation. • Prepare the necessary documentation, using the institution's provided forms. 8. Implementation and Communication: • Communicate the approved program specification to relevant stakeholders, including faculty, staff, and students. • Provide training or orientation sessions to faculty members and staff involved in delivering the program. • Ensure that the program specification is effectively integrated into the institution's systems, processes, and communication channels. 9. Evaluation and Continuous Improvement: • Establish a plan for ongoing program evaluation and continuous improvement. • Monitor the program's effectiveness in achieving its goals and objectives. • Collect and analyse data on student performance, feedback, and program outcomes. • Use evaluation results to inform future revisions and enhancements to the program • specification.

Responsibilities	• HOD • Programs and Study Plans Committee
Inputs	• Mission and objectives of the program • The program study plan shows the courses, their classification, their sequence, credit hours, pre/ corequisites, the classification (required, elective), (university, faculty, department) • Course specifications and a detailed plan for each course that includes the general specification of the course, the language of instruction, objectives, teaching strategies, assessment methods, and learning resources • Internal and external changes. • Reports of Stakeholders' surveys, APRs, and course reports. • Reference comparison. • Matrix linking course learning outcomes with PLOs. • Procedural guide for studying programs and plans.
Procedure	1. The programs and study plans committee prepares the specific documents as inputs for these procedures. 2. The head of the programs and study plans committee determines the members of the work team (the committee members, and the team is approved by the HOD. 3. The assigned team completes the program specification form using the NCAAA format, with consideration of all procedure inputs. • 4. The programs and study plans committee presents and discusses Program Specifications in the faculty council. 5. The suggestions proposed by the council are adjusted by the assigned team. • 6. The HOD presents the revised Program specification to the Advisory Committee. • 7. The suggestions proposed by the Advisory Committee are adjusted by the assigned team. 8. The program specification is submitted to and approved by the faculty council, and raised to the UT standing committee of programs and study plans, for final review and approval. 9. In case there are suggestions for further refinement the UT standing committee of programs and study plans, communicates them to the HOD, who in turn forwards them to the assigned team. 10. The assigned team makes the required adjustments and the Program specification is submitted to the faculty council for approval. The faculty council re-submits the Program specification to the UT standing committee of programs and study plans for final approval and installing it in the admission and registration system. 11. After the final approval by the UT standing committee of programs and study plans, the Program specification is widely publicized and shared with all relevant stakeholders.
Reports	• Approved program specification • Meeting minutes of the Programs and Study Plans committee • Meeting minutes of the Advisory Committee. • Meeting minutes of the faculty council
Appendices	• National qualification framework. • NCAAA Form for Program Specification • University program and plan guide. • The UT Matrix of Authority for study plans development.

Monitoring Quality of Teaching

the university acquires an appropriate space on Google Drive for each faculty member, in addition to providing all information security conditions, the program provides the coordinators with a link specified for his/her course file to upload all required evidence that ensures the quality of teaching and assessments.

Electronic storage is a quality work in the program since it is an easy and practical way to save and archive the quality work in the program on a regular basis. It facilitates access to all documents related to quality files by all members of the program. It also helps to monitor the extent of academic staff members' commitment to the quality requirements of the course and:

- Ensure consistent results.
- Prevent errors and reduce costs.
- Ensure processes are identified and controlled.

Table 9 shows the plan followed by the BSc Biology Program in preparing and documenting the course file.

Procedures

1. All the requirements of the course file are uploaded by the coordinator in the department derive.

2. Electronic storage is available to all teaching staff members in the department to view and benefit from it.

3. Each academic staff member shall raise the requirements according to the distribution of tasks by the coordinator.

4. The development and quality committee prepares a report on the extent to which the requirements are met and submits it to the course coordinator to complete the necessary.

Monitoring Quality of Teaching

NO	Requirements	The Content	Notes	Timing of submitting content for Documentation	Responsibility
1	Curriculum Vitae (CV)	Updated CV	Is updated periodically uploaded to the teaching staff member's website and handed over to the course coordinator to put it in the teaching staff file on Google Drive.	The first week of the semester	Instructors
2	Course specification	Approved course specification according to the NCAAA form	The specification is reviewed periodically according to the improvement plans of the preceding term's course report and after approval by the department council	The first week of the semester	Course Coordinator
3	Timetable	Filled out according to the university form	The timetable is sent to the staff and students and uploaded to the system.	The first week of the semester	Academic affairs committee
Documenting the Students' Results					
1	Reveal the results of the course signed by the program coordinator	The transcript is an official document that is downloaded from the academic system portal after monitoring, reviewing, and approving grades	It must contain the signature of the program coordinator	At the end of the semester	HOD
2	Statistical Analysis of Results	The form contains statistical equations and graphs that help analyse test results		At the end of the semester	Course coordinators

Documenting Student Assessment Activities and Methods					
3	Samples of students' tests for each section were selected according to performance (highest, average and lowest score)	Corrected samples of students› exams for each section distributed according to performance (highest, average, and lowest score)	Selected according to performance, highest, medium, and lowest score	After the release of exam results to the students	Instructors
Documenting the Evaluation of the Quality of the Course					
4	Course evaluation survey.	Students feedback about the course delivery and their suggestions for improvements.	Include the opinions of the students, instructors, and program leaders in the course report.	At the end of the course.	Instructors
Course reports					
5	Course Report	Course overview, course syllabus, learning resources, teaching strategies and assessments, students' performance and feedback, and recommendations for improvements.		With the start of the course and finalized by the end of the course	Instructors + Course coordinators
Close the loop of quality report					
1	Course improvement	recommendations for improvements.		End of the course	Instructors + Course coordinators
2	Achievement of course improvement plans report	Assembling, of course, improvement plans included		End of the semester	MEWG

Annual program Report

The Annual Program Report is a comprehensive document that provides a detailed overview of the academic program's performance and progress over the course of a year. It serves as a valuable tool for program evaluation, accountability, and planning. The report includes information on student enrollment, curriculum updates, faculty contributions, assessment results, student outcomes, program strengths, and challenges. It highlights achievements, identifies areas for improvement, and outlines strategies for enhancing the program's quality and effectiveness. The Annual Program Report plays a crucial role in informing decision-making processes, facilitating accreditation reviews, and fostering continuous improvement in the academic program.

Determinants **These factors ensure a comprehensive overview of the program›s performance.**	**Program Performance:** • **1. Student Achievement:** • **Assess the academic performance, learning outcomes, and success rates of students in the program.** • **2. Program Effectiveness:** • **Evaluate the effectiveness of the curriculum, instructional methods, and assessment strategies employed in the program.** **Stakeholder Engagement:** • **1. Student and Alumni Feedback:** • **Gather feedback from students and alumni regarding their satisfaction with the program, curriculum, faculty, and support services.** • **2. Faculty and Staff and Employers Involvement:** • **Assess faculty, employers, and staff engagement, professional development opportunities, and their feedback on program improvements.** **Facilities and Infrastructure:** • **Evaluate the adequacy and suitability of facilities, equipment, and technology to support the program's needs.** **Continuous Improvement:** • **Assessment and Evaluation: Examine the assessment methods used to measure student learning** • **outcomes and program effectiveness, along with the evaluation processes employed.** • **Program Review and Benchmarking:** • **Compare the program's performance against internal and external benchmarks, industry standards, and best practices.** **Action Plans and Implementation:** • **Outline the action plans derived from the program's assessment and evaluation, and track the progress made in implementing those plans.**
Inputs	• **Program specifications.** • **Courses reports.** • **Measurement of PLOs.** • **Stakeholders' surveys.** • **KPIs performance indicators.**

Responsibility	• HOD. • APR Working Group (APRWG)
Inputs	• Program specifications. • Courses reports. • Measurement of PLOs. • Stakeholders' surveys. • KPIs performance indicators. • Operational plan report.
Procedures	**Establish APR working group:** The HOD decides on APR working group and assigns roles and responsibilities. The APR working group is responsible for gathering relevant information writing and reviewing the draft report, checking for accuracy, coherence, and clarity of information, and ensuring that the report reflects an objective evaluation of the program's effectiveness **Data Collection and Review:** The APR working group gathers all relevant program data and reports from all the committees, and reviews the program assessment reports. **Draft the APR:** Based on the gathered information and the conducted review the APR working group articulates the first draft of the APR. **Share with the department council**: To ensure that the APR reflects an objective evaluation of the program's effectiveness, the HOD presents the APR to the department council seeking their input feedback, and approval. **Review and Refine**: Based on the feedback from faculty members the APR working group revise and refine the APR. **Obtain FOS Approval**: The HOD submits the revised APR to the faculty council seeking their approval. **Obtain UT Approval:** The HOD submits the revised APR to the faculty council seeking their approval. The approved APR will then be submitted to the Deanship of Development and Quality. The Deanship of Development and Quality revises the APR and ensures its fulfilment for the requirement of program accreditation and submits it to the higher standing committee of academic accreditation and quality assurance for final approval. **Communicate Approved APR:** The approved APR is publicized to relevant stakeholders.
Appendices	• NCAAA program report template. • The UT Matrix of Authority for study plans development.

The Five-Year Periodic Evaluation

The program conducts a periodic, comprehensive evaluation every five years and prepares reports about the overall level of quality, with the identification of points of strength and weakness, plans for improvement, and follow-up its implementation.

Purpose	• By analysing the outcomes assessment and stakeholder feedback and engagement, the BSc Biology Program can gain a comprehensive understanding of the program's effectiveness, identify areas for enhancement, and make data-driven decisions to improve the program's quality and relevance over the next five-year period.
Responsibility	• HOD. - DQC and AAC.
Inputs	• Program mission and goals. • National trends according to the requirements of sustainable development in the kingdom. • Statistical reports on students' results. • Annual program report and courses reports. • The results of implementing the operational plan for the program at the end of each academic year and measuring the extent of deviation from its objectives. • Stakeholders surveys. • Academic experts reviewer.
Procedures	• 1. The vice dean of development and quality forms four committees headed and directed by the "Higher Committee for Academic Accreditation" and develops a proposal for an action plan with the approval of the faculty council. • 2. The work plan contains all the procedures and requirements for preparing comprehensive evaluation reports (environmental analysis report, self-evaluation scale, and self-study report) responsibilities timelines for implementation, and required resources are also specified. • 3. Academic Accreditation Committees (AAC) are formed to implement the plan with the participation of faculty members and according to their academic and administrative experiences and preferences. • 4. The proposal of the work plan is discussed, the procedures are approved, and the organizational structure of the committees is discussed within the vice deanship of development and quality. • 5. The formed committees meet periodically to determine the tasks assigned to them. • 6. Each committee submits a periodic achievement report to the "Higher Committee for Academic Accreditation", containing the progress in achievement, as well as difficulties and obstacles. • 7. The "Higher Committee for Academic Accreditation" is responsible for following up on the proper implementation of the work plan approved by the faculty council, coordinating meetings, providing the needs of the various committees, and overcoming obstacles. • 8. The "Higher Committee for Academic Accreditation" compiles and arranges the final report of the various comprehensive evaluation reports of the program which stand on the priorities for improvement. • 9. The report is presented for independent opinion in accordance with the policies and procedures of the university, which sets out strengths and aspects of improvement. • 10. The independent opinion is discussed within the academic accreditation committees and recommendations are discussed to respond or reject them with appropriate justifications. • 11. Recommendations and improvement plans are presented to the faculty council for discussion to take their views. • 12. The plans are adjusted in light of the comments received. • 13. The plans are submitted to the faculty council for approval. • 14. The improvement plans are included in the operational plan for the program and linked to the objectives

Records	• Approved evaluation reports, and minutes of faculty council. • Committees meeting minutes, approved improvement plans, and updated • Approved evaluation reports, and minutes of faculty council. • Committees meeting minutes, approved improvement plans, and updated operational plan.
Appendices	• NCAAA forms for SSRP. • UT Procedural guide for programs and study plans development.

Safety, Emergency Evacuation and Maintenance

Determinants **These factors ensure a robust framework for safety, emergency evacuation and maintenance.**	**1. Building Design and Construction:** • Structural integrity: Ensure that buildings are constructed with robust materials and techniques to withstand various hazards. • Adequate exits and evacuation routes: Design buildings with sufficient exits and clearly marked evacuation routes, ensuring that occupants can easily and safely evacuate in case of an emergency. • Emergency lighting and signage: Install emergency lighting systems and clear signage to guide occupants during evacuations, especially in low-light or smoky conditions. **2. Safety Systems and Equipment:** • Fire detection and suppression systems: Install and maintain fire alarms, smoke detectors, throughout the building to detect and suppress fires effectively. • Emergency communication systems: Implement emergency communication systems to broadcast alerts and instructions to occupants during emergencies. • Emergency power and backup systems: Ensure the availability of backup power systems, such as generators or uninterruptible power supplies, to support essential safety systems during power outages or emergencies. • Security systems: Install appropriate security systems, including surveillance cameras, access control systems, and alarms, to deter and detect security threats. **3. Safety Policies and Procedures:** • Emergency response plan: Develop a comprehensive emergency response plan that outlines procedures for different types of emergencies, including evacuation protocols, communication channels, and roles and responsibilities of personnel. • Training and drills: Conduct regular training sessions and evacuation drills to familiarize occupants with emergency procedures, evacuation routes, and the proper use of safety equipment. • Safety education programs: Provide educational materials, resources, and training sessions to educate occupants about safety procedures, evacuation routes, and the importance of reporting safety concerns. • Maintenance and inspections: Establish regular maintenance schedules and inspections for safety systems and equipment to ensure their proper functioning and compliance with regulations. • Reporting mechanisms: Implement a clear and accessible reporting system for safety concerns and incidents, encouraging occupants to report potential hazards or issues promptly.
Responsibility	• HOD. • Safety Committee and Coordinator. • Facilities and Equipment's Committee FQC.
Procedures	**The FQC is responsible for:** • 1. Engage with authorities at UT for periodic inspections and certifications to ensure that the program's facilities meet the required safety standards and comply with local building codes and regulations. • 2. Ensure that buildings and facilities are accessible to individuals with disabilities, including the presence of ramps, elevators, handrails, and accessible restrooms. • 3. Develop and maintain an emergency response plan that outlines procedures and protocols for various emergencies, such as fires, natural disasters, medical emergencies, or security threats. • 4. Clearly mark evacuation routes, exits, and emergency assembly points throughout the facility. Ensure that exits are unobstructed and easily accessible.

Responsibility	• 5. Communicating emergency alerts and instructions to all occupants of the Biology building. • 6. Maintain an updated list of emergency contacts, including local emergency services, security personnel, and relevant program staff members. • 7. Establish regular maintenance schedules based on the specific needs of equipment or systems. • 8. Maintain detailed records of maintenance activities, including dates, tasks performed, parts replaced, and any issues or observations. • 9. Clearly communicate the available channels for reporting maintenance issues, such as a designated maintenance hotline, email address, or online reporting system. • 10. Establish a follow-up mechanism to provide feedback and updates to individuals who have reported maintenance issues, keeping them informed of the progress and resolution. • 11. Encourage feedback from individuals who have reported maintenance issues to evaluate the effectiveness of the maintenance process and identify areas for improvement.
Procedures	• 1. The FQC holds yearly training sessions and drills to educate faculty members on emergency procedures, evacuation routes, and the proper use of emergency equipment. Practice scenarios for different types of emergencies. Also the FQC • 2. The MEWG conducts an annual survey among students and faculty on the effectiveness of safety regulations and procedures followed by BSc Biology Program, seeking feedback, and suggestions for improvements. A feedback report is prepared by the MEWG and submitted to the FQC. • 3. The FQC reviews the feedback report and revises the safety regulations and procedures accordingly. • 4. The FQC presents its annual report and safety plan for the upcoming year to the Department council for discussion and approval. • 5. The FQC communicates any updates in the safety regulations, procedures, or contact numbers to all stakeholders.
Records	• FQC annual safety reports. • Department council meeting minutes.
Appendices	• NCAAA forms for SSRP. • UT Procedural guide for programs and study plans development.