

# Program Quality System Manual

## Department of Biology

College of Sciences, Jouf University, KSA

<https://www.ju.edu.sa/en/colleges/science-college/college-of-science/departments/department-of-biology//>



# Preparation Team

No	Name	Job	The mission
1	<b>Dr. Fathy Elshaer Mohammed</b>	Head of the Program Quality Committee and Head of the First Standard	Participation, preparation and formulation of quality Guide and general coordination
2	<b>Dr. Shimaa Nabil Mostafa</b>	Member of the First standard	Participation, preparation and formulation of quality Guide and general coordination



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KINGDOM OF SAUDI ARABIA



نأمل في تحقيق رؤية مستقبلية  
تكون المملكة بخدماتها ومنتجاتها  
معياراً عالمياً للجودة و الإتيقان

خادم الحرمين الشريفين  
الملك سلمان بن عبد العزيز آل سعود



dqac@ju.edu.sa



dqac3

جامعة الجوف / إحدى معالم النهضة  
الوطنية في شمال المملكة

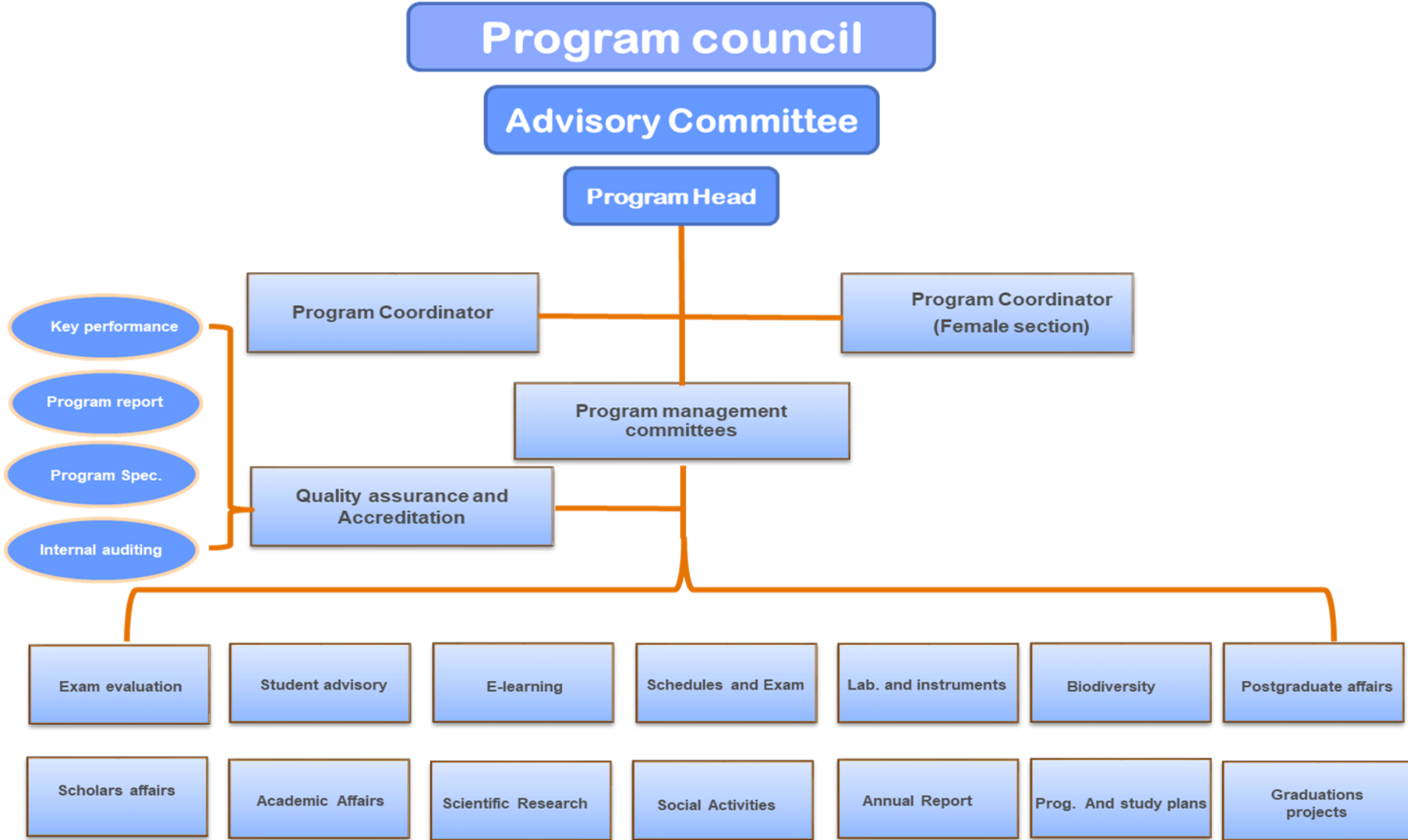
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# The Organization structure of Biology Department





**QUALITY**

**BIOLOGY DEPARTMENT**

# Introduction

Quality Assurance process determines both strengths and weaknesses, and corrective and protective plans in academic programs leading to its quality improvement. Teaching quality is becoming a strategic direction of the higher education repairs in the Arab area and in the heart of Saudi Arabia. Its importance is recently gaining more and more recognition by both the policy makers as well as the various providers of higher education. For Biology Program, a vision to keep abreast of the age and to the leadership in the academic and community services, in order to realize the vision of 2030 in preparing distinguished cadres in the field of Biology to serve the nation in various fields of life.



# Introduction

Hence the role of the National Center for Academic Accreditation and Evaluation (NCAAA) in the adoption and evaluation of academic programs, including Biology program to be achieved improvement, quality and excellence. Accreditation of the programs is being based on a set of indicators known as the key performance indicators (KPIs) been adopted by the Center (NCAAA) and the quality management system at Jouf University. Moreover, indicators of learning outcomes are approved by the college of science.



# Introduction

KPIs are collected through different questionnaires for teaching staff, undergraduates, and employers, as well as statistics on numerical achievements and values of learning outcomes indicators. All achieved KPIs of Biology program should be compared with internal or external benchmarks. This report uses qualitative and quantitative methods to achieve the objectives of program. 21 key performance indicators were provided by NCAAA. According to the Quality Management System (QMS) of college of Science, one of the tasks of quality and development committee in the program. In total, 18 questionnaires are being distributed to teaching staff, student and stakeholders.

# Introduction

A questionnaire was being designed based on the rate of agreement chosen KPIs in five-point scale (1 .00 –Strongly Disagree, 2 .00 –Disagree, 3 .00 –Not Sure, 4 .00 –Agree, 5 .00 –Strongly Agree) and Analysis of questionnaires are being done using statistical mean, percentages and/ or standard deviation. Any data can be used to measure the achievement in a program. Moreover, Statistics for numbers of students, graduates, teaching staff, citations and publications. Values of KPIs of the last years were used as an internal benchmark. An internal monitoring system which will regularly measure the effectiveness of the procedures. A self-evaluation system which will examine and report on the quality of programmers and services. Here, various committees perform in an integration with director of the programs in administration academically and environmentally to control of the quality from planning, implementation, monitoring and to improvement..

# Purpose

- ❖ Academic quality assurance aims primarily to certify continuous improvement of the Biology Program, through a process of self-evaluation, internal review and constructive, formative criticism by external reviewers (nationally and internationally accreditation bodies). A quality assurance review is to evaluate five aspects of a program:
- ❖ (1) Quality.
- ❖ (2) Resource use.
- ❖ (3) Following achievement of action plans for program, and Consistent mission and goals of program with the university.
- ❖ (4) Adaptability.
- ❖ (5) Review of a program is a tool for well change.

# Purpose

❖ **The Academic Quality Assurance Policy has three main goals:**

- (1) Ensure high standards, quality of outcomes and continuous improvement of the academic program of Biology.
- (2) Determine strengths and weaknesses paths, corrective and protective methods for continues improvement of academic program of Biology.
- (3) Document, integrate, and communicate different procedures of quality assurance processes

# Purpose

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# Definitions in the Quality

**Quality** it is meet of requirements for customer as good product or service

**Academic quality** is meet of stakeholders needs from educational process including appropriate and effective teaching, support, assessment and learning opportunities are provided for them.

**Quality assurance (QA)** process in which determines both strengths and weaknesses points, and corrective and protective plan in academic program leading to its quality improvement.

**Quality system** also known as a Quality Assurance (QA) system or a Quality Management System (QMS), is a management system that helps to ensure the consistency of quality of educational outcomes.

**Compliance with Quality System Standards** is established by completion of a successful quality internally and externally reviews conducted by an accreditation bodies acceptable to the Saudi Arabia (for examples, The National Center for Academic Accreditation & Evaluation (NCAAA)).



## **The processes in Biology (Bachelor) program occurring to achieve the mission.**

Vision, mission and goals of the Biology program are submitted in website of Department of Biology, these mission and goals of the Biology program are consistent with mission and goals of college of Science.





# Quality Assurance in Biology Department

## Vision

Global leadership in providing outstanding educational and research services in biology that contribute to building the country and meeting the needs of society and the labor market.

## Mission

Providing educational outputs to Prepare qualified graduates meet the needs of the labor market and scientific research in biology to serve the community.

## Objectives

- ✓ Applying quality standards and providing the best scientific methods in teaching biology, both theoretical and practical.
- ✓ Preparing qualified cadres compatible with the needs of the labor market.
- ✓ Develop students' abilities to contribute to solving biology problems.
- ✓ Contribute to scientific developments in the field of biology through scientific research.
- ✓ Contribute to the service of the Saudi community by providing consultations and services in the field of biology.





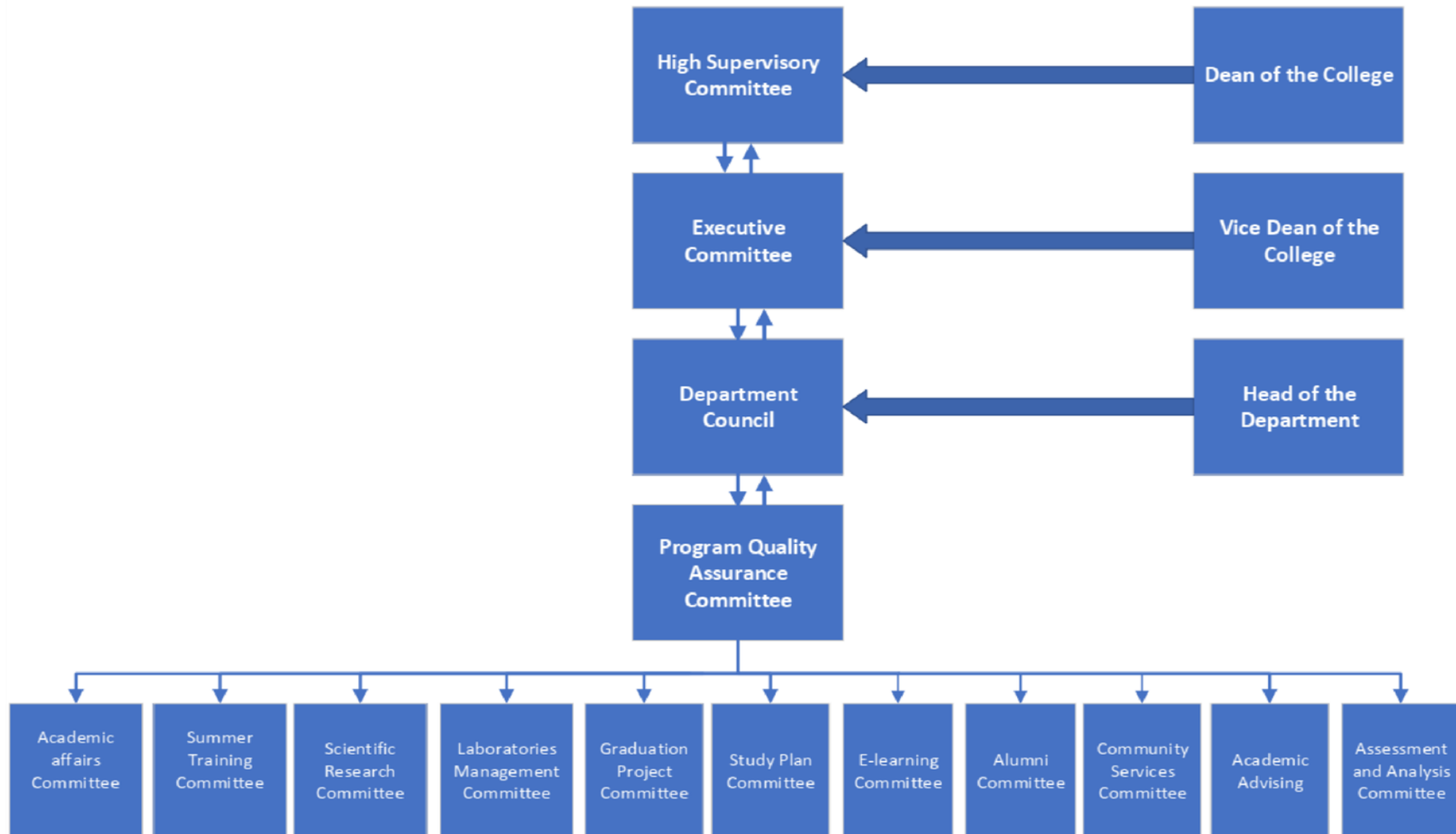
## **The processes in Biology (Bachelor) program occurring to achieve the mission.**

The mission of the Biology (Bachelor) program is reviewed as follows:

1. The mission and objectives of the program are reviewed periodically (every five years) by the formed committee and the advisory committee.
2. Examination and discussion of the formulation of the thesis text in light of the cultural, economic and social variables that surround the university and society.
3. Involving all the beneficiary sectors inside and outside the university (leaders - faculty members - administrators and technicians - employers)
4. In discussing the recommendation to re-accredit the current message or to amend and re-accredit it.
5. Republish and clarify the program's message to all sectors outside and inside the university
6. Presenting the results and analysis of questionnaires and plans for improvement and enhancement periodically to the members of the committee formed to develop and review the mission and objectives, which include all beneficiaries of the program (leaders - faculty members - administrators and technicians - employers) as well as to the program's advisory board.



# Quality Management System in Program of Biology





# Tasks of the Department Committees

## I. Program Quality Assurance Committee

- Provide the requirements for quality and academic accreditation to all staff members in the program.
- Follow up the course specifications periodically according to the model of the National Center for Academic Accreditation and Evaluation and follow up on its upgrade.
- Prepare Program Specifications according to the model of the National Center for Academic Accreditation and Evaluation.
- Follow up on the periodic preparation of Course Report and review Annual Program Report according to the model of the National Center for Academic Accreditation and Evaluation.
- Develop the skills of staff members, administrators and students of the program.
- Create databases for each of the following members: Faculty members - Administrators Community service activities - Scientific research - Training courses.



- Follow up the preparation and implementation of plans in the program.
- Establish a system to follow up the alumni.
- Develop a system to ensure the continuity of quality management system.
- Evaluate the performance level in the program.
- Implementation and follow-up of the evaluation and academic accreditation.
- Provide the necessary facilities for the teams to supervise the application of quality assurance

# Tasks of the Department Committees

## II. Assessment and Analysis Committee

- Review the Course Specifications and Course Reports for all courses.
- Prepare the Annual Program Report according to the model of the National Center for Academic Accreditation and Evaluation.
- Conduct Surveys based on the analysis and make an improvement plan.
- Prepare the KPI analysis Report.
- Prepare a report for evaluating the learning outcomes, and its mapping.
- Prepare a report for measurement the level of student achievement for each targeted learning outcomes.
- Prepare a report from the review of randomly selected samples of the final exams.



## Tasks of the Department Committees

### III. Academic Advising Committee

- Develop a plan for the academic supervision in the program.
- Supervise the progress of the academic guidance process according to the approved mechanisms in the program.
- Raising awareness among students about the nature of the unit and its importance and how to benefit from its services through meetings and publications at the website or blackboard system.
- Raising awareness of the importance of the academic guidance and the importance of communicating with the academic advisor by publishing brochures, publications and using the college or program website for this purpose.



## Tasks of the Department Committees

- In the first week of each semester, the Deanship of the College and the head of the department or coordinator of the program is organized the reception for new students to provide the comprehensive discussion about goals and mission of the college and its educational programs and its scientific groups, the fields of work of its graduates, importance of the university rules and regulations during their educational study and the necessary to contact with their academic advisor.
- At the beginning of each semester receive a list of the new students from the Deanship of the College and deliver to the program coordinator and distribute the students to the program staff for assigning.
- A meeting is held with the newly appointed faculty members to inform them about the system of study and the academic advising mechanism in the college based on program policies.



## Tasks of the Department Committees

- Organizing a regular meeting with the advising coordinators to follow up the progress of the program guidance process.
- Submit periodically (each mid semester) a report that includes the work of the committee and levels of students to the program and faculty administration.
- Analysing the cases that transferred to the committee by the program and faculty administration, preparing reports and submitting them to stakeholders.
- Considering the problems of academic students raised by advisors and seeking to solve them with the program and faculty administration.





## Tasks of the Department Committees

- Educating the spirit of honest competition for students, strengthen social relations with their colleagues, staff and their community, and arranging competitions monthly, semester and annually.
- Holding the sportive and cultural competitions among the students of the program to develop the spirit of competition among them.
- Developing a plan for the student activity in the program throughout the academic year and follow up its implementation.
- Carrying out cultural and social trips for students to develop their cultural and social awareness.
- Selecting the excellent students in cultural competitions and indoor sports; to represent the college in the various central competitions (sports, cultural) organized by the Deanship of Student Affairs at the university.



## Tasks of the Department Committees

- Establishing the sport and recreational competitions among the staff of the program to find a kind of harmony between all staff of the program.
- Coordinating with the units and committees in the college each in its own right.
- Submitting a semester report on the activities of the unit to the Academic Affairs Supervisor of the College in order to submit it to the Dean of the College.
- Carrying out the work entrusted to the unit by the Dean of the College.



## Tasks of the Department Committees

- Considering the complaints of students of academic nature and to find solutions that are suitable for them or to raise them to the program and faculty administration if necessary.
- Consider students' complaints about any course and find solutions and raise them to the program and college administration.
- Supervision of orientation programs for new students to introduce the system of study and exams in the program.
- The committee meets periodically (every 4 weeks) or as reports to discuss periodic reports or special reports from academic advisors at the program level. Carrying out the work assigned to the committee by the head of department and dean of the college. Coordinating with the Committee for estimating the numbers of new students expected to graduate and transferred from other faculties.



## Tasks of the Department Committees

### IV. Community Services Committee

- Preparing the student talents in terms of culturally, socially, sportily, and artistically, and discovering and help them for development.
- Contributing in building the character of the student to achieve a balanced personality loving his country and leadership in culturally, socially, sportily, and artistically and directing.
- Discovering the talent students, developing them, refining them, and using their creative energies in whatever productive and useful.



## Tasks of the Department Committees

### IV. Alumni Committee

- Enhancing the communication and consolidating the principle of exchange of views and information between the graduations inside the program and graduates among themselves.
- Enhancing the loyalty of the graduates and their interaction and contributions for development of the Biology programs. Documentation of the database of graduates of the program in a special archive (paper and electronic).
- Constructing a website for the Alumni Association on the Internet (helps graduates of the college to know the news of the program as a whole, and the bulletin of the Biology Program Society, and the Alumni Guide).
- Establishing a database of institutions and partnerships related to graduates in the program.



## Tasks of the Department Committees

### IV. Alumni Committee

- Measuring the level of satisfaction for graduates and business institutions.
- Opinions of graduates of the program collect through questionnaires filled electronically through the committee.
- Let know the graduate's aspect of academic news and research in the program.
- Documenting the relationship with the graduates to benefit from their experiences in developing academic, research and training plans.
- Measuring the attitudes of business owners towards graduates of the program, and seeking to open the fields of labor market for the graduate.
- To know the requirements by taking opinions of companies for employment through questionnaires.

# Tasks of the Department Committees

- Establishment of an annual day to which the graduates, institutions and companies that need to recruit for graduates of the program.
- Considering what the program management and deanship of the College refers to the subjects and the completion of the related issues.

## IV. E-Learning Committee

- Improving the quality of education through the provision of additional teaching methods based on E-learning techniques.
- Developing the students' skills and their abilities to interact with the changes of the era through modern techniques.
- Follow up the activation of E-learning systems in all courses in the program.
- Raising the skills of faculty members of the program in E-learning systems.
- Servicing the educational and research processes in the program.
- Publishing the culture of E-learning through (seminars - workshops) in the program.

## IV. Study Plan Committee

- Supervising for preparation of the study plan and program in the department and reviewing them to ensure that they comply with the standards of the National Center for Academic Accreditation and Evaluation and according to the requirements of the lab our market.



## Tasks of the Department Committees

- Supervising for development of the study plan of the program and follow up the recent versions of the standards of the National Center for Academic Accreditation and Evaluation and study the agreement of the current courses with them.
- Preparing reports on the study plan and department program and submitting it to the deanship of the College for approval by the department and college councils.
- Coordination with the university Study Plans Committee to approve the plans.
- Conduct a survey on the compatibility between the requirements of the labour market and the specializations inside the program.
- Ensure that the course specifications are available and they comply with both the academic plans in the department and the standards of the National Center for Academic Accreditation and Evaluation.
- Follow-up with faculty members in the program and ensure that they distribute brief course specifications to students at the beginning of each semester.
- To inform faculty members in the program of any updates and developments on the study plans and courses specifications.
- To study the compatibility of the course's contents, teaching methods, courses objectives and the expected learning outcomes and the preparation of the relevant reports.





## Tasks of the Department Committees

- List of books and references is needed by faculty members in the program and coordinate with the Central University Library to provide them according to the requirements of the department.
- Coordination with IT department to put the plans and specifications on the program's website.
- Contact with University Deanship for Educational Affairs at the end of each semester to coordinate and review the latest developments regarding the study plans and specifications and spread them to the faculty members in the program.
- Keep and save all the committee documents and provide a copy to the head of department and deanship of the college.
- Consideration of the subjects referred from the head of department to the committee and completion of related actions.

### **VIII. Graduation Project Committee**

- Preparation of the final list of graduation projects for the department for approval by the Head of the Department and the Dean of the College.
- To take decision for appeals regarding graduation projects from students or faculty members in the program.
- Coordination between other departments in the college, in case of joint projects.
- Making periodic reports of the graduation project committee in the departments.
- Oversee the project discussions with the project committees in the department.
- Submit periodic reports to the Dean of the College and Head of Department on the progress of projects in the department.
- Implementation of the tasks referred from the Head of Department and Dean of the College to the committee.

# Tasks of the Department Committees

## **VIII. Laboratories Management Committee**

- Preparation of studies for the requirements of the program about laboratories and supporting devices and software.
- Developing a general perception of the plants and their arrangement and their relationship with each other and the appropriate areas for each lab and the required spaces.
- Supervising the laboratory equipment with the college labs in coordination with the scientific departments.
- Preparation of presentations and specifications of equipment.
- Studying the offers submitted to the laboratories by the different companies.
- Follow up companies in the supply of scientific devices in coordination with the department.
- Ensuring that the specifications of the equipment required to be supplied to the laboratories before the completion of the purchase process.
- Follow-up with the relevant sections for the maintenance and operation of scientific devices.
- Ensuring that there is periodic maintenance of the laboratories, and replacing the damaged especially with the end of each semester.
- Follow-up of the devices and laboratories at the department on a regular basis.
- Working on the development plans for the development of laboratories in the department.
- Studying the needs of laboratories to engineers, technicians and assistants necessary to organize and processing the labs.



## Tasks of the Department Committees

- Saving all papers related to the committee work, and providing a copy of them to the Head of Department and Dean of the College.
- Considering what the Head of Department and Dean of the College refers to the subjects and the completion of the related issues.

### **X. Scientific Research & Graduate Studies Committee**

- Guide to the Ethical Charter for the Professional.
- Accreditation of a research plan for the department according to the Deanship of Scientific Research and identifying the research priorities and funding sources of the plan.
- Accreditation of database of scientific research (published research, scientific thesis, participation in conferences, organizing conferences, scientific missions and scholarships, Patents, excellence awards, scientific books, ...)
- Accredited mechanisms to encourage that the faculty staff of the program to do research. An annual report on the position of research integration within department and at the level of specialization locally, regionally and internationally, and the sources of funding for scientific research and citizen attributes and faculty of excellence in scientific research in the framework of the research plan of the College.



## Tasks of the Department Committees

### X. Summer Training Committee

- Management of summer training program.
- Supervising the collection of information about the training institutions and expanding the information database and making changes in the names and addresses of those entities.
- Conduct necessary communications to obtain appropriate training opportunities for students in various departments.
- Make arrangements for companies that have specific requirements for trainee students.
- Supervise the distribution of training opportunities for students and solve the problems related to them.
- Coordinate with companies that have specific requirements for the students wishing to train them.
- Contribute to solving students' problems beyond the training period.
- Establish a database of training companies.
- Evaluation of weekly reports on training on student performance during the training period.
- Make sure that graduate students have completed all training requirements.
- Prepare a feedback form that focuses on the performance and classification of institutions that instruct college students to be given to trainee students.
- Preparing a thankful letter to the active training institutions.
- Establishing a database of the program graduates.



## Tasks of the Department Committees

- Establishing a recruitment center in the college in cooperation with the active companies.
- The student may search for a training institution provided that the training committee approves the training body specified by the student and the approval shall be based on:
  - The student provides the contact information of the person in charge of training.
  - The student provides training committee with training program training.
- Submit a comprehensive report on the work of the Committee after the end of the training period to the Head of Department and Dean of College.
- Implementation of the tasks referred from the Head of Department and Dean of the College to the committee.

### X. Academic affairs Committee

- **General Objective:** carrying out the tasks entrusted to the Committee by the program's supervisor for Academic Affairs to follow up all the directives, circulars, transactions and decisions issued by the head of department or from the University administration and to ensure their implementation at the specified times.
- Coordination between the units of college and committees of the program in the transactions issued and incoming.
- Follow up all transactions that received by the committee after studying them and completing all aspects.
- Follow up the preparation of the educational and exams tables via coordination with the relevant committee of the program and the scientific department.

# Tasks of the Department Committees

- Presenting the recommendations for students' disciplinary cases according to the disciplinary regulations at the university.
- Keeping a record of topics discussed for all students.
- The committee receives the deletions and additions to the students from the scientific departments after registering them on the system.
- The Committee meets the students' problems.
- Helping the graduate students to finish their graduation procedures, and assisting the students who are expected to graduate in registering the remaining courses and to submit their applications which the unit cannot achieve to the Deanship of Admission and Registration.
- Coordinating and organizing an archive of all the activities of the college and recording all the student issues that were discussed and the development of an index and a record of files and documents.
- Preparing periodic reports on the work of the committee and the need to increase its performance.
- Submitting a report in each semester for the activities of the committee to the academic affairs Supervisor.
- Carrying out the work entrusted to the committee by the Head of Department and the Dean of the College.



## **Academic Standard**

Biology (Bachelor) program is adopting the national academic standard from the Education and Training Evaluation Commission.

### **Program Accreditation Standards 2018 ([Appendix 1](#))**

The National Center for Academic Accreditation and Evaluation recently reviewed and developed the programmatic standards, which will soon be used instead of the old ones.

#### **The following are the key criteria:**

- ❑ **Standard 1:** Mission and goals
- ❑ **Standard 2:** Program management and quality assurance
- ❑ **Standard 3:** Teaching and learning
- ❑ **Standard 4:** Students
- ❑ **Standard 5:** Faculty members



# Academic Program Improvement Process

## Continuous Improve Cycle

Continuous improvement is the act of continually looking to improve upon a process, product, or service through small incremental steps.

## Why Use a Continuous Improvement Process?

Implementing a Continuous Improvement Process in an organization should be standard practice now. Studies have shown the main benefits of a CIP are:

- ❑ Increase productivity
- ❑ Better teamwork and morale
- ❑ Greater agility
- ❑ Less waste
- ❑ More efficiency
- ❑ Increase customer satisfaction
- ❑ Increase in profit





# Continuous Improve Cycle

Continuous improvement is the act of continually looking to improve upon a process, product, or service through small incremental steps.

## Phases of the Continuous Improvement Process (CIP)

There are four phases associated with the CIP. These phases are associated with the Shewhart Cycle:

- Phase 1 “Plan”: Plan for change and identify improvement opportunities.
- Phase 2 “Do”: Implement changes identified.
- Phase 3 “Check”: Check to determine if the change had the desired outcome.
- Phase 4 “Act”: If successful, implement across the organization and process.



Fig 1. Continuous Improvement cycle.

# Quality Cycle



# Plane



# Phase I: Plane

❖ The planning in Biology program will be represented in the following:

1. Strategic Plan of Jouf university and Strategic plane of Faculty of Science ([Appendix 2](#)).

2. Biology program objectives ( [Appendix 3](#)).

· Biology program has its own objectives which is aligned with the faculty of science objectives and Jouf university objectives. ([Appendix 4](#)).

· Biology program has an operating plan ([Appendix 5](#)) to achieve the objectives.

3. The operating plan of Biology program is aligned with the executive plan of the faculty of science ([Appendix 6](#)).

4. Biology program Research plan ([Appendix 7](#)).

5. Maintainace Plan ([Appendix 8](#)).

6. Training plan for Human resources ([Appendix 9](#)).



# Phase II: Do



# Phase II: Do

- ❖ Biology program has different committees to execute the tasks of the operating plan and the program KPIs ([Appendix 10](#)).
- ❖ In Biology program there are Academic standard teams, their task is to fulfill the requirements of the program academic standard ([Appendix 1](#)). Each team consists of leader and staff members. The number of the staffs is according to the requirements of the academic standards ([Appendix 11](#)). The tasks of each academic standard teamwork are to achieve the standard via processes and documents.

## ❖ Policies, Procedures and Guides:

Biology program belongs to Biology department at College of Science Jouf university. So, Biology program is adopting the policies, procedures, and guides of Jouf university. Jouf university is fully accredited from the Education and Training Evaluation Commission.

1. Procedures of acceptance and registrations ([Appendix 12](#)).
2. Studying and Examining guide ([Appendix 13](#)).
3. Rights and duties guide ([Appendix 14](#)).
4. Complaints and Grievances ([Appendix 15](#)).
5. Routing and Guidance guide ([Appendix 16](#)).

# Phase II: Do

- ❖ Education system at Biology program:
- ❖ There are courses coordinators ([Appendix 17](#)). for the courses in Biology program. Biology program top management is adopting the templates which issued by Education and Training Evaluation Commission.
- ❖ The Policy of encouraging faculty members to effectively participate in all research and scientific activities
- ❖ Intellectual property rights protection policy at Jouf University ([Appendix 18](#))
- ❖ Jouf University Academic Quality Assurance Policy ([Appendix 19](#))
- ❖ Jouf University communication policy with graduates ([Appendix 20](#))
- ❖ Jouf University Council self-evaluation policy ([Appendix 21](#))
- ❖ Jouf University's Outstanding Performance Award Policy ([Appendix 22](#))
- ❖ Monitoring the quality of teaching and learning at Jouf University ([Appendix 23](#))
- ❖ Policy for developing and creating academic programs and RASCI ([Appendix 24](#))

# Phase II: Do.

- ❖ Policy of examinations and student evaluation ([Appendix 25](#))
- ❖ Policy of verifying the standards of achievement for students at Jouf University ([Appendix 26](#))
- ❖ Policy stimulates and support for Jouf University employees to participate in community activities ([Appendix 27](#))
- ❖ Professional and personal development policy at Jouf University ([Appendix 28](#))
- ❖ Student retention policy and increased completion rates ([Appendix 29](#))
- ❖ The policy of attracting external beneficiaries to Jouf University ([Appendix 30](#))
- ❖ The policy of rights and benefits related to providing advice and services to other sectors outside the university ([Appendix 31](#))



# Phase II: Do.

- ❖ The university's support mechanism for faculty members to conduct joint research with external bodies and encourage graduate students to participate in research and scientific activities ([Appendix 32](#))
- ❖ University policies for marketing and commercial investment of innovations and scientific production for its employees ([Appendix 33](#))
- ❖ University Risk Management Policy ([Appendix 34](#))
- ❖ Workload policy ([Appendix 35](#))

# Phase II: Do

## ❖ Quality Assurance Criteria for Biology Programs

The Program assurance process for academic program starts from the college Mission and objectives which explain the reason of the presence of the college and its purpose.

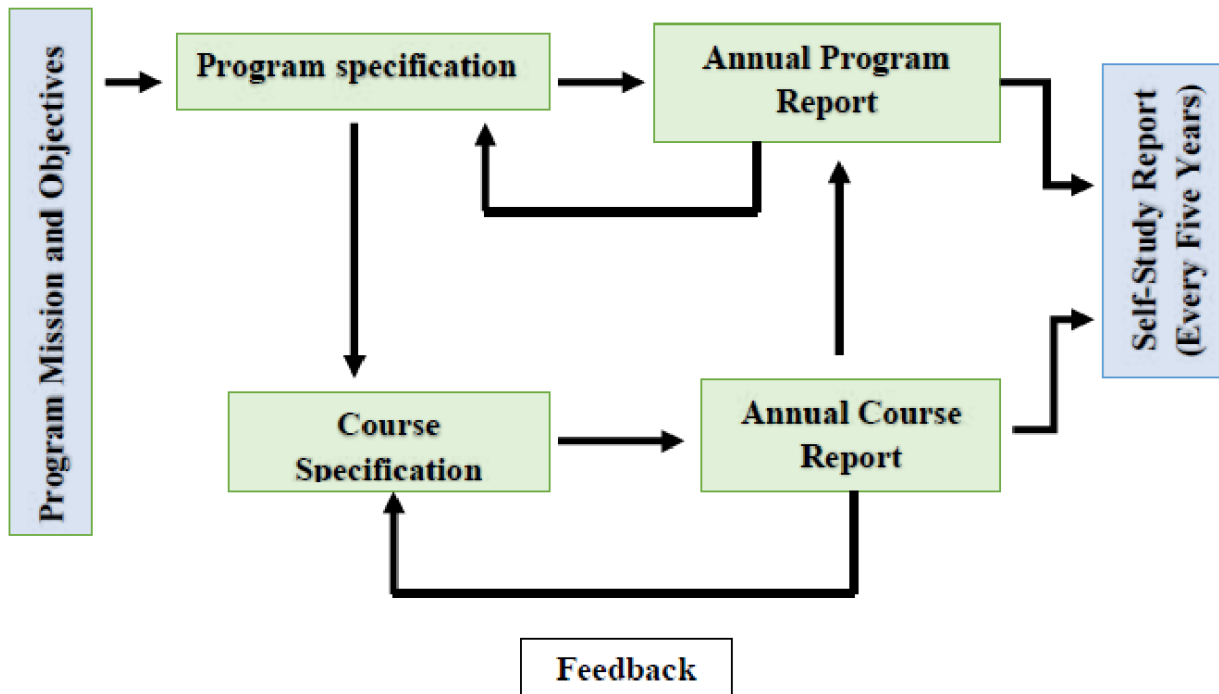
From this point the Program Mission is formulated which is derived from college Mission which lead to the development of program objectives. Each academic program identifies its graduate attributes with regarding to labor market and stakeholder expectation and aligned with both college and University graduate attributes.

Program uses a development framework for demonstrating the links between program graduate attributes, in relation to program learning outcomes, as well as courses learning outcomes. Course curriculum, including course objectives and assessment criteria, is consistent with graduate profiles, to ensure there is a strong link between the attributes of graduates and actual intended learning outcomes of the program.

Program learning outcomes are formulated defining what the student will gain through all the program from Knowledge, skills and competencies. The curriculum, assessment methods and criteria used to evaluate performance must be consistent with these learning outcomes. Program learning outcomes must be consistent with the requirements of the Saudi Arabia Qualifications Framework (SAQF), as well as the labor market requirements, and as per the requirements for professional practice in Saudi Arabia in the fields of practice

# Phase II: Do

The Quality assurance process takes five years, it starts by formulation of program specification, then course specification-Which is approved by the standing Committee of study plans and University council in QU. So, course learning Outcomes are consistent with program Learning Outcomes. Followed by the preparation of course reports which lead to program report. Which is also based on stakeholder evaluations and units and committee reports. Program reports leads to improvement plans which is fulfilled and monitored in the next year and the cycle goes on. After five year the program prepare the self-study report and the cycle goes on.



Cycle of quality assurance at the level of the program

# Phase II: Do

The program annual report – based on NCAA forms- is a key stone in maintaining high quality performance for the whole educational and supportive administrative process. It integrates all the data gathered along the year to write the progress report on previous plan and formulate a new action plan to be fulfilled the next year. This report includes the following:

First Statistical Information which give brief description on student enrolment, accomplishment and graduation which include:

- Number of students who started the program in the year concerned.
- Apparent completion rate.
- Enrollment Management and Cohort Analysis.
- Destination of graduates as shown in survey of graduating students.

Second Course Reports Information Summary to ensure the quality of delivering the courses and proper assessment for the students which includes:

- Analysis of Significant Results or Variations.
- Delivery of Planned Courses Third Summary Program Evaluation:
- Graduating Student Evaluations (surveys).
- Employers' evaluation survey.

# Phase II: Do

Fourth Program Course Evaluation and KPI assessment:

- All program courses taught during the year.
- Program Learning Outcomes Assessment.
- Orientation programs for new teaching staff.
- Professional Development Activities for Faculty, Teaching and Other Staff.

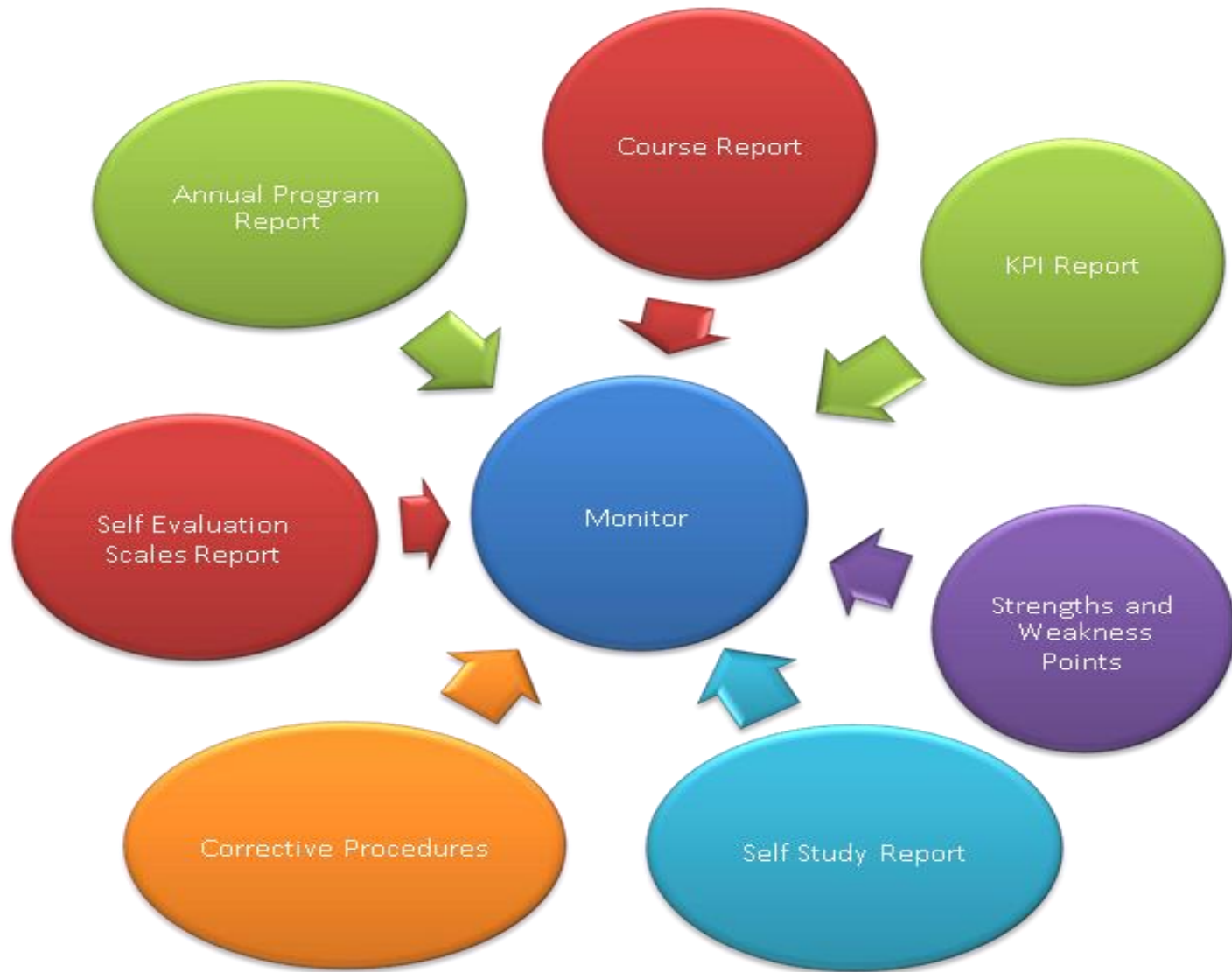
Fifth Independent Opinion on Quality of the Program

- Program KPI and Assessment Table.
- Program Action Plan Table.

Finally, Program action Plan Progress Report

This sequence shows the detailed assessment and analysis carried by the program to ensure the quality of the delivered program.

# Monitor



# Phase III: Check

## Planning and review cycle:

Quality assurance process is an ongoing process of planning and evaluation. The program has a structural process to ensure the quality of the program. This process depends on both direct and indirect methods of measuring the quality of the offered program with the KPI and bench mark the director of improvement. The program improvement is guided by the collage strategic plan. There are two main levels of evaluation: annual evaluation and periodic evaluation which occur every five years

The program ensures high quality performance for the whole educational and supportive administrative process through the following process:

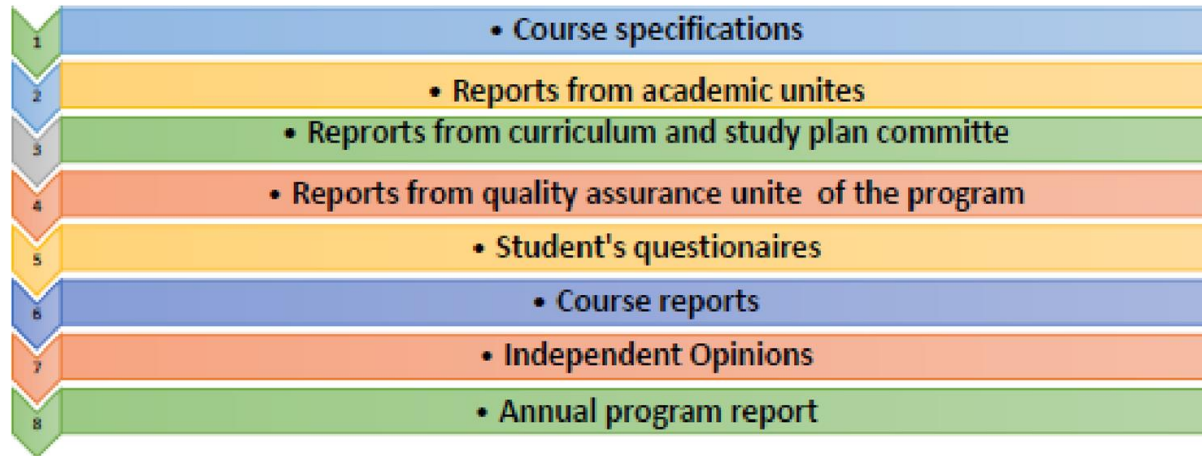
- ❖ **First:** Planning which include preparing the program plan which is integrated with the program objectives and the program Key performance indicators (KPI).
- ❖ **Second:** Implementation were all parts of the plan is fulfilled through-out the academic year.
- ❖ **Third:** Monitoring the outcome through the extent of fulfilling of the KPI and action plan

# Phase III: Check

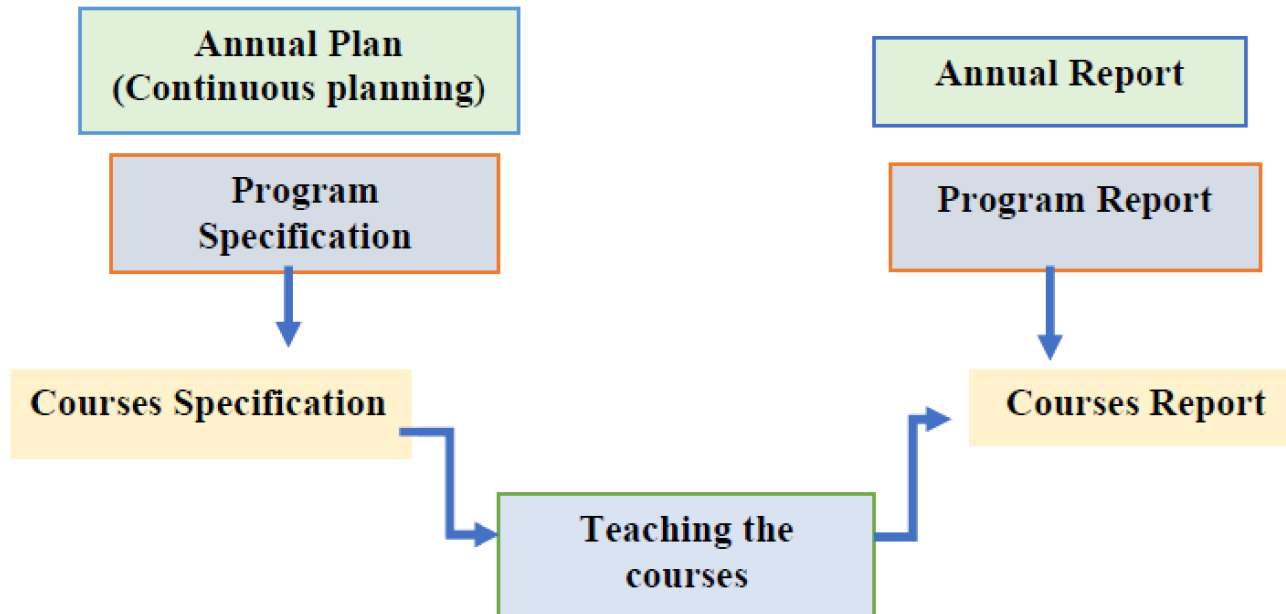
- ❖ **Fourth:** Performance evaluation is done through writing both reports the department and program reports with identifying points of strength and improvement opportunities which is included in next year the program annual report which integrate all the data gathered along the year to write the progress report on previous plan and formulate a new action plan to be fulfilled the next year.
- ❖ **Fifth:** Improvement plans which is based on the annual reports strengths and improvement opportunities, which lead improvement plan which should be implemented on next year.
- ❖ **Sixth:** Periodic reviews: Periodic review should be comprehensive and include a re-examination of the environment in which the program operates and any changes or expected developments of program activities. A report should be prepared that includes an analysis of changes in the original plans that may have occurred during the period, assessments of the degree of success in achieving the objectives, and assessments of the strengths and weaknesses that need to be addressed in future planning, and planning responses to these assessments.



# Phase III: Check



The Procedure of Quality Assurance Management in DPT Program



Sequence of Planning and documentation processes

# Phase III: Check

## ❖ Types of comprehensive evaluation:

### A- Internal Auditing:

This is done by the dean ship of development and Quality in two phases:

**First** submitting an electronic program Data through Daman platform and electronic copy of NCAAA six standards verification documents then **second** stage involves site visits to the academic program by a selected Teams formed by members of Deanship of Development and Quality and the Standing Committee of Quality. Site visits during internal audits involve meeting and interviews with programs' stakeholders (e.g. students and faculty) to ensure that reality is well reflected in the programs' quality documents. Internal audits always end with a full report sent to the colleges/programs containing a number of strengths and action recommendations for improvement, of which programs managers are asked to respond with action plans. Progress in these action plans is evaluated in the next internal audit round.

This will be followed by a report including Strength and improvement opportunities, where the program has to submit an improvement plan for these recommendations which will be verified on next year Internal Auditing

# Phase III: Check

## ❖ Planning and review cycle:

### Auditing in Biology program

1. Internal Auditing for the program academic standard ([Appendix 36](#)).
2. Internal Auditing for program specification ([Appendix 37](#)).
3. Internal Auditing for program report ([Appendix 38](#)).
4. Internal Auditing for Course specification ([Appendix 39](#)).
5. Internal Auditing for Course report ([Appendix 40](#)).
6. Internal Auditing of Field Experience course specification ([Appendix 41](#)).
7. Internal Auditing of Field Experience course report ([Appendix 42](#)).
8. Questionnaires ([Appendix 43](#)).

# Phase III: Check

## B-External Auditing and independent opinion and its forms, controls, standards, and mechanisms

An independent reviewer should review all the program operations, activities and outputs/outcomes of the program through verification of all documents supporting the program processes and visiting the program facilities. Then this reviewer will provide the program with a detailed report about strength and recommendation for improvements, which will be used by program director to enhance the quality of educational process.

To ensure the quality of the Biology program, the program must be subject to external audit (independent opinion) periodically - at least once - to ensure the quality of program specification, the courses and their reports, and the results of the internal evaluations by the program (once with each full program cycle). The program is subject to external audit once the completion of the self-evaluation and writing a self-study report before applying for program accreditation (once every 3-4 years).

# Phase III: Check

The external auditors (**independent opinion**) should be selected with expertise from the same specialization, preferably from accredited programs or participated in accreditation processes for similar programs (peer evaluators). In their selection, the following conditions should be met:

- 1- Experience
- 2- Recognition: The evaluated program recognizes the importance of their role in the development process.
- 3- Independence: It is essential that the assessors be completely independent of the educational institution being reviewed so that there is no conflict of interest.
- 4- Familiarity with the national standards for accreditation for the program.

# Phase III: Check

## External Audit Mechanisms

**1-The external auditor is obligated to review all of the program specification, course specification, and program and courses reports.**

- The External Auditor must write his report within two - three weeks of the date of receiving the program documents (program specification, course specification, program, and courses reports.)
- Conducting 1-3 site visits as needed; To view the facilities and equipment at the program site and provide technical support.

# Phase III: Check

## External Audit Mechanisms

**2-The external auditor must review to review the report of the self-evaluation and the report Self-study report.**

- The self-study report must be sent to external reviewer to write the independent opinion.
- The External Auditor must complete the independent opinion report within two weeks of sending the program's self-evaluation metrics report.
- The external auditor must complete the independent opinion report within two to three weeks of the date of sending the self-study report
- Conducting 1-3 site visits as needed; To view the facilities and equipment at the program site and provide technical support.

# Phase IV: Act

Cycle of Measuring the outcomes and Evaluation of Biology programs

Program Learning outcomes are specific sentences written in SMART way to demonstrate the Knowledge, skills and competences that student will gain by completing the program which is reflected in the graduate attributes. Program Learning outcomes are fulfilled by the courses Learning Outcomes which are written in the same way.

Assessment of PLOs and CLOs should be aligned with assessment of graduate attributes. In other words, results of PLOs & CLOs assessment should be used as indicators of the extent to which program's graduate attributes are achieved.

**Program Learning Outcomes measurement/assessment tools include both direct and indirect tools may include:**

1. Results of self-evaluation scales, which should depend on evaluations by focus groups including students, faculty, employers, alumni and other stakeholder when preparing the self-study report.
2. Benchmarking which is used to compare program outcomes and some external benchmarks



# Phase IV: Act

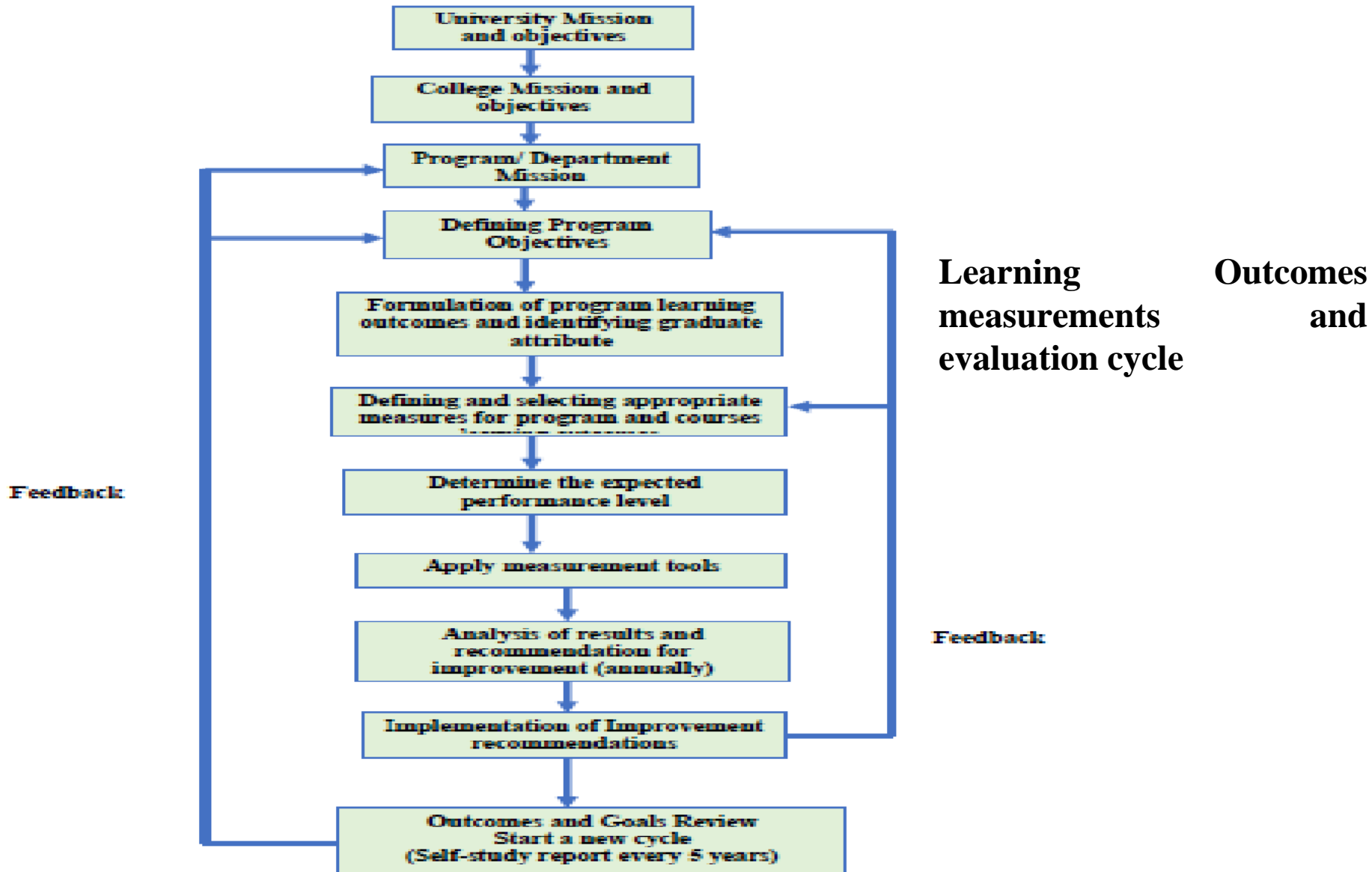
3. Independent evaluation of external reviewers.
4. Questionnaires completed by students, graduates and employers, including:
  - Course survey
  - Student experience survey
  - Program survey
  - Alumni survey
  - Employers survey
5. Performance Indicators
6. Use of Rubrics (a clear, gradual set of criteria to assess the achievement of learning objectives and learning outcomes) at the program level.
7. Direct assessment methods e.g. exams, exist exams, student portfolios

# Phase IV: Act



## Student Learning Assessment

# Phase IV: Act



# **Phase IV: Act**

## **Key Performance Indicators for Biology program**

# Phase IV: Act

## **Key Performance indicators:**

They are specific forms of evidence used by the college and to provide evidence of quality performance. The basic performance indicators are one of the most important tools for assessing the quality of academic programs according to the criteria and rules of the National Center for Academic Assessment and Accreditation, and are among the most prominent practices that contribute to decision-making and follow-up processes and continuous development and improvement.

# Phase IV: Act

## Key Performance indicators:

The performance indicators are used in the academic program in the following:

- 1 . Operational plan for the academic program.
- 2 . Specification of programs and courses
- 3 . Program and course reports
- 4 . Annual reports
- 5 . Self-Auditing scales
- 6 . Self-study
- 7 . Operational action plans for development and improvement

# Phase IV: Act

So, the Jouf University updated the list of main indicators for academic programs at the university and approved it at the beginning of the academic year 1439-1440 AH. A main indicator for monitoring performance at the programmatic level of the postgraduate stage in 1439, all of which agree with the developed program accreditation standards, and these indicators are the minimum required to be measured periodically. Furthermore the National Center for Academic Accreditation and Assessment also made it possible to use additional performance indicators if the program saw the need to do so to ensure quality. Accordingly, Jouf University used a number of additional performance indicators for each of the health programs, scientific programs, humanitarian and theoretical programs

# Phase IV: Act

## Types of KPIs used:

### ✓ Input KPIs

- 1- The program's operational plan.
- 2- Infrastructure.
- 3- Technologies, equipment and learning resources.
- 4- The scientific Staff.
- 5- Students.
- 6- Regulations and activities.
- 7- Financing.



# Phase IV: Act

## Types of KPIs used:

### ✓ Operations Performance Indicators

- Educational processes (teaching and learning processes, programs, courses).
- Administrative and organizational processes.
- Material services (support).
- Scientific activities in academic programs at the university

# Phase IV: Act


## Types of KPIs used:

### ✓ Output Performance Indicators

- The quality of academic outputs (learning and employment).
- Satisfaction of the beneficiaries (internal and external).
- Scientific Research .
- Community Service .

## ❖ **Methodology to determine the new targets**

- The program measures key performance indicators with benchmarking using appropriate tools, such as: opinion polls, statistical data .... etc. according to the nature and purpose of each indicator, as well as determining the following values for each indicator:
- Actual performance level.
- Target level of performance.
- The level of internal benchmarking (internal benchmarking).
- The level of external benchmark performance (external benchmarking).
- The new target performance level.
- This results in a report describing and analyzing the results of each indicator (including performance changes and comparisons according to the decisions), and an accurate and objective identification of strengths and aspects that need improvement.

- 
- The questionnaires prepared by the Measurement and Evaluation Unit were used in both parts for the purpose of measuring the indicators adopted by the university, and they were made available electronically.

## **Key Performance Indicators**

- The program accreditation standards document included six standards covering the main program activities: mission and objectives, program management and quality assurance, teaching and learning, demand, faculty, learning resources, facilities and equipment, and a number of criteria are included under each of these standards that reflect the level of quality in it.
- The table of key performance indicators issued by the National Center for Academic Accreditation and Assessment is used

# Phase IV: Act

## Institutional Key Performance Indicators

Standard	Code	Key Performance Indicators	Description
-1- Mission, Vision and Strategic Planning	KPI-I-01	Percentage of achieved indicators of the institution strategic plan objectives	Percentage of performance indicators of the strategic plan objectives of the institution that achieved the targeted annual level to the total number of indicators targeted for these objectives in the same year
-2- Governance, Leadership, and Management	KPI-I-02	Proportion of accredited programs	Proportion of programs with valid accreditation from approved accrediting bodies to the total number of programs in the institution
-3- Teaching and Learning	KPI-I-03	Students' evaluation of quality of learning experience in the programs	Average of overall rating of final year students for the quality of learning experience in the programs on a five point scale in an annual survey
	KPI-I-04	First-year students retention rate	Percentage of first-year undergraduate students who continue at the institution the next year to the total number of first-year students in the same year
	KPI-I-05	Graduates' employability and enrolment in postgraduate programs	Percentage in the of graduates from undergraduate programs who within a year of graduation were: a. employed b. enrolled in postgraduate programs during the first year of their graduation to the total number of graduates same year
	KPI-I-06	Graduation rate for Undergraduate Students in the specified period	Percentage of undergraduate students who completed the programs during the specified period in each cohort
	KPI-I-07	Satisfaction of beneficiaries with learning resources	Average of beneficiaries' satisfaction rate with learning resources on a five point scale in an annual survey in terms of: a. Their adequacy and diversity (references, journals, databases... etc.) b. The support services provided for their utilization.
	KPI-I-08	Employers' evaluation of the institution graduates proficiency	Average of overall rating of employers for the proficiency of the institution graduates on a five-point scale in an annual survey

# Phase IV: Act

## Institutional Key Performance Indicators

Standard	Code	Key Performance Indicators	Description
-4- Students	KPI-I-09	Annual expenditure rate per student	Average of annual operating expenditure per student (total operating expenditure - other than accommodation and student allowances - to the total number of students)
	KPI-I-10	Students' satisfaction with the offered services	Average of students' satisfaction rate with the various services offered by the institution (restaurants, transport, sports facilities, academic advising, ...) on a five-point scale in an annual survey
-5- Faculty and Staff	KPI-I-11	Ratio of students to teaching staff	Ratio of the total number of students to the total number of full-time or full-time equivalent teaching staff - for the institution as a whole and for each program separately
	KPI-I-12	Proportion of faculty members with doctoral qualifications	Percentage of faculty members with verified doctoral qualifications to the total number of teaching staff at the level of: a. Institution b. Each branch
	KPI-I-13	Proportion of teaching staff leaving the institution	Percentage of teaching staff leaving the institution annually for reasons other than age retirement to the total number of teaching staff.
-6- Institutional Resources	KPI-I-14	Percentage of self-income of the institution	Percentage of self-income of the institution to the total income of the institution
	KPI-I-15	Satisfaction of beneficiaries with technical services	Average of beneficiaries' satisfaction rate with technical services...) on a five-point scale in an annual survey in terms of: a. Suitability. b. Safety and confidentiality. c. Availability and ease of access. d. Maintenance and support services.
-7- Scientific Research and Innovation	KPI-I-16	Percentage of publications of faculty members	Percentage of full-time faculty members who published at least one research during the year to total faculty members in the institution

## Institutional Key Performance Indicators

Standard	Code	Key Performance Indicators	Description
<b>-8- Community Partnership</b>	KPI-I-17	<b>Rate of published research per faculty member</b>	The average number of refereed and/or published research per each faculty member during the year (total number of refereed and/or published research to the total number of fulltime or equivalent faculty members during the year)
	KPI-I-18	<b>Citations rate in refereed journals per faculty member</b>	The average number of citations in refereed journals from published research per faculty member in the institution (total number of citations in refereed journals from published research for full-time or equivalent faculty members to the total research published)
	KPI-I-19	<b>Number of patents, innovations, and awards of excellence</b>	Number of: a. Patents and innovations b. Awards of excellence obtained by the institution's staff annually
	KPI-I-20	<b>Proportion of the budget dedicated to research</b>	Proportion of the budget dedicated to research to the total budget of the institution
	KPI-I-21	<b>Proportion of external funding for research</b>	Proportion of research external funding to the total budget of research during year
	KPI-I-22	<b>Satisfaction of beneficiaries with the community services</b>	Average of beneficiaries' satisfaction rate with the community services provided by the institution on a fivepoint scale in an annual survey
	KPI-I-23	<b>Rate of community programs and initiatives</b>	Average community programs and initiatives provided by each academic program during the year (total number of community programs and initiatives provided to total number of academic programs)



# **Quality Systems in Biology Program**





## Quality Systems in Biology Program

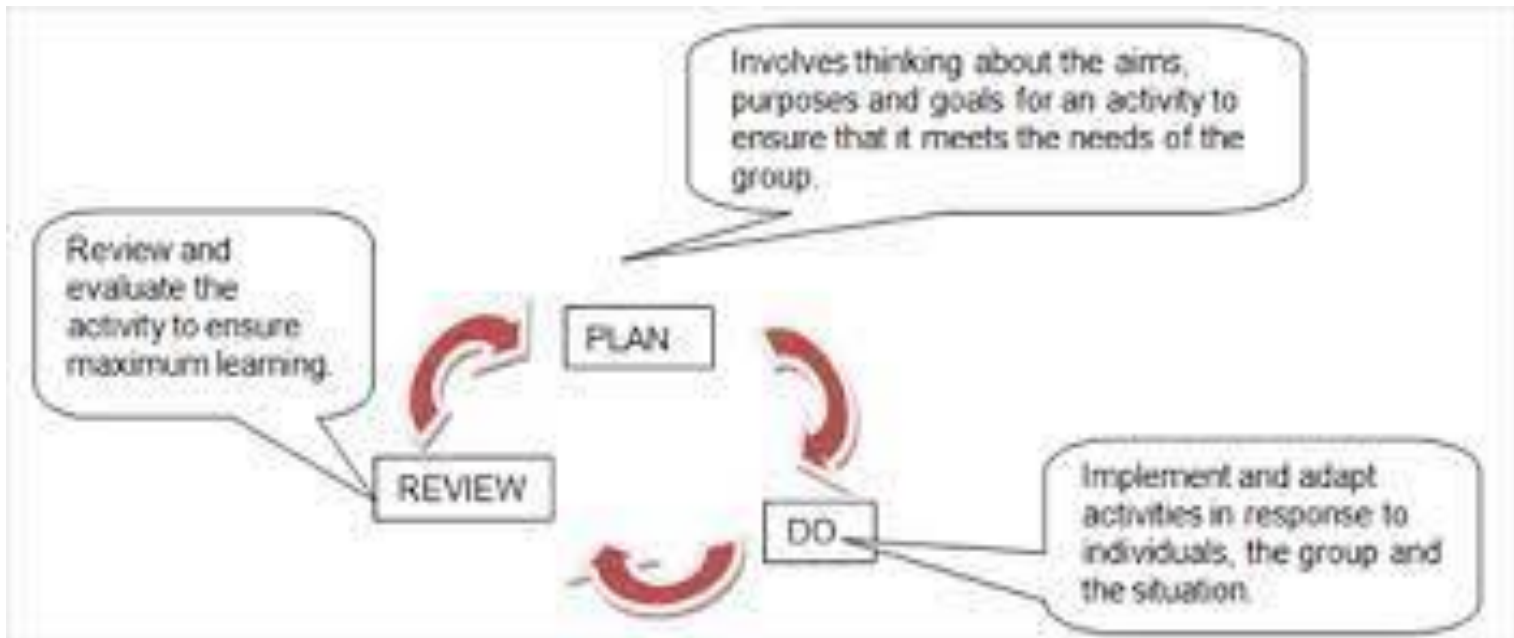
After PDCA continues improvement cycle we could say that Quality assurance in the educational system is continues process of planning and assessment to ensure reaching quality in the educational process. Emphasizing the quality of the educational process requires studying all aspects, activities and steps of the process and achieving quality in each. This requires the following:

- Clarity and transparency of all academic programs, providing clear and accurate information to internal and external (relevant) stakeholders.
- Defining clear and precise objectives for the academic programs offered by the College which must be consistent with the mission of these programs and which must be in accordance with the College's mission.
- Ensuring that the necessary conditions are met to achieve the objectives of the academic programs effectively and continue to maintain them.
- Ensuring that academic program learning outcomes are consistent with labor market requirements and meet community needs.
- Ensuring that academic programs meet the requirements of academic accreditation, whether these are required by the National Center for Academic Accreditation and Assessment (NCAAA) or by Dean Ship of quality and development
- § Strengthening bridge of cooperation with the community, and improving the quality of services provided by the college to the community.

## Quality Systems in Biology Program

Commitment of all faculty members and their involvement in quality assurance processes, and their active participation in all activities.

### Planning and review cycle:





## ❖ **Time frame for some periodic activities for quality and accreditation work**

- Quality practices and operations are carried out according to a recurring time cycle, and the duration of the cycle is according to the nature of the activity. The process is several years, such as self-study for example.

# Task Plan Table for Biology Program

Task	Time	Responsibility	Repetition	Description
<b>Program Annual Report</b>	By the end of the Academic Year/16W	Program	Every year	Using NCAAA updated form
<b>Course Report</b>	By the end of the semester	Program	Every semester	Using NCAAA updated form
<b>Course evaluation survey</b>	Academic Year/16W	Program	Every semester	Results of evaluation should be requested every semester
<b>Program evaluation survey</b>	12W	Program	Every semester	Results of evaluation should be requested every semester
<b>Experience evaluation survey</b>	12W	Program	Every semester	Results of evaluation should be requested every semester
<b>KPIs determination and measurements Report</b>	14W-16W	Program	Every year	Program KPIs should be measured

# Task Plan Table for Biology Program

Task	Time	Responsibility	Repetition	Description
<b>Advisory Board (meetings)</b>	1W-16W	Program	Every semester	The quality committee
<b>Self-Study report (SSR)</b>	4 years	Program	Every 4 year	The quality committee
<b>Self-Evaluation Report</b>	Academic Year	Program	Every two Years	Using NCAAA updated form
<b>External Audit</b>	4 years	Program	Every 4 year	The quality committee
<b>Benchmarking</b>	Academic Year	Program	Every Year	Using NCAAA updated form
<b>Review course/program files</b>	Academic Year	Program	Every Year	The Program Review Committee

# Improve



# 1- Academic Program Improvement Process

All improvement processes are based on PDCA (Plan – Do – Check - Act)

## A. Program Improvement

### a. Development Plan [Regularly]

Purpose: Development plan for continues improvement of the programs.

Policy: All feedback reports must be considered for continues development

Responsibility: Follow-Up Coordinator, Strategic Planning Committee and HOD.

Flow Chart

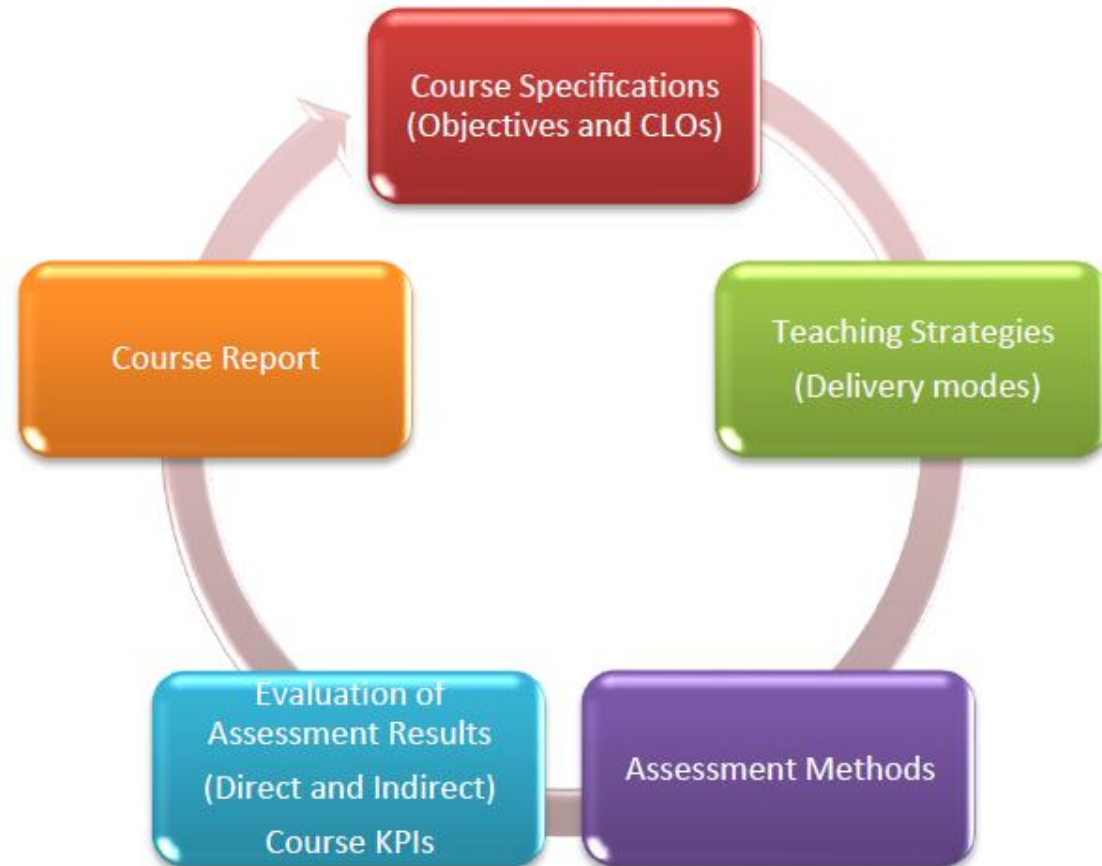


# 1- Academic Program Improvement Process

## Feedback Report:

- Annual Program Report
- Internal Review/ External Review/ KPI Report/ Board of Advisor feedback
- Course Reports
- Annual Department Report
- Any report during the semester
- **Forms:**
- Report Records
- Follow-Up Table

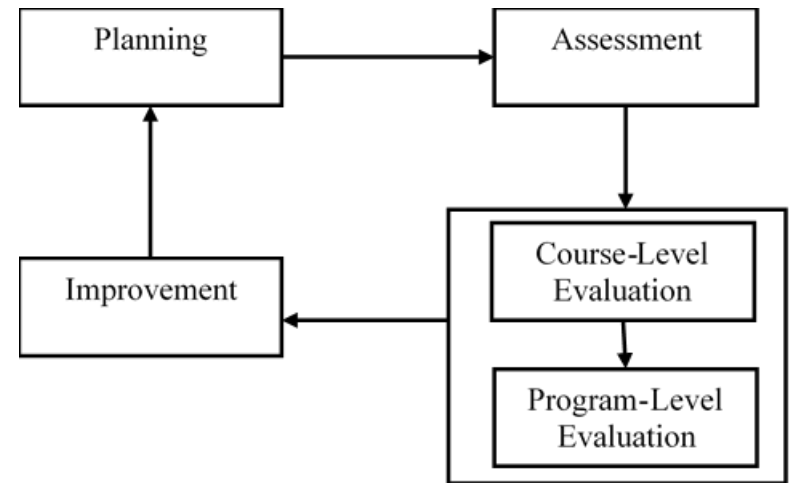
## • b. Course Improvement Process (Annually)





# 1- Academic Program Improvement Process

The program objectives set a guideline for program learning outcomes, curriculum development, and teaching procedure. To ensure achievement of the program learning outcomes, a variety of assessment tools as discussed were used. The level of assessment and evaluation process is conducted at the end of every semester, and the results of this assessment process are used to improve the educational process to achieve the targeted program learning outcomes. The process is summarized below which depicts the assessment and evaluation process and hence closing the loop, of program learning outcomes. Note that evaluation is made at two different levels, course-level and program level. The outcome of the evaluation is utilized as feedback for improvement and incorporated into planning to enhance the overall attainment of Program Learning Outcomes.



**Assessment and Evaluation Process for Closing the Loop Planning:**

# 1- Academic Program Improvement Process

## B. Program Improvement Process [3-5 Years]



# 2- Quality Assurance Process

## **A. Bi-annual Quality Assurance Auditing**

### **a. Program Quality Assurance Committee**

Quality Assurance Committee in each program is responsible of performing a regular check on the quality of documents and services provided by the program. This is carried once each semester using approved forms by the Vice-deanship of Quality and Development. These forms are used to evaluate the quality of the important documents and reports such as course reports, course specification and annual program report.

### **b. Quality Assurance Unit**

Quality Assurance Unit (QAU) at Vice-deanship of Quality and Development performs a bi-annual review to make sure that quality of documents and services provided by programs meet the predetermined standards. For this purpose, QAU review the documents, ask for evidences, check programs facilities, and arrange meetings with different beneficiaries to evaluate the quality of documents and services provided by the programs in the College of Science.

## **B. Annual Internal Review**

This is the second reviewing process, which is an annual review and more comprehensive than the bi-annual Quality Assurance Auditing. The internal review process is carried out once per year under supervision of the Vice-Dean of Quality and Development for the main purposes of assessing and evaluating the quality of services offered by academic programs in the College of Engineering. In addition, the review checks also the readiness of programs for academic accreditation.

## 2- Quality Assurance Process

The review team members of internal review process includes the Vice-Dean of Quality and Development, the Coordinator of Academic Accreditation Unit, the Coordinator of Assessment and Evaluation Unit, and Coordinator of Quality Assurance Unit. The internal review process is a comprehensive and focused review of all quality documents and all services provided by the programs. Detailed review reports are prepared with suggestions and recommendations to the concerned programs. These feedbacks are used by program coordinators in development plans to improve the services provided by their programs.

# 3- Procedures

## A. Assessment & Evaluation

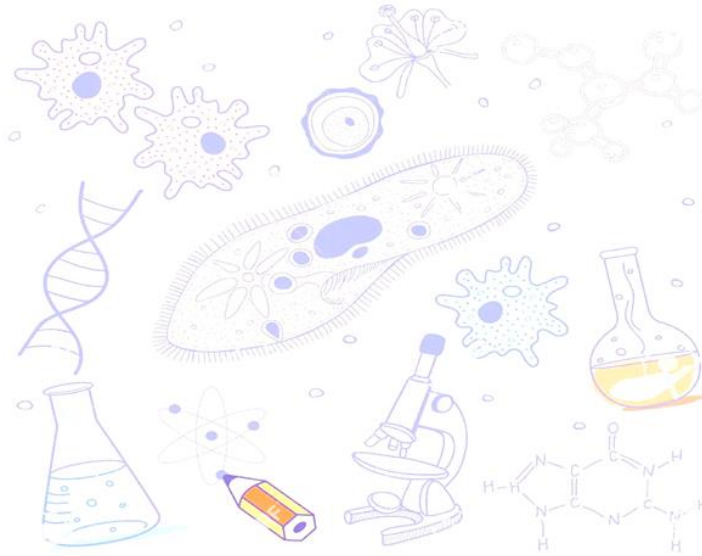
Purpose: To provide programs, units with analysis for further recommendations, writing action plans and for improvement issues.

Policy: To collect all data from reports, surveys results, comments, notes to analyze and writing recommendation

Responsibility: Assessment and Evaluation Unit (Committee)

Flow Chart





# Thank You !

<https://www.ju.edu.sa/en/colleges/science-college/college-of-science/departments/department-of-Biology/>