جامعة نجران
NAJRAN UNIVERSITY
كليــــة الصـــــيـدلــة

# Quality Management System

**College of Pharmacy**

**2024**

# NAJRAN UNIVERSITY

كلية الصيدلة

# Quality Management System

## College of Pharmacy

## 2024

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# I.  Introduction

Quality assurance is primarily an internal responsibility and depends mainly on the commitment and support of all those involved in an institution's administration, management, and teaching. The procedures and standards outlined by the National Center for Academic Accreditation and EvAluation (NCAAA) are based on expectations that the institutions will accept that responsibility and take appropriate action to ensure the achievement of high quality. This Handbook is intended to guide and support those processes.

The quality of higher education must be verified by independent processes that can assure everyone concerned that high levels of quality are being achieved, including students, their families, and the wider community. Quality evaluations involve judgments about two main elements: the extent to which goals and objectives are achieved and the consistency with generally accepted standards of performance in higher education.

The process of improving quality involves assessing current performance levels and the environment in which the institution operates. Then, strategic priorities for improvement are identified, objectives are set, and plans are developed. After that, those plans are implemented, monitored, and adjustments are made if necessary. Finally, the results achieved are assessed, and changes are made if necessary. These steps involve a repeating cycle of planning and review.

Major plans may involve a sequence of activities over a number of years, with a number of steps to be taken and the results of each step assessed at stages within that longer-term plan. While the monitoring should be continuous, there are normally two time periods when more formal assessments take place; one is annual, with monitored performance and adjustments made as required, and one is on a longer cycle in which major reviews are undertaken. When applied to planning for quality improvement, some of the steps in this planning cycle have a special meaning. For example, the scan of the internal and external environment at the initial stage should include a thorough assessment of the current quality of performance and an analysis of constraints and opportunities for development.

A SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) can be a useful planning tool at this stage. A major development strategy will normally be phased in over a period of years, with implementation,

monitoring, and adjustments through action plans on an annual basis. It is important to periodically step back and carry out a thorough, review of an institution's relevance and effectiveness and to review a program's appropriateness and effectiveness periodically.

The quality loop concept is considered one of the modern administrative methods that seek to sense weaknesses and achieve high-quality performance. Implementation of quality loop closure facilitates early detection of problems, analyzing them, and proposing solutions, which contribute to making appropriate corrective decisions to address them. The benefits of the implementation of quality loop closure:

- Early identification of defects.
- Provide the guidelines for improvement planning and corrective procedures.
- Follow up on the implementation of the improvement plan and corrective procedures.
- Evaluation of the outcome of implementing the improvement plan and corrective procedures.

This booklet contains the quality management policies of the Pharmaceutical Sciences program in addition to the introduction of the organizational structure, work functions, and duties. The powers and tasks in this booklet are based on the unified list of development and quality units at the University of Najran (in Arabic). The booklet also includes the program policies for measuring Program Learning Outcomes (PLOs) and closing the quality loops. In addition, the policy in this booklet ensures that the program management approves the key performance indicators that accurately measure the program performance and provide regular data on the program. Furthermore, the booklet shows how the program analyzes the evaluation data annually (selecting performance indicators and benchmarking data, student progress, program completion rates, student evaluations of the program, courses, and services, and views of graduates and employers); and results are used in planning, development, and decision-making processes.

# II. Brief description of Najran University

Najran University is a public university established on November 1, 2006. It has 14 colleges on its main campus and on the Sharura campus. The University offers Bachelor's degrees in all its college programs and Master's degrees in some programs. It has about 20,000 students.

Najran University campus has many facilities for students and faculty services, including a spacious restaurant and many coffee shops, printing services shops for students, sports complexes, and a football stadium. All the colleges and supportive deanships are located within the university campus.

- **University Vision statement:**

Leadership in teaching, learning, and scientific research to build an innovative and internationally competitive knowledge society.

- **University Mission statement:**

Providing distinguished education and producing competitive scientific research that contributes to developing the knowledge economy, and building effective community partnerships by strengthening institutional governance that supports creativity and national values.

- **University Values:**

Leadership, Responsibility, Integrity, Transparency, Excellence, Empowerment, Creativity, Moderation, Affiliation, Honesty.

# University organizational chart

الهيكل التنظيمي للجامعة في ضوء قرار مجلس شؤون الجامعات
رقم (٢-١٦-٤٥) بتاريخ ١٤٤٥/٢/١٤هـ



**مجلس الجامعة**

**رئيس الجامعة**

| | |
|---|---|
| عمادة التطوير والجودة | مكتب رئيس الجامعة |
| الإدارة القانونية | الإدارة العامة للاتصال المؤسسي |
| وحدة قياس الأداء | إدارة الأمن السيبراني |
| وحدة المراجعة الداخلية | وحدة التوعية الفكرية |
| مكتب تحقيق الرؤية | مكتب إدارة البيانات |

**وكالة الجامعة للشؤون التعليمية**

| | |
|---|---|
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| كلية الصيدلة | كلية التربية |
| كلية طب الأسنان | كلية إدارة الأعمال |
| كلية العلوم الطبية والتطبيقية | كلية الهندسة |
| كلية التمريض | كلية علوم الحاسب ونظم المعلومات |
| كلية اللغات والترجمة | الكلية التطبيقية بنجران |
| عمادة القبول والتسجيل | الكلية التطبيقية بشرورة |
| عمادة السنة التحضيرية | عمادة شؤون الطلاب |
| | إدارة التوجيه والإرشاد الطلابي |

**وكالة الجامعة للدراسات العليا والبحث العلمي**

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|---|---|
| المجلس العلمي | أمانة مجلس الجامعة |
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| مركز البحوث الصحية | مركز البحوث العلمية والهندسية |
| إدارة الترجمة والنشر | مركز البحوث الشرعية والتربوية والانسانية |
| إدارة الابتعاث | إدارة الكراسي البحثية |
| إدارة المجلات والجمعيات العلمية | إدارة التعاون والاتفاقيات الدولية |
| وحدة الوقاية من الاشعاع | إدارة التقنية وريادة الأعمال |
| وحدة البحث والتطوير والابتكار | وحدة التصنيفات العالمية |

**وكالة الجامعة للأعمال والاستثمار**

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| معهد الدراسات والخدمات الاستشارية | عمادة التحول الرقمي ومصادر المعرفة |
| مركز الوثائق والمحفوظات | الإدارة العامة للموارد البشرية |
| الإدارة العامة للشؤون المالية | الإدارة العامة للمشاريع والصيانة والمرافق |
| الإدارة العامة للخدمات المساندة | إدارة إسكان أعضاء هيئة التدريس والموظفين |
| إدارة الاستثمار والأوقاف وتنمية الموارد | إدارة المسؤولية المجتمعية |
| إدارة الاتصالات الإدارية | مكتب تحقيق كفاءة الإنفاق |
| وحدة مخاطر الأصول والأنشطة والتأمين | مركز رعاية المستفيدين |

Figure 1. University organizational chart

## III. Brief description of the College of Pharmacy at Najran University

The higher education council's decision on 2/6/1428 AH (June 17, 2007) was to launch the College of Pharmacy at Najran University. The college offered a Bachelor of Pharmaceutical Sciences degree (B.Sc. Pharm. Sci.).
The College of Pharmacy is located within the Najran University campus. It has a fascinating building contains many classrooms and laboratories and two large auditoriums that can hold up to 120 occupants. The building also has several teaching and research laboratories that are used for teaching students and performing research as well. Also, many facilities are used to service the students and faculty members, including a spacious mosque, a spacious library and study room, and a cafeteria. Faculty members have their own offices that are equipped with modern computers and are accessible to nearby printers.

### The College Vision

To achieve leadership in education, research, and community services in pharmacy according to local, regional, and international standards.

### The College Mission

To improve the pharmacy profession through innovative teaching and learning practices, conduct scientific research, and offer professional services to the community.

### College of Pharmacy Goals

1. Developing the college's organizational environment to support innovation and human resource development.
2. Enhancing learning outcomes to meet the needs of the labor market by preparing qualified and competitive pharmacists.
3. Advancing scientific research that supports innovation, development, and problem-solving.
4. Introducing postgraduate programs that meet the demands of the labor market.
5. Contributing to improving patient healthcare and promoting continuous and effective commitment to community service

## College of Pharmacy Values

Leadership, Responsibility, Integrity, Transparency, Excellence, Empowerment, Creativity, Moderation, Affiliation , Honesty.

## Bachelor of Pharmaceutical Sciences program Mission

Preparing qualified and professional pharmacists who are able to compete in the labor market and contribute to the improvement of health care and scientific research.

## Bachelor of Pharmaceutical Sciences program Goals

1. To provide students with basic knowledge and concepts in the pharmaceutical field and related sciences.
2. To provide students with basic skills for professional pharmacy practice.
3. To improve health care for the community.
4. To develop the students' skills in scientific pharmaceutical research.
5. To improve students' career opportunities through pharmaceutical field training

# College of Pharmacy Organization Structure

**College Council**

**College Dean**

Information and Public Relations Unit

Student's Advisory Council

Dean's Office

College Advisory Committee

Disciplinary and Grievances Committee

| College Vice-Deanship for Academic Affairs | College Vice-Deanship for Development and Quality | Scientific Departments | College Administration |
|---|---|---|---|
| Academic Affairs Unit | Development and Quality Unit | Clinical Pharmacy Department | Human Resources Unit |
| Student's Affairs Unit | Academic Accreditation Committee | Pharmacology Department | Financial Affairs Unit |
| Academic Advising Unit | Planning and Follow-up Committee | Pharmaceutics Department | Central Telecommunication Unit |
| Graduates and Field Training Unit | Teaching and Learning Committee | Pharmaceutical Chemistry Department | Technical Support and IT Unit |
| Student's Activities Unit | Performance Measurement Committee | Pharmacognosy Department | Support Services Unit |
| Learning Resources Unit | Skills Development Committee | | Warehouse and Custodies Unit |
| Scientific Research Unit | Community Services Unit | | |
| Transfer Course Equivalency Committee | Laboratories and Facilities Unit | | |
| Curriculum Committee | Safety and Security Unit | | |
| Student Excuses Committee | Internal Audit Committee | | |
| Schedules and Exams Committee | | | |
| Progress Tests and Exit Exam Committee | | | |

Figure 2. Organizational structure and governance of College of Pharmacy- Najran University.

The college Dean is the head of the college council, which consists of the vice dean for academic affairs, the vice dean for development and quality, and the heads of departments for the five college departments. The college council discusses and manages the college's scientific, administrative, and financial affairs. The University president approves the College council's decisions.

The department councils discuss and manage the department's scientific, administrative, and financial affairs and assure the development and quality of department course topics. The college dean approves the department council's decisions.

- **Departmental structure of the college: the college has five different departments:**
  1- Clinical Pharmacy Department.
  2- Pharmacology Department.
  3- Pharmaceutics Department.
  4- Pharmaceutical Chemistry Department.
  5- Pharmacognosy Department.

## IV.Development and Quality Unit at the College of Pharmacy

The development and quality unit oversees and reviews the plans, policies, and procedures of the program's quality assurance system and ensures that it's implemented efficiently and effectively at all levels.

- **Development and Quality Unit Vision:**
  To ensure overall quality, continuous improvement plans are applied to guarantee that the program's quality assurance system achieves leadership in education, research, and community services.

- **Development and Quality Unit Mission:**
  Achieving academic, research, and administrative excellence and serving the community by the college through strengthening the internal quality system and supporting academic programs to obtain national and international accreditations.
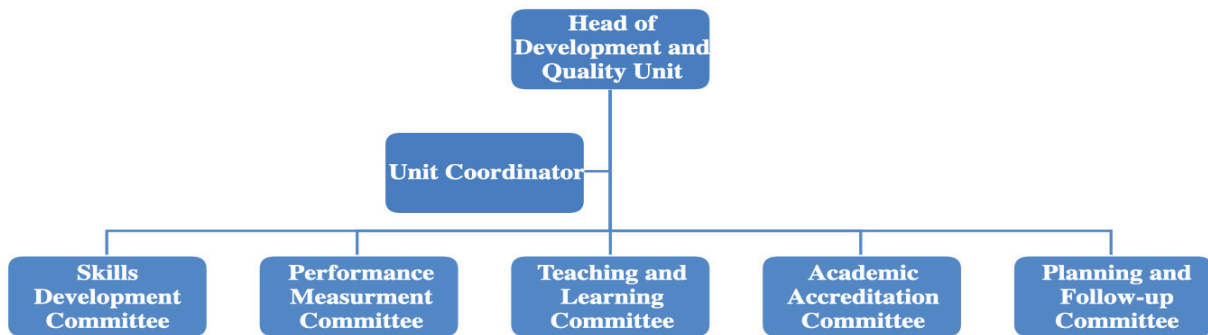
## Development and Quality Unit Objectives:

1. Establishing a quality culture within the framework of academic and administrative work among the faculty members.

2. Upgrading the quality of academic programs in the College of Pharmacy to meet the mission of the college and the university.

3. Enhance internal monitoring and evaluation systems in the teaching and learning process within the university's unified system.

4. Managing data and information that meets the requirements of continuous evaluation and improvement.

5. Supporting the college's programs to obtain specialized academic accreditation, whether locally or internationally.

6. Upgrading the training system for the academic and administrative cadres to enhance the quality management system in the College of Pharmacy.

7. Support the College of Pharmacy in performing its social responsibility.

## Development and Quality Unit functions:

1. Spreading awareness and promoting a culture of quality among all faculty employees.

2. Follow up on implementing the college's development and operational plans.

3. Follow up on implementing the university's strategic plan activities and projects.

4. Follow up the creation of integrated databases to evaluate performance and ensure quality in the college.

5. Follow up on the performance evaluation and development activities in the college's various scientific and administrative departments.

6. Continuous communication with the Deanship of Development and Quality and its various units to coordinate the implementation of development and quality activities.

7. Providing technical support to the scientific departments and various departments of the college with regard to development, quality, and accreditation requirements.

The Vice-Dean for Development and Quality is the head of the Development and Quality Unit. He is responsible for assuring that all unit objectives are achieved. The unit coordinator is responsible for coordinating the unit meetings and collecting of all documentations required for the quality assurance

## ▪ Development and Quality Unit flow chart



**Figure 3.** Development and quality unit flow chart

The development and quality Unit (which is chaired by the college dean) monitors and ensures applying the best quality criteria in the different activities that are carried out within the program by periodical measurement of various quality loop elements (i.e., Inputs, Processes, Outputs); depending on specific key performance indicators (KPIs), in order to provide the necessary data required, to the program managers and authorities to help in decision making, and future planning for improvement and development.

## ▪ Responsibility of the main committees

The Development and quality unit consists of five committees responsible for monitoring the adoption of best practices and quality assurance of performance in the program accreditation standards for program accreditation developed by the National Center for Academic Accreditation and Assessment (NCAAA), which are as follows:

### Planning and Follow-up Committee

1. Participate in preparing the annual operational plan for the college and program.
2. Participate in preparing the annual plan for the faculty development and quality unit according to the scope of specialization.
3. Promote the concept of operational planning among college employees.
4. Follow up on updating the faculty mission and programs according to the following systems and mechanisms.
5. Follow up on achieving the goals of the programs and the college according to the approved models and provide feedback.

6. Follow up on the implementation of the college's operation plan.

7. Follow up on implementing the development projects of the university's strategic plan.

8. Follow up on the performance of the internal quality systems in the programs and provide the necessary advice.

9. Qualifying the internal auditors in the college to conduct internal reviews on quality systems.

10. The internal review of the quality systems in the college's academic programs and the provision of feedback.

11. Coordinate with the Performance Measurement Committee to develop performance indicators.

12. Designing follow-up forms for all approved plans that the college units implement.

13. Follow up improvement plans for all academic and administrative units of the college based on performance indicators.

14. Executing the work, tasks, terms of reference, and plans and achieving the committee's objectives.

15. Prepare a monthly report on the committee's work and submit it to the Head of the DQU.

## II. Academic Accreditation Committee

1. Drawing up plans and policies for academic accreditation in the college in light of the university's academic accreditation plans and policies.

2. Establishing a culture of accreditation and spreading it in the college community.

3. Communicate with the Academic Accreditation Unit at the Deanship of Development and Quality within the jurisdiction.

4. Follow up on completing academic accreditation files for all programs and provide technical support.

5. Prepare a monthly report on the committee's work and submit it to the Head of the DQU.

## III. Teaching and Learning Committee

1. Follow up and coordinate with the quality coordinators in the various college programs regarding fulfilling the teaching and learning standards requirements.

2. Follow up on the development and improvement of teaching and learning requirements and equipment, such as libraries, laboratories, classrooms, and Internet halls, in various programs.

3. Follow up on the development and improvement of academic support counseling and student services and preparing annual reports for them.

4. Review study plans, program and course descriptions and reports, and comprehensive reports on course reports for

academic programs to ensure that they fulfill the terms of the standard forms for the Teaching and Learning Unit of the Deanship of Development and Quality.

## IV. Performance Measurement Committee

1. Preparing measurement tools (scales, questionnaires, and note cards) required for the internal evaluation processes in the College of Pharmacy.
2. Evaluate the examination Papers for the semester and final courses and write reports on the quality of the tests according to the evaluation form.
3. Follow up the entry of faculty members, students, and college administrators on the university's website to complete standard questionnaires to assess performance indicators.
4. Prepare a monthly report on the committee's work and submit it to the Head of the DQU.

## V. Skills Development Committee

1. Preparing the annual plan for internal training in the College of Pharmacy according to the study of training needs in the college.
2. Establishing a database related to the training plans and services it provides in the areas of total quality in the college and others related to trainers, their CVs, and areas of excellence.
3. Measuring the training impact and making feedback reports according to the form prepared by the Skills Development Unit at the Deanship of Development and Quality.
4. Communicate with the Skills Development Unit at the Deanship of Development and Quality for coordination and follow-up.
5. Prepare a monthly report on the committee's work and submit it to the Head of the DQU.

The college's development and quality process aligns with the method that Najran University uses for improving quality. All forms and official processes are collected by the program from the deanship of development and quality. In addition, the program uses the resources that are provided by the deanship of development and quality, which includes human resources (expert consultants in the field of the program who give support to the program). Also, supporting multiple development and quality meetings and workshops for the program faculty members.

# V. Quality Management System (QMS)

A quality management system (QMS) in academia refers to a set of procedures, processes, and policies designed to ensure that educational institutions consistently deliver high-quality education and services. Implementing a QMS in academia can help institutions maintain standards, improve efficiency, and enhance student satisfaction. Some key components of a QMS in academia may include:

1. Documented procedures: Clearly defined processes and procedures for various academic functions such as curriculum development, student admissions, teaching methodologies, assessment methods, and administrative tasks.

2. Quality assurance mechanisms: Regular monitoring and evaluation of academic activities to ensure compliance with established standards and continuously improve processes.

3. Training and development: Providing faculty and staff with training and development opportunities to enhance their skills , which in turn can contribute to the overall quality of education.

4. Feedback and improvement processes: Seeking feedback from stakeholders such as students, parents, and industry partners to identify areas for improvement and implement corrective actions.

5. Compliance with regulations and standards: Ensuring the institution complies with relevant regulatory requirements and quality standards set by accreditation bodies in the education sector.

By implementing a robust QMS, academic institutions can enhance their reputation, attract more students, and ultimately contribute to the overall improvement of the education sector.
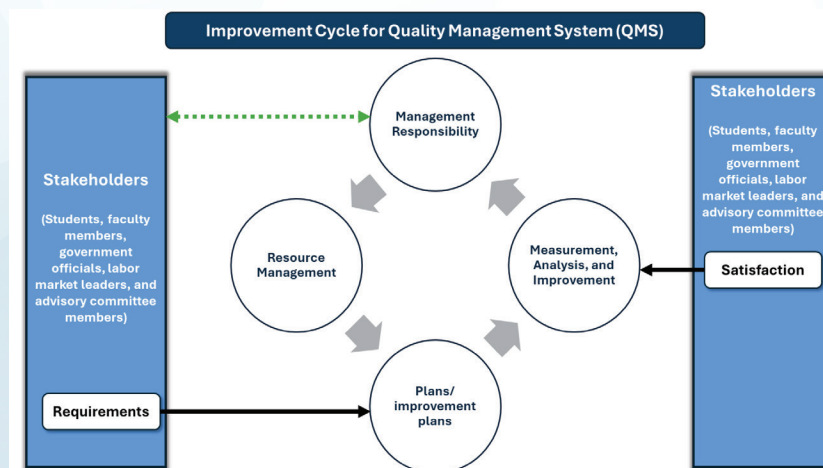


**Figure 4** Improvement Cycle for Quality Management System (QMS)

## ▪ Program Quality Review Cycle:

The following figure shows the continuous quality improvement cycle and how the process is reflected by collecting evidence and looking at course reports, analyzing the issues and evidence, and comparing the program performance against the key performance indicators or target benchmarks for the subject area. This should lead to program improvements. Hence, annual monitoring of programs and courses is the cornerstone of the quality assurance processes and leads to a review of every program's currency, ensuring the continuing relevance, appropriateness, and success of the award and student experience. The aims of the annual program and course reporting are:

- To evaluate the statistical information on student recruitment, grades, progression, completion, and appropriateness.
- To consider and respond to input and feedback from students, external accreditation bodies, and agents such as professionals.
- To reflect on the learning, teaching, and assessment strategies deployed and consider any recommendations for change.
- To review the appropriateness and effectiveness of the learning outcomes in securing the program aims and objectives.
- To recommend changes for improving the student learning experience or curriculum content.

The implementation of a systematic review of the Bachelor of Pharmaceutical Sciences program in the College of Pharmacy –Najran University is an essential element to evaluate the extension of the fulfillment of the program's Mission and level of achievement of the program's intended goals. While the monitoring should be continuous, there are normally two time periods when more formal assessments take place. The first assessment is performed annually with monitored performance and adjustments as required (as shown in Figure 5). The other review cycle is a longer cycle in which major and comprehensive reviews are undertaken every five years as decided by the College council.
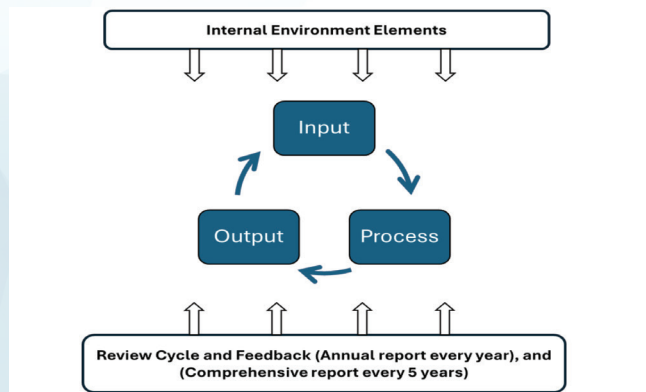


**Figure 5**. Program quality review cycle process.

The program quality review cycle ensures that all elements of quality assurance are included in the review cycle and are properly utilized. These elements are:

**1. Input:**

All resources that can be used by the educational institution to provide its programs.

**2. Processes:**

All policies and administrative procedures that take place within the educational institution in the planning, delivery and reviewing its programs.

**3. Outcomes:**

The results of the operations and activities of learning, teaching, and research activities of the educational institution.

**4. Internal environment:**

All environment tools that can affect on the program quality, which include laboratories and facility, safety and security standards, quality of faculty members, and all college units and councils.

**5. Feedback:**

Measurement of opinions for all stakeholders which include students, alumni, faculty members, employers, advisory committee members, etc.

**▪ The aims of systematic review:**

1.Determine the strengths and reinforce them.

2 Determine the areas for improvement and address them with suitable, effective acts.

3. Assure students, employers, and Najran district residents of the quality of the degree and certificate awarded by the program.

4. Assure that the educational program offered is relevant to the labor market needs.

5. Improve the quality of the program's scientific research and community services.

6. Provide information and feedback that can be utilized in programmatic mission and objectives setting and planning.

The primary purpose of the program review is to critically and systematically analyze the information relevant to the administration, quality of graduates, teaching and learning, student service, teaching staff and employees, scientific research, and community service issues.

# ▪ Comprehensive systematic program review:

This process is implemented every five years to align with the update of Najran University's strategic plan, when there is a need for deep programmatic revision to follow changes in employment requirements, or to implement a shift in institutional or national trends.

The process of improving quality involves assessing current levels of performance and the environment in which the institution is operating.

Then, priorities for improvement are identified, objectives are set, and plans are developed. After that, implementing those plans, monitoring what happens, and making necessary adjustments. Finally, the results achieved will be assessed, and changes will be made if necessary. These steps involve a repeating cycle of planning and review. Major plans may involve a sequence of activities over a number of years, with a number of steps to be taken and the results of each step assessed at stages within that longer-term plan.
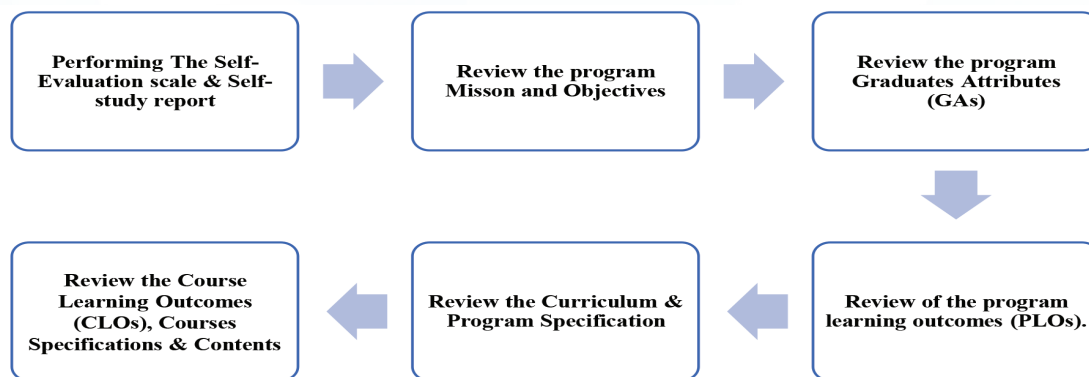


**Figure 6.** The flowchart for the sequences of the comprehensive systematic program review.

# ▪ Sequences of the comprehensive systematic program review:

The comprehensive systematic program review process uses multiple steps. It starts with Performing the Self-Evaluation scale and self-study report. Then, it reviews the program's Mission and Objectives, the program Graduate Attributes (GAs), the program learning outcomes (PLOs), the Curriculum and program Specification, and the Course Learning Outcomes (CLOs), Course Specifications, and contents as shown in Figure 6.

### Step 1: Perform self–evaluation scale and formulation of self-evaluation report and self-study report

When the program intends to perform a self-evaluation scale and its report, the dean forms a committee composed of faculty staff with experience in the NCAAA program accreditation standards (internal audit committee). The function of this committee is to perform the self-evaluation and finalize the self-evaluation report according to the program accreditation standard (five standards), which is guided by a self-evaluation scale template designed by the NCAAA; and attach various supporting evidence.

Training workshops will be provided to the committee members concerning the optimum methods for implementing the self-evaluation and report formulation. The college council approves the final committee report. Then, the college, in coordination with the university's Deanship for Development and Quality, assigns internal and independent reviewers to examine the score given to every domain and subdomain and the documents supporting this evaluation. The internal and/or independent reviewers have the right to modify the scores according to the adequacy (quality and quantity), and availability of the supporting evidence. Then, the final reviewer's report, including recommendations, will be approved and considered. This report is the skeleton of the self-study report.

### Step 2: Review of the program mission and objectives:

The development and quality unit is responsible for reviewing the mission and objectives. When the program intends to perform a review of the mission or objectives, the unit starts to conduct frequent meetings to collect and discuss data regarding the following:

1. The reviewed program mission.
2. The reviewed university mission.
3. The strategic plan for the university.
4. Benchmark program missions.
5. The Saudi Arabia 2030 vision.
6. The achievement report of the previous program mission includes the strengths, weaknesses, opportunities, threats, recommendations, areas for improvement, and obstacles.
7. The modern trend in pharmaceutical education.
8. The expectations from the program in the field of education, scientific research, and community service.

This unit has the right to request support from any individual, committee, unit, or department in the program through

the vice-deanship of development and quality. Moreover, it can request assistance or consultation from outside the program through the dean. The final statement of the program mission should be consistent with and in alignment with the university mission, and national trend (Vision 2030). The final statements of the program objectives should be consistent with the program mission and aligned with the college and university strategic objectives.

The program's mission and objectives amendments can be classified into two different methods, as shown in Figure 7.

### A.  Insignificant amendments:

This type of amendment includes changing some words of the mission statement and program objectives without any significant effect on the meaning or on the nature of activities mentioned in the mission and objectives. The reason for this type of amendment is to fix grammatical or spelling mistakes or to clarify the meaning by using different words. This type of amendment can be directly done by the development and quality unit. The new statement must be approved by the development and quality council and college council to be published for all stakeholders (faculty members, students, administrative staff, program alumni, employers, and pharmacy field experts).

### B. Significant amendments:

This type of amendment includes major changes in the phrasing of the mission statement and program objectives to reflect different activities and/or different perspectives for the program. This type must pass through the process of getting proposals and recommendations from both internal and external stakeholders, and it also requires development and quality council and college council approvals to be published for all stakeholders. If the college council refuses or has notes on the proposed mission statement and objectives, the development and quality unit must consider this and reform the mission statement and objectives to be submitted again for approval.

### Reviewing Processes

1.  At the beginning of each new cycle of the operation plan, the development and quality unit conducts environmental strengths, weaknesses, opportunities, and threats (SWOT) analysis to study and monitor changes in the internal and external environment, which could have an impact on the nature and activities of the program. The unit must submit its report to the development and quality council.

2. The development and quality unit reviews the program mission and objectives and proposes the new mission statement and objectives according to the SWOT analysis.

3. The new mission statement and objectives must be approved by both the development and quality council and college council to be published for all stakeholders.

4. After the approval of the new program mission and objectives, it must be posted, circulated, and published in all possible ways to make both internal and external stakeholders informed.

5. If no amendments or changes are proposed to the mission statement and program objectives, the mission and objectives must be reapproved by the college council.
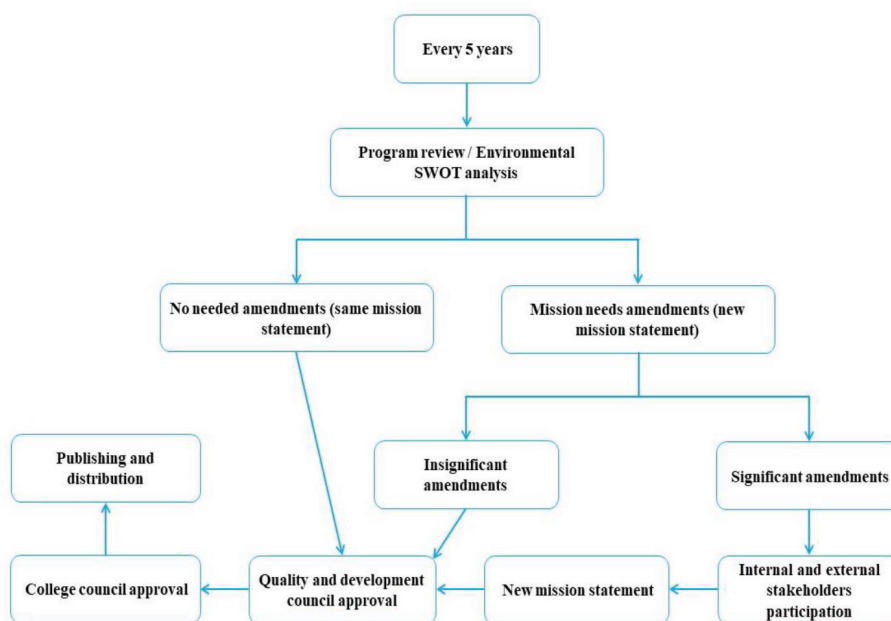


**Figure 7.** Summary of the procedures of the program mission and objectives review.

## Step 3: Review the program graduates' attributes (GAs).

The review of the program graduate attributes is the responsibility of the development and quality unit. In order to fulfil the educational part of the program's mission and its aligned objectives, the program will conduct a thorough review of the graduates' attributes. The graduate's attributes review should be consistent with the program mission, program objectives, and employment needs and aligned with the university graduate's attributes, National Qualification Framework (NQF).

### Step 4: Review the program learning outcomes (PLOs).

The review of the program learning outcomes is the responsibility of the development and quality unit. In order to provide the program graduates with the expected attributes, the program will conduct a thorough review of the program learning outcomes via the development and quality unit (teaching and learning committee). The learning outcomes reviewed should facilitate the achievement of the graduates' attributes and be consistent with the program mission, objectives, National Qualification Framework (NQF), and labor market needs.

### Step 5: Review the Curriculum & Program Specification

### 1. Program Development Process (Approval and Changes)

Programs are planned as coherent packages of learning experiences in which all courses contribute in planned ways to the intended learning outcomes for the program.

1- Preparation of specifications for all the programs at Najran University, including teaching and assessment strategies, based on the NCAAA template.

2- Preparation of course specifications for all the programs at Najran University, including teaching and assessment strategies, based on the NCAAA template.

3- All the programs must provide students with the knowledge and skills they need in accordance with the mission of the university.

4- Faculty members must be trained on modern teaching strategies, effective teaching skills, exam systems, students' assessments, and measurement of learning outcomes.

5- The amendment of programs or establishment of new ones is always related to society's needs, the job market requirements, and the developments in the majors, as well as in response to improvement plans.

6- The establishment of new programs also requires the provision of financial and human resources, and an informational survey of similar programs, and it should be in compliance with the national qualifications framework.

7- A comprehensive review of the programs must be done every five years.

8- The process of establishing new programs' study plans or modification of the current programs' study plans is done according to the steps shown in Figure 8.
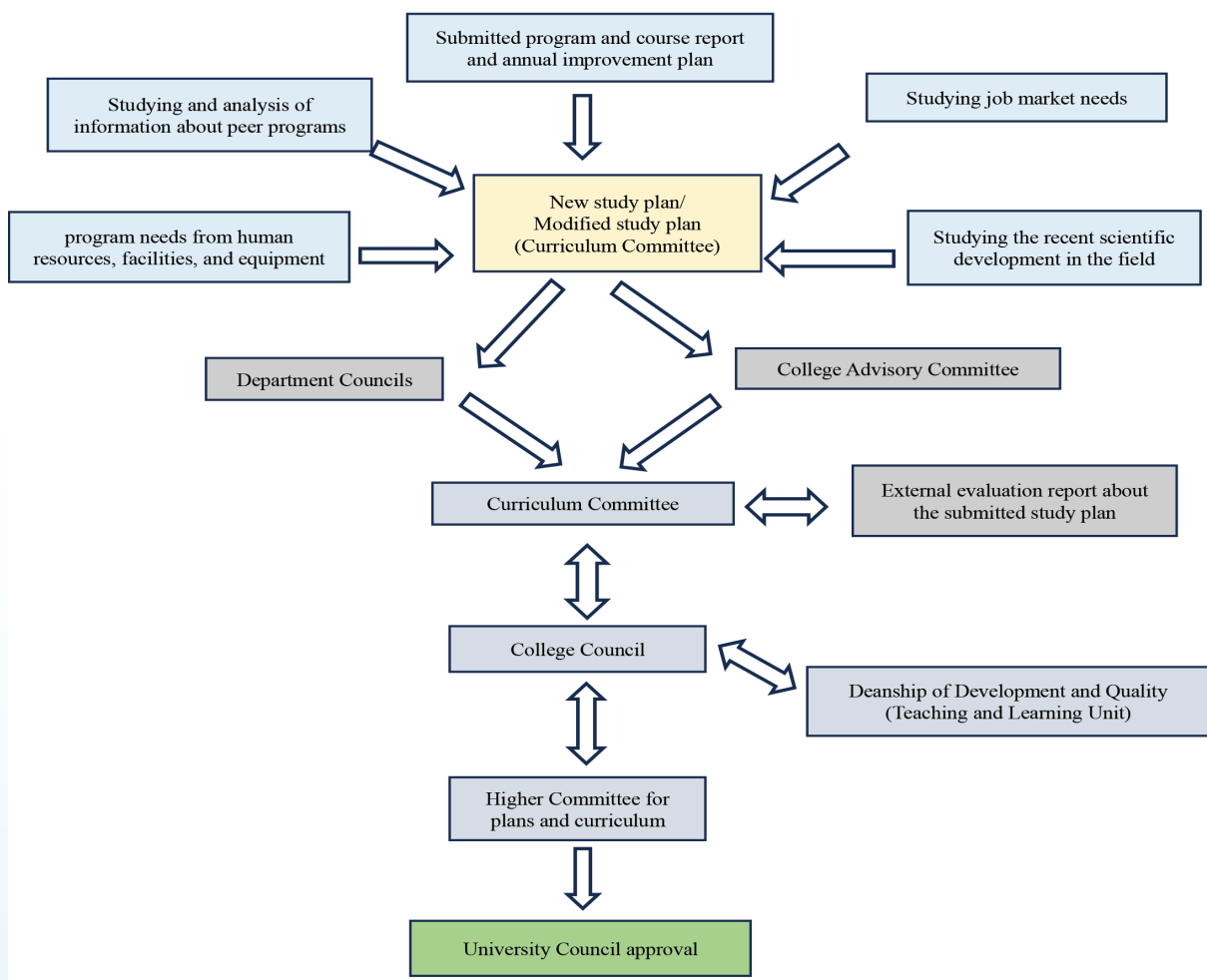
**Figure 8.** Process of establishment of new programs' study plans or major modification of the current programs' study plan in the College of Pharmacy at Najran University.

The curriculum committee has to verify that all the new or amended study plans are in compliance with the university mission and the program goals. They should also be in line with the national qualification's framework and the requirements of the teaching and learning standard of NCAAA.

## II. Mechanisms of Program Learning Outcomes (PLOs) assessment:

Program ILOs assessment is used to determine how well the program prepares students to achieve the learning outcomes. It is a collaborative process of inquiry regarding student learning outcomes, followed by analysis, reflection, and actions (if needed). The results are used to detect strengths and weaknesses in students' performance in the learning domains and accordingly generate action plans in order to improve overall student achievement and to improve the program as a whole on the basis of actual evidence and measurable indicators.

## Objectives:

1.  To determine how well the program prepares students to achieve learning outcomes.

2.  To detect strengths and weaknesses in students' performance in learning domains.

3. To generate action plans to improve overall student achievement and to improve the program as a whole on the basis of actual evidence and measurable indicators.

4. To identify issues and concerns that need attention and thus guide professional development.

5. To support accreditation and meet reporting requirements set by NCAAA.

## Assessment methods:

A summative evaluation of 18 advanced courses for students who completed the program courses is conducted each academic year to review overall learning outcomes. These courses were selected carefully from the higher levels of the study plan in which students must master the learning outcomes assigned to these courses. These courses covered all the program learning outcomes. The courses are:

1. Pharmacology-3 (PHCL 444)

2. Toxicology (PHCL 445)

3. Pharmacy practice-2 (PHCP 455)

4. Pharmacotherapy-1 (PHCP 457)

5. Medicinal Chemistry-3 (PHCH 518)

6. Recent Approaches in Analysis of Medicinal Plants(PHGN 524)

7. Pharmaceutics- 3 (PHCU 534)

8. Industrial Pharmacy (PHCU 535)

9. Pharmacotherapy-2 (PHCP 558)

10. Drug and Poison information(PHCP 559)

11. Regulations, Ethics and History of Pharmacy(PHCP 560)

12. Instrumental Analysis of Pharmaceutical Compounds (PHCH 519)

13. Herbal and Alternative Medicine (PHGN 525)

14. Sterile Dosage Forms (PHCU 536)

15. Pharmaceutical Quality Control and Good Manufacturing Practice (PHCU 537)

16. Over the Counter Drugs(PHCU 538)

17. Cosmetic Preparations(PHCU 539)

18. Pharmaceutical Marketing(PHCP 561)

Program Learning Outcomes (PLOs) assessment in the program includes both direct and indirect methods. As Course Learning Outcomes (CLOs) are used as a direct assessment, the exit survey and interviews with the stakeholders, who include faculty members, students, administrative staff, program alumni, employers, and pharmacy field experts, are used as indirect methods for PLOs. The results should be used for continuous improvement during the assessment cycle of PLOs, which extends for 5 years.

The assessment methods used for the assessment of PLOs and the uses of their results in the improvement process are shown in Table 1. The assessment cycle of program learning outcomes extends for 5 academic years during which all the PLOs will be assessed, and continuous improvement actions and minor changes are implemented while plans for implementing the required major changes "if any" will be designed by the end of the assessment cycle.

| Assessment methods | | |
|---|---|---|
| **Direct (Using CLOs)** | | **Indirect** |
| **Summative (Cycle-based)** | | |
| Average of related CLOs contributing to the achievement of the PLOs at the M- level as mentioned in the PLOs matrix | | 1.   Course evaluation survey<br>2.   Alumni survey<br>3.   Stakeholders survey<br>4.   Student exit survey<br>5.   Interviews<br>6.   Focus group discussion |
| The results are used for continuous improvement at the courses level during the assessment cycle, while the major changes at the program level are implemented at the end of the assessment cycle | | |
| The program determines the data collection timeline and evaluation timeline as well as the timeline for implementing the required improvement for each PLO | | |

**Table 1**. Assessment methods used for assessment of PLOs.

## Step 6: Review the Course Learning Outcomes (CLOs), Courses Specifications & Contents

Course Specification is a document that is prepared to demonstrate the plans for each course. It must state clear guidelines to the course instructors about the course objectives and learning outcomes, the course contents helping in achieving the course learning outcomes, its contributions to the overall program, and how its effectiveness should be assessed.

The course specifications also apply on a continuing basis, subject to changes required as a result of experience. Individual course specifications must be prepared for each course in the program and kept on file with the program specifications. The purpose is to make clear details of planning for the course as part of the package of arrangements to achieve the intended learning outcomes of the program. Consequently, course specifications include the knowledge, skills, and values to be developed in keeping with the National Qualification Framework (NQF) and the overall learning outcomes of the program, the strategies for teaching, and assessment in sufficient detail to guide individual instructors. Course learning outcomes, teaching strategies, and teaching methods are to be in alignment.

## ● Course modification process

All course specifications are reviewed and approved by the department council initially before they can be implemented. All course reports are reviewed and approved by the department council and sent, with the course file, to the development and quality unit to keep them and process any required information accordingly.

**Minor action plans:**

Minor changes apply only with changes in course topics with changes not exceeding 30% of the course contents, as far as no other changes from program specification.

Minor changes are proposed by the course coordinator and approved by the department council before implementation.

**Major action plans:**

Major changes apply when there is any change in the course items, including course code, credit hours, type of the course (theoretical vs practical), and change of more than 30% in course content.

Major changes must be approved initially by the department council and sent to the quality and development unit. Then, they should be approved by the college council. Course specifications must be reviewed at the beginning of each semester, and course reports must be submitted by the end of each semester.

### ● Closing the loop of quality

Communicating the results of assessed PLOs to all the associated parties is assured by discussing the assessment reports  at the level of the college council to define possible root causes for less than expected achievement and set the program priorities for improvement and possible strategies and actions for improvement.

Implementation of the corrective actions and improvement plans and evaluation of their impact on subsequent achievement is keenly monitored by the program via course reports and program reports submitted by the end of each semester.

### ● Key Performance Indicators (KPIs):

Performance indicators are tools or measurements that the college/program uses to measure its performance toward achieving its goals and reaching the expected or desired results.

## Performance measurement ethics:

1. Precision.

2. Honesty.

3. Confidentiality.

4. Transparency.

Performance indicators are important tools for assessing the quality of Academic Programs and monitoring their performance. They contribute to continuous development processes and decision-making support. Annually, the pharmacy program completes the Annual report of the performance indicators and closes the quality circle. Any program required to use the 11 KPIs announced by the National Center for Academic Accreditation and Evaluation (NCAAA). Besides these KPIs, the program expects to define its own KPIs after approval by the program and college Council. The 11 indicators are the minimum to be periodically measured.

All academic programs in the College of Pharmacy should measure the KPIs with benchmarking using the appropriate tools, such as (Surveys and statistical data) according to the nature and objective of each indicator, as well as determining the following levels for each indicator:

1. Actual performance

2. Targeted performance level

3. Internal reference (Internal benchmark)

4. External reference (External benchmark)

5. New target performance level

A list of the 11 KPIs announced by NCAAA is shown on Table 2, and Table 3.

The Bachelor of Pharmaceutical Sciences Program ensures the achievement of its mission goals through different KPIs that were prepared by the program in alliance with the recommendation of the National Center for Academic Accreditation and evAluation (NCAAA) in the 2023 update.

**Table 2.** Key Performance Indicators (KPIs) of the pharmaceutical Sciences program (adapted from NCAAA).

| No. | KPIs Code | KPIs | Measurement Methods |
|---|---|---|---|
| 1 | KPI-P-01 | Students' Evaluation of quality of learning experience in the program | Average of overall rating of final year students of the quality of learning experience in the program, satisfaction with the various services offered by the program, and satisfaction with adequacy and diversity of learning sources on a five-point scale in an annual survey |
| 2 | KPI-P-02 | Students' evaluation of the quality of the courses | Average students' overall rating for the quality of courses on a five-point scale in an annual survey |
| 3 | KPI-P-03 | Completion rate | Proportion of undergraduate students who completed the program in minimum time in each cohort |
| 4 | KPI-P-04 | 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 |
| 5 | KPI-P-05 | Students' performance in the professional and/or national examinations | Percentage of students or graduates who were successful in the professional and / or national examinations, or their score average and median (if any) |
| 6 | KPI-P-06 | Graduates' employability and enrolment in postgraduate programs | Percentage of graduates from the program who within a year of graduation were: A. Employed within 12 months. B. Enrolled in postgraduate programs during the first year of their graduation to the total number of graduates in the same year. |
| 7 | KPI-P-07 | Employers' evaluation of the program graduate's proficiency | Average of the overall rating of employers for the proficiency of the program graduates on a five-point scale in an annual survey |
| 8 | KPI-P-08 | 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 |
| 9 | KPI-P-09 | Percentage of publications of faculty members | Percentage of full-time faculty members who published at least one research paper during the year to total faculty members in the program |
| 10 | KPI-P-10 | Rate of published research per faculty member | 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 full-time or equivalent faculty members during the year) |
| 11 | KPI-P-11 | Citations rate in refereed journals per faculty member | The average number of citations in refereed journals from published research per each 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 |

## Program-specific KPIs:

The program added two more KPIs that are specific to measure the performance of the community services.

**Table 3.** Key Performance Indicators (KPIs) of the pharmaceutical Sciences program (Program-specific KPIs).

| No. | KPIs Code | KPIs | Measurement Methods |
|---|---|---|---|
| 12 | KPI-PH-1 | Number of community service activities performed by the program | Data collection form (Number of community programs, consultancy and community service activities in the academic year) |
| 13 | KPI-PH-2 | Percentage of full-time teaching staff actively engaged in community service activities | Data collection form (% of full time teaching staff actively engaged in community service activities in the academic year) |

The college review the results of KPs directly and discuss these indicators. The final report of the indicators and the closing of the quality cycle including an explanation of the indicators that have been closed and that have not been closed, in addition to the indicators whose circuit is closing. The process of closing the quality cycle depends on ensuring the stability of the performance indicator and achieving the target value.

## Methodology for selecting performance indicators in the college and programs

To ensure the effectiveness of performance indicators, it is required that they coincide with the goals of the operational plan, whether they are strategic goals or an operational plan for the college or program, as well as related procedures, processes, and initiatives to ensure the effectiveness of these indicators. In addition, the college or the program should ensure that all selected KPIs include SMART components. If the KPIs include the SMART components, this means it will be:

1. Specific
2. Measurable
3. Achievable
4. Realistic
5. Timely

Necessarily, the programs of the College of Pharmacy (represented by the quality committees in the programs) adopt a scientific methodology in selecting performance indicators based on identifying the college and university's directions and their strategic or operational goals to ensure the existence of consistency, harmony, and congruence between the college's directions and its strategic goals and with what we have created from indicators.

## Measurement process steps

1. Identification and determination: identifying and determining the performance to be measured.

2. Measure: Measure the performance using a measurement tool, and then obtain data.

3. Analysis: Analyze the data collected from the measuring tool application that relates to the indicator.

4. Improvement: In light of the statistical analysis of the data, a report is written that includes strengths to enhance it, and weaknesses, to develop plans for improvement or correction to improve it and address these weaknesses.

Reports on performance indicators should not only contain numbers, but also an explanation, and identification of strengths to enhance and weaknesses for improvement, in addition to having recommendations.

## Types of performance indicators

All types of performance indicators are either quantitative (various statistics and numerical data such as student-faculty ratio) or qualitative indicators. The qualitative indicators are related to answering the questions of how and why, such as measuring the satisfaction of the beneficiaries, what is the degree of satisfaction? and why is it low? In addition, the qualitative indicators are related to efficiency, effectiveness, and what is related to what is called leading lagging indicators.

## The importance of performance indicators

### I. The importance of performance indicators at the national level.

1. Keeping up with global developments and leading experiences.

2. Ensure transparency and accountability.

3. Monitoring the quality of educational programs.

4. Stirring up local competition between educational programs.

5. Stirring up regional and international rivalries to attain excellence.

6. Planning, monitoring, and correcting the course of action.

### II. The importance of performance indicators at the program level.

1. Assist in the process of evaluating program performance in the sense of measuring what has been achieved in terms of results during a certain period compared to what has been planned in terms of strategic or operational - implementation goals.

2. It helps to monitor and follow up performance, and monitor the change in performance, by identifying performance deviations, which enables the decision-maker, head of department, and dean of the faculty, to develop corrective or improvement plans to address these deviations and deal with them.

3. Performance indicators provide us with information obtained either through a data form or through a questionnaire of what is applied, interviews, or field visits about the performance of the program.

4. Facilitating the program evaluation processes and levels of improvement.

5. Assist in ensuring the program quality and academic accreditation for the academic programs in the College of Pharmacy.

6. Assist in providing information related to academic programs to accrediting bodies.

7. Stirring up competition between programs in the event of an exchange of the results of indicators measurements helps in creating a competitive environment conducive to effective performance.

8. Ensuring transparency, accountability, and issue in light of the achievements monitored or measured and activities and projects.

9. Provide information to the state (Ministry of Education) for transparency and accountability.

## III. The  importance of performance indicators at the individual level

1. Focusing on the professional level of individuals (faculty or administrators and students).

2. Determine the roles of individuals in the strategic plan of the college.

3. Promote successful practices and treatment failures.

4. Motivating individuals and working to satisfy them, will positively affect the overall performance.

5. Determining the necessary procedures for development and change and assigning tasks.

6. Encouraging innovation and performance excellence for individuals.

7. Measuring and diagnosing the activation of modern educational and technical aids in a manner that benefits students.

8. Diagnosis of the student behavior (academic advising).

9. Measuring the level of achievement of learning outcomes.

10. Measuring the effectiveness of educational activities.

11. Notify individuals of the accurate development of the tasks assigned to them.

### ● Benchmarking

It is one of the tools for continuous improvement and development, and it includes making comparisons between the programs of the College of Pharmacy and those in other similar universities, to answer several questions:

- Where are we in relation to the other universities' programs?
- What are the areas of improvement desired and required for making comparisons between us and the others?

- In what field can we achieve distinction compared to other programs? Or, more precisely, in any field, we are already outperforming as compared to the other programs, and we need to strengthen that area and maintain the continuity of its improvement?
- In what fields do other programs excel us?

## Types of Benchmarking

### I. Internal Benchmarking

Internal benchmarking is a process in which an educational program makes a comparison with a similar academic program within the University in light of certain criteria in an attempt to identify best practices. The required information is collected by measuring tools specified by the program (quantitative, qualitative) under the guidelines previously mentioned in this booklet.

### II. External Benchmarking

It is a process in which the program compares its performance with a similar program in another university in light of certain criteria, and the required information is collected with specific measuring tools (quantitative, qualitative).

Criteria for choosing internal & external Benchmark.

1.  Similarities in the educational system (teaching and learning, scientific research, and community service).

2. The similarity in mission and goals.

3. The quality of indicators and the method of their measurement.

4. The ability to provide data.

5. Cultural, social, and economic conditions.

6. Geographical dimension and community culture.

7. Ranking of the university to which the program belongs according to local and Arab classifications.

### How to set KPI Targets

Without targets, your KPIs are worthless. To set the right targets for your KPIs remember the following tips:

1. Targets can be set as absolute: "e.g. increase of seven", or proportional or percentage: "e.g. increase of 4%".

2. Targets should be defined relative to internal and external benchmarks.

3. Targets should have a clear time frame.

4. Targets should be realistic and achievable.

Here are a few more tips to help set the right targets:

- Detect trends and patterns: A look at the existing data you have that gives you performance history is a good place to spot trends and patterns that can be extrapolated and used to define a target.
- Account for seasonal variations: In some cases, seasons will impact performance. If you create a target that's only ever possible for three months of the year, your team will not take it seriously.
- Take national targets, best practice benchmarks into account: National targets or the best practices of other programs in and outside your university can help you determine a stretch target that is achievable but that pushes your team.

Take time lags into account: It will sometimes take time for leading indicators to translate into lagging indicators.

Follow these six steps to ensure your KPIs will actually drive real results.

1. Review program objectives.
2. Analyze your current performance.
3. Identify the strengths and weaknesses of the program.
4. Set short and long-term KPI targets.
5. Review targets with your team.
6. Review progress and readjust.

## Managing performance indicators

### I. Indicators documentation requirements

1. Determining the identity of the indicator (to which criteria the indicator belongs and what goals does it achieve?).
2. Name of the indicator.
3. Target value.
4. Measurement tool.
5. Measurement equation.
6. Level of measurement.
7. Data source.
8. The measuring body.
9. Measurement cycle (measurement period).

## II.  Performance indicators and data collection mechanisms

1. Defining and formulating performance indicators.
2. Description of the performance indicator.
3. Define the target group.
4. Determine the source of the necessary data.
5. Determine the target value.
6. Determine the measurement method.
7. Apply the indicator measurement tool.
8. Analyze the benchmark results.

## III.  Writing the report

1. Submit monitoring reports to the concerned authorities to the faculty development and quality unit for study.
2. Submit monitoring reports to the department council to study them and build appropriate improvement plans.
3. Keep reports in paper and electronic form and archive them for easy access to information.

## IV. Writing the KPIs report

The report should not include only figures, statistics, or tables that others may not understand and not help them make decisions. However, it must include a presentation of the results, a discussion of data, a statement of points of strength and weakness, and a statement of the causes of weakness or defect, which helps in making decisions and developing improvement plans. Presenting the report to the DQU, then the program Scientific Board, then the College Board, and discussing the results contained it at the program level and the college level and comparing them with the target values in light of the previous results for the same indicator to determine the areas of distinction to support, and the weaknesses that require studying the root causes for them and what follows this in taking measures corrective or improvement plans.

## Common mistakes when choosing indicators:

Most of these errors result in the case relying on two methods of selecting performance indicators, namely Off-The-Shelf or brainstorming. These errors can be summarized in the following points:

o Identify indicators that are not commensurate with the operational goals and objectives of the program.
o Coming up with indicators that are not related to the procedures, practices, and projects of the college's strategic plan.

What happens if these errors are not avoided?

- A temporary, misleading, false, or no improvement in performance.
- A waste of resources and a waste of time and effort.
- Common mistakes when using performance indicators.
- Reliance on unevaluated questionnaires.
- Failure to standardize the source of the data.
- Relying on inappropriate mathematical formulas.
- A large number of indicators, and a lack of focus on what are important indicators that have to do with the success factors of the program.
- Determine inflated target values.
- Writing reports that only include numbers and statistics without explaining these numbers, and without specifying the strengths that need strengthening, and the weaknesses that need improvement.

## Factors ensuring the success of the performance indicators:

Factors ensuring the success of the performance indicators system in light of a clear methodology and an integrated operational framework include the following:

1) Having clear and specific goals, which is called SMART.

2) Linking objectives to procedures, practices, and projects.

3) Presence of a trained team, aware of the strategic objectives and the procedures associated with achieving those goals, and based on the following tasks:

- Works to define the important performance indicators through which we can monitor and follow up on the achievement of goals and the associated operational procedures and initiatives related to the main factors for the success of the program.
- Providing opportunities for program members to participate in all units, whether academic or administrative units, through achieving good communication with them.

4) Using indicators, applying them and analyzing them, and then obtaining reports that help in making decisions so that the report includes not only numbers and statistics but also results, discussion, and coming up with recommendations on strengths and weaknesses.

5) Create improvement plans that address weaknesses and any deviations in performance or from the target.

6) Work as much as possible to automate all procedures for achieving goals and documentation of all measures or procedures that have been taken.

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جامعة نجران
NAJRAN UNIVERSITY
كلية الصيدلة

# Quality Management System

**College of Pharmacy
2024**

Prepared by
Quality and development unit
June 3, 2024

# Quality Management System

## College of Pharmacy
## 2024