# 1 Quality management system

The health faculties of Lebanese University define quality as efficiency in operations and achievement of high-quality outcomes. They have espoused the "Process Approach" into the daily activities including the PDCA Cycle as presented in figure 1.

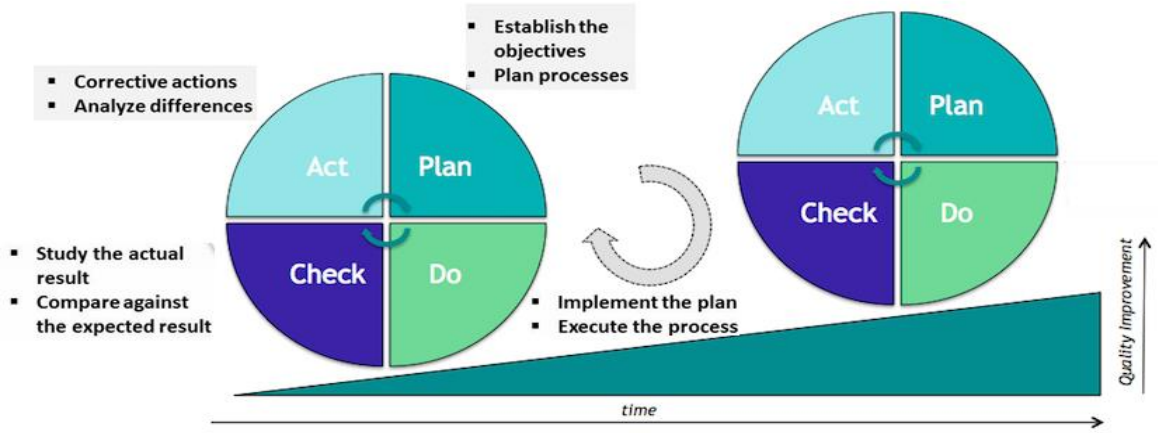


**Figure 1: Deming Cycle for Continuous Quality Improvement**

The quality assurance and continuous improvement of educational programs are based on the self-evaluation carried out by the program and its various units based on the quality performance criteria to identify clear goals for improvement and propose operational plans to achieve them:

**P:** The operational plan in each department in the faculty must be aligned with the faculty's current strategic plan. The department's operational plan(action plan) is an annual plan mapping what will be done to achieve the unit's goals over the upcoming year, how the proposed actions will be done, who will be responsible, and what will be measured to assess progress of Key Performance Indicators(KPIs)

**D:** The next step is the implementation of the planned actions

**C:** Effective quality management depends on regular assessment, or checking, of progress, identifying anything that is not going according to plan or to the timetable and exploring why there has been delay or inaction.

**A:** Effort focuses on the issues identified in the checking/assessment step, either removing the roadblocks to progress or refining the expectations, in the lead-up to the next iteration of the cycle, with a revised operational plan for the following year.

The quality management system is assured by:

- Faculty quality assurance committee (for more details refer to QACom-Terms of references).

- Programs quality assurance Committee(for more details refer to PQACom-Terms of references).

The cycle of quality assurance has two levels according to the faculty policy and procedures:

- Cycle of Quality assurance at the faculty level
- Cycle of quality assurance at the academic program level

### 1.1 Cycle of quality assurance at the faculty level

The faculty QA Com and PQA Com prepare an annual action plan to ensure high quality of the whole educational and administrative process and to follow and achieve the strategic and quality goals. They ensure that all administrative, academic departments and other faculty committees prepare their action plan at the beginning of the academic year and submit to them at the end of academic year an accomplishment report with its measuring KPIs. In addition, an annual report shall be written by these committees, based on the report submitted other committees, on assessment results (data analysis of evaluation and satisfaction surveys for stakeholders) and on program and course related learning outcomes measures.

### 1.2 Cycle of quality assurance at the academic program level

The PQACom carries out a continuous evaluation process for the courses, annual assessments of the learning outcomes, and KPIs, in addition to stakeholders' surveys. Then annual reports are prepared including the point of strengths and improvement opportunities, from which improving plans are established. Thereafter, at the end of the cycle (5 years) it prepares the self-study report. Figure 1 shows a visual overview of quality assurance at the academic program level.

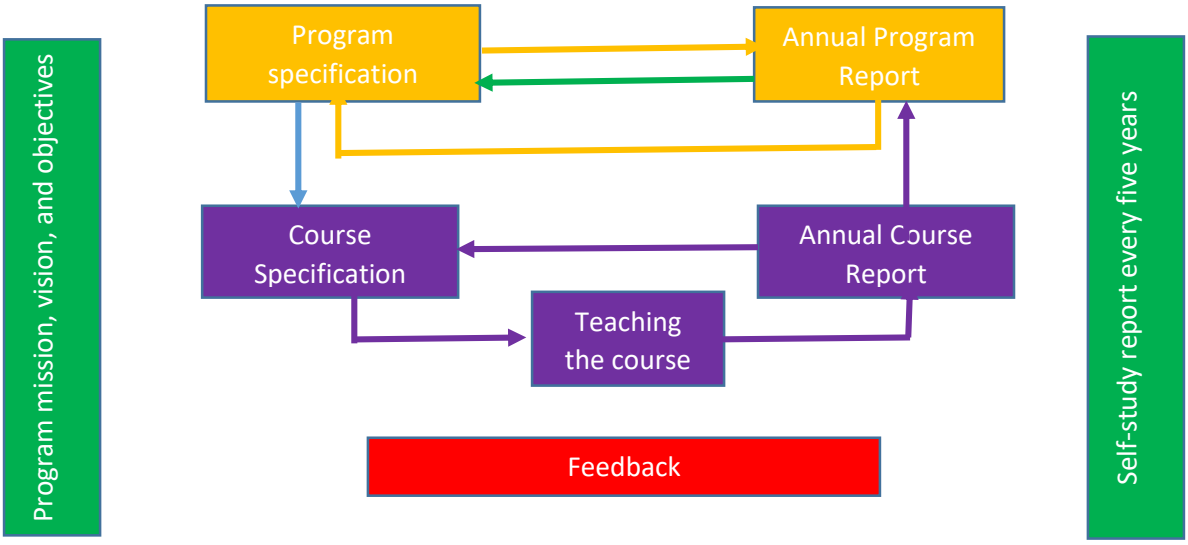


**Figure 2: Cycle of quality assurance at the level of the program**

## 2 Quality Assurance for Academic Programs

The assurance process for the academic programs starts from the faculty's mission and objectives which explain the reason for the presence of the faculty and its purpose.

From this point, its mission is formulated, derived from the faculty mission, which leads to the development of program objectives. Each academic program identifies its graduate attributes regarding labor market and stakeholder expectation and is aligned with both department and faculty graduate attributes.

Program learning outcomes are formulated by defining what the student will gain through all the program from Knowledge, know-how, and social skills. Program learning outcomes (PLO) must be consistent with the requirements of the Lebanese Qualifications Framework (LQF), as well as the labor market requirements, and as per the requirements for professional practice in Lebanon in the fields of practice. The curriculum, assessment methods and criteria used to evaluate performance must be consistent with these learning outcomes.

The Quality assurance process starts with the formulation of program specification, then course specification-Which is approved by the faculty council. So, course learning outcomes (CLO) are consistent with PLO. Followed by the preparation of course reports which lead to the program report. This is also based on stakeholder evaluations and units and committee reports.

The program annual report is a keystone 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 the previous plan and formulate a new action plan to be fulfilled the next year. Program reports lead to improvement plans which are fulfilled and monitored in the next year and the cycle goes on.

After five years, the QACom conducts a periodic review of the program to prepare the self-evaluation report. Periodic reviews 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 change 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 and the cycle goes on.

## 3 Learning Outcomes Alignment

Alignment is an essential element of the curriculum development as it assures that the students have different opportunities to achieve the intended outcomes by graduation. It is also used to identify curriculum gaps and redundancy and to ensure that appropriate assessment tools are used to assess each outcome.

Table 2 shows CLOs contributing to the intended PLOs. Extra caution should be paid to the alignment of the CLO bloom's taxonomy cognitive level with the PLO proficiency level. A CLO should contribute to at least one PLO. A PLO could be covered by one or more CLO. The CLOs might not cover all the PLOs. Tables below show different learning outcome alignments.

**Table 2: Aligning the course learning outcomes with the program learning outcomes**

| | PLO 1 | PLO 2 | PLO 3 | PLO 4 | PLO 5 | PLO 6 | ……. |
|---|---|---|---|---|---|---|---|
| **CLO 1** | | | | | | | |
| **CLO 2** | | | | | | | |
| **……** | | | | | | | |

Table 3 is used to specify the recommended assessment tools for each CLO. The program coordinator should select at least three tools for each CLO. The assessment methods should include both direct and indirect (e.g., instructor observation, student satisfaction survey, student self-evaluation,etc..) tools.

**Table 3: Aligning the course learning outcomes with the recommended assessment tools**

| Course Code | Course Title | Direct Assessment Tools | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Quizzes** | **Assign ments** | **Project** | **Mid Term Exam** | **Final Exam** | **----** |
| **GESTM2823** | Quality Assurance | | | **X** | | | |

Table 4 used to capture the contribution of the individual courses to the PLOs proficiency levels "I = Introduction, P = Proficient, A = Advanced ".

The program coordinator may use the information submitted by the course coordinators in Table 1 to decide on proper the proficiency level to be used. This table is essential to identify if a PLO is not covered by any courses (i.e., curriculum gap), if a PLO is covered by too many courses (i.e., curriculum redundancy), or if the PLO is missing a proper coverage at one or more proficiency level (i.e., curriculum misalignment).

**Table 4: Aligning program courses with program learning outcomes proficiency levels**

| | Course 1 | Course 2 | Course 3 | Course 4 | Course 5 | …….. |
|---|---|---|---|---|---|---|
| **Knowledge** | | | | | | |
| **PLO1** | | | | | | |
| **Know- how** | | | | | | |
| **PLO2** | | | | | | |
| **Social skills** | | | | | | |
| **PLO3** | | | | | | |

## 4 Assessment of Academic programs

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

The QACom uses Kirkpatrick's Model to assess the program's effectiveness. This conceptual model recognizes that the measurements of educational program effectiveness taking place at different levels while using different measuring instruments. The more we go up the pyramid towards program impact after graduation, the more difficult it becomes for measurements and more difficult to establish a cause-and-effect relationship between the curriculum and performance at the workplace.

**Figure 3: Kirkpatrick's Model of Program Effectiveness**

**Table 5: Kirkpatrick's Model and related Instruments**

| Levels | Description | Instruments used in the program |
|---|---|---|
| **Level 1** | Reaction / Satisfaction | Student feedback: Fresh graduates satisfaction Survey, course satisfaction, faculty satisfaction, graduate satisfaction |
| **Level 2** | Learning | Different Student Assessment systems: MCQs, and Objective Structured Practical Examination (OSPE) |
| **Level 3** | Behavior | Supervisor Evaluation of Extended Clinical Practicum. |
| **Level 4** | Result / Impact | Employers Survey, alumni survey |

**Level 1 or 'Reaction'** will measure whether students are satisfied from the instructor/s, whether the courses / program met the participant's needs or are the student's satisfied with the educational tools employed etc. This is done by simple written feedback immediately at the end of each course or by administering a "fresh graduate satisfaction survey" at the time of graduation.

**Level 2 measures 'Learning'** and the tool used would be "Course Pass rate" which measures the percentage of students passing the course in first attempt or percentage of students successfully defending the master thesis successfully without major revisions.

**Level 3 Behavioral** measures change which can be measured using evaluation at the workplace after observation of the student over a period of time. This includes feedback from Research Supervisor, instructors from faculty, from peers, from the Program Director etc.

**Level 4 Result or Impact** can be measured to some extent by the publication of the research work done in high-impact factor journals which are expected to yield good citations that will have a significant impact on the practice and society, the award of a grant to continue research work in the same area and also can be measured by employers' opinion.

# 5 Assessment plan

Approved assessment plan and timeline are used to guide the faculty on the following:

- The instruments to be used and the type of evidence to be collected and analyzed
- The entities responsible for each aspect of assessment and quality assurance
- The process for reviewing the results of assessment and developing approved action plans that include projection of required budgets and resources.
- The process for disseminating the results of assessment, including what will be disseminated and to whom
- The process for monitoring the implementation of improvement plans.

**(For more information refer to Process of assessment plan-PP).**

## 5.1 Learning Outcomes Assessment

Assessment of learning outcomes provides an opportunity for academic programs to effectively review and enhance the alignment between the planned, delivered and experienced curriculum. The main purpose of the assessment process is to obtain information that can be used to answer the following questions:

1. Are students learning what we think is important?
2. Are they learning what they need to succeed in this field or profession?
3. Are we continuously improving the students learning experience?
4. Should our curriculum or teaching strategies be modified?
5. Are there other techniques or additional resources that would help our students learn more effectively?

Answering the above questions would help faculty decide on the proper actions to take and the strategies to implement in order to ensure the continuous improvement of the student learning experience. An integrated assessment infrastructure has been established by the faculty which adopts the standard assessment process shown:

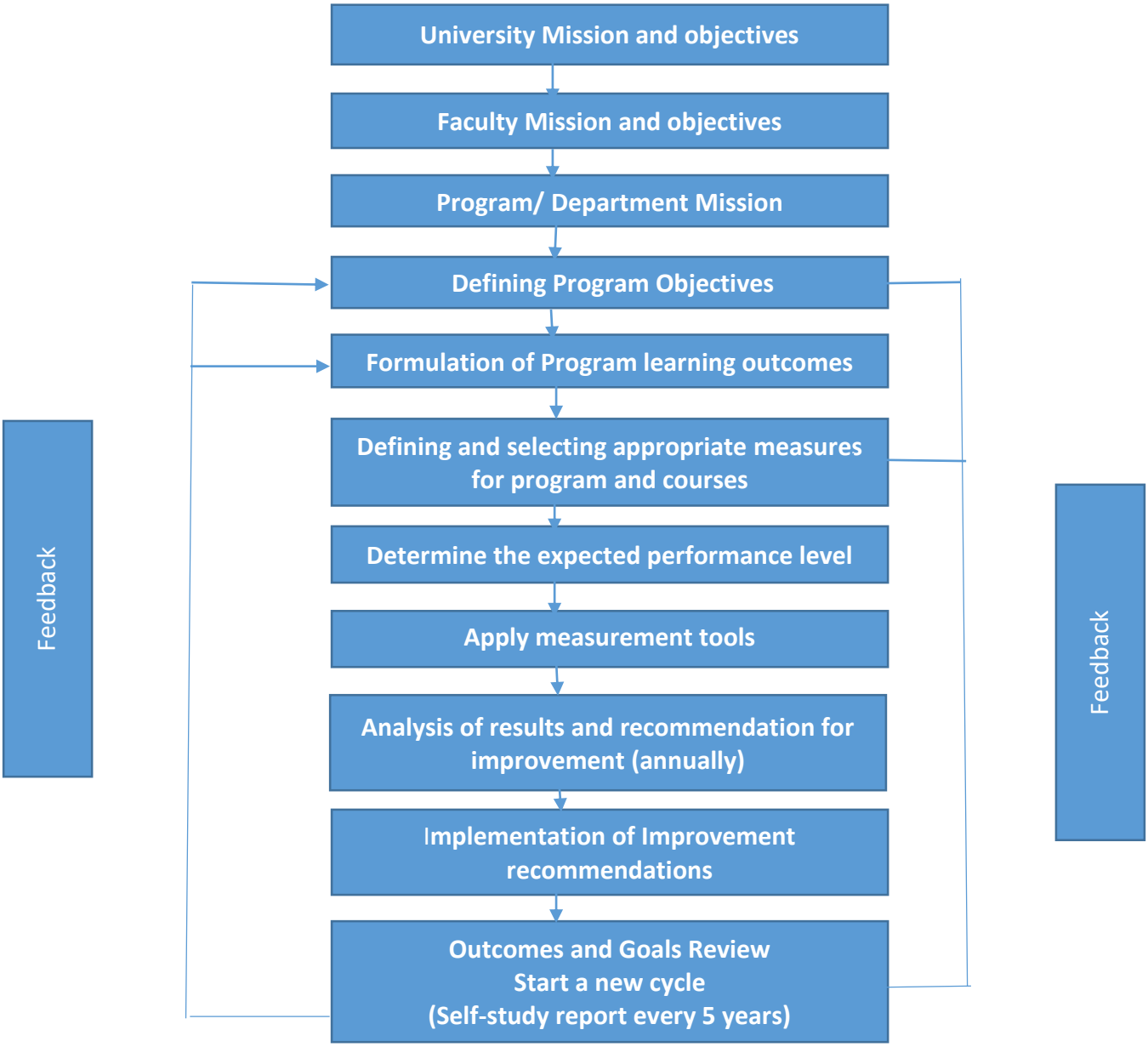


**Figure 4: Learning Outcomes Assessment**

The faculty of PHARMACY is committed to conducting effective, transparent, robust, and fair learning outcomes assessment at the course, program, and institutional levels.

### 5.2 Program Learning Outcomes Assessment

The PLOs are regularly assessed and analyzed as per the following rules:

- Each PQAC defines, regularly revises, and aligns the program learning outcomes with LQF.
- The PQAC of each department ensures that a sustainable assessment plan is developed and maintained.
- The PQAC of each department oversees the execution of the PLO assessment plan(s).
- Program Directors collect relevant PLO assessment data and submit the collected assessment data to PQAC.
- Program Directors analyze and discuss the PLOs assessment results with concerned stakeholders and decide on remedial actions
- Department chairs/Program Directors ensure that appropriate remedial actions are implemented to address any identified weaknesses.

### 5.3 Course Learning Outcomes Assessment

The CLOs are assessed and analyzed according to the following rules:

- PQAC of each department ensures that the CLOs for all courses offered by the department are regularly reviewed and aligned with the PLOs
- PQAC committee oversees the CLO assessment process
- Course coordinators are responsible for identifying appropriate assessment tools for each CLO
- Faculty uses the identified assessment tools to assess the CLOs
- Faculty collects the assessment data and prepare the CLO assessment in the course report
- Analysis and remedial actions are done once a year after collecting the assessment results for entire academic year
- Program coordinators ensure that CLO assessment data are collected, analyzed and discussed with the course chair.
- Program coordinators ensure that appropriate remedial actions are taken to address any identified weaknesses
- Program coordinators oversee the implementation of the CLOs remedial actions, if any.

## 6 Institutional Evaluations as means for improving quality and standards

The faculty uses a variety of surveys to evaluate the effectiveness of both academic and administrative support units. The evaluations are broadly classified into two categories: (1) faculty

Wide Surveys/ Evaluations and (2) department Level Evaluations/ Surveys. The flow chart below shows the process of evaluating the effectiveness of academic programs.

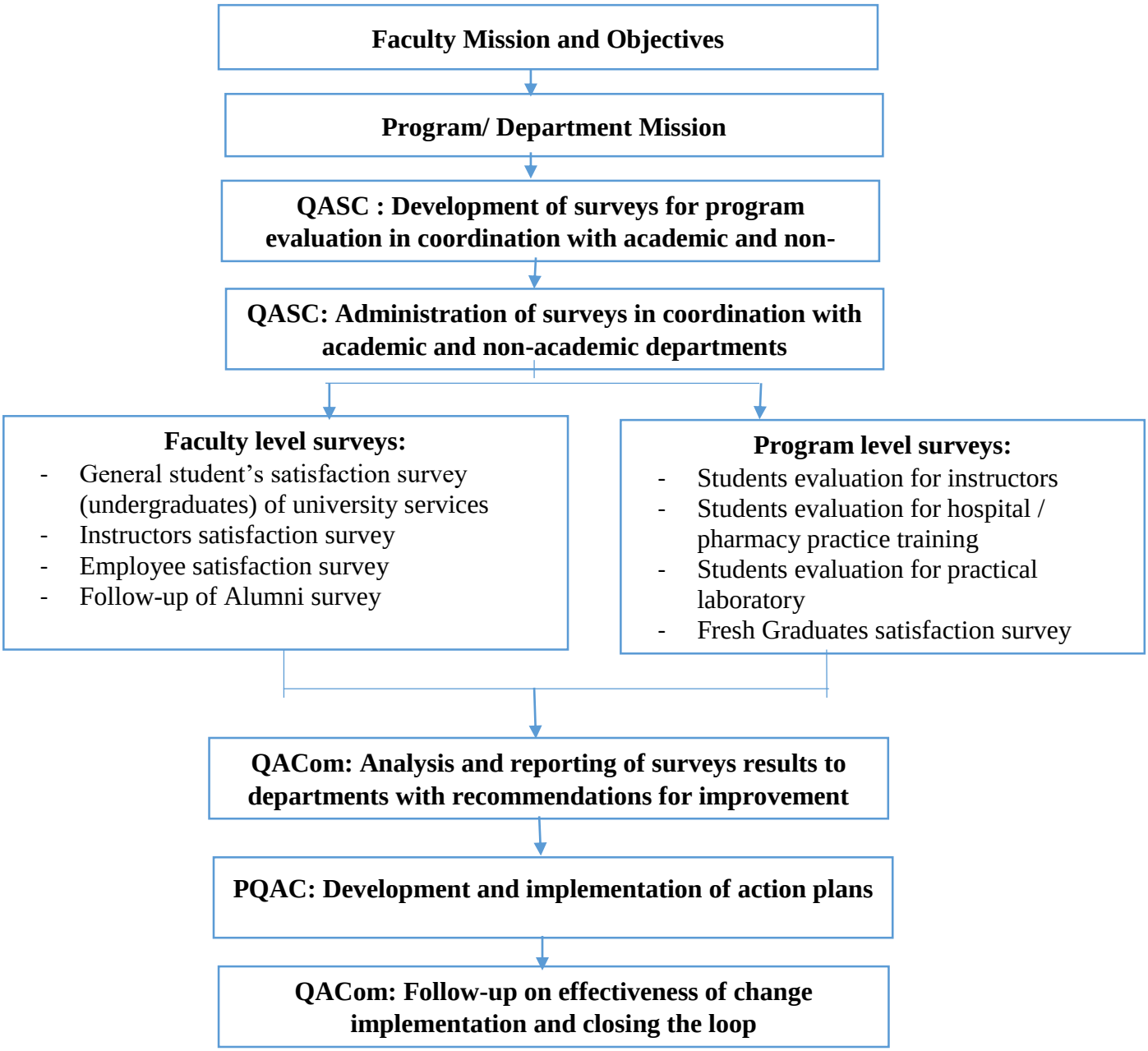


**Figure 5:** Closing the Loop to ensure effectiveness

## 7 (Input, Process, outcome) Model of KPIs

The faculty of PHARMACY has set benchmarks for its performance in different areas to meet its strategic goals and objectives which shall help to accomplish its mission and vision. The table 6 represents the KPIs of academic effectiveness under the IPO (Input, Process, Outcome) Model. This Model consists of a set of well-defined Input, Process, and Outcome indicators at the faculty level, department level, and administrative support level.

**Table 6: Program Effectiveness Indicators with Accepted Values**

| IPO Category | Domain | KPI | Description | Objectives | Measurement tools | Timing | Target |
|---|---|---|---|---|---|---|---|
| Input | Student facts | **Total number of students** | Number of students is defined as the number of enrolments at a given level of education | To show the general level of participation in a given academic program | Faculty registers | Beginning of each academic year | --- |
| | | **Freshmen Enrollment rate** | All currently enrolled students are counted within the faculty | To maintain a sufficient student enrollment at the undergraduate and graduate levels<br>To ensure the viability of the program and course offerings | Faculty registers | Beginning of each academic year | Will increase at least 3 % annually |
| | | **Foreign students rate** | Number of undergraduate students who are foreign nationals and who spend at least three months at your university(proportion of the 'total number of undergraduate students') | To improve the faculty's academic reputation | List of foreign students | Beginning of each academic year | --- |
| | | **% of students received scholarship** | Total number of students received scholarship | To help students complete education. | List of students received scholarship | Beginning of each academic year | --- |

| IPO Category | Domain | KPI | Description | Objectives | Measurement tools | Timing | Target |
|---|---|---|---|---|---|---|---|
| **Process** | **Student satisfaction** | **Students satisfaction rate about courses** | Average students overall rating for the quality of courses and training on a five-point scale in an annual survey<br><br>Training Assessment Form Students' Perception | To get feedback from students about the course and teaching effectiveness | Course Assessment Form Students' Perception | Two weeks prior to start of final exam | 75% of the students score ≥ 4 on a five point scale |
| | | **Students satisfaction rate about training** | | To get feedback from students about the training effectiveness | Student evaluation for hospital/pharmacy training practice | | |
| | | **Undergraduate students' satisfaction rate about university life** | Average students overall rating for the quality of university life on a five-point scale in an annual survey | To get a general insight on student's satisfaction with the university life | General Students' satisfaction survey (undergraduates) | Once yearly at the end of first semester | 70% of the students score ≥ 4 on a five point scale |
| **Outcomes** | **Student performance** | **Student 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 | Measuring the educational quality of the program | Statistical data and analysis | End of each year | 100 % |

| IPO Category | Domain | KPI | Description | Objectives | Measurement tools | Timing | Target |
|---|---|---|---|---|---|---|---|
| **Outcomes** | **Student performance** | **Rate of student Transfer-out (%)** | The transfer-out rate is the percentage of these students who did not graduate from the faculty but instead transferred to another university within three years. | To evaluate the reason that leads students to leave the faculty | Student transfer out log sheet | Annually | 0% |
| | | **Course Pass Rate (%)** | The number of students who passed the test on the total number of students who passed this test. | To prepare a detailed report on the level of achievement of course / training outcomes in order to prepare recommendations and remedial action plan | Course specification report<br>Field experience specification report | Every semester | 70% of the students score above 70% |
| | | **Completion Rate** | Proportion of undergraduate students who completed the program in minimum time in each cohort | Measuring the educational quality of the program | Statistical data and analysis | Annually | >90% |

| IPO Category | Domain | KPI | Description | Objectives | Measurement tools | Timing | Target |
|---|---|---|---|---|---|---|---|
| **Input** | **Faculty facts at Program Level** | **Total number of academic faculty in the program** | The total number of academic faculty staff who are responsible for planning, directing, and undertaking academic teaching only, research only, or both academic teaching and research within faculty of public health | To maintain adequate faculty with appropriate expertise to deliver a high-quality program. | Faculty log sheet | Annually | --- |
| | | **International Faculty Staff** | Number of academic faculty staff who contributes to academic teaching or research or both at your university for a minimum period of at least three months and who are of foreign nationality | | Faculty log sheet | Annually | --- |

| IPO Category | Domain | KPI | Description | Objectives | Measurement tools | Timing | Target |
|---|---|---|---|---|---|---|---|
| Process | Faculty Workload | **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 | Me a s u r i n g the quality of education elements | Statistical data and analysis | Annually (beginning of academic year) | |
| | Faculty Development | **Nb. of Faculty Development activities attended by the faculty** | Number of activities attended by faculty | To maintain adequate faculty with appropriate expertise to deliver a high-quality program. | Staff development log sheet | Annually | |
| | Faculty satisfaction | **Faculty satisfaction rate from educational process** | Average faculty overall rating for the quality of educational process on a five-point scale in an annual survey | To understand the involvement and satisfaction in different areas such as in administration, faculty activities, professional growth, resources and available facilities etc. | Opinion Survey of the Professors and Instructors in the Educational Process | Annually | 80% of the faculty members score ≥ 4 on a five point scale |
| | | **Faculty satisfaction rate about university life** | Average faculty overall rating for the quality of university life on a five-point scale in an annual survey | To get a general insight on faculty's satisfaction with the university life | Faculty Satisfaction Survey | Annually | |

| IPO Category | Domain | KPI | Description | Objectives | Measurement tools | Timing | Target |
|---|---|---|---|---|---|---|---|
| **Process** | **Staff satisfaction** | **Staff satisfaction rate about university life** | Average staff overall rating for the quality of university life on a five-point scale in an annual survey | To get a general insight on staff's satisfaction with the university life | Employees Satisfaction Survey | Annually | 80% of the faculty members score ≥ 4 on a five point scale |
| **Outcomes** | **Faculty publications** | **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 program | Measuring the quality of the axis of scientific research | Statistical data and analysis | Annually (end of academic year) | >70$ |
| **Outcomes** | **Graduates satisfaction** | **Graduates' employability** | Percentage of graduates from the program :who within a year of graduation were employed | Measuring the quality of graduates ‹characteristics, and the extent of employers› satisfaction, and the labor market›s need for them | Graduate survey | First semester | >80% |
| | | **Graduates' enrolment in postgraduate programs** | Percentage of graduates from the program :who within a year of graduation were enrolled in postgraduate programs during the first year of their graduation to the total number of graduates in the same year | Measuring the quality of graduates ‹characteristics, and the extent of employers› satisfaction, and the labor market›s need for them | Statistical data and analysis | | >60% |

| IPO Category | Domain | KPI | Description | Objectives | Measurement tools | Timing | Target |
|---|---|---|---|---|---|---|---|
| Outcomes | Graduate satisfaction | **Graduates Satisfaction rate with PLOs and university experience** | Average graduates overall rating for the quality of program on a five-point scale in an annual survey | To get feedback from graduating students about their complete university experience | Fresh graduates survey | Annually | >90% |
| | Alumni satisfaction | **Alumni satisfaction rate** | Average alumni overall rating for the relevance of the education to their work and life after graduation on a five-point scale in an annual survey | To collect information from the alumni about the relevance of the education to their work and life after graduation | Follow-up of Alumni survey | First semester | 80% of the students score ≥ 4 on a five point scale |
| | Employer satisfaction | **Employers evaluation of the program gradu-ates proficiency** | Average of overall rating of employers for the proficiency of the program graduates on a five-point scale in an annual survey | Measuring the quality of graduates ‹characteristics and employers› satisfaction with them | Questionnaire | First semester | 90% |