



College of Sciences and Humanities

Department of Mathematics
Quality Management System

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1. Introduction

1.1 Purpose of Quality Management System

Quality Assurance and Management is an integral part of any Organisation –academic institutions are no exception to it. In fact, all academic institutions must have an effective Quality Assurance System as they have the responsibility of grooming the youth to be contributing member of the society. Prince Sattam Bin Abdulaziz University, being an Accredited Educational Institution, has an effective Academic Quality Management System in place to achieve the Kingdom’s Vision 2030.

Mathematics, being an integral part of STEM (Science, Technology, Engineering and Mathematics) curriculum and the Bachelor Program in Mathematics being one of the oldest Programs of PSAU adheres to the guidelines of the Academic Quality Management System designed by PSAU and strives hard to achieve effective academic standards.

QMS of Mathematics department is aimed to ensure the following:

- (a) Adoption of Regulation, Policy and Procedures given out by the Apex bodies such as Higher Education Council, PSAU.
- (b) Fulfilling all the academic requirements with regard to the Curriculum development, Program delivery and Review as envisaged in the National Qualification Framework (NQF)
- (c) To obtain the feedback and consider the level of satisfaction from various stakeholders – student, faculty, staff, employers etc., with regard to all offered services including but just not limited to Program delivery.
- (d) To ensure that the review and development process is continuous and ongoing.

1.2 Terminology

Accreditation	Formal verification by a recognized authority that a program or an institution meets required standards.
Assessment	A process of measuring performance in relation to established standards or criteria.
Course	A self-contained unit of study on a particular topic, with defined level, credit value, aims, intended learning outcomes, mode(s) of delivery, scheme of assessment, and possibly also pre- and co-requisites
Evaluation	The process of assessing and assigning value to a facility or activity.
Internal Quality Assurance	Processes of quality assurance carried out within and by or for a higher education institution.
Learning Outcomes	The term learning outcomes is commonly used to refer to the learning that results from a course or program undertaken by students. Learning outcomes are the result of the teaching process. Reference is often made to Intended Learning Outcomes to mean the learning objectives a course or program is designed to develop.
Program	A coherent course of study followed by students in an academic or professional field or leading to a professional qualification, the successful completion of which qualifies them for an academic award.
Qualification	The formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards.
Quality	The value, worth, or standard of an institution or program in relation to generally accepted standards for an institution or program of its type.

Quality Assurance	Processes and procedures for ensuring that qualifications, assessment and program delivery meet quality standards. The activities that aim at safeguarding quality.
Standards	Specifications and criteria which detail prescribed outcomes for qualifications or qualification institutions.
Self-evaluation	The process of systematically observing, analyzing and improving one's own actions or results. Self-evaluation takes place at an individual level, but also at a department or organizational level.
Self-Study Report	It considers inputs, processes and outcomes, and these are all incorporated in the six accreditation standards. The most important of these considerations, and the ultimate test of the value of a program, is what students have learned and can do as a result of participating in it. Consequently, special attention should be given to student learning outcomes, including standards of student achievement and how these standards are directly measured and verified.
Key Performance Indicators	They are important tools for assessing the quality of Academic Programs and monitoring their performance. They contribute to continuous development processes and decision-making support.
Stakeholders	<p>In higher education can be described as either internal or external. Internal stakeholders are members of the academic community, 'those who participate in the daily life of institutions. This includes faculty and non-academic (or professional or general) staff, managers, students and the institution itself as an entity expressed through its leadership and formal governance.</p> <p>External stakeholders are 'groups or individuals that have an interest in higher education' but who are not internal stakeholders. External stakeholders include employers; parents; society at large, including non-consumers of education; the government, as represented by its various</p>

agencies; and organizations or groups representing collections of such stakeholders, nationally and internationally.

1.3 Accountability

The Department of Mathematics (DoM) in the College of Science and Humanities at Al Kharj was established in the year 1426H (2005G) and is offering the Bachelor of Science in Mathematics since then. Following the formation of Prince Sattam bin Abdulaziz University (PSAU) at Alkharj by Royal Decree w.e.f 01.01.1430, College of Science and Humanities and all its departments got affiliated to PSAU, Alkharj.

The Department is accountable for :

- (a) Developing Programs as per the SAQF and NQF standards that will produce competent graduates who will contribute to achieving the Mission and Goals of the College as well as PSAU.
- (b) Delivery of such developed programs upkeeping the standards prescribed by the Competent Authority (College/PSAU/ETEC/NCAAA).

In order to achieve this the Department of Mathematics ensures:

Completeness :Quality processes stipulated by DDQ. PSAU in learning and teaching is strictly adhered to. The learning experience of all students are systematically considered and proper actions improvement actions are planned and implemented with the approval of competent authority.

Coherence The components of the Quality Framework are inter-related and act to draw together diverse individuals and information in a coherent and holistic review of quality.

Objectivity Program specific quality processes given by the DDQ/PSAU are followed by taking views and inputs not only of the internal stake holders such as students, faculty, staff etc., but also of external experts and bodies The Programs offered by the Department needs to acquire Academic Accreditation awarded by the NCAAA.

Efficiency and assurance : The components of the Academic Quality Framework are designed to ensure rigorous interrogation of academic standards and assurance of academic quality while meeting the needs of academic staff and minimizing the impact on workload. Accordingly, the processes themselves are subject to frequent – mostly annual – review.

Responsibility : All stakeholders are collectively responsible for maintaining academic standards. The components of our Academic Quality Framework are designed to support

devolved responsibility, with everyone being involved in academic activity and to demonstrate that we are committed to providing a high-quality learning experience.

With this commitment to adhering to maintaining the quality standards, presently, the Department of Mathematics offers two programs for which the medium of Instruction is English :

(a) Bachelor of Science in Mathematics

(b) Master of Science in Mathematics.

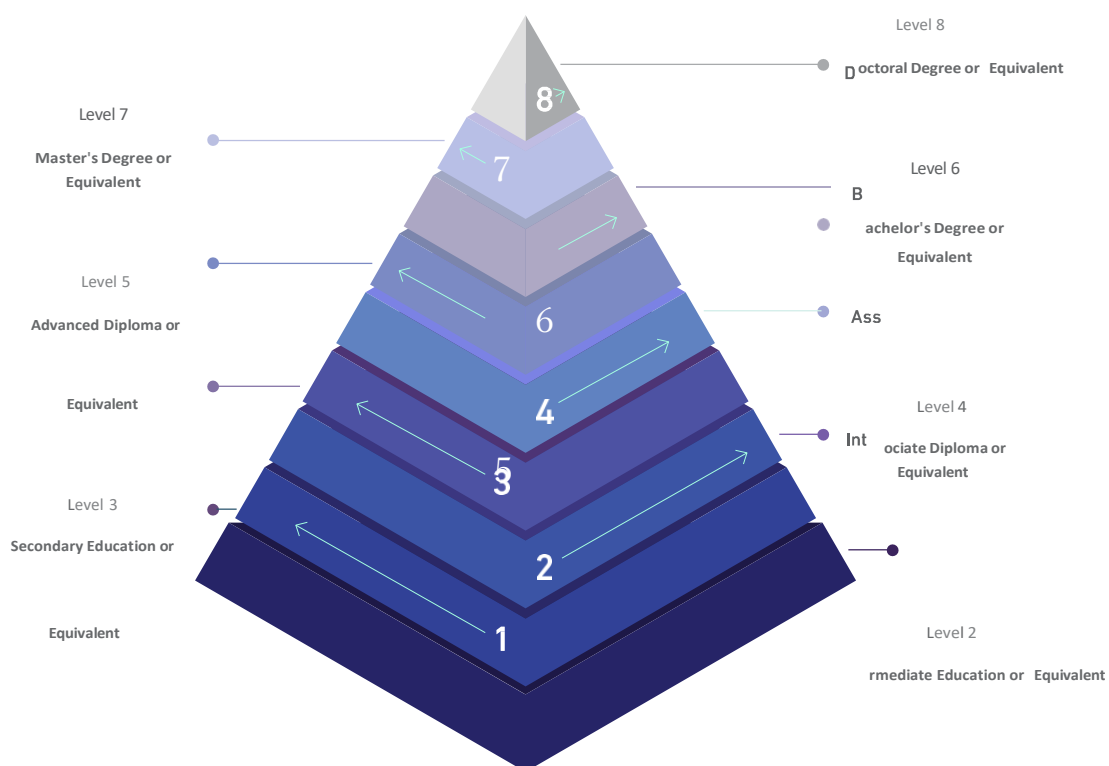
The academic and administrative affairs of the Department is led by a qualified and experienced Head of Department (HoD). He is assisted and supported by a council of qualified and experienced faculty members, recruited not only from Saudi Arabia but also from various countries. The Department council forms various subcommittees to look after various aspects of program delivery.

2. National Qualifications Framework for Saudi Arabia (NQF-KSA)

The Education and Training Evaluation Commission (ETEC) developed the National Qualification Framework for Saudi Arabia (NQF-KSA), a comprehensive structure for classifying the qualifications based on the levels of complexity and depth of learning outcomes. It also acts as a tool for transfer of the Knowledge, Skills and Values across both academic and work environment. Thus NQF is a nexus reinforcing the education and training in one hand with the practical requirements of labor market on the other. In order to achieve this, the NQF has classified the education into various levels.

FRAMEWORK LEVELS

The Levels are tiered vertical pathways categorized according to the breadth and depth of learning domains and their accumulation in educational programs. The levels start at an entry level and ending at level 8. Each level has a specific scope and depth, as they cover public, technical and vocational training, higher education, practical, civil, and military education sectors. Each level represents a progression of learning outcomes includes descriptors of the associated knowledge, skills, and values. The individual levels collectively form the NQF matrix of levels.



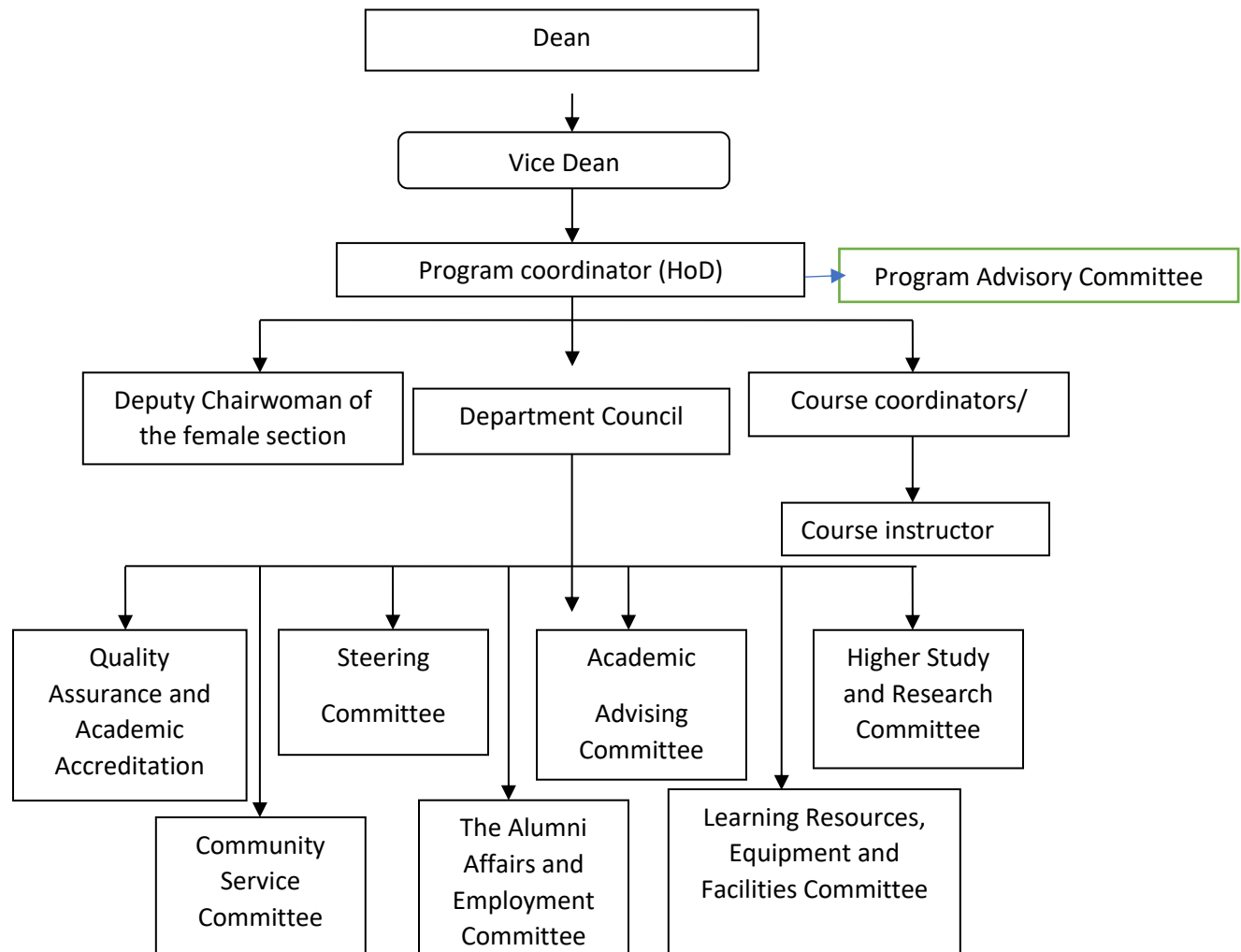
The department of Mathematics is committed to follow the guidelines and standards prescribed by the NQF for various levels of qualifications. Every institution and the Program must ensure that there is consistency with the various guidelines issued by the NQF such as:

- (i) Duration of Study,
- (ii) Credit and Contact Hour Requirement,
- (iii) Engagement of Stakeholders
- (iv) Program Learning Outcome
- (v) Learning Outcome Assessment methods**

The Programs offered by the Department of Mathematics must ensure that the guidelines of NQF are strictly followed with the guidance of DDQ, PSAU.

3. Organisational Structure

The Programs are administered in line with the following hierarchy:



4. Responsibilities at all Organizational Structure Levels

a) Responsibilities of the Department Head

- 1- Implementing the decisions of the University Council and the College Council in relation to the department.
- 2- Presiding over the department council and following up on the implementation of its decisions after their approval.
- 3- Preparing a comprehensive periodic report on the progress of work in the department and its educational affairs and other aspects. The activity and needs of the department, and submitting this to the dean of the college.
- 4- Suggesting plans for developing the academic performance of the department and submitting to the Dean of the College after approving in the Department Council.
- 5- Suggesting study schedules, distributing lectures, and exam schedules for the department to which he belongs. and submit it to the College Council after the approval of the Department Council in accordance with Article (43) of the Council's bylaw Higher education and universities and its implementing regulations.
- 6- Approving the proposals received from various subcommittees for submission in the Department Council and then submitting it to the College Council along with the minutes thereof.
- 7- Supervising the academic advising process for students in the department and following up on the progress of studies in it. Suggesting academic advisors, in coordination with the relevant authorities.
- 8- Suggesting the numbers and special conditions for admission to the scientific department, according to the absorptive capacity and raising it to the dean of the college after being presented to the department council.
- 9- Approval of the final results of various courses offered by the department.

- 10- Preparing Performance Appraisal Reports and other confidential reports in respect of faculty members and the like, and administrative staff and submit it to the dean of the college.
- 11- Recommending the granting of emergency and regular leave and other statutory leave to all Saudi and non-Saudi faculties, lecturers, teaching assistants, technicians and employees, the department's administrators, employees and workers, and submit it to the Dean of the College for approval and further action.
- 12- Forwarding of Joining Report of the Faculty members and staff returning from vacation.
- 13- Following up on the department's various needs and write them to the Dean of the College.
- 14- Forwarding of Scholarship Requests of Teaching Assistants for Higher studies overseas and monitoring their progress and reporting the same to the Competent Authority.
- 15- Any other duties assigned by the Vice Dean / Dean of the College.

b) Responsibilities of the Department Council

- 1- Approving the department's strategic plan in line with the strategic plans of PSAU and College of Science, some of which are:
 - a) Scientific Research
 - b) Academic Programs.
 - c) Application of Quality Standards
 - d) Graduate education.
 - e) Academic Advising and Student centric activities.
 - f) Scholarship and training for faculty and staff.
- 2- Discussing the directives received from the College and University and planning their implementation
- 3- Considering the proposals for study plan / curriculum review
- 4- Approving the proposals received from various subcommittees of the Department and forwarding to the College council.

- 5- Approving requests received from TAs and Lecturers with regard to the award of Scholarship for Higher Studies overseas such as admission, university rank, Review of Progress, Extension or discontinuation, Termination and any other matter in this regard and forwarding to the Competent Authority.
- 6- Approving the appointment of faculty members, teaching assistants, and lecturers, and their renewal, assignment, and promotion.
- 7- Approving the weightage for various direct assessment methods of Program and Course Learning Outcomes.
- 8- Approving the teaching load of the faculty members.
- 9- Considering and recommending Sabbatical Leave requests as set out by the Faculty and Employees Leave Rules of PSAU.
- 10- Recommending the approval of the faculty member's work as a part-time advisor, or its renewal. In government agencies, the private sector, or regional or international organizations.
- 11- Approving the request of the faculty members for participation in conferences and seminars that are held inside or outside the Kingdom after consideration.
- 12- Recommending the employment of non-Saudi faculty members who have exceeded the upper age limit.
- 13- Approving the request of a faculty member to attend a conference or scientific symposium.
- 14- Approving the transfer of a faculty member and the like to and from the department.
- 15- Recommending to grant the part-time professor a reward equivalent to the first peg of the scientific rank he was in. If he is not a former faculty member, the University Council determines the amount of the reward, including: The first tied does not exceed the rank of assistant professor.
- 16- Recommending the use of non-employees of distinguished Saudi competencies from outside the university. to do teaching.

- 17- Recommending the assignment of a faculty member and the like to work for government agencies.
- 18- Recommending the extension of the services of a faculty member and the like.
- 19- Recommendation to send a faculty member on a scientific mission outside the university premises.
- 20- Recommendation to send a faculty member to teach outside the kingdom.
- 21- Recommendation to allow a faculty member to travel to conduct research at a university other than his own during the period. summer vacation.
- 22- Considering the promotion of a faculty member, and the nomination of no less than a number of specialized arbitrators. Their number is about eight.
- 23- Approval of the equivalency of the courses that the student studied outside the university, according to the executive rule. Article (42) of the study and examination regulations for the undergraduate level.
- 24- Recommending the student to study courses if the student has completed the courses required for graduation. But his total grade was less than (2).
- 25- Approval for the student to complete the requirements of any course in the following semester based on the subject's teacher's recommendation in accordance with Article (25) of the Regulations for Study and Examinations for the Undergraduate Level.
- 26- Approval of the course reports, the annual report of the program and the self-study of the program.
- 27- Setting the controls for admission and transfer to and from the department.
- 28- Suggesting the number of students who will be accepted annually.
- 29- Setting the regulations for conducting them. Proposal to determine the degree of the semester work between internal and final mark allocations/distributions.
- 30- Consideration of all proposal regarding conduct of Exams and the Evaluations.
- 31- Recommending to add/modify conditions for admission to the master's or doctoral stages.

- 32- Recommending the admission of students to study a master's degree or a doctorate in a field other than his field of specialization
- 33- Considering all applications regarding transfer students, transfer of credits etc.
- 34- Considering all matters pertaining to Master Thesis – such as Supervising Limit for a faculty member, Validation of Thesis, Formation of Defense Committee etc.
- 35- Recommending identifying the supervisor of the student's thesis in postgraduate studies.
- 36- Encouraging the preparation of scientific research.

c) Responsibilities of the Committees

1. Quality Assurance and Academic Accreditation Committee

- 1. Spreading the culture of quality in the department.
- 2. Drafting and review of the Manual for Quality Management System for the Department of Mathematics.
- 3. Drafting and finalization of Mission and Goals of such Programs which is consistent with the mission and goals of PSAU and CSH and periodical review of Mission and Goals by following due process and consulting with stake holders such as Students, Faculty, Staff, Program leaders, Program Advisory Committee, DDQ etc.
- 4. Drafting and approving the Graduate attributes which is consistent with the Graduate Attributes given out by PSAU.
- 5. Drafting of Program Learning Outcome as per the guidelines given by NCAAA/NQF from time.
- 6. Verifying that the PLOs are aligned with the Graduate Attributes, by preparing a consistency matrix.
- 7. Suggest various teaching strategies to be adopted for achieving the PLOs and diversified assessment methods to evaluate the Program Learning Outcome

and the Graduate Attributes and submitting to Department Council for its consideration and approval.

8. Preparing alignment matrix between PLOs and Graduate Attributes.
9. Preparing an Assessment Plan to evaluate the PLOs and Graduate Attributes through Direct and Indirect Assessment Methods.
10. Draft and Suggest the Key Performance Indicators to evaluate various components of Quality Process such as the attainment of Mission and Goals, Student Progress, Stakeholders involvement in the Quality Assurance System, Program Review etc.
11. Guiding the Course Coordinators and Course Instructors in preparing the Course Learning Outcome, which is aligned to Program Learning Outcome.
12. Preparing the CLO-PLO alignment Matrix.
13. Preparation and review of Program Specification incorporating PLOs, Teaching Strategies, Assessment Methods, Assessment Plan, KPIs etc. and submitting to the Department Council for its approval
14. Review of courses files (Portfolios).
15. Review the updating of the files of community service, scientific research and department of alumni, and confirm the inclusion of any new activities.
16. Preparation of Rubrics for Grading of the results of various analysis such as KPI, PLO Attainment, Graduate Attributes, Mission and Goals.
17. Evaluation of KPIs, PLOs, Graduate Attributes as per the Assessment Plan.
18. Evaluation of the Mission and Goals as per the Operational Plan to evaluate the Mission and Goals.
19. Making SWOT Analysis of derived results and preparation of action plan for improvement.
20. Preparation of the Annual Program Report comprising of the results and suggested action plan and submitting to the Department council for its approval.

21. Formation of subcommittees for easing the Self Study Process of the Program
22. Update the Self Evaluation Scales for the program at both faculty branches (males and females).
23. Drafting and review of the Self Study Report (SSR) for the program at both faculty branches (males and females) and submission for consideration and approval of Competent Authority.
24. Preparing and processing the academic accreditation files of the program.
25. Follow up the recent publications of the National Commission for Academic Accreditation and Assessment and submit improvement actions to the Department Council.
26. Placing request for Accreditation from Accrediting Agencies through Competent Authority.
27. Coordinating the meetings of the accreditation team with members of the faculty staff and students in the department.
28. Supervising the evaluation and academic accreditation activities of the department.

2. Steering Committee

- 1-Preparing a strategic plan for the department on the lines of the strategic plan of the college and the university and the needs of the community and the modern directions of planning.
- 2-Updating the vision, mission and objectives of the department in accordance with the vision of the college and the university, their mission and strategic plan.
- 3-Provide advice and suggestions on improving academic and administrative performance within the department.
- 4-Introducing the strategic plan of the department and dissemination of its objectives and components.

- 5-Supervising the implementation of the department's strategic plan.
- 6-Supervising the development plans of the department.

3- Academic Advising Committee

- 1-Raising awareness of the importance of academic advising for the students enrolled in various programs offered by the Department.
- 2-Emphasize the concept of academic advising and the role of academic advising in guiding students to plan for their educational future.
- 3- Prepare a plan for academic advising
- 4-Help students solve their academic problems.
- 5-Referral of the grievances of the students to the competent authority and resolving them (such as: re-registration of student who have dropped out of school – removed from academia - problems of denied students – excuses of absent students from the final exams).
- 6-Develop a plan to serve students who are slow learners
- 7-Follow up on receiving students' complaints and responding to their suggestions.
- 8-Follow up the preparation of the necessary questionnaires for academic accreditation regarding academic advising.
- 9-Deepening trust between students and faculty members.
- 10-Collecting report from faculty members on their academic advising to students and review the same and forward to HoD/Vice Dean Academics, which is considered as a criteria for performance evaluation of the faculty members.

4- Learning Resources, Equipment and Facilities Committee

- 1- Interact with faculty members periodically and get the list of updated text and reference materials for the courses taught by them.
- 2- Submit the consolidated list to the Department Council for approval and submission to Competent Authority for procurement.

- 3- Collect the details of software requirement from the faculty and forward to the competent authority through HoD for making the licenced software available in the laboratory.
- 4- Review all computer terminals in the Computer Lab and get technical support from the College IT Team / PSAU IT Team.
- 5- Ensure that computer facilities including licensed software are available for all programs offered by the department.
- 6- Ensure availability of plans for the maintenance of computers, software and peripherals.
- 7- Supervising the availability of guidance procedures for security and safety procedures in laboratories and study halls.
- 8- Raise awareness, prepare guidance publications on safety and safety measures for different risks, and distribute them to students at the beginning of the study year.
- 9- Ensure a hygienic academic environment with the help of the College Administration.
- 10- Ensure that facilities for differentially abled stakeholders are maintained properly.
- 11- Prepare questionnaires to measure the satisfaction of the beneficiaries of all facilities and services provided.
- 12- Evaluate the level of satisfaction of stakeholders (faculty and students) on availability of learning resources in library, computer facilities etc. at the end of each academic year.
- 13- Discuss the preliminary results with the Quality Committee and present proposals and solutions.
- 14- Provide a periodic report to the head of the department at the end of each year and incorporating action plan for improvement with a copy to QAAC for including in the Annual Report of the concerned Program.

- 15- Coordinating with the competent authorities regarding the technical support of the devices.

5- Alumni Affairs Committee

- 1- Building the databases of graduate students.
- 2- Building the databases of the target parties in the employment of graduates
- 3- Studying the job market and its relation to the practical disciplines and programs required.
- 4- Develop a mechanism for skill development of graduates to join the labor market
- 5- Activate communication with the graduates of the department and get feedback from their experiences.
- 6- Coordinating with the alumni affairs department at the college and the university.
- 7- Presenting the success stories of some graduates in various fields.
- 8- Organizing the annual alumni forum.
- 9- Create a webpage for alumni on the department and college websites so that the graduates can register data and communicate with the department.
- 10- Announcing the innovative and distinguished programs of graduates, which serve the community and the university.

6- Field Training Committee

- 1- Coordinating with the college administration to provide opportunities for field training for students.
- 2- Proposal to form a committee to evaluate the student's final report and approve it from the department council.
- 3- Follow up the training places of the student and collect feedback about the student's performance

- 4- Making the student aware of the importance of the field experience by explaining the connection between the theoretical and practical aspects.
- 5- Development of scientific skill in the field of specialization.
- 6- Deepening the student's ethics and behavior at work, during the training period through discipline and punctuality, responsibility and teamwork.
- 7- Enable students to demonstrate their scientific and practical abilities, which may allow them to get employment in the same training place or be nominated in other places upon graduation.
- 8- Enable students to develop their abilities by analyzing strengths and weaknesses during the training period.
- 9- At the end of the training collect confidential report from the supervisor of the establishment where the student undertakes the training and submit to HoD along with the report of the student.
- 10- Prepare Field experience report and submit to the QAAC for review and further necessary action.

11- Time Table Committee

- 1- Work on the preparation of study schedules to be delivered in a timely manner.
- 2- Review the teaching loads of faculty members.
- 3- Distribute the department's courses to the allocated halls.
- 4- Coordination between departments to achieve proportionality between the capacity of the hall and the number of students per course.
- 5- Follow up the announcement of the timetables on the halls assigned to the department.

10- Exams Committee

- 1- Prepare the final exam schedule.

- 2- Ensure that the classrooms are equipped with chairs, lighting, and air conditioning.
- 3- Distribution of halls for the final exam and its supervision.
- 4- Follow up the final exams, including:
 - a) Follow-up attendance of exam supervisors and provide alternatives in case of emergency.
 - b) Receiving questions and lists of students from the professors of the course and handing them over to the committees.
 - c) Receiving of exam answer sheets papers and the signatures lists from the exam committees and delivering to the course instructors.
 - d) Provide a daily report on the progress of the final exams.
 - e) Recognition of denied students and ensuring they have no access to the relevant exam.
 - f) Arranging halls and seating according to the number of students per course.
 - g) Raise student issues (request for alternative exams - cases of cheating ... etc.) to the relevant committees.
 - h) Preparation of the final exam report on daily basis for the entire duration of the exam and forward to competent authority.

11-Scientific Research Committee

- 1- Monitoring of research projects within the department for various fields.
- 2- Prepare a research plan that considers the research interests and trends of the department faculty members in coordination with the college.
- 3- Implementation of scientific research programs and policies in the department.
- 4- Encouraging scientific research that meets the needs of the job market, and opening channels of communication with those wishing to benefit from the services of faculty members.

- 5- Working to raise the research skills of the faculty members through specialized courses and lectures.
- 6- Searching for graduate programs that meet the needs of Vision 2030 of the Kingdom of Saudi Arabia.
- 7- Implementation of the research partnership between the members of the department and the college, and other faculties inside and outside the university.
- 8- Prepare and follow up the scholarships file in the department.
- 9- Receive proposals for research seminars and arrange their schedule each academic year, with approval by the department.

12- Disciplinary Committee

- 1- Guide students in some academic issues that are difficult for students to deal with.
- 2- Follow students' behavior and solve behavioral problems that could be an obstacle to their educational process.
- 3- Communicate with the guardians of students who commit academic or behavioral violation in order to inform them about the violation of those students.

13- Community Service Committee

- 1- Develop a proposal plan for the community service.
- 2- Document the relationship of the department with the external community and work to identify and meet its needs.
- 3- Encourage the spirit of initiation among faculty members and similar positions, along with students (males and females) to participate in community service.
- 4- Follow up the implementation of programs and writing reports.

- 5- Evaluate the community service programs and work on developing them.
- 6- Develop KPIs for evaluating the level of community partnership.
- 7- Document all department work related to community service.
- 8- Dissemination of the achieved community service work through the social media and the websites of the department, college and university's newspaper.
- 9- Evaluate the KPI results and prepare the annual report of the community service activities along with improvement action plan and submit to HoD with a copy to QAAC for incorporating in the Annual Program report.

14- Graduation Project Committee (For Bachelor Programs)

- 1- Making awareness and introductory seminars on graduation projects for seventh-level students.
- 2- Receive the titles of the proposed projects from the faculty in the department and choose the appropriate ones and approve them by the department board, choose discussion committees and put.
- 3- Supervising project discussions, ensuring that the deliberate standards and models of the department are applied and raising a report to the head of the department. Carry out other tasks assigned to the committee.

15- Higher Studies Committee (For Master Programs)

1. The committee collects information about professional programs and Master degree Programs (Regular / Part-time / Executive) based on the directions received from the University / College Administration.

2. After collecting all preliminary information and identifying benchmarking institutions, prepares the a proposal for commencement of the program highlighting various factors such as :
 - (a) Need for commencement of the Program
 - (b) Mission and Objectives of the Program
 - (c) Benefit to the society
 - (d) Entry requirements
 - (e) Study Requirements
 - (f) Graduation requirements
 - (g) Employment avenues to graduates
3. Prepares the study plan of the program (Course work / Course-work with Thesis / Course-work with Internship etc) and makes benchmark with identified universities of repute offering similar program.
4. Communicate with internal and external subject experts and submit final proposal incorporating the recommendations of the reviewers to the Department Council.
5. After approval in the Department Council the proposal is forwarded to the Higher Education Council of PSAU through the College Council for further action.
6. After commencement of the program, the Higher Studies Committee coordinator assists the Head of Mathematics Department in the Program delivery from registration of new students till graduation.
7. In case of Thesis based programs, the Higher Studies Committee helps the HoD in finalizing the Proposal for thesis, approval of thesis, defense of the thesis and notification of the result.
8. The Committee will provide QAAC with all inputs to evaluate the Program Administration and all aspects of Program Quality Assurance.

5. Standards and Criteria for Program Adopted

5.1 Standard 1: Program Management and Quality Assurance

5.1.1 Standard 1 Criteria:

1	PROGRAM MANAGEMENT AND QUALITY ASSURANCE The program must have effective leadership that implements the institutional systems, policies and regulations. The program leadership must plan, implement, monitor, and activate a quality assurance systems that achieve continuous development of program performance in a framework of integrity, transparency, fairness and within a supportive organizational climate.
1-1	Program Management
1-1-1	The program mission and its goals are consistent with the mission of the institution/college, and guide all its operations and activities.
1-1-2	The program has the sufficient number of qualified staff to perform its administrative, professional and technical tasks, and they have defined tasks and authorities.*
1-1-3	The program provide an organizational climate and supportive academic environment.
1-1-4	The program management monitors the achievement of its goals and actions are taken for improvement.
1-1-5	The program management applies mechanisms ensuring integrity, fairness, and equality in all its academic and administrative practices, and between the male and female student sections and branches (if any).

1-1-6	The program builds on the views of professionals and experts in the program specialization, to contribute to its evaluation, development, and performance improvement.
1-1-7	The program management provides reliable and publicly disclosed information to the community about the program description, performance, and achievements that suits the needs of the stakeholders.
1-1-8	The program management is committed to activating the values of the scientific integrity, intellectual property rights, rules of ethical practices, and proper conduct in all academic, research, administrative, and service fields and activities.*
1-1-9	The program management applies the systems, regulations, and procedures that are approved by the institution/college, including those related to grievance, complaints, and disciplinary cases.
1-2	Program Quality Assurance
1-2-1	The program management implements an effective quality assurance and management system that is consistent with the institution quality system.
1-2-2	The program analyzes the key performance indicators and the evaluation data annually and results are used in planning, development, and decision-making processes. *
1-2-3	The program conducts a periodic, comprehensive evaluation and prepares plans for improvement; and follows up its implementation.

5.1.2 Standard (1) Procedures



5.1.3 Standard (1) Activities:

Procedure 1: Preparing Program's Mission and Goals

- The quality committee / program coordinator prepares a proposed format for the program's mission and goals.
- Taking feedback on the draft mission and goals from internal and external stakeholders.

- Preparing the initial copy of the program's mission and goals and submitting it to the department council.
- Discussing the proposed mission and goals in the department council for approval and sending it to other stakeholders such as Program Advisory Committee, College Quality Committee, DDQ etc.
- The comments received from various stakeholders are reviewed.
- The quality committee / program coordinator prepares the second copy of the program mission and goals incorporating suggestions of the stake holders.
- Obtaining approval from the department council.
- Obtaining the approval of the concerned vice dean of the college.
- To approve the mission and goals from the College Council.

Procedure 2: Reviewing and Updating the Program's Mission and Goals

The program mission and goals are reviewed every 4 years by following the following steps:

- The quality committee/program coordinator reviews the program's mission and goals according to the internal and external variables and the objectives of the university/college/department.
- Preparing a proposed copy of the updated version of the program's mission and goals (the previous version) with justifications and reasons.
- Preparing the initial copy of the program's mission and goals and submitting it to the department council.
- Taking feedback on the proposal from internal and external stakeholders.
- Discussing the proposed formula in the department council and recommending for sending it to various stakeholders such as PAC, DDQ etc.
- Preparing the second copy of the program's mission and goals incorporating the suggestions of the stakeholders..
- Obtaining approval from the department council.
- Obtaining the approval of the concerned vice dean of the college.

- Approval of the mission and goals from the college council.

Procedure 3: Publication of Program's Mission and Goals

- The QAAC / Program Coordinator prepares the approved version of Mission and goals.
- Preparing a plan to disseminate and raise awareness of the program's mission and goals.
- Implementation of the plan and publicizing the Mission and Goals through various channels such as Website, Leaflets, Department Handbook etc.
- Preparing a periodic report.

Procedure 4: Program's Mission and Goals are consistent with all its operations and activities:

- A consistency matrix of Mission and Goals of the Program with the Mission and Goals of the College and University is prepared.
- The QAAC prepares an operational plan incorporating various actions to be undertaken to achieve the mission and each goal.
- The QAAC also identifies relevant KPIs for evaluation of the attainment of Mission and Goals of the programs offered.
- The department council secretary ensure that the department council considers the topics that are related to the mission and goals of the program.
- The decisions of the department council concerning the program are linked to its mission and goals according to the program's operational plan.
- Preparing a periodic report on the extent of consistency and coherence of the operations and activities of the competent council with the program's mission and goals.

Procedure 5: Evaluation and Benchmarking:

- Key Performance indicators identified for measuring the attainment of the program's mission and goals.
- QAAC evaluates the KPIs as per the operational plan.
- Comparisons with internal and external benchmark are done.
- The attainment of the Operational Plan objectives based on the KPI Analysis is reported in the Annual Program Report of the Program concerned.
- Preparing a periodic report and developing plans for improvement and development the program's mission and goals is made

5.1.2 Standards Procedures:

5.2.3 Standards (2) Activities:

Procedure (1): Program Management:

- The program managers are selected through a rigorous selection process of PSAU and after selection are appointed by the Competent Authority initially for a fixed term, which is extendable there after based on their performance.
- The duties and responsibilities of the Program Managers are clearly outlined by the PSAU and the Higher Education Council and are notified from time to time
- A Hierarchical (Pyramidal) Organizational structure is in place to oversee all activities relating to effective Program Delivery, well defined roles and responsibilities.
- At the department level, the Head of the Department is the Program Coordinator. He is assisted by the Department Council.
- At the beginning of every academic year, the Department Council nominates members for various Sub Committees with specific terms of reference for maintaining an academic environment for effective program delivery.
- Program Coordinator /Department council looks into various aspects of course / program delivery across branches such as adherence to the lecture plan as specified in course specification, executing common assessment plan across all branches (both direct and indirect)
- The senior management encourages participation of faculty members in active research by giving various incentives from time to time
- The faculty members are encouraged to have research collaboration (domestic as well as international) through the Deanship of Scientific Research
- A committee has been formed by the department council to look after the research activities of the program / department, which organizes periodical meetings /seminars to facilitate exchange of research findings among faculty members.

- The Program Management reviews the curriculum and study plan periodically and suggest such modifications so that the curriculum is at par with similar programs offered nationally as well as internationally
- Department council, among its members, nominates senior faculty members having varied administrative experience apart from teaching for a Steering Committee, which advises the HoD / Dept Council or any other subcommittee of the department, for an effective Program Administration and Program Delivery
- The department of mathematics will form a Program Advisory Committee comprising of Senior Administrators, Subject Experts, Employers and get professional guidance with regard to various aspects of programs offered, their delivery and improvement of their performance.
- The Program Management encourages the Teaching Assistant, Staff to enhance their academic and technical qualification by recommending to the approval of the Competent Authority
- The sub committees which are entrusted with various aspects of program delivery submit their reports at the end of each term and suggest improvement plans which are considered by the Dept. Council and after deliberations forwarded to the Competent Authority for their consideration
- An effective Performance Appraisal System is in place as envisaged by the PSAU and is implemented by the Program Coordinator and Program Administrators uniformly in which contribution of faculty members to various aspects of mission and goals such as teaching load, research output, academic advising, community service, professional activities are evaluated.
- The Program Management procures all such accoutrements for an effective program delivery.

Procedure (2): Program Quality Assurance:

- The Department Council nominates members for Quality Assurance and Academic Accreditation committee (QAAAC) with specific terms of reference
- The QAAC drafts the Manual for Academic Quality Management System of the department based on the AQMS manual of PSAU.
- The QAAAC in consultation with the faculty members and other stake holders drafts the program specification which outlines the graduate attributes of the program, intended learning outcomes, teaching strategies to be adopted and an assessment plan for evaluating the learning outcomes and the graduate attributes, so that the graduate possess the desired attributes as per the NQF standards.
- The faculty and staff are consulted from time to time by the Program Management through Department Council and Sub Committee Meetings and the recommendations are considered by the competent authority.
- A group of faculty members prepares the course specifications with specific objectives, intended learning outcomes which are in alignment with the Program learning outcomes, teaching strategies and assessment methods, required resources etc., which is reviewed by the QAAAC before submitting to Dept. council for its consideration and approval.
- The PS and CS are forwarded to the DDQ for its approval, through the Quality committee formed at college level.
- The program evaluates its progress to achieving its mission and goals through Key Performance Indicators (KPIs) given out by NCAAA. The program can also have its own KPIs. The Program evaluates all the KPIs given by NCAAA in each program cycle.

- The Program Administration evaluates the attainment of Mission and Goals, student progress, stakeholder's involvement in Quality Assurance Process through identified KPIs.
- At the end of each semester the course coordinators submit the course reports analyzing the achieved results, effectiveness of teaching strategies, suggestion for improvement and an action plan for future
- The students are contacted periodically by QAAAC and Academic Advisers regarding the course delivery apart from Class room observation done by Program Management
- QAAAC of the department conducts different types of surveys to ascertain the satisfaction level of stake holders with regard to various aspects of Course / Program (such as course evaluation, program evaluation, alumni survey, employer survey, faculty member survey etc)
- At the end of each academic year, the QAAAC prepares a consolidated Program Annual Report evaluating the results achieved and the Program KPIs with reference to the Mission and Goals of the Program with suggested improvement action plan and submits the report to the Department Council for its consideration and approval.
- The QAAC conducts a periodical self-study of the Program Delivery with reference to the standards given out by the NCAAA and prepares a self- study report and forwards to the Accreditation Agency through proper channel for getting the program accredited.

5.3 Standard 2 (Teaching and Learning)

5.3.1 Standard 2 Criteria:

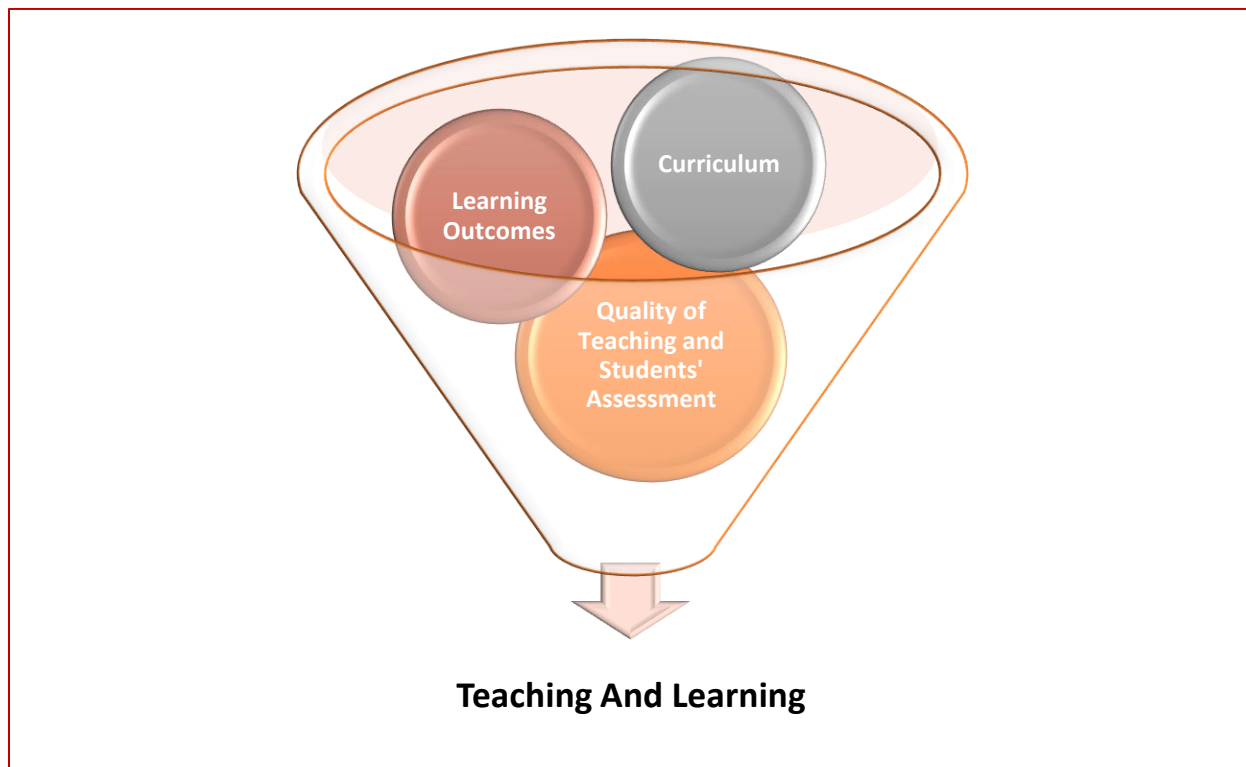
2	<p>TEACHING AND LEARNING</p> <p>Learning outcomes at the program level must be precisely defined, consistent with the requirements of the National Qualifications Framework and with the related specialized academic standards, and the labor market requirements. The curriculum must conform to professional requirements. The teaching staff must implement diverse and effective teaching and learning strategies and assessment methods that are appropriate to the different learning outcomes. The extent of achievement of learning outcomes must be assessed through a variety of means and the results are used for continuous improvement.</p>
2-1	<p>Learning Outcomes</p>
2-1-1	<p>The program identifies its intended learning outcomes that are consistent with its mission, and aligned with the specialized academic standards and the graduate attributes at the institutional level; they are approved, publicly disclosed, and periodically reviewed.</p>

2-1-2	The learning outcomes are consistent with the requirements of the National Qualifications Framework, academic standards and labor market needs.*
2-1-3	The program identifies the learning outcomes for the different tracks (if any).
2-1-4	The program applies appropriate mechanisms and tools for measuring the learning outcomes, and verifying their achievement according to specific performance levels and assessment plans.*
2-1-5	The Program implements a clear and approved teaching, learning and evaluation strategy that articulates its educational philosophy and ensures that the Program's intended learning outcomes are achieved.
2-2	Curriculum
2-2-1	The curriculum design considers fulfilling the program goals and learning outcomes, and the educational, scientific, technical and professional developments in the field of specialization; and is periodically reviewed.*
2-2-2	The study plan ensures the balance between the general and specialty requirements, and between theoretical and applied aspects; and it takes into account the sequencing and integration of the courses.*
2-2-3	The construction of the program study plan considers the identification of exit-points requirements (if any) in accordance with international practices and similar programs.
2-2-4	The learning outcomes in the courses are aligned with the program learning outcomes (e.g., Matrix for the alignment of the learning outcomes of the courses with program learning outcomes).

2-2-5	Teaching and learning strategies and assessment methods in the program vary according to its nature and level, and are aligned with the learning outcomes of the program.
2-2-6	The program verifies the effectiveness of field training and the quality of its supervision, and follows up on the commitment of its operators to their mandated tasks according to specific mechanisms.
2-2-7	The program ensures a unified application of its study plan as well as the program and the course specifications offered at more than one site (sections of male and female students and different branches).*
2-3	Quality of Teaching and Students' Assessment
2-3-1	The program monitors the commitment of the teaching staff to the learning and teaching strategies and assessment methods included in the program and course specifications through specific mechanisms.*
2-3-2	The necessary training is provided for the teaching staff on learning and teaching strategies and assessment methods identified in the program and course specifications, along with the effective use of modern and advanced technology; and their use is monitored.
2-3-3	At the beginning of each course, students are provided with comprehensive information about the course, including learning outcomes, teaching and learning strategies, and assessment methods and dates, as well as what is expected from them during the study of the course and feedback on their performance is provided for them.

2-3-4	The program applies mechanisms to support and motivate excellence in teaching, and encourages creativity and innovation of the teaching staff.
2-3-5	The program implements clear and publicized procedures to verify the quality and validity of the assessment methods, and to ensure the level of student achievement.
2-3-6	Effective procedures are used to control academic integrity at the program level to verify that the work and assignments of students are their own. *

5.2.2 Standard (3) Procedures:



5.2.3 Standard (3) Activities:

Procedure (1) : Learning outcomes

- The QAAC in consultation with the Course Coordinators reviews the Program Learning Outcomes given by NQF for the specific level of the program (Bachelor – Level 6, Master and Professional – Level 7, Doctorate – Level 8)
- The Subcommittee for Learning Outcomes identifies graduate attributes and PLOs in line with the NQF and consistent with the graduate attributes of PSAU, program mission as well as with academic, professional, and labor market requirements.
- The subcommittee ensures PLOs are developed in accordance with the graduate attributes of the Program.
- The subcommittee will ensure that the PLO is aligned to the Graduate Attributes and prepare a consistency matrix for the same.
- The subcommittee will ensure that the graduate attributes and the PLOs are approved, by Department council and college council.
- The Committee evaluates the attainment of graduate attributes through direct methods such as (a) Evaluation of attainment of PLOs (b) Exit Exam (c) Number of graduates employed in identified sectors as per the Saudi Job Classification and indirect methods through survey of (a) Alumni (b) Employers (c) Supervisors of establishments where the students undertake field Experience and other KPIs and by forming a
- The subcommittee ensures that the graduate attributes are publicly disclosed, and periodically reviewed.
- The subcommittee identifies specific sectors in the Saudi labor market as stated in Saudi NTP Vision and Job Classification therein.
- The subcommittee for CLO –PLO assessment collects students' assessment data from all faculty to measure the attainment of the learning outcomes every semester.
- The subcommittee prepared Target- actual statements of each course in order to determine the achievement and performance levels of faculty and students

Procedure (2): Curriculum:

- The Department Study Plan committee is responsible to suggest, design, develop and modify the program curriculum periodically.
- The study plan committee must ensure that the minimum requirements of core knowledge units specified by NCAAA/NQF are met.
- The study plan committee selects the knowledge units and prepares course learning outcomes, which are aligned with the Program Learning Outcomes.
- The Study Plan committee ensures that the course content is comparable with courses of similar programs offered benchmarked universities identified by the Department and or suggested by NCAAA.
- A matrix is prepared to align program learning outcomes (PLOs) with the Course learning outcomes (CLOs).
- The study plan committee creates a balance between theoretical and applied courses and schedule them logically in a sequence based on the level of understanding and comprehension required.
- Adequate provision exists for curricular and extracurricular activities during each semester.
- The learning outcomes in the courses are aligned with the program learning outcomes and shown in a matrix
- The teaching and learning strategies and assessment methods are aligned with PLOs and CLOs in order to determine their attainment.
- The faculty employs a student-centered teaching and learning strategy by encouraging them to involve in active learning
- The program Coordinator (HOD), the course coordinators and individual instructors ensure a unified application of the study plan, in both theory and practice, in both male and female sections.
- All course specifications, course description, as well as assessment (e.g, midterm and final term exams) are unified in both male and female sections.
- The Field training committee ensures that all trainees attain the learning outcomes as specified in the FT specifications

- Appropriate strategies and activates aligned to the learning outcomes of the program are designed and implemented for field training and field experience
- The field training committee ensures that the tasks assigned to trainees contribute to the attainment of the learning outcomes
- The field training committee ensures that field supervisors and managers at training sites are aware about the intended learning outcomes
- The field training committee has devised a mechanism to supervise, follow-up, and evaluate students' performance during the field training.
- Depending on the Level and type of Program, the Graduation committee or the higher studies committee devises the assessment plan and criteria for evaluation of the graduation Project of bachelor degree and thesis defense for Master degree programs.

Procedure (3): Quality of Teaching and students' assessment:

- All teaching staff in the department ensure adherence to the learning and teaching strategies and assessment methods as specified in the program and course specifications
- The Program, through various meetings and Department council platform, urges the instructors to identify suitable learning and teaching strategies and assessment methods and make use of blackboard, and other advanced technology.
- At the beginning of each semester, the students are provided with a copy of course description containing credit and contact hours, learning outcomes, teaching and learning strategies, assessment methods and intervals of assessment.
- Both direct and indirect methods are employed to periodically evaluate the effectiveness of teaching and learning strategies and assessment methods, and are mentioned in the course specifciatons.
- Adequate rewards and motivations are provided for recognizing excellence and innovation in teaching.

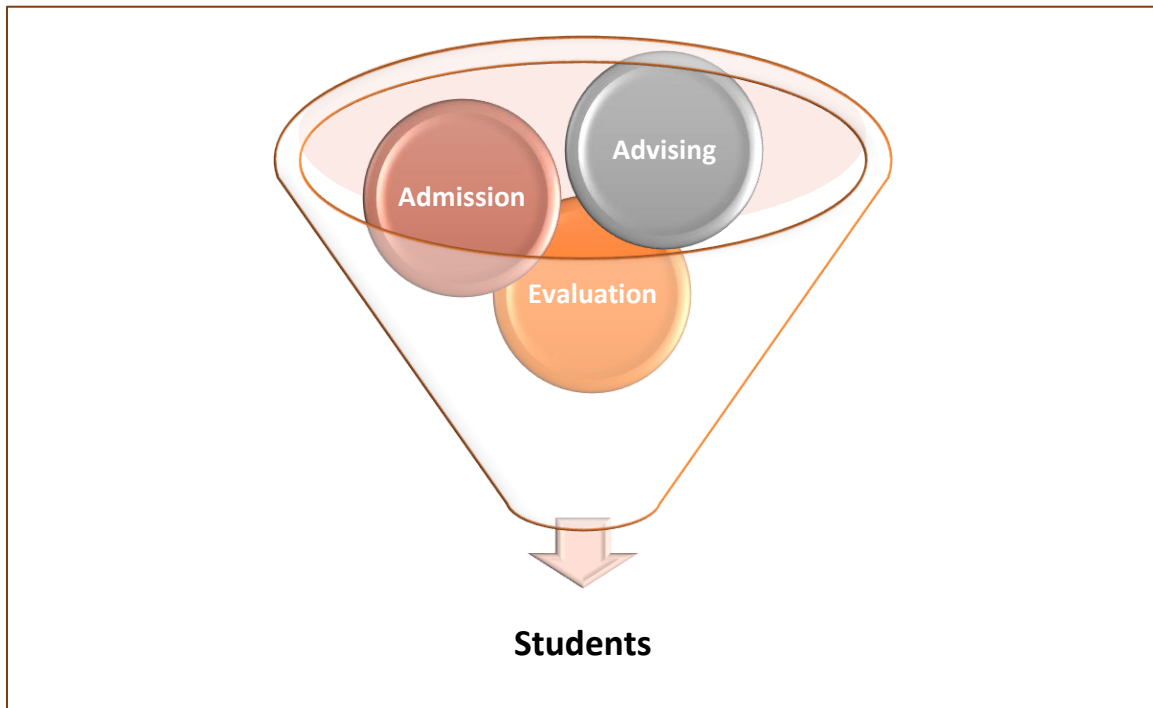
- The Department council ensures evaluation of the student progress through different means:
 - (a) Attainment of CLOs through direct assessment by way of exams, quiz, homework, assignment, presentation, defense etc.
 - (b) Prepares a rubric for evaluating the student progress through various indirect means such as (a) Progression Rate (b) Completion rate in all courses (c) Completion rate scoring a benchmark score determined by the CLO-PLO Attainment Analysis Committee of the College, (d) Number of students completing the program in minimal time, (e) Student evaluation of courses through structured questionnaires, (f) Feedback of Supervisor of the establishment where the student undertakes field experience to name a few.
- The program makes available publicly course specifications, and the rules related to learning outcomes, grades calculation methods.
- The ithenticate software (plagiarism checker) is randomly used to ensure that assignments and graduation projects are works of students.
- The Faculty provides feedback to students about their performance periodically and suggest measures to improve their performance.
- The academic advisors receives the feedback of their students from the course instructors and the results of various assessments and gives counselling to the students and suggest means to improve their performance.
- At the end of the semester, the course coordinator prepares the course report incorporating the attainment of CLOs, completion rate, whether any difficulties faced in course delivery and an improvement action plan, and submits to the QAAC.
- The QAAC, prepares the program learning outcome assessment report based on the assessment plan specified in the program specification incorporating the results of SWOT analysis related to teaching and learning parts and proposes an action plan to improve the areas of weakness in the following semester and monitored continuously.

5.4 Standard (3) (Students):**5.3.1 Standard (3) Criteria:**

3	STUDENTS The criteria and requirements for student admissions in the program must be clear and publicly disclosed, and must be applied fairly. The information about the program and the requirements for completion of the study must be available, and students must be informed about their rights and duties. The program must provide effective guidance and counseling services, and extracurricular and enriching activities to its students. The program must evaluate the quality of all services and activities offered to its students and improve them. The program must follow its graduates.
3-0-1	The program applies approved and disclosed criteria and requirements for the admission, registration and graduation of students, the transition to another program and the equivalent of what students have previously learned, commensurate with the nature of the program and are applied fairly.
3-0-2	The program provides basic information to students, such as study requirements, services, and financial fees (if any), through various means.
3-0-3	Students are provided with effective academic, professional, psychological, and social guidance, and counseling services through qualified and sufficient staff.*
3-0-4	Mechanisms are applied to identify gifted, creative, talented, and underachieving students in the program, and appropriate programs are available to care for, motivate, and support each group of them.

3-0-5	Students in the program are offered extracurricular activities in variety of fields to develop their abilities and skills, and the program takes appropriate actions to support and motivate their participation.
3-0-6	The program implements an effective mechanism to communicate with its alumni and involve them in its events and activities, explore their views, and benefit from their expertise and support; and provides updated and comprehensive databases about them.
3-0-7	Effective mechanisms are applied to evaluate the adequacy and quality of services provided to students and measure their satisfaction with them; and the results are used for improvement.*

5.3.2 Standard (3) Procedures:



5.4.3 Standard (4) Activities:

Procedure (1): Students' Admission and Registration:

(a) Bachelor Program:

- The Department Council determines the number of students that may be accepted based on comparisons and studies.
- The Department determines the additional admission and transfer requirements for the program (if any).
- The student uploads the details to the university's website and fills in the required forms.

- The Deanship of Admission and Registration provides the conditions and regulations to students.
- The student registers his/ her academic schedule with the help of the academic advisor.
- The Deanship of Admission and Registration reviews the student's schedule in accordance with the specified terms and policies.
- The student prints his academic schedule on the academic website.
- The student deletes or adds some courses after the approval of the academic advisor

(b) Master Program:

- The Vice Rector of Higher Studies and Scientific Research determines the eligibility conditions and selection process for the Master Degree Programs offered in PSAU.
- Mathematics Department, strictly enforces the rules of the Higher Education Deanship of PSAU.
- Advertisement calling for application is made in various means by the competent authority of PSAU who fulfill the following criteria:-
 - The candidate must be a Saudi national or a non-Saudi who has obtained an official scholarship through one of the cultural exchange programs.
 - The candidate must hold a B Sc degree in Mathematics or Mathematics education (or its equivalent) from any university recognized by the MOE either inside or outside the Kingdom of Saudi Arabia.
 - The candidate must have a GPA of (3.25) out of (5) at the bachelor's degree level as a minimum to be admitted in the program
 - The candidate must have secured atleast a score of 4 in IELTS or equivalent English Test.

- The candidate must not have previously been dismissed from any university for disciplinary or academic reasons.
- The candidate must pass the written test and a personal interview held by the Department of Mathematics.
- The candidate must have the approval of the employer if he/she works in either the government sector or the private sector

Procedure (2): Transfer Between Colleges/Programs/Universities

- The transfer request is submitted by the student after completing the specified form supported by the student's academic record.
- The equivalence committee studies the application and reviews it in accordance with the university terms and regulations.
- The committee submits a report on the status of the application with a recommendation for approval or rejection supported by justifications and reasons.
- The Department Council discusses the committee's report and recommends acceptance or rejection through a memorandum submitted to the college's Vice Dean for educational and Academic affairs.
- The request is submitted to the relevant college council to approve the acceptance or rejection of the transfer request.
- Send the decision to the authorized person for implementation of the decision.
- Transfer is not applicable for Master Degree Program of the Department.

Procedure (3): Initialization and Guidance

- The academic advising committee prepares a periodic plan for preparing students for the program.
- The department council discusses the proposed configuration plan.

- The academic advising committee prepares the first version of the periodic plan to prepare the students for the program after taking feedback from the department council.
- The Vice Dean of Academic and Educational Affairs studies the plan considering the capabilities of the faculty and the plans of other programs in the college.
- The academic advising committee prepares the final version of the plan considering the views and recommendations of the Vice Dean of Academic and Educational Affairs.
- The plan is presented to the relevant department council for approval.
- The plan is approved by the College Council.
- The committee implements the plan activities under the supervision of the concerned councils.
- The committee prepares a periodic report on the plan supported by performance indicators and evidences.
- The department must ensure that proper guidance is given to gifted, talented students and psychological counselling is given to students who need the same.

Procedure (4): Students Evaluation

- The exams committee prepares a time plan for the student's evaluation (procedures and activities).
- The department council discusses the time plan for the student's evaluation.
- The exams committee prepares the final version of the plan after receiving the feedback from the department council.
- The Vice Dean of Academic and Educational Affairs studies plans considering the capabilities of the faculty and the plans of other programs in the college.

- The exams committee prepares the final version of the plan considering of the views and recommendations of the Vice Dean of Academic and Educational Affairs.
- The plan is presented to the relevant department council for approval.
- The plan is approved by the College Council.
- The committee implements the plan activities under the supervision of the concerned councils.
- The committee prepares a periodic report on the plan supported by performance indicators and evidences.

Procedure 5: Quality Assurance Procedures

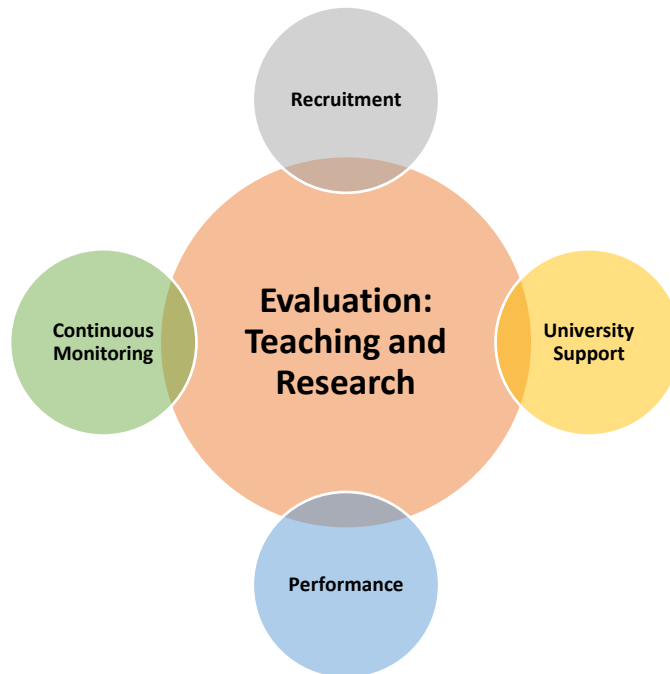
- In the beginning of each academic year, the department council nominates student members to various committees of the department such as Student Activities Committee, Learning resources, facilities and equipment committee, graduate affairs committee, to name a few. This way the concerns of the students can be addressed.
- The department periodically interact with Alumni of the programs offered and gets feedback about the learning experience and offered services by the department.
- Similarly, the department periodically interacts with the students and ascertain the level of satisfaction on curricular and extra curricular activities, resources and facilities provided to them through surveys.
- At the end of the academic year, a detailed survey report is prepared based on the analysis of the survey of the students and alumni incorporating action plan for improvement of various services and submitted to QAAC.
- QAAC incorporates the results in the periodic report in the Program report incorporating the suggested action plan and monitors the progress on the proposed action plan regularly through the HoD / Department Council.

5. 4 Standard (4) (Faculty)

5. 4.1 Standard (4) Criteria:

4	Faculty The program must have sufficient numbers of qualified teaching staff with the necessary competence and experience to carry out their responsibilities. The teaching staff must be aware of current academic and professional developments in their fields of specialization, participate in research and community service, and in improving the program and institutional performance. Teaching staff performance must be evaluated according to specific criteria, and the results of these evaluations must be used for development.
4-0-1	The program has an adequate number of faculty members at all sites where it is offered and appropriate verification mechanisms are applied.*
4-0-2	The teaching and adjunct staff in the professional programs include some experienced and highly skilled professionals in the field of the program.
4-0-3	The teaching staff participate in academic, research and scientific production activities efficiently and regularly, and their participation in these activities is considered as one of the criteria for their evaluation and promotion.
4-0-4	Teaching staff participate in community partnership activities; and their participation in these activities is considered as one of the criteria for their evaluation and promotion.
4-0-5	Teaching staff participate in professional and academic development programs in accordance with a plan that meets their needs and contributes to the development of their performance.
4-0-6	The performance of the teaching staff is regularly assessed according to specific and published criteria; feedback is provided to them; and the results are used in improving the performance.

5.5.2 Standard (4) Procedures



5.5.2 Standard (4) Activities

Operating Rules and Procedures :

Various Rules and regulations are in place as given out by the Ministry of education, Saudi Arabia with regard to the recruitment, retainment, promotion of Faculty and Staff of Saudi Arabia which are as under:

- i. Regulations of Appointment for the affairs of employees of Saudi universities, including faculty members and the like.
- ii. Regulations of Promotion for the affairs of employees of Saudi universities, including faculty members and the like.
- iii. The regulations governing the affairs of Saudi university employees from faculty members and those in their position 1418 AH.

- The department must make a thorough analysis of faculty needs based on enrollment numbers at each site, offered courses, scheduling requirements, and student-to-faculty ratios etc and must submit the proposal to the Competent Authority.
- The appointment of faculty members and staff of the department of mathematics, must be carried out based on the basis of qualification and merit.
- The procedure must ensure that there is no discrimination based on factors such as sex, race, religion, or any other irrelevant criteria to fostering a diverse and inclusive academic environment.

The detailed procedures to be adopted for various positions are as under:

Procedure (1): Staff Recruiting:

- Appointment of Saudi lecturers or teaching assistance (TA),
 - An announcement is published on the official website of the university, and after the completion of the announcement deadline, all applications are sorted out to select those who meet the conditions of application. The list of eligible candidates is sent to the department.
 - The department conducts a written examination for all the shortlisted applicants. A personal interview is conducted by a college level committee for all candidates successful in the written examination. This committee comprises members of experienced faculty members and the department head
 - All successful applicants are ranked according to their grades in the written test and interview. The Department sends the recommendations as well as the number of teaching staff required by the department. All appointments are approved by the Department Council as well as the College Council.

- The process to appoint Saudi faculty members or transferring the services of a Saudi faculty member from another university to Prince Sattam bin Abdul-Aziz University involves a process with several stages:
 - The applicant's doctoral thesis is examined and a report is written by a panel of senior faculty members with academic and research experience.
 - A personal interview is carried out with the candidates through a committee formed at the college level, in which the department is represented by a senior faculty member or the department head
 - A second personal interview is conducted in the last stage with the permanent Committee for Promotions and Appointments at the university level. The department is also represented in this interview by a senior faculty member or the department head.
- The process to appoint Non-Saudi faculty members also takes place in several stages,
 - The CVs of the candidate for an academic position in the department are examined and official minutes are prepared by the department's "Outstanding Faculty Members Attraction Committee". The criteria of selection include excellent record in teaching and research experience.
 - The committee submits its report and a list of recommended candidates to the head of the department for further communication with the candidates and inform its decision to the dean of the college.
 - After the selection, a contract is sent by the Dean of the College to the candidate to sign and send the acceptance.

- Finally, all successful candidates are contacted by a committee formed by the university to complete the contracting procedures at the Saudi Cultural Attaché in the country of the candidates.

Procedure (2): University Support

All faculty members of the program receive various forms of support.

- At the beginning of the first semester of each year, the university organizes an orientation program (3-5 days) for all freshly recruited faculty members.
- During each academic year, subsequently, various deanships such as Deanship of Development and Quality, Deanship of Scientific Research, and Deanship of Information Technology organize various workshops covering a wide range of professional /academic interest.
- All faculty members are encouraged to attend and participate in 4-5 workshops per year. The participation and attendance certificates are taken into account in academic promotion or the annual appraisal reports prepared by the Head of the program.
- The university, through Deanship of Scientific Research, offers various forms of sponsorship to support scientific research. Each staff member receives at least one research project every year
- The university offers excellent learning resources either through Saudi digital library or the University central library
- The college offers good environment for teaching and research activity
- The program offers a chance for staff members to evaluate their research activity during Seminar activity held frequently during each Semester.

- The university enables academic promotion for all faculty members, after satisfying certain conditions and rules.
- The department nominates the faculty members to participate in professional development programs such as workshops, seminars and conference on various areas organized both within and outside PSAU.

Procedure (3): Performance

- All faculty members contribute in the program specific committees and activities.
- All faculty members have teaching load according to their academic rank.
- All faculty members, aside of their teaching load, have 5-6 hours as an office and academic advising hours in their weekly timetable.
- All faculty members adopt various teaching strategies, assessment tools to evaluate student learning outcomes as prescribed in course specifications.
- Faculty members are encouraged to give extra professional/academic workshop for undergraduate students, for the sake improving their skills.
- All faculty members are responsible to prepare course portfolio by the end of each semester.

Procedure (4): Evaluation: Teaching and Research

- The scientific research outcome of each faculty member is counted and reflected in his or her annual appraisal and evaluation report.
- The exam committee examines the Exam papers of each course to ensure whether they are aligned to the prescribed program and course learning outcomes.

- All faculty members are required to prepare PLO-CLO matrix to evaluate their learning outcomes according to the criteria of the Quality assurance unit of the College.

Procedure 5. Quality Assurance Process of the Standard

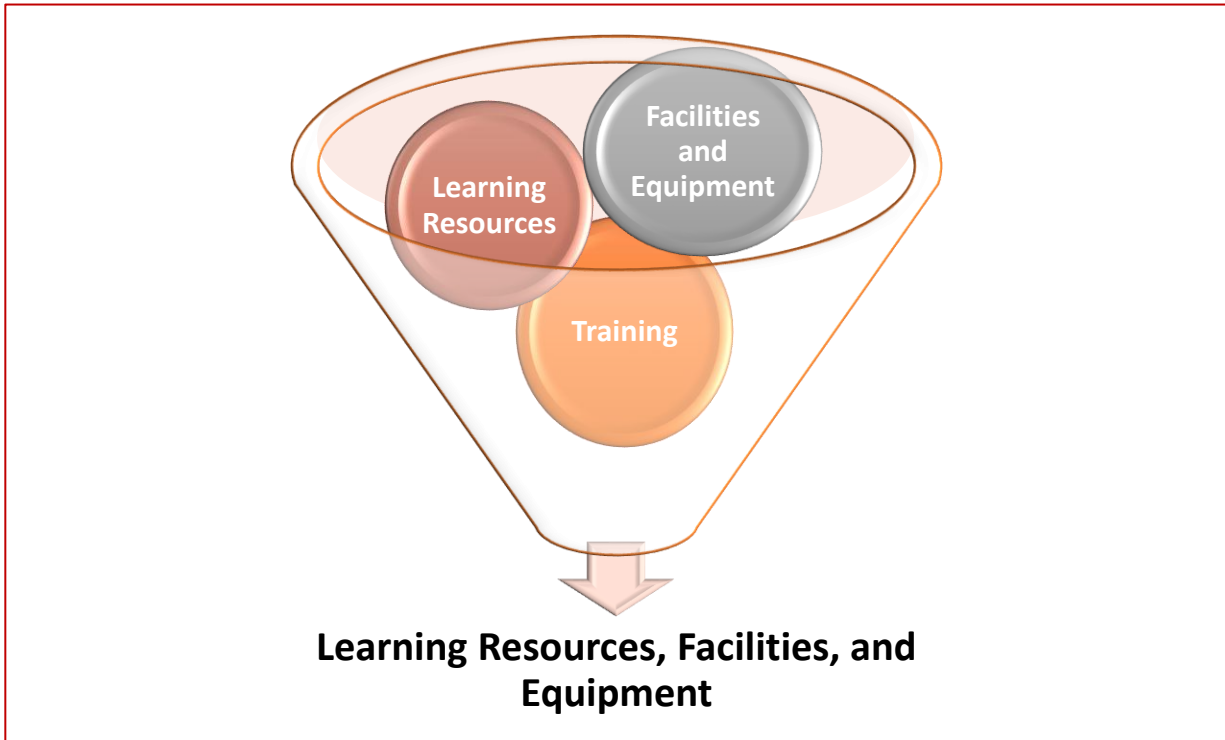
- The QAAC will collect the updated resume of the faculty members and other details of the faculty members including their speciality, courses taught in the semester, Thesis supervised, Thesis evaluated in order to ensure that the course is delivered by subject experts.
- The Scientific Research committee of the Department collects the research output, participation in workshop/conference, seminars attended/given etc from the faculty members including patents and compiles the same and evaluates the identified KPIs.
- The QAAC in cooperation with the statistical committee conducts survey on the satisfaction of the faculty members on various aspects such as
 - (a) Evaluation about the Program Leaders including HoD
 - (b) Satisfaction about the offered services and facilities
 - (c) Support provided for professional development
 - (d) Support for community partnership
- The results of such survey are reported in the Program Annual report with suggested improvement action to the Competent Authority through the Department Council / HoD for implementation.

5. Standard 5 (Learning Resources, Facilities, And Equipment)

5.1 Standard (5) Criteria:

5	LEARNING RESOURCES, FACILITIES, AND EQUIPMENT Learning resources, facilities, and equipment must be adequate to meet the needs of the program and its courses; and must be available to all beneficiaries using an appropriate arrangement. Teaching staff and students must participate in identifying such resources based on their needs, and in assessing their effectiveness.
5-0-1	The program ensure the adequacy and appropriateness of learning sources and services provided in accordance with its needs and student numbers, and updated them periodically.
5-0-2	The teaching staff, students, and employee of the program have the appropriate orientation and technical training and support for the effective use of resources and means of learning.
5-0-3	Safety, environmental conservation and hazardous waste disposal standards are applied efficiently and effectively, with all public and occupational health and safety requirements available in facilities and equipment, and educational and research activities. *
5-0-4	The program has the appropriate technologies, services, and environment for courses offered through distance or e-learning according to their own specific standards.
5-0-5	The program evaluates the effectiveness and efficiency of learning resources, facilities, and equipment of all types; and the results are used for improvement.

5.5.2 Standard (6) Procedures



5.5.2 Standard (6) Activities

Procedure 1: Learning Resources

- The concerning committee determines the resources and reference materials necessary to support teaching and learning processes, sufficient for all courses and students' number at the beginning of each semester.
- Stakeholders (students - faculty members) feedback has been taken regularly.
- First, the required learning resources are represented to the department council for discussion.
- Next, the required learning resources are represented to the concerned Vice Dean of the college.

- Then, the required learning resources are approved by the Department Council.
- The required learning resources are submitted to the College Council for final discussion to make scale of their necessity, and hence they are approved
- Key performance indicators are measured by taking feedback from the stakeholders (students - faculty members) at the end of the semester.
- A benchmarking measure is made for the availability of learning resources for the program with similar local and international programs.
- An improvement and development plan are initiated based on key performance indicators and benchmarks.
- Periodic reports are made on the availability of learning resources for the program.

Procedure 2: Facilities and Equipment

- The concerning committee determines the required facilities and equipment like classrooms, laboratories, electronic resources, technology, and computer necessary to support teaching and learning processes, sufficient for all courses and students' number in the beginning of each semester.
- Stakeholders (students - faculty members) give regular feedback about their facilities and requirements.
- The required facilities and equipment are first represented to the department council for initial discussion.
- The required facilities and equipment are then represented to the concerned Vice Dean of the college.
- Next, the required facilities and equipment are approved by the Department Council.
- The required facilities and equipment are submitted to the College Council for final discussion according to their needs, and after that they are approved.

- The key facility and equipment performance indicator are measured by taking feedback from the stakeholders (students - faculty members) at the end of each semester.
- A benchmark measurement is developed using the availability of different facilities and equipment for the programs following similar local and international programs.
- Improvement and development plans are initiated based on key performance indicator and benchmarks.
- Periodic reports are generated based on the availability of facilities and equipment for the programs.

Procedure 3: Training Programs

- The concerning committee determines the required orientation and technical training and support for the effective use of resources and means of learning at the beginning of each semester.
- Feedback is taken from the stakeholders (students - faculty members).
- The required training programs are first represented to the department council for discussion.
- The required training programs are then represented to the concerned vice dean of the college.
- Next, the required training programs are approved by the department council.
- The required training programs are finally submitted to the College Council for discussion in accordance with their needs, and then they are approved.
- The Key performance of training indicators is measured by taking feedback from the stakeholders (students - faculty members) at the end of the semester.
- A benchmark measurement is developed using the availability of the training program following similar local and international programs.

- Improvement and development plans are initiated based on key performance indicator and benchmarks.
- Periodic reports are generated based on the availability of training programs for the program.

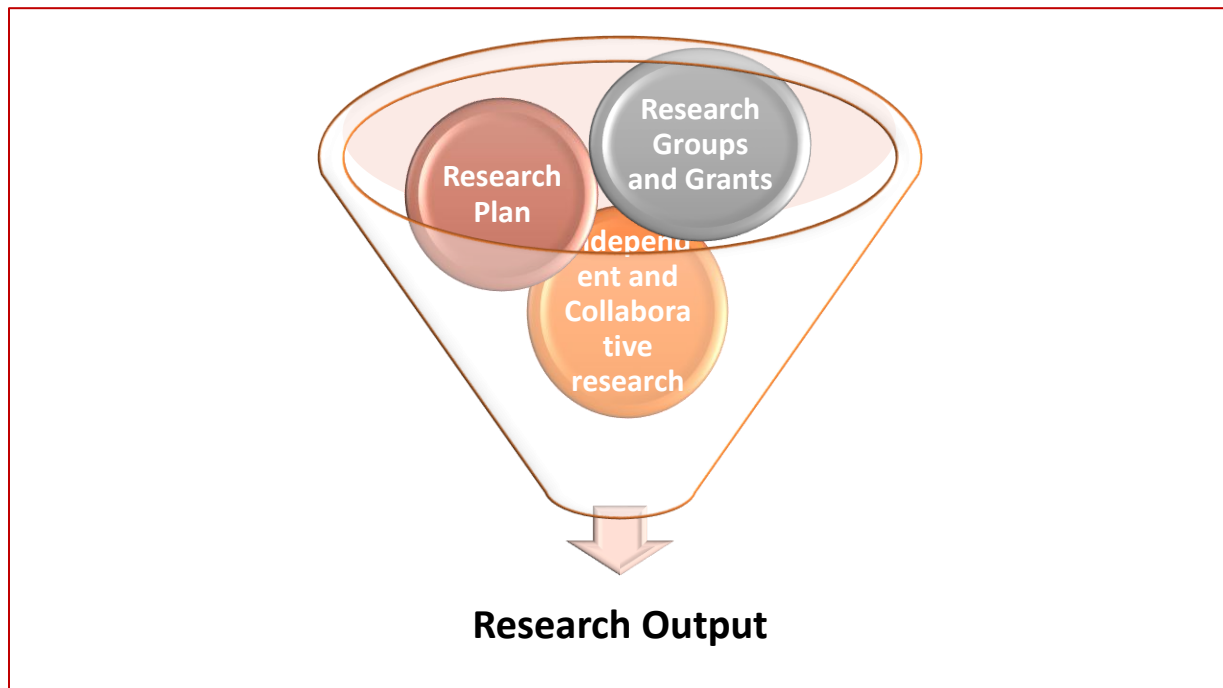
5.7 Standard 6 -Research and Projects

5. 6.1 Standard (6) Criteria:

6	Research and Projects The program is committed to play a prominent role in the implementation of the Institutional Plan for Research, follow, and develop its research activity. The Program must have academic and logistical environment supportive of research, and develop research skills for its employees, examine their commitment to ethical principles of scientific research. The program must implement mechanisms to evaluate, develop, and improve these activities.
5.6-0-1	The program follows the rates of its research activity in line with its role in the institutional research plan according to clear and specific performance indicators, and works to develop its performance. *
6-0-2	The program identifies research priorities in line with the mission of the institution, national trends, and development plans.
6-0-3	Supportive and encouraging environment, financial support and equipment for research activities are available in the program.
6-0-4	The Program applies various mechanisms for the development of research and dissemination skills of its employees, exchanges experiences and research results among them, and develops and improves such mechanisms.
6-0-5	The program applies various mechanisms to generate funding of research activities from donors and investment entities.
6-0-6	Specific academic and administrative procedures for the approval of scientific thesis and research projects are applied in the program within an appropriate time frame.
6-0-7	The program has clear, publicized and available instructions and guidelines for the preparation and evaluation of research, thesis, and projects.

6-0-8	The program applies specific mechanisms to monitor the efficiency of academic supervision of thesis, research and projects, and such mechanisms are evaluated and developed.
6-0-9	The program monitors the fairness, objectivity, and credibility of research evaluation and discussion of scientific thesis and their approval.
6-0-10	The program verifies the originality of research, knowledge enrichment, and innovation in its research activities in accordance with the level of qualification and international standards.
6-0-11	The program implements clear policies of ethics and regulations of research and verify the commitment of researchers to them according to appropriate mechanisms and develops them. *

Standard 6 Process and Procedures



Process:

- The Department council forms a subcommittee for preparing the research plan setting the research priorities of the department on the lines of the strategic plan /objectives given out by the Deanship of Scientific Research PSAU.\
- The Scientific research committee of the Department will comprise of the faculty members of the department who are senior researchers in different fields of mathematics.
- The Subcommittee formed for that purpose will prepare a research plan to achieve the strategic objectives of the DSR, PSAU.
- The Subcommittee will collect information about various research groups operating in the department.

Grants and Rewards:

The research grants are given by the DSR, PSAU from time to time under different heads such as (a) Support program for new recruits, (b) Specialised research (c) International Collaboration (d) Research Groups etc.

If any faculty member is facing any difficulty in submitting the research proposals, the Committee will assist in submissions especially the new recruits.

DSR, PSAU also gives cash awards for publishing in reputed scientific journals indexed in Web of Science / SCOPUS. The criteria for applying for such rewards are notified from time to time by the DSR. The Subcommittee will assist the faculty members to apply for the same, whenever such notifications are made.

Reporting:

The Subcommittee periodically collects the information regarding the scientific activities of the department such as publications, citation record, awards received, approved projects etc., from the faculty members and the DSR, PSAU and prepares a consolidated report at the end of the Academic Year highlighting the Strength, Weakness and suggested action plan for improvement and forwards to QAAC for incorporation in the Program Annual Report and College Annual Report

6. Academic Quality Assurance of Mathematics Department

Academic quality assurance aims primarily to certify continuous improvement in the Mathematics programs, through a process of self-evaluation, internal review and constructive, formative criticism by external reviewers (nationally and internationally accreditation bodies).

Purpose

A quality assurance review is to evaluate five aspects of a program:

- (1) Quality.
- (2) Resource use.
- (3) Following achievement of action plans for programs, and Consistent mission and goals of program with the university.
- (4) Adaptability.
- (5) Review of a program is a tool for well change.

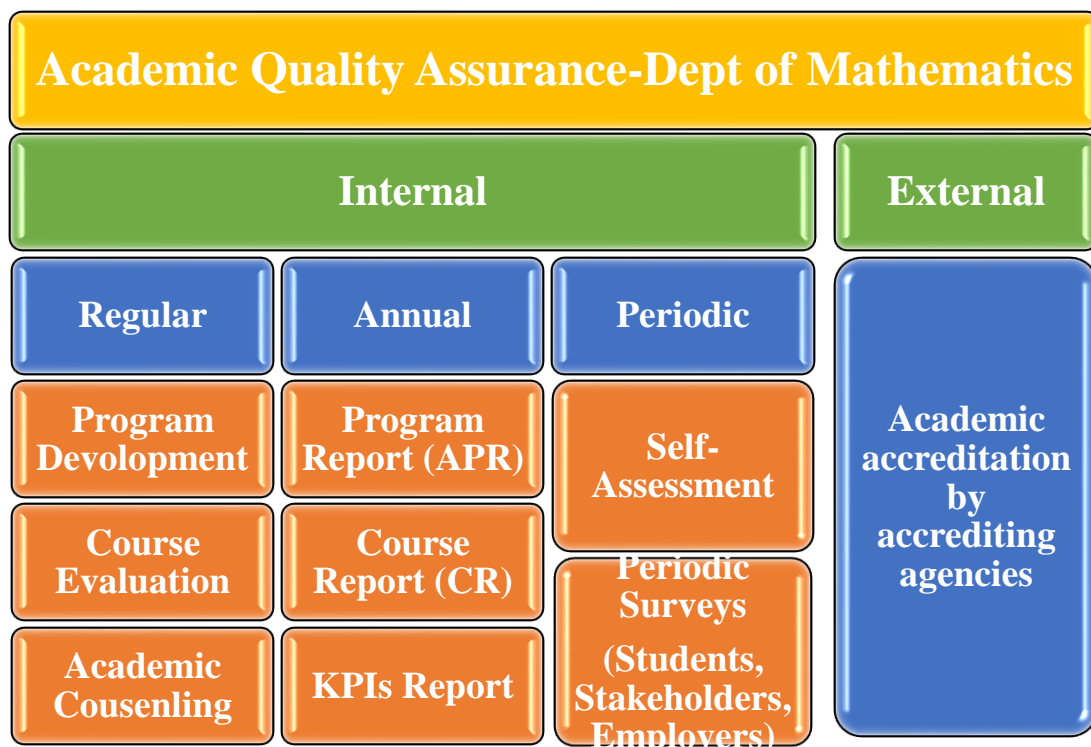
Policy

The Academic Quality Assurance Policy has three main goals:

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

Quality assurance system has been designed as a tool to support both internal self-evaluation and external quality assurance activities. The content of the plan was developed over time, starting with a review of national and international policies, rules and regulations, considering feedback from key stakeholders and the outcomes of a variety of testing activities.

Mathematics program places great importance and value on students' involvement in its processes and seeks to promote their engagement in quality wherever appropriate. These include the participation of the students in all survey evaluations related to quality and development. It is important to note that each process is informed by the output of others, to create a coherent framework. The following diagram represents a summary of the program plan of quality assurance processes:



7. Regular Activity

7.1 Program development

PSAU provides guidelines to support the development of new programs or updating existing programs. The guidelines include information sheets on key strategic areas that should be considered as a checklist to guide the process of designing and reviewing programs, and a comprehensive list of pedagogical principles. The university always ensures verification of quality standards through its procedures for program approval and hence several measures have been taken into consideration. These include:

1. External reference points, including any relevant subject benchmark statements.
2. NQF and NCAAA criteria and standards.
3. The requirements of professional and statutory bodies, where appropriate.
4. The compatibility of program proposals and developments with the university and college missions.
5. The program's commitment to the university's Graduate Attributes.

Mathematics program provides a coordinated package of learning experiences within which all components contribute to the learning outcome expected from the students. Each course of the mathematics program has specific goals/objectives reflecting part of the learning outcomes package of the program. The program has to be developed to ensure that the learning is delivered by the courses of the program and reflect clearly the goals and learning outcomes included within the program. Program design, development, and approval are important steps in setting programs at an appropriate academic standard. Adaptation of any international standards needs to respect the NCAAA's and NQF Standards for Quality Assurance.

PSAU adopts several stages to ensure proper developing of its programs. These include a proposal/planning stage, a development/design stage, and an approval stage. The Standing Committee of Study Plans, presided over by the Vice Rector of Education and Academic Affairs, is responsible for studying proposals for new programs and making recommendations to the University Council for the approval of the developed program. This can be summarized in the following procedures:

1. Colleges, through their departments, have the authority for the development of new programs or modifications to the existing ones. This is done through proposals that are submitted to the Standing Committee for Study Plans.
2. New program proposals or any modifications in the existing programs are assessed and approved or rejected by the Standing Committee for Study Plans using criteria that ensure thorough and appropriate consultation in planning and capacity for effective implementation.
3. If these proposals are approved by the standing committee, then they are submitted to the university council for final approval.
4. If they are rejected by the standing committee then they are sent back to the college with the relevant recommendations for further study.
5. PSAU has delegated the authority for minor changes in programs such as change of text books and reference lists, modified planned teaching strategies, details of assessment tasks, and minor updating of course content, with the relevant colleges.

An approval is a multi-stage activity involving the Department/College Council, Standing Committee of Study Plans and the University Council, which is responsible for the final approval. After a program has been approved, then following each cycle of delivery there will be a monitoring stage (typically course and program annual monitoring) and a periodic review stage, which typically takes place five years after the last program approval (this is shortened to four years when a program is approved for the first time).

7.2 Course Evaluation

Courses taught in the programs offered by mathematics department are evaluated using an electronic survey by DDQ, PSAU and also by the QAAC in collaboration with Statistical Committee, which requires a written or selected response in answer to a series of questions in order to evaluate the instruction of a given course. These surveys provide constructive feedback which the faculty members and university can use to assess the quality of course delivery.

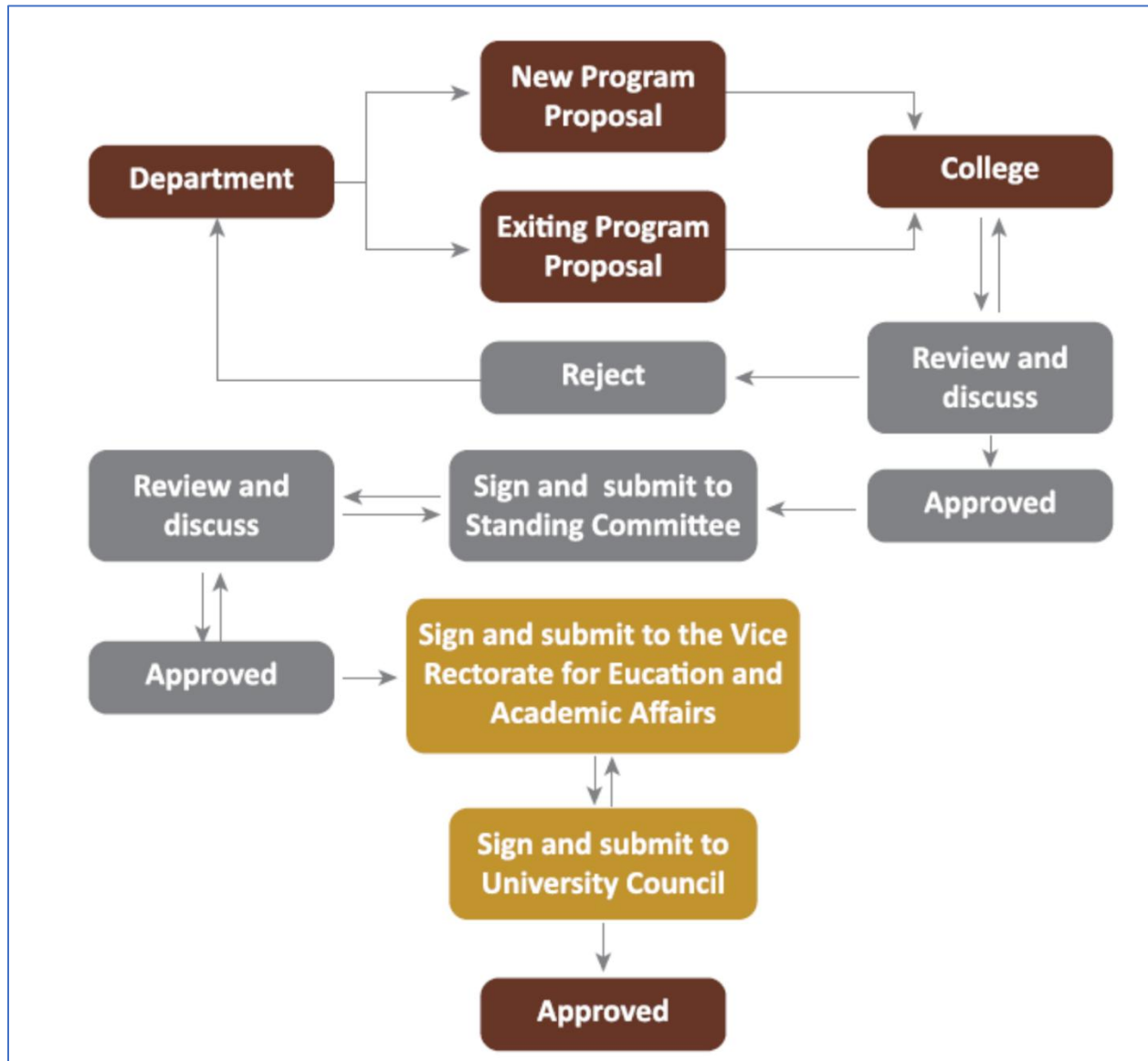
The process of (a) gathering information about the impact of learning and teaching practice on student learning, (b) analyzing and interpreting this information, and (c) responding to and acting on the results is valuable for several reasons.

It enables instructors to review how others interpret their teaching methods. The information can also be used by administrators, along with other input, to make summative decisions and make formative recommendations (e.g., identify areas where a faculty member needs to improve). Typically, these evaluations are combined with peer evaluations, supervisor evaluations, and results of student's test scores, to create an overall picture of teaching performance. Course evaluations are implemented in one of two ways, either summative or formative.

Mathematics department encourages staff to use a variety of mechanisms to obtain student feedback to promote ongoing dialogue between students and staff and to minimize overreliance on one particular mechanism. To ensure practice is consistent, the program sets out its requirements for gathering course evaluation data from students via questionnaires in its course evaluation policy. The key elements of the program's policy on course evaluation are:

1. Students should be given clear instructions on how to complete the questionnaire and advised when it will be circulated.
2. The data from the completed questionnaires should be summarized in a summary statistical annual report.

Course evaluation template



7.3 Academic counseling

Faculty members of the mathematics program are required to provide academic counseling to students to overcome difficulties. Students who, for instance, show a below average performance are provided with the necessary counseling by their advisors. Academic advisors are faculty members who have experience in and have been trained on the range and extent of support services available to the students. The regular meetings with students and the analysis of surveys on students' satisfaction with the academic counseling process provide feedback on the adequacy of assistance and counseling provided.

Furthermore, the Deanship of Development and Quality (DDQ) monitors the conduct of academic advising during its on-site visits to colleges through reviewing the evidence and face-to-face meetings with students. Faculty members strive to assist students in learning, counseling, and other academic activities. In addition to the teaching load of faculty members specified by the Council of Higher Education, an experienced faculty member is allotted a group of students, to whom they will provide academic advice during the semester. The process is automated / system-generated to obtain a uniform and unbiased allocation. The same method is being followed in all colleges of PSAU (Academic Advisor Guidebook).

Each student is regularly provided with the name and office hours of his/her academic advisor. At the beginning of each semester, the Academic Advising committee organizes orientation sessions for the newly recruited faculty members regarding the Academic Advising activities. Most academic advising sessions are conducted face to face with documentation of the events in special forms.

8. Annual Activities

Annual activities are carried out to evaluate the operation of academic activities; these activities include reviewing courses and program reports, key performance indicators (KPIs), student performance, and other measures of the quality of the student learning experience throughout the preceding year.

Annual monitoring of programs and courses is the cornerstone of the quality assurance process. The aims of the annual program/course reports are:

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

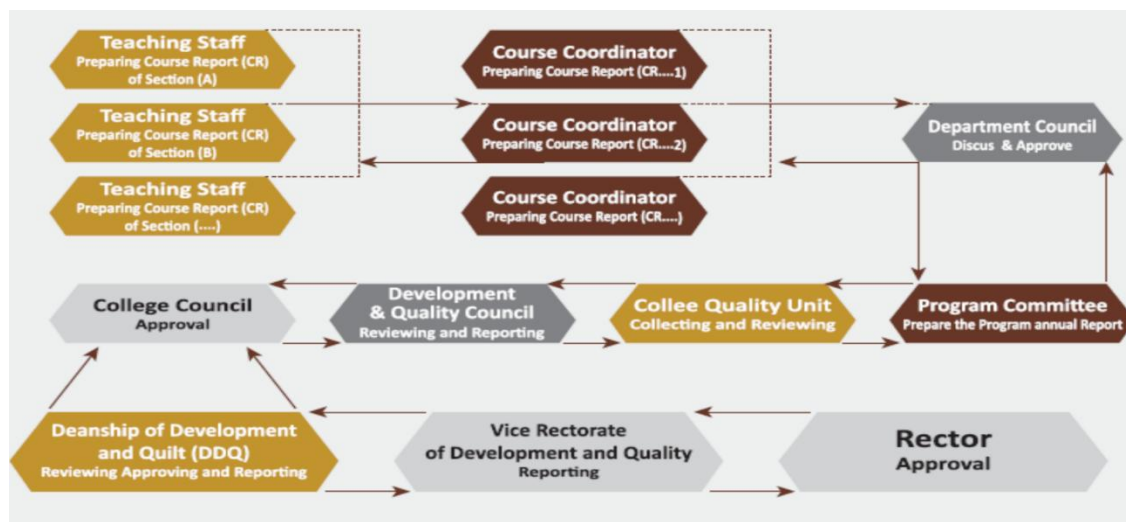
8.1 Annual Program Report and Annual Course Report

Annual monitoring of programs and courses is a continuous process by which a program and its constituent courses are kept under review. The outcomes of this review are reported in an Annual Program Report (APR). All academic programs are required to identify their strengths and weaknesses and set action plans to act upon them through program and course reports based on NCAAA templates (<https://etec.gov.sa/en/service/accreditation/servicedocuments>).

APRs are prepared by the program coordinator in consultation with faculty members in the program. The reports are submitted to the head of department or college and used as the basis for improvements, modifications or changes in the program which are used in the Self Study Report for Programs (SSRP) and by external reviewers for accreditation. A separate course report (CR) should be submitted for every course and for each section or campus location where the course is taught, even if the course is taught by the same faculty member. Each CR is to be completed by the course coordinator at the end of each course and given to the program coordinator. A combined, comprehensive course report should be prepared by the course coordinator and reports from the separate locations are to be attached, based on the NCAAA requirements.

To implement these improvement plans effectively, PSAU has set out a mechanism for reviewing the course and program reports. This mechanism works at program, academic department, college and university levels. This ensures the integration of evaluation and quality improvement plans with the normal administrative process.

The Mechanism for Reviewing the Course & Program Reports



According to this mechanism, the Department Council will discuss and approve the APRs and CRs prepared by the program coordinator and course instructors, respectively. In turn, the program committee will prepare the APR / CRs for the College Quality unit, which will review the Program Annual Monitoring report and prepare a College Annual Monitoring report. The reporting procedure is designed to ensure that issues arising from monitoring are properly considered, reflected, on, and acted upon at each stage and by the relevant committees. In turn, these reports are submitted to the Development Quality council for reviewing and reporting to the College Council, which will approve these reports. If approved, each report will be submitted to the DDQ for review and approval and finally reported to the Vice Rectorate of Development and Quality which then reports to University Council for final approval. Responses are also provided at each stage - closing the feedback loop and ensuring that actions and outcomes are reported back to staff and students is a crucial element of Annual Monitoring as well as other processes.

8.2 Key Performance Indicators (KPI's)

ETEC/NCAAA has given out Key Performance Indicators to evaluate the performance of the Programs and Department of Mathematics has adopted the NCAAA recommended indicators for programs (PKPIs) to monitor and evaluate the quality of courses and programs. By doing so, the Department aims to achieve the following:

2. Controlling and monitoring the level of progress towards achieving the various objectives of the program.
3. Assisting those with authority to make decisions based on correct and accurate information
4. Monitoring performance for benchmarking with other universities
5. Ensuring transparency and good governance
6. Facilitating the process of program evaluations to achieve one of the most important requirements for academic accreditation.

Process:

- Mathematics department has established a standing committee for KPIs, which is responsible for identifying and approving the KPIs to monitor and evaluate the performance. This committee has issued A “Manual of Key Performance Indicators”, with a detailed explanation of the adopted KPIs.
- The Department of Mathematics will finalise a mechanism to identify Key performance indicators to evaluate the attainment of mission and goals, student progress and the stakeholder’s involvement in Quality Assurance Process for each program run and administered by it.
- In order to achieve this, the Programs may adopt the following procedures:
 - (a) Review and updation of the Manual for the Quality Assurance System of the Department of Mathematics
 - (b) Identifying the KPIs given by NCAAA and also the identify some additional KPIs with target bench marks and get it approved by the Department Council, Program Advisory Committee, DDQ and College Council.
 - (c) Preparation and approval of the Program Operational Plan to evaluate the attainment of Mission and Goals of each program.
 - (d) Evaluate the KPIs and analyse the attainment of Mission and Goals with reference to the targets (internal and external benchmarks)
 - (e) Prepare KPI analysis report incorporating the analysis and action plan for improvement and get it approved by the Department Council, DDQ, College Council.

- (f) The derived results are reported in the Program Annual report and the action plan will be implemented by the Department.

In order to ascertain the progress of students, the program will identify certain additional KPIs such as (i) completion rate of courses with specific target scores (ii) year to year progression rate (iii) course evaluation by the students and form rubrics to make evaluations.

At the end of each semester, the evaluation will be done by the QAAAC and CLO PLO Committee of the Department and the results are reported with improvement and follow up action plan for implementation in the next semester.

Likewise, in order to ensure that the Stake holders are involved in the Quality assurance Process, the Statistical Committee in consultation with QAAC forms a structured questionnaire and conduct survey among various stakeholders to analyse their level of satisfaction at the end of every semester.

- Some of the survey details and their periodicity are given below

Type of Survey	Periodicity
Course Evaluation Survey	Every Semester
Program Evaluation Survey	Every Semester for Bachelor Programs as students graduate every semester End of Level 3 in case of Master Program (Course with Thesis Option)

	End of Level 4 in case of Master Program (Course with Project)
Faculty Member survey	Atleast once in a year
Alumni Survey	Once in a Year
External Stakeholder survey	Once in a year
Program Advisory committee	Atleast once a year

- Apart from these, the Statistical committee collects various other information such as Staff- Student Ratio, Research Output, Citation rate etc, from various sub committees and will analyse the data periodically.
- The results of these indicators are updated regularly for all academic programs and used for internal and external benchmarking comparison. A collective report containing the results of KPIs for each program is prepared annually and distributed to relevant parties.

9. Periodic Activity

The Programs offered by the Matheamtics Department will operate two periodic internal review processes: Self-assessment and Satisfaction of the program stakeholders.

9.1 Program Self-Assessment

Mathematics program periodically prepare their Self-Study Reports (SSR) in compliance with the requirements of “The Standards for Quality Assurance and Accreditation” defined by the NCAAA. Each SSR should include all the necessary information to be read as a complete self-contained report on the quality of the program and provide a thorough examination of the quality of the program.

The mission and objectives of the program and the extent to which they are being achieved are thoroughly analyzed according to the standards for quality assurance and accreditation defined by the NCAAA.

The SSR is considered as a research report on the quality of the program. It should include sufficient information to inform a reader who is unfamiliar with the program about the process of investigation and the evidence on which conclusions are based and enable him or her to have reasonable confidence that those conclusions are sound.

The SSR is written with a focus on clarity and completeness of all information and supportive evidence from the program concerned. In addition, a verification of the analysis and advice from others deemed able to offer an unbiased and independent opinion are used during the preparation of this report. The completed scales evaluation sheets for the best practices, and for each standard as a whole, are prepared with the specific requirements contained in NCAAA's document 'Self-evaluation Scales (SES).

This multi-faceted task is accomplished through wide participation among faculty members in the program, in which many teams are formed comprising members from male and female sections who actively participate. Each team is assigned specific duties, and a steering committee of the program is established to coordinate all tasks related to the preparation of the self-study report.

Program' SES and SSR are submitted to the DDQ to be evaluated by PSAU's board of internal assessors. Assessors' feedback is then submitted to the program quality unit to accept and modify these changes and finally resubmitted to an experienced external reviewer, to obtain an independent evaluation of the two documents. The reviewer evaluates the SES and SSR drafts in light of all supporting evidence and key performance indicators (KPIs).

9.2 Periodic Survey

The programs uses many surveys introduced by the DDQ, PSAU as instruments of indirect evaluation of its quality assurance processes. These surveys are centrally administered, and the results are provided to the respective units for the sake of comparison and analysis as a basis for their development plans. Among other things, these surveys (online/ offline) measure the satisfaction level of stakeholders with university services such as libraries, IT services, and the experience of learning in general. These surveys are unified tool (both online and offline) for internal stakeholders such as students, faculty, staff.

The DDQ regularly distributes questionnaires to the university's stakeholders, including students and academic and administrative staff, to measure their level of satisfaction regarding the policies of the university, the current and future plans, the level of performance of the staff and faculty members, the adequacy of equipment and facilities and other topics that directly or indirectly relate to the students' experience. The questionnaires distributed to the students gather their understandings, opinions and perceptions of the issues relevant to them. These eleven questionnaires comprise:

- A program evaluation survey
- A survey evaluating the student's experience
- A survey evaluating the student activities and services provided
- A survey evaluating the university's mission statement - students
- Alumni survey
- A survey evaluating manuals and regulations
- A survey evaluating academic advising
- A survey evaluating electronic services
- A survey evaluating library and learning resources
- A survey evaluating the digital library
- A survey evaluating facilities and equipment the opinions of faculty members and administrative staff are also obtained regarding different issues, such as

policies, facilities, and services provided by the university, by periodically conducting several questionnaires as follows:

- A survey of academic and administrative staff and leaders, evaluating the university's mission statement.
- A survey evaluating educational service quality and information resources
- A survey evaluating the services provided to the administrative staff.
- A survey evaluating manuals and regulations.
- A survey evaluating electronic services.
- A survey evaluating library and learning sources
- A survey evaluating the digital library
- A survey evaluating the facilities and equipment

Based on these surveys, the DDQ's statistical report is divided into 23 sections. Each section deals with a single questionnaire in terms of analysis and interpretation of the survey data. In each section, the findings are discussed in three basic paragraphs: the first paragraph highlights the survey results' analysis at the university level, the second paragraph reports the analysis at the gender level, and the third paragraph reports the analysis at the branch level.

10. Academic Accreditation by Accrediting Agencies (AAs)

Accrediting agency is an umbrella term for a very diverse group of bodies, including a large number of professional bodies, regulators those with statutory authority over a profession or group of professionals. Accreditation is the process whereby a professional association or non-governmental agency gives recognition to a school or institution for its demonstrated ability to meet predetermined criteria for established professional, statutory or regulatory standards.

The academic content and other aspects of taught programs can often be influenced by the requirements of accrediting bodies and professional associations.

Accreditation provides potential benefits for students:

- It offers recognized fast-track routes for graduates seeking professional status.
- It provides a further way of assuring and enhancing the quality of teaching and learning provision in particular subjects.

Typically, an accredited agency will carry out periodic reviews of the program to ensure that they continue to meet the requirements for accreditation and reflect current thinking about the profession and its development. Such reviews normally take the form of visits by a panel of members of the relevant body, who prepare a report on their findings. The format and organization of these reviews and what is required of subject areas in preparation are defined by the relevant accrediting agency. The university's programs in a large number of subject areas are endorsed or accredited by relevant professional, statutory or regulatory bodies that provide an additional layer of externality and objectivity to the monitoring of our provision.

11. Templates used to achieve the program quality

Mathematics program uses the NCAAA templets in achieving the quality assurance processes as they are on the website

<https://www.etec.gov.sa/en/service/accreditation/servicedocuments>. These templets are the following:

1. Consistency with National Qualification Framework (NQF)
2. Program Specification (PS)
3. Course Specification (CS)
4. Program Annual Report (APR)
5. Course Report (CR)
6. Field Experience Specifications (FES)

7. Field Experience Report (FER)
8. Self-Study Report for the Program (SSR)
9. Program key performance indicators (KPIs)
10. Program Accreditation Eligibility Requirements

12. References

Deanship of Quality and Academic Accreditation, PSAU: website

<https://ddq.psau.edu.sa/ar>

Education and training Evaluation Commission, KSA: website

<https://etec.gov.sa/en/productsandservices/NCAAA/Pages/default.aspx>.

Approval Details

Meeting No.	
Item No.	
Date	

