Program Quality Assurance Manual

Information Systems Program

Jouf University
College of Computer and Information Sciences

Content

1. Introduction

Quality Assurance process determines both strengths and weaknesses, corrective and protective plans in academic programs leading to its quality improvement. Teaching quality is becoming a strategic direction of the higher education repairs in the Arab area and in the heart of Saudi Arabia. Its importance is recently gaining more and more recognition by both the policy makers as well as the various providers of higher education. For Information Systems Program, a vision to keep abreast of the age and to the leadership in the academic and community services, in order to realize the vision of 2030 in preparing distinguished cadres in the field of Information Systems to serve the nation in various fields of life. Hence the role of the National Center for Academic Accreditation and Evaluation (NCAAA) in the adoption and evaluation of academic programs, including Information Systems program to achieve improvement, quality and excellence. Accreditation of the programs is being based on a set of indicators known as the key performance indicators (KPIs) been adopted by the NCAAA and the quality management system at Jouf University. Moreover, indicators of learning outcomes are approved by the college of Computer and Information Sciences. KPIs are collected through different surveys for teaching staff, undergraduates, and employers, as well as statistics on numerical achievements and values of learning outcomes indicators. All achieved KPIs of Information Systems program should be compared with internal or external benchmarks. This report uses qualitative and quantitative methods to achieve the objectives of program. 17 key performance indicators were provided by NCAAA. A questionnaire was being designed based on the rate of agreement chosen KPIs in five-point scale (1 .00 –Strongly Disagree, 2 .00 –Disagree, 3 .00 –Not Sure, 4 .00 –Agree, 5 .00 – Strongly Agree) and Analysis of questionnaires are being done using statistical mean, percentages and/ or standard deviation. Any data can be used to measure the achievement in a program. Moreover, Statistics for numbers of students, graduates, teaching staff, citations and publications are used. Values of KPIs of the last years were used as an internal benchmark. An internal monitoring system which will regularly measure the effectiveness of the procedures. A self-evaluation system which will examine and report on the quality of the program and its services.

2. Purpose

Academic quality assurance aims primarily to certify continuous improvement of the Information Systems Program, through a process of self-evaluation, internal review and constructive, formative criticism by external reviewers (nationally and internationally accreditation bodies). A quality assurance review is to evaluate five aspects of a program:

(1) Quality.

(2) Resource use.

(3) Following achievement of action plans for program, and consistent mission and goals of program with the university.

(4) Adaptability.

(5) Review of a program is a tool for well change.

3. Policy

The Academic Quality Assurance Policy has three main goals:

(1) Ensure high standards, quality of outcomes and continuous improvement of the academic Information Systems program.

(2) Determine strengths and weaknesses paths, corrective and protective methods for continues improvement of academic Information System program.

(3) Document, integrate, and communicate different procedures of quality assurance processes.

The IS program applies the quality assurance policy provided by the Jouf University (described the following link).

4. Definitions in the Quality

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

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

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

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

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

5. Vision, Mission and Goals of program

| Vision |
|---|
| Leadership in education and scientific research and being nationally ranked among the best of information systems programs. |

Mission
Preparation of qualified scientific cadres in the various fields of Information Systems through innovative education and scientific research, which develops creative and analytical abilities that can serve the society.

Objectives
1. Develop competitive capabilities of graduates to contribute in building effective information systems solutions.
2. Contribute effectively to scientific research and the discovery of modern knowledge and methods in information systems.
3. Provide community services and consulting in the field of information systems.
4. Ensure the continuous development of the performance of faculty members in the fields of information systems.
5. Successfully engage in life-long learning and demonstrate the capability to adapt to rapidly changing technologies in the Information Systems field.

6. Quality Management System in the Information Systems Program
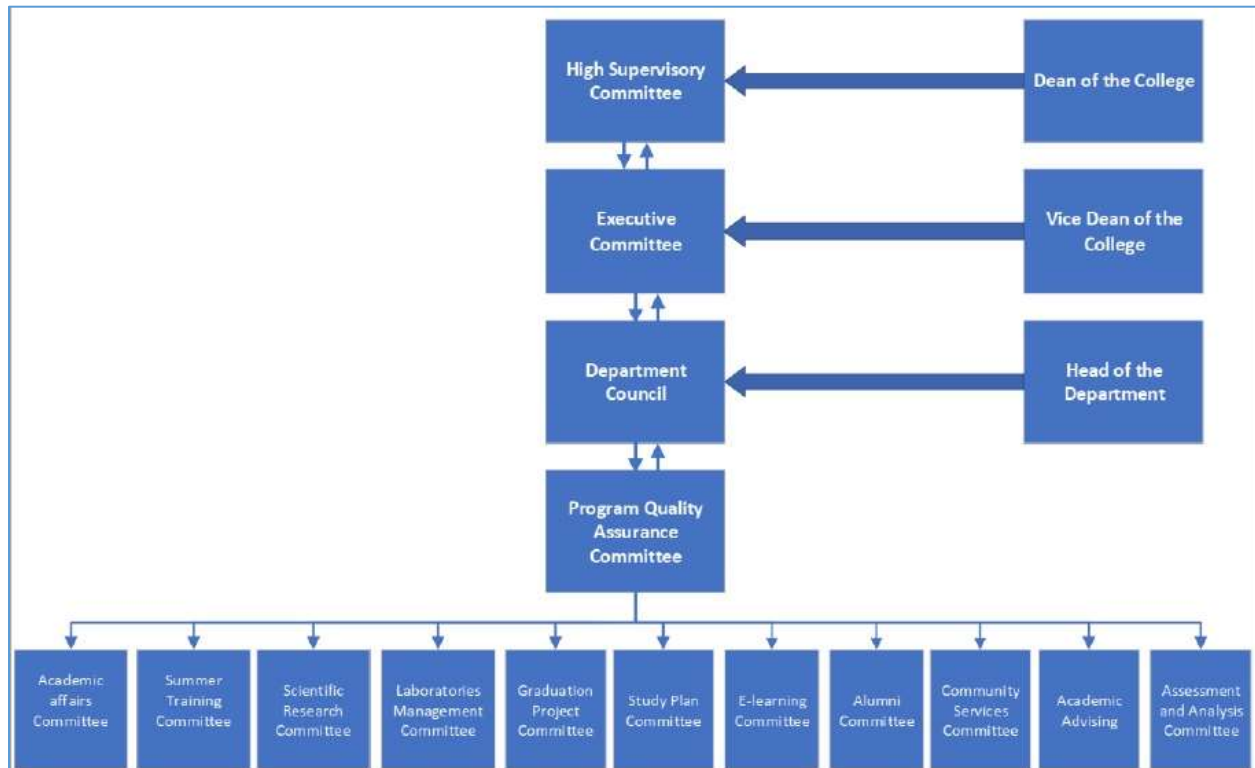
7. Tasks of the IS Program Committees

7.1 Program Quality Assurance Committee

- Provide the requirements for quality and academic accreditation to all staff members in the program.

- Follow up the course specifications periodically according to the model of the National Center for Academic Accreditation and Evaluation and follow up on its upgrade.

- Prepare Program Specifications according to the model of the National Center for Academic Accreditation and Evaluation.

- Follow up on the periodic preparation of Course Report and review Annual Program Report according to the model of the National Center for Academic Accreditation and Evaluation.

- Develop the skills of staff members, administrators and students of the program.

- Create databases for each of the following members: Faculty members - Administrators - Community service activities - Scientific research - Training courses.

- Follow up the preparation and implementation of plans in the program.

- Establish a system to follow up the alumni.

- Develop a system to ensure the continuity of quality management system.

- Evaluate the performance level in the program.

- Implementation and follow-up of the evaluation and academic accreditation.

- Provide the necessary facilities for the teams to supervise the application of quality assurance.

7.2 Assessment and Analysis Committee

- Review the Course Specifications and Course Reports for all courses.

- Prepare the Annual Program Report according to the model of the National Center for Academic Accreditation and

- Evaluation.

- Conduct Surveys based on the analysis and make an improvement plan.

- Prepare the KPI analysis Report.

- Prepare a report for evaluating the learning outcomes, and its mapping.

- Prepare a report for measurement the level of student achievement for each targeted learning outcomes.

- Prepare a report from the review of randomly selected samples of the final exams.

7.3 Academic Advising Committee

- Develop a plan for the academic supervision in the program.

- Supervise the progress of the academic guidance process according to the approved mechanisms in the program.

- Raising awareness among students about the nature of the unit and its importance and how to benefit from its services through meetings and publications at the website or blackboard system.

- Raising awareness of the importance of the academic guidance and the importance of communicating with the academic advisor by publishing brochures, publications and using the college or program website for this purpose.

- In the first week of each semester, the Deanship of the College and the head of the department or coordinator of the program organized the reception for new students to provide the comprehensive discussion about goals and mission of the college and its educational programs and its scientific groups, the fields of work of its graduates, importance of the university rules and regulations during their educational study and the necessary to contact with their academic advisor.

- At the beginning of each semester receive a list of the new students from the Deanship of the College are delivered to the academic advising unit representative which distribute the students to the program staff for assigning.

- A meeting is held with the newly appointed faculty members to inform them about the system of study and the academic advising mechanism in the college based on program policies.

- Organizing a regular meeting with the advising coordinators to follow up the progress of the program guidance process.

- Submit periodically each mid semester) a report that includes the work of the committee and levels of students to the program and faculty administration.

- Analyzing the cases that transferred to the committee by the program and faculty administration, preparing reports and submitting them to stakeholders.

- Considering the problems of academic students raised by advisors and seeking to solve them with the program and faculty administration.

- Considering the complaints of students of academic nature and to find solutions that are suitable for them or to raise them to the program and faculty administration if necessary.

- Consider students' complaints about any course and find solutions and raise them to the program and college administration.

- Supervision of orientation programs for new students to introduce the system of study and exams in the program.

- The committee meets periodically every 4 weeks) or as reports to discuss periodic reports or special reports from academic advisors at the program level.

- Carrying out the work assigned to the committee by the head of department and dean of the college.

- Coordinating with the Committee for estimating the numbers of new students expected to graduate and transferred from other faculties.

7.4 Community Services Committee

- Preparing the student talents in terms of culturally, socially, sportily, and artistically, and discovering and help them for development.

- Contributing in building the character of the student to achieve a balanced personality loving his country and leadership in culturally, socially, sportily, and artistically and directing.

- Discovering the talent students, developing them, refining them, and using their creative energies in whatever productive and useful.

- Educating the spirit of honest competition for students, strengthen social relations with their colleagues, staff and their community, and arranging competitions monthly, semester and annually.

- Holding the sportive and cultural competitions among the students of the program to develop the spirit of competition among them.

- Developing a plan for the student activity in the program throughout the academic year and follow up its implementation.

- Carrying out cultural and social trips for students to develop their cultural and social awareness.

- Selecting the excellent students in cultural competitions and indoor sports; to represent the college in the various central competitions sports, cultural) organized by the Deanship of Student Affairs at the university.

- Establishing the sport and recreational competitions among the staff of the program to find a kind of harmony between all staff of the program.

- Coordinating with the units and committees in the college each in its own right.

- Carrying out the work entrusted to the unit by the Dean of the College.

7.5 Alumni Committee

- Enhancing the communication and consolidating the principle of exchange of views and information between the graduations inside the program and graduates among themselves.

- Enhancing the loyalty of the graduates and their interaction and contributions for development of the programs.

- Documentation of the database of graduates of the program in a special archive paper and electronic).

- Establishing a database of institutions and partnerships related to graduates in the program.

- Measuring the level of satisfaction for graduates and business institutions.

- Opinions of graduates of the program collect through questionnaires filled electronically through the committee.

- Let know the graduate's aspect of academic news and research in the program.

- Documenting the relationship with the graduates to benefit from their experiences in developing academic, research and training plans.

- Measuring the attitudes of business owners towards graduates of the program, and seeking to open the fields of labor market for the graduate.

- To know the requirements by taking opinions of companies for employment through questionnaires.

- Establishment of an annual day to which the graduates, institutions and companies that need to recruit for graduates of the program.

- Considering what the program management and deanship of the College refers to the subjects and the completion of the related issues.

7.6 E-Learning Committee

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

7.7 Study Plan Committee

- Supervising for preparation of the study plan and program in the department and reviewing them to ensure that they comply with the standards of the National Center for Academic Accreditation and Evaluation and according to the requirements of the labor market.
- Supervising for development of the study plan of the program and follow up the recent versions of the standards of the National Center for Academic Accreditation and Evaluation and study the agreement of the current courses with them
- Preparing reports on the study plan and department program and submitting it to the deanship of the College for approval by the department and college councils.
- Coordination with the university Study Plans Committee to approve the plans.
- Conduct a survey on the compatibility between the requirements of the labor market and the specializations inside the program.

- Ensure that the course specifications are available and they comply with both the academic plans in the department and the standards of the National Center for Academic Accreditation and Evaluation.

- Follow-up with faculty members in the program and ensure that they distribute brief course specifications to students at the beginning of each semester.

- To inform faculty members in the program of any updates and developments on the study plans and courses specifications.

- To study the compatibility of the course's contents, teaching methods, courses objectives and the expected learning outcomes and the preparation of the relevant reports.

- List of books and references is needed by faculty members in the program and coordinate with the Central University Library to provide them according to the requirements of the department.

- Coordination with IT department to put the plans and specifications on the program's website.

- Contact with University Deanship for Educational Affairs at the end of each semester to coordinate and review the latest developments regarding the study plans and specifications and spread them to the faculty members in the program.

- Keep and save all the committee documents and provide a copy to the head of department and deanship of the college.

- Consideration of the subjects referred from the head of department to the committee and completion of related actions.

7.8 Graduation Project Committee

- Preparation of the final list of graduation projects for the department for approval by the Head of the Department and the Dean of the College.

- To take decision for appeals regarding graduation projects from students or faculty members in the program.

- Coordination between other departments in the college, in case of joint projects.

- Making periodic reports of the graduation project committee in the departments.
- Oversee the project discussions with the project committees in the department.
- Submit periodic reports to the Dean of the College and Head of Department on the progress of projects in the department.
- Implementation of the tasks referred from the Head of Department and Dean of the College to the committee.

7.9 Laboratories Management Committee

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

- Saving all papers related to the committee work, and providing a copy of them to the Head of Department and Dean of the College.

- Considering what the Head of Department and Dean of the College refers to the subjects and the completion of the related issues.

7.10 Scientific Research & Graduate Studies Committee

- Guide to the Ethical Charter for the Professional.

- Accreditation of a research plan for the department according to the Deanship of Scientific Research and identifying the research priorities and funding sources of the plan.

- Accreditation of database of scientific research (published research, scientific thesis, participation in conferences, organizing conferences, scientific missions and scholarships, scholarships, Patents, excellence awards, scientific books,)

- Accredited mechanisms to encourage that the faculty staff of the program to do research.

- An annual report on the position of research integration within department and at the level of specialization locally, regionally and internationally, and the sources of funding for scientific research and citizen attributes and faculty of excellence in scientific research in the framework of the research plan of the College.

7.11 Summer Training Committee

- Management of summer training program.

- Supervising the collection of information about the training institutions and expanding the information database and making changes in the names and addresses of those entities.

- Conduct necessary communications to obtain appropriate training opportunities for students in various departments.

- Make arrangements for companies that have specific requirements for trainee students.

- Supervise the distribution of training opportunities for students and solve the problems related to them.

- Coordinate with companies that have specific requirements for the students wishing to train them.

- Contribute to solving students' problems beyond the training period.

- Establish a database of training companies.

- Evaluation of weekly reports on training on student performance during the training period.

- Make sure that graduate students have completed all training requirements.

- Prepare a feedback form that focuses on the performance and classification of institutions that instruct college students to be given to trainee students.

- Preparing a thankful letter to the active training institutions.

- Establishing a database of the program graduates.

- Establishing a recruitment center in the college in cooperation with the active companies.

- The student may search for a training institution provided that the training committee approves the training body specified by the student and the approval shall be based on:

- The student provides the contact information of the person in charge of training.

- The student provides training committee with training program training.

- Submit a comprehensive report on the work of the Committee after the end of the training period to the Head of Department and Dean of College.

- Implementation of the tasks referred from the Head of Department and Dean of the College to the committee.

7.12 Academic affairs Committee

- General Objective: carrying out the tasks entrusted to the Committee by the program's supervisor for Academic Affairs to follow up all the directives, circulars, transactions and decisions issued by the head of department or from the University administration and to ensure their implementation at the specified times.

- Coordination between the units of college and committees of the program in the transactions issued and incoming.

- Follow up all transactions that received by the committee after studying them and completing all aspects.

- Follow up the preparation of the educational and exams tables via coordination with the relevant committee of the program and the scientific department.

- Presenting the recommendations for students' disciplinary cases according to the disciplinary regulations at the university.

- Keeping a record of topics discussed for all students.

- The committee receives the deletions and additions to the students from the scientific departments after registering them on the system.

- The Committee meets the students' problems.

- Helping the graduate students to finish their graduation procedures, and assisting the students who are expected to graduate in registering the remaining courses and to submit their applications which the unit cannot achieve to the Deanship of Admission and Registration.

- Coordinating and organizing an archive of all the activities of the college and recording all the student issues that were discussed and the development of an index and a record of files and documents.

- Preparing periodic reports on the work of the committee and the need to increase its performance.

- Submitting a report in each semester for the activities of the committee to the academic affairs Supervisor.

- Carrying out the work entrusted to the committee by the Head of Department and the Dean of the College.

8. Quality Cycle

The quality cycle constitutes various interconnected elements with the objective of achieving the intended purpose of the Information Systems program. **The Plan-Do-Check-Act** approach as depicted in the figure above is proposed to be followed in Reviewing the Cycle of the IS program.
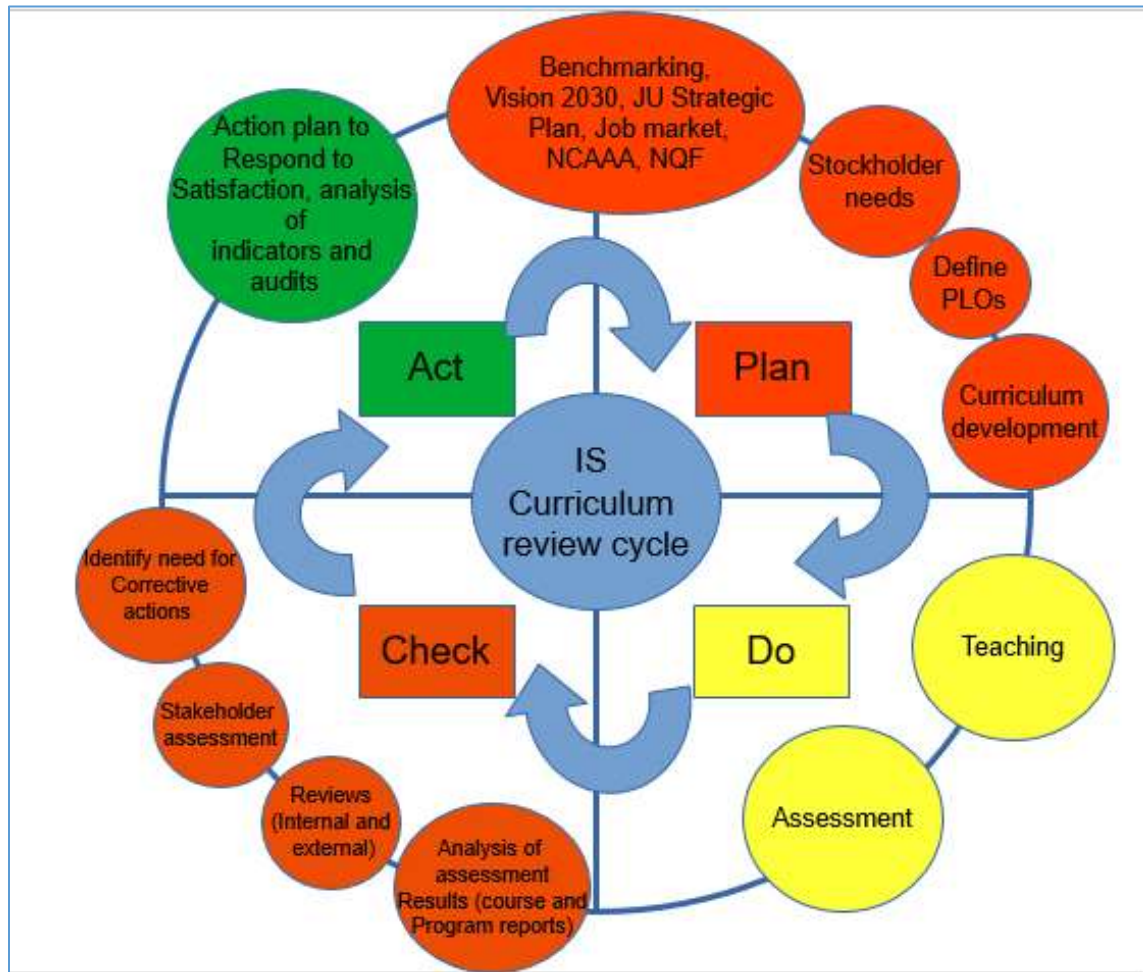

Figure 8.1 Review Cycle of the IS program

8.1 Plan

This stage begins with a review on what modern technology demands, what computer engineering standards and job market desire and what educational standards and national qualifications framework require for the development of the IS program. An analysis of the stakeholders' needs of faculty, students, employers and society in general should be

accomplished. All these are translated into human resource terminology i.e. graduate competencies which in turn translated into educational taxonomy and learning outcomes. Based on the learning outcomes, curriculum is designed backward to meet PLOs.

8.2 Do

The plan stage is implemented where curriculum is delivered and learning outcomes are assessed to gauge the achievement of PLOs. The PLOs are assessed by two methods namely direct (based on course learning outcome assessment) and indirect (based on surveys namely, exit surveys, program evaluation surveys, student experience surveys and employer surveys). Details for the assessment mechanism are showed in Figure 8.2.

8.3 Check

This stage involves the analysis of assessment results, internal and external reviews of courses' and program's reports as well as courses' and program's specifications, feedback from students, faculty and employers, and at least areas for improvement are identified. Details for the internal and external review process are showed in Figure 8.2.

8.4 Act

Based on the above mentioned assessment mechanism, an annual improvement plan is developed while considering the 5 yearly strategic plan and action plan requirements. Best practices are shared and improvement is made for the next cycle.
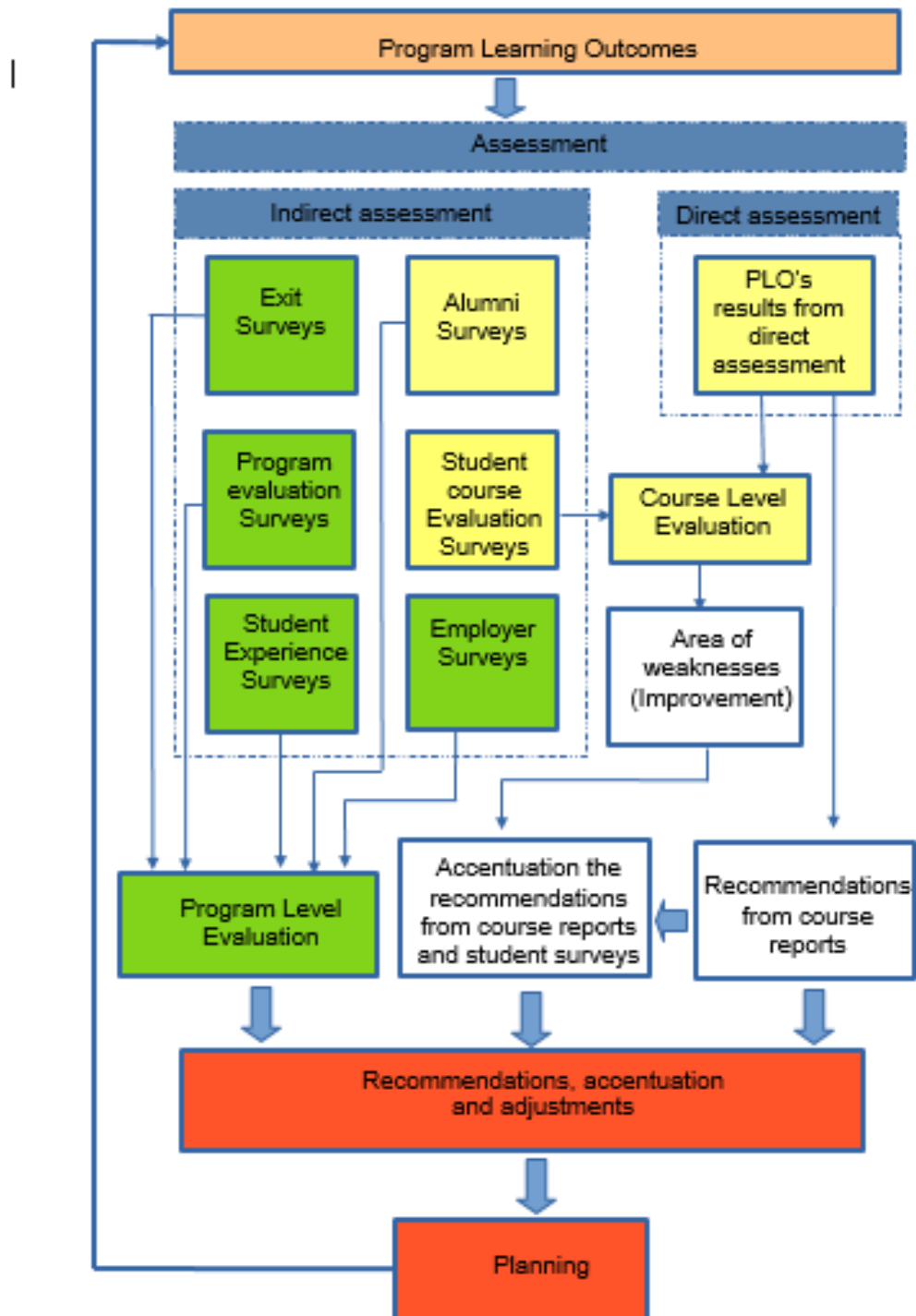
Figure 8.2: Assessment and annual review cycle of the IS program

9. Evaluation of Program Quality Matrix

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
Effectiveness of teaching and assessment	Student, program leaders , students, peer review	Program evaluation surveys Students experience surveys Faculty Satisfaction Surveys Advisory committee opinion Internal and external reviews of courses and program specification	End of academic year
		Course student evaluation surveys Internal reviews	At end of each study term
Extent of achievement of course/program learning outcomes	Program Leaders, faculty, quality unit, employers, students , alumni	Course reports Student Indirect surveys Independent insurance of student achievement reviews	At end of each study term
		Alumni surveys Employer surveys Annual program report Advisory committee opinion	End of academic year
Quality of learning resources	Student, faculty, alumni	Exit Surveys	At end of each study term
		Faculty Satisfaction Survey Program evaluation surveys Student experience surveys Alumni surveys	End of academic year

10. Standards and mechanism for evaluation and periodic review of academic programs

The evaluation and periodic review process generally aims to identify the extent to which the program has achieved its objectives, learning outcomes and ensuring its effectiveness. Hence, the evaluation and periodic review of the program by those in charge of it are necessary in order to ensure development and improvement processes and keep pace with technical innovations, scientific developments and the labor market. The process of evaluation and review of academic programs is defined as the process of systematic and regular review and evaluation for the program and its components every certain period.

10.1 Criteria for the comprehensive evaluation and review process of academic programs

The comprehensive program evaluation and periodic review process (once every 3-5 years) should be conducted on the overall level of quality in the program by identifying its strengths and weaknesses.

- The tools used in the program evaluation process should be varied and not be limited to one type tools.

- Relying on evidences and documents evidence away from personal opinions and impressions.

- Comprehensiveness means that the evaluation process is not limited to specific parts of the program, but rather includes the inputs and operations (including the recommendations of the program's professional advisory committee, results of a graduates and students opinions surveys) and the outputs of the program, with attention to the learning outcomes (the extent of their achievement) and the extent to which the characteristics of graduates have been achieved.

- Continuity: The evaluation process should go hand in hand with the teaching and learning process to ensure permanent follow-up of the program's effectiveness annually.

- The KPIs in the program are measured annually and their reports are discussed and taken appropriate decisions on them, preparing reports and making a benchmark comparison of the program with other similar programs.

- Program reviews and evaluations are carried out with the participation of stakeholders and experts in order to guarantee that the program is still fit for purpose.

- Preparing a complete self-study report for the program according to the template of the National Center for Evaluation and Accreditation.

10.2 Mechanisms of the periodic (annual) evaluation of the program

This level is done by academic Program Evaluation Committee, and its role in this aspect is as follows:

The mechanisms of the program evaluation process (internal audit) are as follows:
Implementing periodic procedures to ensure the quality of the academic program by collecting required data about the program using various evaluation tools and periodically analyze their results to identify strengths and weaknesses in order to improve performance, including the following:

- Analyzing the results of direct assessment of course learning outcomes and analyzing the results of direct and indirect assessment of the program learning outcomes, reporting, and improvement and development plans and reports of improvement and development plans for the previous year.

- Analyzing the results of opinion surveys and making the necessary reports, improvement and development plans, and reports of improvement and development plans for the previous year.

- Preparing the annual report of the program, including improvement and development plans, and reports of improvement plans and development for the previous year.

- Analyzing the results of measuring the main performance indicators of the academic program and preparing a performance indicators report of the improvement and development plan and the improvement and development plan report for the previous year.

- Preparing self-evaluation scales for the academic program.

- Preparing a self-study report for the academic program, improvement and development plan, and a plan report of improvement and development for the previous year.

- Evaluating the learning outcomes and the extent to which the characteristics of graduates have been achieved at all levels, and preparing the necessary reports, improvement and development plans, and reports of improvement and development plans for the previous year.

- Studying the circumstances surrounding the program and developments related to the labor market and the extent of the demand for program graduates.

- Preparing a complete report that includes strengths, weaknesses, priorities for improvement and development proposals of the program, the improvement and development plan, and the report of the improvement and development plan for the previous year.

- The mechanisms of the program evaluation process (external audit) are as follows:
  - The program file that includes (program specification - course specification - Annual Program report - Course Reports - Program Key Performance Indicator Reports - Learning outcomes Report - survey reports - program self-evaluation scales – Self-study report of the Program - a complete report that includes strengths, weaknesses and priorities for improvement, the program development proposals, the improvement and development plan, and the improvement and development plan report for the previous year) is sent to the department council, then to the college council, and then to the plans and programs unit to send it to the external auditor to conduct the external audit.

  - Preparing the improvement and development plan based on the external audit report and preparing a complete report that includes strengths, weaknesses, priorities for improvement, proposals for program development, and a plan of Improvement and

development and report of the improvement and development plan for the previous year.

11. Program Key Performance Indicators

11.1 Main Key Performance Indicators

Code	Key Performance Indicators	Target Benchmark
KPI-P- 01	Percentage of achieved indicators of the program operational plan objectives.(S1)	90%
KPI-P- 02	Students' Evaluation of quality of learning experience in the program. (S3)	4.5
KPI- P- 03	Students' evaluation of the quality of the courses. (S3)	5
KPI- P - 04	Completion rate. (S3)	70%
KPI- P - 05	First-year students retention rate (S3)	98%
KPI- P - 06	Students' performance in the professional and/or national examinations. (S3)	NA
KPI- P - 07	Graduates' employability and enrolment in postgraduate programs. (S3)	50% 25%
KPI- P - 08	Average number of students in the class. (S9)	10
KPI- P - 09	Employers' evaluation of the program graduates proficiency. (S3)	5
KPI- P - 10	Students' satisfaction with the offered services. (S5)	5
KPI- P - 11	Ratio of students to teaching staff.(S5)	10:1
KPI- P - 12	Percentage of teaching staff distribution (S5)	B: 70% Assist. P: 60% Assoc. P:20% Prof.:20%
KPI- P - 13	Proportion of teaching staff leaving the program(S5).	0%
KPI- P - 14	Percentage of publications of faculty members.(S5)	80%

KPI- P - 15	Rate of published research per faculty member.(S5)	5
KPI- P - 16	Citations rate in refereed journals per faculty member.(S5)	20
KPI- P - 17	Satisfaction of beneficiaries with the learning resources.(S6)	4

11.2 Additional Key Performance Indicators

Code	Additional Key Performance Indicators	Target Benchmark
Additional KPI-P- 01	Number of research groups in the program	2
Additional KPI-P- 02	Number of funded research projects in the program	5
Additional KPI- P- 03	The percentage of students participating in extra-curricular activities	20%
Additional KPI- P - 04	Employers' satisfaction with the program mission and goals	3.5
Additional KPI- P - 05	Percentage of the student's graduation projects related to the surrounding community	25%

12. Teaching and learning strategies to achieve program learning outcomes

	Program Learning Outcomes (PLOs)	Teaching and Learning Strategies	Assessment Methods
	Knowledge and Understanding		
	Demonstrate sound knowledge of the computing requirements to solve computer-based problems and state them in appropriate forms	▪ Lecture ▪ Tutorials ▪ Self-learning ▪ Class discussions	▪Exams ▪Assignments ▪Quizzes
	Define the essentials of analysis, design, implementation, and evaluation of computer-based system, process, component, or	▪ Lecture ▪ Tutorials ▪ Self-learning ▪ Class discussions	▪Exams ▪Assignments ▪Quizzes

	program to meet desired needs		
Learning Domains	Demonstrate sound knowledge of the concepts of applied management and mathematics appropriate to the discipline	▪ Lecture ▪ Tutorials ▪ Self-learning ▪ Class discussions	▪Exams ▪Assignments ▪Quizzes
	Skills		
	Apply the analysis, design principles, concepts of computing and mathematical problems solving appropriate to the information systems.	▪ Lectures ▪ Tutorials ▪ Lab demonstrations ▪ Field activities ▪ Projects ▪ Reports ▪ Presentations ▪ Class discussions	▪ Assignments ▪ Exit Exam ▪ Rubric-based Project Report ▪ Presentation ▪ Lab Exam
	Implement and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.	▪ Tutorials ▪ Lab demonstrations ▪ Field activities ▪ Projects	▪ Assignments ▪ Rubric-based Project Report ▪ Lab Exam
	Use the current techniques and tools necessary for computing practice, delivery, use, and management of information systems.	▪ Lab demonstrations ▪ Field activities ▪ Projects ▪ Reports ▪ Presentations	▪ Assignments ▪ Rubric-based Project Report ▪ Lab Exam
	Communicate effectively in a variety of professional contexts.	▪ Presentations ▪ Class discussions	▪ Rubric-based Project Report ▪ Presentation ▪ Lab Exam

Values		
Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.	- Lectures - Tutorials - Field activities - Projects - Reports - Presentations - Self-learning - Class discussions	- Rubric-based Project Report - Class Discussion - Presentation - Lab exam
Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.	- Lectures - Tutorials - Field activities - Projects - Reports - Presentations - Self-learning - Class discussions	- Rubric-based Project Report - Class Discussion - Presentation - Lab exam
Demonstrate an ability of self-learning and continuing professional development.	- Lectures - Tutorials - Field activities - Projects - Reports - Presentations - Self-learning - Class discussions	- Rubric-based Project Report - Class Discussion - Presentation - Lab exam

13. NCAAA Program Accreditation Forms

Name	Download Link
Program Specification	https://etec.gov.sa/en/productsandservices/NCAAA/AccreditationProgrammatic/Pages/Forms.aspx
Annual Program Report	https://etec.gov.sa/en/productsandservices/NCAAA/AccreditationProgrammatic/Pages/Forms.aspx
Course Specifications	https://etec.gov.sa/en/productsandservices/NCAAA/AccreditationProgrammatic/Pages/Forms.aspx
Course Report	https://etec.gov.sa/en/productsandservices/NCAAA/AccreditationProgrammatic/Pages/Forms.aspx
Field Experience Specifications	https://etec.gov.sa/en/productsandservices/NCAAA/AccreditationProgrammatic/Pages/Forms.aspx
Field Experience Report	https://etec.gov.sa/en/productsandservices/NCAAA/AccreditationProgrammatic/Pages/Forms.aspx
Self-Study Report for the Program	https://etec.gov.sa/en/productsandservices/NCAAA/AccreditationProgrammatic/Pages/Forms.aspx
Self-Evaluation Scales for Higher Education Program	https://etec.gov.sa/en/productsandservices/NCAAA/AccreditationProgrammatic/Pages/Forms.aspx
Program key performance indicators	https://etec.gov.sa/en/productsandservices/NCAAA/AccreditationProgrammatic/Pages/Forms.aspx
program Accreditation Eligibility Requirements	https://etec.gov.sa/en/productsandservices/NCAAA/AccreditationProgrammatic/Pages/Forms.aspx

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