PROGRAM QUALITY MANAGEMENT SYSTEM

BACHELOR IN COMPUTER SCIENCE PROGRAM

DEPARTMENT OF COMPUTER SCIENCE
COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

JAZAN UNIVERSITY

2024-2025

Declaration

Program Quality Management System manual for Bachelor in Computer Science program has been designed in line with the Quality Management System (QMS) handbook of College of Engineering and Computer Science as well as Jazan University. Quality and accreditation guidelines of NCAAA stated in Quality Handbook. This manual is especially prepared for the bachelor in computer science program and the information and instructions are lined and consistent with college of computer science and information technology's QMS.

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DEPARTMENT OF COMPUTER SCIENCE
JAZAN UNIVERSITY
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PREFACE

Quality Management System is a mechanism to evaluate and measure the promises and achievements of any institution provided in mission and vision statement and reflected in the strategic directions of that institution. The main idea of it is to evaluate the satisfaction level of various stakeholders and increase their confidence by established procedures and methods.

College of Engineering and Computer Science is committed to quality education and fulfilling the obligations enshrined into the mission and vision were as the program committed to fulfil the goals and achieve the mission set by the college.

The major goal of this manual is to provide useful information to all employees and personnel of computer science department, with special focus dedicated to those responsible for ensuring the academic quality of computer science degree program and obtaining appropriate accreditation. The Quality Management System described in this manual defines the various policy and procedure that ensures the quality assurance and management activities in line with good practices of NCAAA standards are implemented and evaluated. It clearly describes the responsibilities, scope and domain of various activities.

This manual considers the application of a system of processes throughout the college as well as the identification and interaction of these processes, and their management. This Quality Management System is in line with the regulations and requirements described by the NCAAA.

The manual also includes sample course descriptions, a sample program description, and an example evaluation technique for a sample program. Benchmarking, performance indicators, questionnaires, course reports, and program reports are all examples of such evaluation tools. The manual also includes advice on how to write up strategies for future growth and improvement.

The policies and procedure defined here are applicable throughout all the activities and level of organization and various units, committees and members are responsible for ensuring the implementation of this QMS.

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Definition and Abbreviations

Abbreviation	Full Form
ABET	Accreditation Board for Engineering and Technology
BS	Bachelor of Science
CLO	Course Learning Outcomes
CS	Computer Science
CTC	Curriculum and Teaching Committee
DAD	Deanship of Academic Development
EQA	External Quality Assurance
HR	Human Resource
HoD	Head of Department
ICT	Information and Communications Technology
IQA	Internal Quality Assurance
JU	Jazan University
KPI	Key Performance Indicator
KSA	Kingdom of Saudi Arabia
MOE	Ministry of Education
NCAAA	National Commission for Academic Accreditation and Assessment
NCAAA	National Commission for Academic Accreditation and Evaluation
NQF	National Qualifications Framework
OEC	Organizational Excellence Committee
PDCA	Plan-Do-Check Action Cycle
PIRI	Plan Implement Review Improvement Plan
PLO	Program Learning Outcomes
PQC	Program Quality Coordinator
QA	Quality Assurance
QAU	Quality Assurance Unit
QMS	Quality Management System
SES	Self-Evaluation Scale
SLO	Student Learning Outcomes
SOP	Standard operating procedure
SSRI	Self-Study Report for Institution
SSRp	Self-Study Report for Program
SIC	Statistics and Information Committee
SWOT	Strength Weakness Opportunities and Threats
T&L	Teaching & Learning
TNA	Training Needs Analysis
UPPP	Unit for Policy Procedures and Processes
VPAA	Vice President of Academic Affairs

Chapter 1: 1.1 Historical Background

1.1 College of College of Engineering and Computer Science

College of Computer Science and Information Systems was established by the consent of the Royal Decree No. 7 / b / 24 232 as on 11/5/1425 H. At first it was under the patronage of King Khalid University, Abha, later in 1428 was under the guardianship of King Abdul Aziz University. In 12/01/1427, Royal Decree issued for the establishment of Jazan University. Several significant events have marked the university's growth. The first decision to appoint the dean of the college was issued in 04/06/1429 AH. The College started with only two specializations, Information systems and Computer Sciences.

The Department of Computer Networks was established at the beginning of the first semester of the academic year 1429/1430 H.

The female students section was opened at the beginning of the first semester of the academic year 1431/1432 H with two departments, Information systems and Computer Science.

In 2006, the Computer science department was established. The first curriculum plan for BS Computer Science was developed with 146 credit hours. At that time, the total number of computer laboratory was 6. In 2008, the second edition of curriculum plan was developed with the 145 credit hours.

On September 27, 2023, the College of Computer Science and Information Technology merged with the College of Engineering. The newly formed institution is now called the College of Engineering and Computer Science.

The Computer Science Department at Jazan University, Faculty of Computer Science and Information Systems integrates the study of important theoretical foundations in Computer Science with the study of powerful scientific methodologies that are central to the field, providing excellent preparation for under graduate (Bachelor in Computer Science) study in computer science. In addition to offering a full program of core computer science courses, Computer Science Department offers a wide range of courses in areas relevant to advance curriculum, including Cloud Computing, Mobile Computing, Neural Computing, Computer Graphics and Visualization, and Software Engineering. Currently, the department houses more than 15 specialized computer laboratories including GIS Lab, Computer Vision and Advance Artificial Intelligence (AI) Lab containing machines running the Linux, Red Hot Unix and Windows version 7 and 8 operating

systems. Several on-going research projects within the department offer students and staff, the opportunity to work on real problems both during the academic year and over the summer semester.

The program was updated to comply with the country's Vision 2030 for sustainable development and to provide quality youth education in order to succeed in global society. The new curriculum plan (third edition) was approved and implemented in 2019-2020. The latest trends and job market requirements were incorporated into the redesigned plan, which now comprises 160 credit hours. At the time of designing the new plan, benchmarking for the courses was done with the top universities of the world and Saudi Arabia. When it comes to English, Mathematics, and Sciences courses, ACM guidelines and accreditation organization regulations, such as NCAAA and ABET regulations, were strictly followed. The Department has well-qualified faculty members with a sizeable number of PhD holders with specialization in the various fields of computer science. The Saudi government is also promoting online applications and a digital revolution in every aspect of the country that will require more and more computer science graduates and will result in the high employability of passed out students.

1.2 Vision and Mission

1.2.1 College Vision and Mission

The newly formed College is now the College of Engineering and Computer Science. Before the merging the following was the Vision, Mission and Goals of the College of Computer Science & Information Technology. The College of Engineering & Computer Science is in the process of framing updated Vision, Mission & Goals for the year 2025-2026 for the merged college.

Vision

To building a competitive environment in education, research, innovation and entrepreneurship in the field of Computer Science and Information Technology to serve the community.

Mission:

The mission of Computer Science and Information Technology is to provide best practices of education, research, innovation and entrepreneurship in the field of Computer Science & Information Technology to contribute in building a vibrant society.

College Goals:

1 Enhance infrastructure for supporting excellent computing education.
2 Endeavor governance and proper utilization of resources.
3 Establish state-of-the-art curricula to cover the scientific knowledge and professional needs of the students.
4 Emphasis on student-centric learning to seek better career in industry, business or government sector.
5 Empower faculty development and research activities.
6 Maintain relations with industry and other academic institutes for benchmarking and technology-sharing.
7 Improve community service and quality of life.

1.2.2 Program Vision and Mission

Program Vision

To build a competitive environment in education, research, innovation and entrepreneurship in the field of Computer Science to serve the community.

Program Mission

Bachelor in Computer Science program is to provide best practices of education, research, innovation and entrepreneurship in the field of Computer Science to contribute in building a vibrant society.

Program Goals:

1 To impart innovative teaching to enrich students with sound computing knowledge by utilizing state of the art infrastructure.
2 To prepare students for the job market by strengthening their problem solving and professional skills.
3 To train students by providing an environment for lifelong learning and entrepreneurship.
4 To support faculty and students in multidisciplinary research.
5 To inculcate students with professional ethics and social responsibilities to contribute in society's economic growth.

Graduate Attributes:

1 Proficient programming and computing knowledge.
2 Ability to think creatively and apply computational thinking to contribute to advancements in artificial intelligence, computer security, data science and other emerging areas.
3 Strong work ethics and continuous professional development in the evolving fields of computer science.
4 Competence in team leading and collaborate effectively to make informed decisions in software design and development practices.
5 Excellence in verbal, non-verbal, and digital communication for articulating technical concepts in programming and software development.

Program educational Objectives:

1 Students will learn **essential concepts of mathematics, science and computing** to successfully apply them in BCS program.
2 Students will be **equipped with essential skills and knowledge** to comprehend, analyze and develop computing systems for desired needs.
3 Students will gain independent, **critical and creative thinking**.
4 Students will be **encouraged to have self-learning skills** and will be trained to achieve leadership and entrepreneurship traits.
5 Students will understand the **professional and ethical considerations** in the field of Computer Science as well as identify society's needs.
6 Students will be equipped with specialized training programs to support them for IT **job market.**
7 Students will be encouraged to **involve in scientific research and innovative** thinking in the field of Computer Science.

1.3 Stakeholders

Major stakeholders of the college and program are:

- Students
- Faculty members and Other Staff
- Alumni
- Industry / Employers
- Others

1.4 Strategic Directions

- **Direction –1:** Strengthen student's skills, values and personality development for academic excellence on par with the industry requirements.
- **Direction –2:** Involvement in community services to fulfill social obligations towards society especially in Jazan province.
- **Direction –3:** Motivating faculty members and students to increase research productivity towards achieving excellence.

1.5 Program Strategic Plan

Department of Computer Science has developed a strategic plan and action plan 2017-22 based on the Jazan University strategic plan and college strategic plan. The strategic plan and action plan is annually reviewed based on the defined key performance indicators.

1.6 Quality Assurance Unit (QAU) at college level

Assurance Unit (QAU) was established on 10th May 2010 (23/5/1431H) by the executive order of Dean, faculty of CS & IT. QAU is providing academic guidance for quality education by improving teaching learning strategies, program planning, self-review, and continuous improvement. All QAU activities cover regional and international standards to enhance quality of programs offered by the faculty. So, the stakeholders can admire the faculty and its market driven programs.

Unit is enforcing quality standards in the faculty, regulated by Deanship of Academic Development (DAD) for gaining accreditation of National Commission for Academic Accreditation and Assessment (NCAAA) as well as striving for accreditation of ABET (Accreditation Board for Engineering & Technology). For the purpose of streamlining each and every process in the faculty, SOPs are developed, and surveys are conducted from different constituents for the purpose of assessment and continuous improvement.

1.6.1 Vision, mission and objectives of QAU

Vision:

To produce graduates who are recognized in the market for their superior quality and achieve accreditation for all academic programs offered by the faculty of Computer Science & Information Technology.

Mission:

Unit is dedicated to establish best practices of teaching & learning to align educational programs according to market need and current research trends, and ensure the optimum use of available resources to achieve formal accreditation by national and international accreditation boards like NCAAA and ABET.

Objectives:

- To assist faculty in implementing the standards set by the NCAAA & ABET.
- To assist the faculty in curriculum-review of existing programs and designing new programs as well.
- To conduct assessments in the faculty to find the strengths to carry on and weaknesses to be removed.
- To facilitate each department in establishing their strategic plan to gain recognition from regional, national and international academic communities.
- To conduct self-assessment, student satisfaction survey, employer survey for continuous improvement purpose.
- To implement Quality Management System (QMS) throughout the faculty.

Organizational Chart of QAU

Unit is working under one Chairman and one Head as shown in below Chart, but sub committees members are taken from male and female both sections to execute similar standards in both sections.

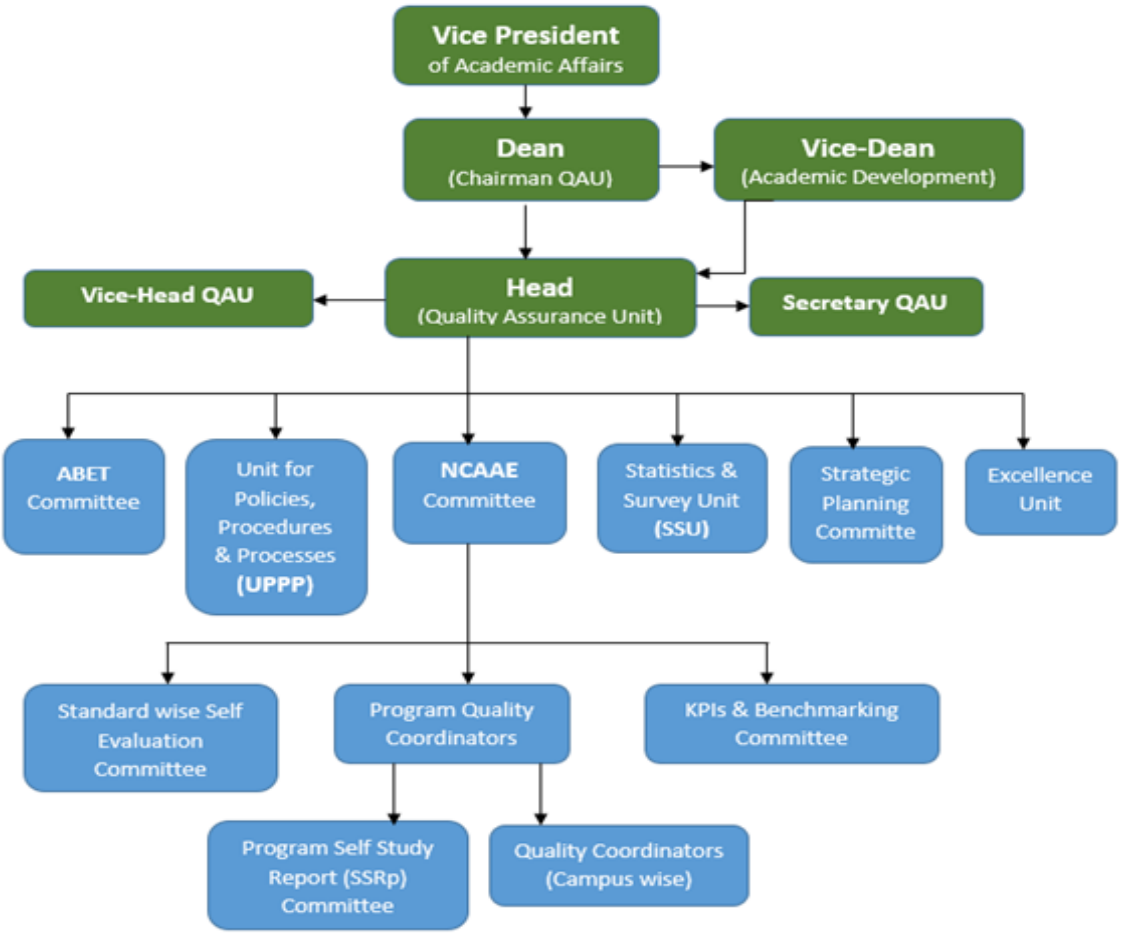

Figure 1: Quality Assurance Unit (QAU) Structure

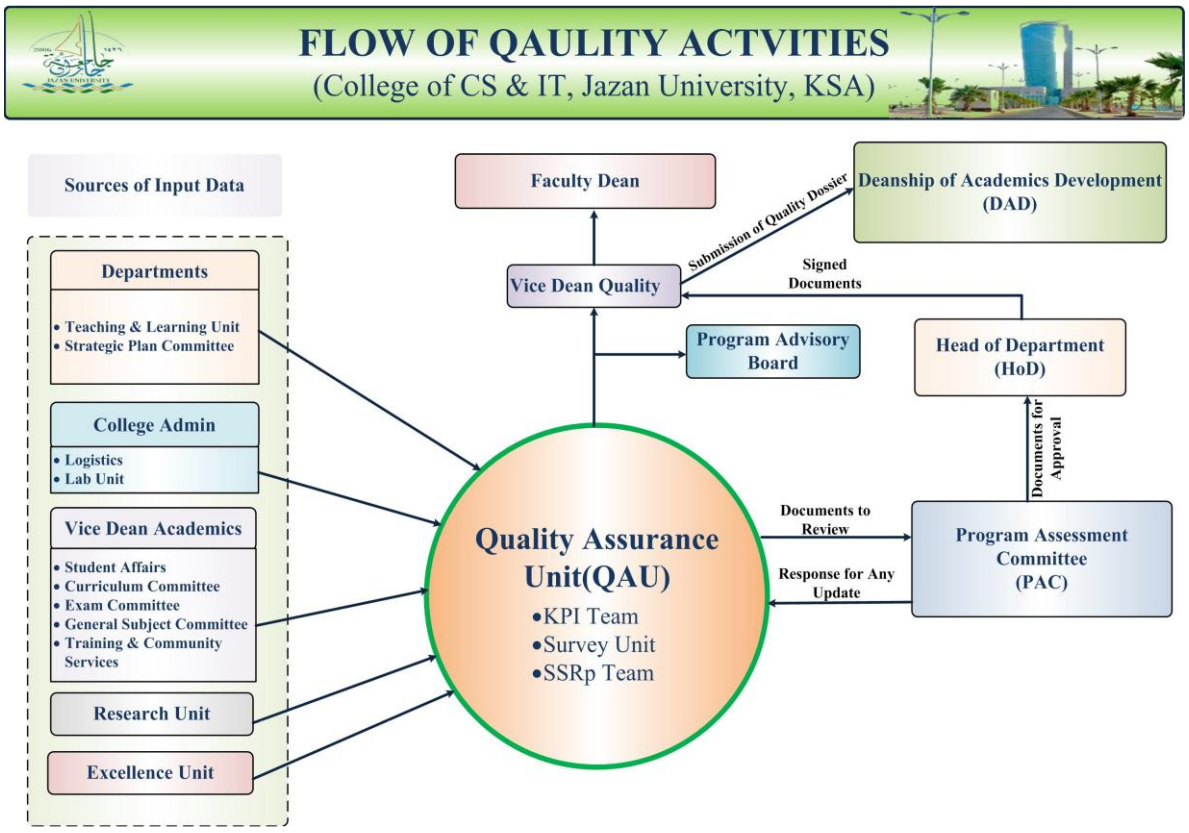

Figure 1(b): CS Program QAU structure

Chapter 2: Quality Management System (QMS)

Quality is the extent to which the customers or users believe the product or service surpasses their needs and expectations. Quality of education, for example, is the skill of building the abilities of assimilating the knowledge in the area of educational needs and the implementation of this knowledge to creating mechanisms allowing fulfilling expectations of customers and educational services. The care about the quality of education by the universities is one of the basic process, which creates the present market of educational services. The quality of education becomes the basis to working out and implementing the strategy of the development of educational units. Quality management means the systematic development and maintenance of quality. As a methodological entity, the quality system refers to the methods of quality management. The quality management system includes the methods for continuous improvement of education, research, management, leadership and supporting services. More and more requirements put for the higher education, especially from the point of view of the demand on the job market, caused the necessity of implementing the quality management systems (QMS) compatible with the ISO 9001: 2008 standard to universities. Jazan University aims to continuously improve the quality of all its operations by a formalized system assuring the fulfillment of the academic standards.

This QMS conforms to NCAAA Standard 1 requirement: Program Management and Quality Assurance. The QMS Manual contains organizational information, quality policy, objectives, and methodologies to achieve compliance with NCAAA standards.

2.1 Definition of Quality Assurance

Quality assurance is primarily an internal responsibility system in an institution, and it depends heavily on the commitment and support of all those who involve in administration, management, and teaching. The procedures and standards outlined by The National Commission for Academic Accreditation Assessment are based on the expectation that institutions would adopt such a responsibility system and take appropriate actions to ensure that high quality criteria are achieved

This Handbook is intended to guide and support those processes Due to the importance of the higher education system for students, their families, and the wider community, one cannot simply assume that quality can be simply achieved Quality must be verified by independent processes in order to guarantee to everyone concerned that high levels of quality are being accomplished The NCAAA accreditation processes for higher education institutions and the programs provide this verification.

2.2 The Significance of Quality Assurance

Quality assurance is both a process and a framework defined for achieving excellence. The process guides to fulfill the institutional mission and vision and further achieve goals and objectives of institution.

The main objective of the quality assurance is to guide various constituents in performing their activities at an optimal level. These constituencies include administration, faculty members, students, support service staff and physical resources (i.e. buildings, classroom environment). Continuous evaluation will help any educational institution in rectifying weaknesses and attaining high quality in all areas. The college/ department will be aligned with changes in academic and job market requirements and adapt accordingly to provide the highest quality education to students. Based on its endeavor to ensure having a distinguished status at the regional, national and international levels, College of Computer Science and IT is striving to implement quality systems and processes in all its units.

2.3 Relationship of Quality Assurance to Accreditation

Quality assurance is a continuous, ongoing process of monitoring outcomes and ensuring quality in all university endeavors If such a process is done properly, institutions will constantly evolve and adapt to environmental changes and social needs Accreditation is mainly based on the evaluation at a specific period of time, highlighting institutional quality and outcomes that demonstrate alignment of purpose with performance As such, quality assurance can be considered as a prerequisite for accreditation.

Accreditation process, at the institutional or programmatic level, involves evaluation by an external body (such as ABET) or the internal body of Saudi Arabia (i.e. NCAAA) based upon a set of agreed standards If the standards are met, accreditation is granted It is

worth mentioning that being accredited indicates that the institution and its programs are up to international standards, and it is essential to maintain such quality standards as part of the institution's ongoing and long term performance improvement Thus, it is unlikely that accreditation can be completely granted unless providing evidence that further steps to maintain the effectiveness and the quality of its programs through continual evaluation and assessment are provided

2.4 Program Quality Assurance Processes

Department of Computer Science believes that proper designing, implementing and continuous assessment and improvement of all of its sections and activities can guarantee high quality output. For this reason, it has recommended general guidelines and procedures in the form of quality practices in order to ensure that good practices of all sections follow the requirements of NCAAA quality expectation. The quality assurance processes follow a continuous loop as shown in below figure:

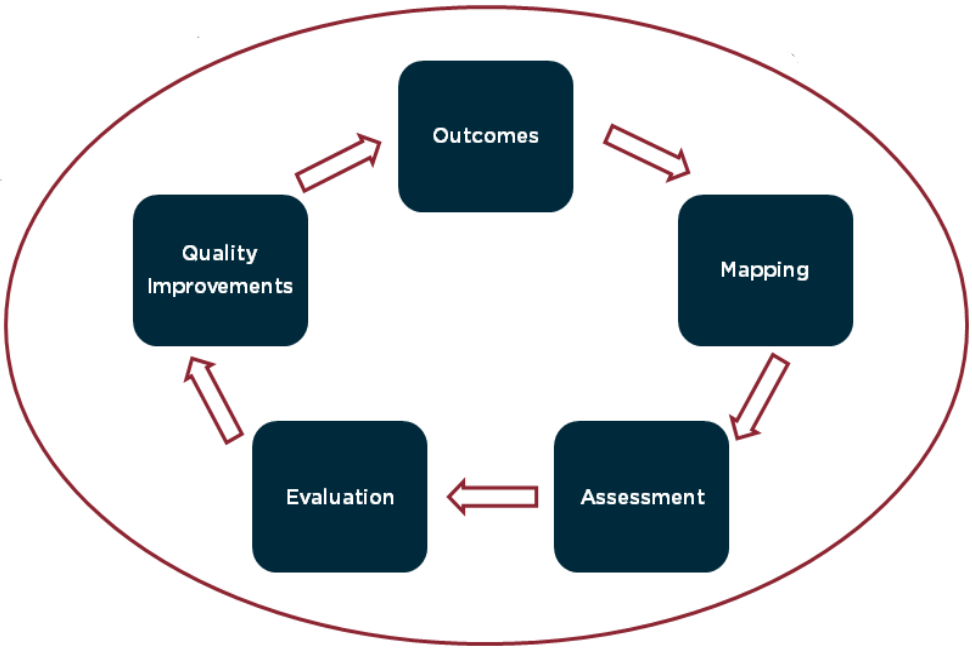

Figure 2: Program Quality Assurance Cycle

2.5 General Requirements

Department Council with consultation of College Council will create, document, implement, and maintain the QMS and will continue to improve its effectiveness in line with NCAAA requirements, stakeholders' satisfaction, department strategic plan and Afaq plan. Department Council will: -

a) Determine the required major processes in the QMS and their implementation throughout the program domain.
b) Determine process sequence and related processes.
c) Determine criteria, operational mechanism and effective process control.
d) Ensure adequate resources and accurate data to support process excellence and process monitoring.
e) Monitor, measure and analyze process achievement or KPIs achievement.
f) Execute opportunities for improvements, preventive and corrective control and continuous process improvement.

All major processes will be managed by Department Council in accordance with College Council, University Council regulations with NCAAA requirements.
In case external resources or services are required, Department Council will ensure these external resources meet NCAAA and QMS requirements. Department Council will identify the units, divisions or colleges that require external resources.

Department Council will document the QMS for top management to ensure it meets the QMS Document Structure (see, Figure 3).

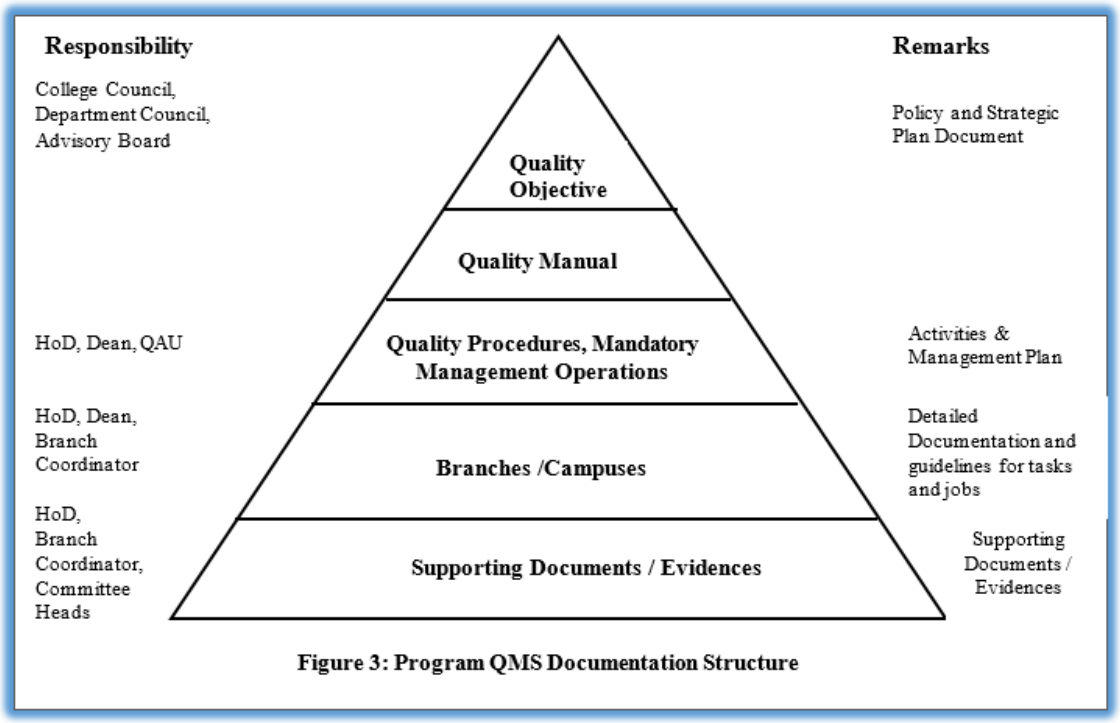

Figure 3: Program QMS Documentation Structure

QMS is being created to ensure a good quality management system developed and implemented to guide NCAAA and Program Vision, strategic plan and action plan implementation based on quality policy and objectives.

2.6 Quality Cycle

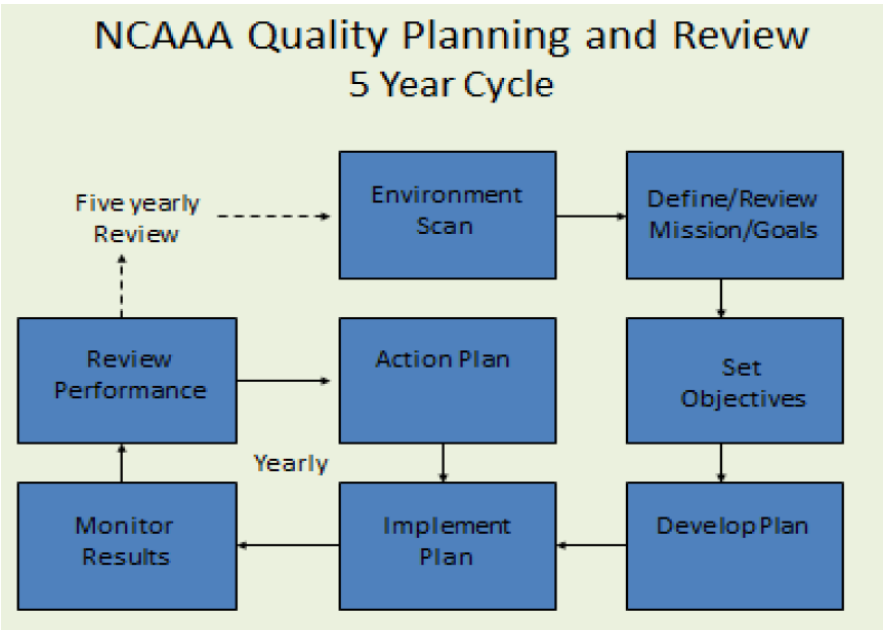

Figure 4: NCAAA Quality Planning and Review Cycle

2.7 Quality Manual

Program Quality Manual is the main document to explain the policy and planning by top management. The Quality Manual is the main source of reference other than NCAAA and Program and College Vision documents. The scope of Quality Manual are: -

a) Scope of implementation for QMS.
b) Quality policy and quality objectives of program.
c) Not-applicable to NCAAA requirements (Need to be modified as per NCAAA latest modifications if any)
d) Reference to procedures and other support documents.
e) Process map in the QMS.

2.8 Quality Practices

-Mandatory Procedures

1. Document Control
2. Control of Records
3. Self-Study or Internal Audit
4. Risk Management
5. Improvement Initiatives

- Management Supporting Procedures

Four management support procedures:

1. Self-Study Report (SSRp)
2. Human Resource Development (HRD)
3. Stakeholders' feedback (survey and action plans)
4. QMS monitoring

Major processes, as identified for effective QMS implementation, are listed below in Table 1.

TABLE 1: PROGRAM LEVEL ACTIVITIES & RESPONSIBILITIES

#	Activity Name	Semester Wise	Annual	Every 5 Years	Responsibility	Stakeholders Involved
1.	Program Mission, Vision, Goals, Objective and Learning Outcome preparation and review			✓	Organizational Excellence Committee (OEC)	• Students • Staff • Employers • NQF • Advisory Committee
2.	Program Specification Review			✓	NCAAA Committee	• Staff
3.	Course Report	✓			Course Coordinator	• Staff
4.	Course Recommendation Reporting	✓		✓	Curriculum and Teaching Committee	• Staff
5.	Course File Preparation and Submission	✓			Course Coordinator	• Staff
6.	Program KPI Report Preparations and Analysis		✓		KPI Committee	• Staff
7.	Annual Program Report		✓		NCAAA Committee	• Staff
8.	Program Assessment, Recommendations and Conclusion		✓		OEC	• Staff • Advisory Committee
9.	Program Review and Evaluation (SWOT Analysis)			✓	SSRp Committee	• Staff • Advisory Committee
10.	Program Self Study Report Development			✓	SSRp Committee	• Staff
11.	Course Evaluation Survey	✓			Statistics and Information Committee (SIC)	• Students
12.	University Experience Survey (Mid-Level Students)		✓		SIC	• Students
13.	Program Evaluation Survey (Final Level Survey)		✓		SIC	• Students
14.	Exit Student Survey for Student Attributes		✓		SIC	• Students
15.	Employer Survey for Student Attributes		✓		SIC	• Employers

16.	Alumni Surveys for Student Attributes		✓		SIC	• Alumni
17.	Employer Survey		✓		SIC	• Employer
18.	Alumni Survey		✓		SIC	• Alumni

2.9 Document Control

Documents created in QMS will be controlled. Procedures to control documents will be as following:

a) Approval of document before circulation;
b) Revision, updating, and approval;
c) Ensure changes and latest documents status identified;
d) Ensure latest version of the documents;
e) Ensure documents can be referred when required at any time;
f) Ensure external documents needed to be identified and verified and their circulation to be controlled; and
g) Prohibit obsolete documents from being used and must be stamped "**VOID**", if it is kept for any reason.

2.10 QMS Review

2.10.1 QMS REVIEW INPUTS

The review will get input from these sources:-

a) Program Annual Report
b) Self-Study Report for Program(SSRp)
c) Review Report Improvement Plan
d) Previous QMS revision meeting file
e) Inputs from stakeholders
f) Inputs from Environment
g) Survey results

2.10.2 QMS OUTPUTS

QMS review results will be used to improve: -

a) QMS processes and its effectiveness.

b) Need and requirements of the stakeholders.
c) Resources planning and utilization (human resources and infrastructures).

CHAPTER 3: Committee Structure and Responsibilities

3.4 Quality Committee Structure

3.4.1 Higher Standing Quality Committee of the University

The Committee for Evaluation and Accreditation is responsible for planning to ensure quality in all academic programs, and to advise the Rector regarding the policy and institutional issues related to the assessment and adoption of academic programs. The Committee endorses the operational plans of the departments and colleges based on the recommendations of the evaluation teams. More specifically, the functions of the Committee are, but not limited to, as following:

1. Approve and supervise the implementation of a comprehensive plan for the evaluation and accreditation of academic programs at the university.
2. Establish, review and adopt policies and procedures that guarantee the quality of academic programs.
3. Adoption of corrective actions and development plans, based on the results of the self-assessment and the observations of accreditation teams for academic programs and monitoring their implementation.

Members of the Committee

The Rector	Head
Vice Rectors	Co-Head
Dean of Academic Development	Reporter
All deans and Deanships	Members

3.4.2 The Quality Assurance Committee at University Level

The **Committee** on **Quality Assurance** is to provide advice to the dean of the faculty concerned with regard to overall feedback on self-study report. The Commission should review the documents submitted, and provide advice and guidance to the committees of

academic programs to take action or the necessary corrections before proceeding to accreditation or self-study.

The Quality Assurance Committee's functions:

1. Follow up the plan of assessment and accreditation.
2. Review the self-study report and the documents required for accreditation of academic programs.
3. Provide feedback on the appropriate level of documentation.
4. Ensure that the documents submitted meet the accreditation body standards.
5. Make recommendations for program improvement.
6. Review executive plans for academic programs.
7. Provide periodic reports to the Rector of the university on monitoring progress in the implementation of corrective actions and development plans for academic programs.

Members of the Committee

Dean of Academic Development	President
Vice Dean of Academic Development	Co-President
Vice Dean for Academic Development (female)	Reporter
Advisors from the Deanship of Academic Development	Members
Quality Coordinators in Colleges	Members

3.4.2 College Quality Committee

The quality committee of the college is responsible for overseeing the development of quality procedures and processes to ensure quality provision, and for their implementation across academic, research and administrative areas of college, departments and programs. It also provides appropriate counseling and recommendations on various topics and issues related to assurance of quality in college. The organizational structure of Quality Committee at College level is shown in figure 3.4.2.

The Committee on College will report about the evaluation and accreditation for all matters related to academic accreditation and continuous improvement programs, according to

local needs and international quality standards. The Committee shall provide support to the dean of the faculty in all matters related to accreditation bodies to meet the requirements.

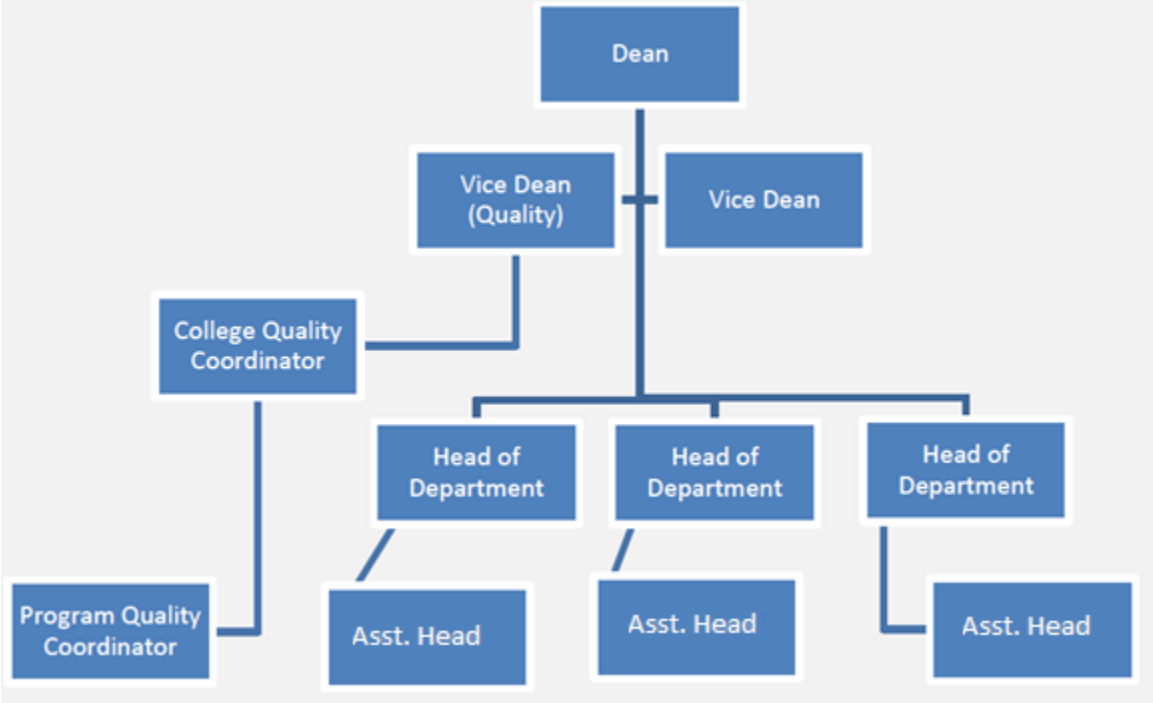

Figure 5: College Quality Committee Structure

More specifically, the Committee's tasks are as following:

1. Develop and monitor accreditation and evaluation of academic programs in the college plan.
2. Planning and implementation of training and awareness programs with respect to the standards and requirements of the accreditation body.
3. Coordinate and facilitate the efforts of academic programs in the self-evaluation of the national adoption or International accreditation.
4. Ensure that documents submitted meet the accreditation bodies' standards and requirements.
5. Review and monitoring of academic programs within the college based on the results of self-evaluation and recommendations of the accreditation bodies implementation plans.

6. Make recommendations for program improvement.

Members of the Committee:

Dean of the College concerned	President
Vice Dean for Quality and Academic Development	Vice President
Heads of Departments	Reporter
Quality Coordinator	Members

3.4.3 Program Quality Committee

The Program Quality Committee provides advice to the Head of the Academic Division on all matters relating to the accreditation and evaluation of academic programs and related matters with a view to improving the quality of academic programs and teaching and learning methodologies.

Program Quality Committee's tasks:

1. Ensure that the program complies with the quality standards of accreditation bodies.
2. The preparation of self-study to meet the accreditation body standards report.
3. Ensuring the availability of the required documents and files, review of decisions based on the accreditation body requirements.
4. Collecting, reviewing and interpreting the program calendar or recommendations of the accreditation.
5. Recommending improvements to the programs section and propose amendments as appropriate.
6. The preparation of the implementation of the program based on the recommendations or results of the evaluation and accreditation activities plan.
7. Prepare an annual report highlighting the achievements regarding the procedures in the implementation, and propose corrective action plan if necessary.

Members of the Committee

Head of Section concerned	Head
Quality Coordinator for the Department	Co-Head
Members of the department appointed by the head of department.	Members

3.4.4 Responsibility of College Dean

Basically, the Dean has responsibility for the educational and administrative business of the faculty and its departments. Accordingly, Deans are the primary accountable officer for management and delivery of teaching and learning in their college. Dean's responsibilities include:

a. Coordinating the development of and implementing the college's Vision, Mission and Goals.
b. Leading college efforts towards achieving University goals.
c. Developing a college budget.
d. Leading and coordinating college strategic planning and curriculum development.
e. Supervising, evaluating, and supporting Departments in a manner that promotes excellence in instruction, scholarly and creative productivity, and service.
f. Leading and coordinating the governance of the college.
g. Leading the processes of college administrator selection and overseeing the processes of faculty and staff selection and retention.
h. Coordinating the professional development of college administrators and staff.
i. Evaluating college administrators and staff.
j. Evaluating Department Chairpersons with Departmental faculty and staff.
k. Evaluating overall Departmental productivity in teaching and learning, research, and service responsibilities.
l. Advising the University manager on University policies and procedures.

3.4.5 Vice Deans (Quality)

Vice Dean (Quality) is responsible for quality affairs in the college under delegated authority from the Dean. Vice Deans (Quality) have responsibilities for:

a. Providing advice to the Dean on all matters relating to quality in the college.

b. Monitoring the Quality Unit performance and develop communications within their faculty and entities on quality issues.

3.4.6 Responsibility of Department Head

Head of Department, as executive officers of the academic department, contributes to the achievement of the University and faculty strategic plans by providing effective management and academic leadership within the department. These responsibilities include quality assurance of all programs, maintaining documentation relating to courses, monitoring staff performance, appraisal of teaching staff, and providing opportunities for individual staff development. They are also responsible for providing appropriate resources to support all teaching undertaken by the academic department. Specific responsibilities are:

a. Responsible and accountable for setting and advancing the academic strategy of the Department in line with Faculty and University strategic plans and direction.
b. Oversee, organize and develop the core activities of teaching, research, examining, advising and other service activities and knowledge transfer, consulting with all departmental colleagues.
c. Refresh and develop new programs in order to attract new students and markets.
d. Ensure the highest levels of quality, integrity and ethics in teaching, learning and research within the department.
e. Ensure that staff performance is managed appropriately and that fair workload allocation processes are in place.
f. Ensure all staff has access to the necessary support to enable them to contribute fully and develop their skills and experience.
g. Ensure a safe and healthy environment for both staff and students, and full compliance with health and safety requirements.
h. Ensure that University equipment/ facilities under the department´s control is properly maintained and serviced as required.
i. Comply with auditing, quality assurance and risk management procedures, both internal and external.

j. Ensure that Program specification and report, course specification and report, Program self-evaluation scale and Program Self-study report are going according to the latest versions of NCAAA and in the right way.
k. Enhance the quality and volume of research by encouraging and enabling demonstrable research achievement within the department.

3.4.7 Responsibility of College Quality Unit Coordinator

The Quality Unit Coordinator in the college provides a comprehensive and efficient administrative support service to the Vice Dean (Quality Affairs) of the College. Main responsibilities are:

a. Assist the College Dean/ Vice Dean (Quality) with planning, implementing and monitoring of quality within the college.
b. Provide organizational support to the Vice Dean (Quality) to ensure the efficient implementation and monitoring of the teaching and learning observation process.
c. Develop quality improvement systems and processes in order to continuously improve standards of teaching and learning, student success rates and the overall quality of the learner experience
d. Support the planning, organization and delivery of a comprehensive range of staff development activities and ensure these activities are thoroughly tracked, monitored and evaluated.
e. To participate in the College's Professional Development Review process and to undertake appropriate training and development activities.
f. Participate in any College staff review/ performance management processes involving the identifying and meeting of training needs for self and others.
g. Support the collation and distribution of data analysis from Student Surveys, Staff Surveys, quality audits and activities and monitor follow up quality improvement actions.
h. Administer the consistent implementation of NCAAA quality assurance and performance improvement systems and processes in line with JU operational and strategic objectives.

i. Develop the College Strategic plan, Annual College report, ensuring that the latest NCAAA template for all quality practices in Programs and College are used in the right way.

3.4.8 Responsibility of Program Quality Coordinator

Program Quality Coordinators are responsible for facilitating the assessment of student learning in their programs.

a. Develops and manages the program's/ department's assessment plan and data collection including: developing program goals and student learning objectives, developing a program curriculum matrix and assessment activities matrix, developing and implementing direct and indirect assessment methods appropriate for the program, collecting data about the program and student learning.
b. Providing semi-annual updates of progress and/ or achievements (at the end of each semester) to the department chair, college dean for the Assessment of Student Learning.
c. Provide documents and evidence for Program accreditation based on NCAAA and/ or other related accreditation bodies (mainly, program specification, course specification, course report, program report, Self-Evaluation Scales of the Program (SESP) and the Self-Study Report of the Program (SSRP).

3.5 Organizational Excellence Committee

Following are the responsibilities of the committee:

a) Preparation and review of Course Descriptions & Course Specification with the help of Course Coordinators and Track leaders
b) To review and recommend to the department council on existing and proposed curricula, courses, prerequisites, co-requisites, advisories and programs;
c) Periodically review and enhance the learning objective and outcomes of the program and courses to make sure that they coincide the needs of job market and accreditation bodies.
d) Make sure that textbooks references, lab manuals of all courses are current and up to date and periodically reviewed.

e) Development of new curriculum based on industry requirements and review of existing curriculum (if any).
f) Benchmarking of courses with local and international universities while designing and reviewing the curriculum
g) Consideration of JU program designing guidelines, NCAAA, ABET and ACM Guidelines any other relevant body while reviewing the current curriculum or designing the new curriculum.
h) Consideration of human, technological and learning resources availability and planning for future requirements if any.
i) To solicit and review the expert opinion from different stakeholders in review and development of Curriculum plan and contents
j) Preparing documents and supports department in review and approval of current as well proposed curriculum.
k) Ensure the Teaching Plan is prepared and delivered timely according to the approved academic calendar with the help of Course Coordinators and Track leaders.

Members:

1. Head – CEO or any other members appointed by HoD
2. Track Leaders
3. External subject experts if any
4. Any other member appointed by HoD

3.6 Curriculum and Teaching Committee

Following are the responsibilities of the committee:

a) Preparation and review of Course Descriptions & Course Specification with the help of Course Coordinators and Track leaders
b) To review and recommend to the department council on existing and proposed curricula, courses, prerequisites, co-requisites, advisories and programs;

c) Periodically review and enhance the learning objective and outcomes of the program and courses to make sure that they coincide the needs of job market and accreditation bodies.
d) Make sure that textbooks references, lab manuals of all courses are current and up to date and periodically reviewed.
e) Development of new curriculum based on industry requirements and review of existing curriculum (if any).
f) Benchmarking of courses with local and international universities while designing and reviewing the curriculum
g) Consideration of JU program designing guidelines, NCAAA, ABET and ACM Guidelines any other relevant body while reviewing the current curriculum or designing the new curriculum.
h) Consideration of human, technological and learning resources availability and planning for future requirements if any.
i) To solicit and review the expert opinion from different stakeholders in review and development of Curriculum plan and contents
j) Preparing documents and supports department in review and approval of current as well proposed curriculum.
k) Ensure the Teaching Plan is prepared and delivered timely according to the approved academic calendar with the help of Course Coordinators and Track leaders.

Members:

1. Head – CEO or any other members appointed by HoD
2. Track Leaders
3. External subject experts if any
4. Any other member appointed by HoD

3.7 Academic Development Committee

Responsibilities:

- Plan a clear and practical training timeline to help faculty understand NCAAA and ABET standards, along with the steps involved in achieving accreditation.
- Increase faculty awareness of accreditation systems, criteria, and updates through planned workshops, invited speakers, and short courses inside and outside the University.
- Revise course outcomes with different program outcomes according to NCAAA systems.
- Collect course outcome assessments per semester and prepare a comprehensive assessment report.
- Develop an NCAAA SSR report for the Computer Science program for external review.

3.8 Statistics & Information Committee

Responsibilities:

- To identify the survey requirements, timeline, medium (offline or online), and stakeholders (internal and external) for each survey to be conducted.
- To design survey forms according to the requirements of the Quality Assurance Unit.
- To map each KPI with the required source, like the first-hand survey or statistical data collected from the concerned personnel.
- To plan, distribute, and Coordinate survey activities among the team members.
- To prepare a final report based on the findings as required by the QAU.
- To conduct surveys (online/offline form distribution, response collection, data punching, data cleaning, etc.)

- To collect statistical data from the required personnel like faculty affairs, student registration, examination, etc.
- Prepare the reports based on the findings from the data acquired from primary sources like surveys and secondary sources like student/faculty feedback, etc.

3.9 Policy & Procedures Committee

Responsibilities:

a) Defining the duties and nature of jobs for all the members working in the department as per department, college, and university guidelines.
b) Developing Policies and Procedures for various academic Processes covering different domains.
c) Preparation of various facilitative formats for academic and administrative activities.
d) Reviewing, updating, or changing the current procedures and processes to improve them to the next level, in consideration with the concerned authority and beneficiaries.
e) To facilitate the department implementing the standard operating procedures (SoPs) besides addressing any of their concerns

3.10 Planning & PMO Committee

Responsibilities:

a) Making recommendations to Head of Department related to the department's
b) mission, vision, strategic initiatives and strategic direction
c) Identify and analyze critical strategic issues being faced by department and planning for solutions.
d) Development of a three to five-year strategic plan with measurable goals and time targets and monitoring strategic plan processes as well as the department's performance against measurable targets (KPIs).

e) Periodically / annually reviewing the mission, vision, strategic plan and action plan and recommending changes if any to the Head of Department.
f) Keeping up-to-date on industry and local market trends and advances in technology and other related issues.

3.11 Program Advisory Board

Responsibilities:

a) Assess the current program and ensure that it's up to date and serving the requirements of industry and following the standard guidelines of relevant professional bodies.
b) Advise about required attributes, skills and suitable outcomes for the pass out students necessary for their success.
c) Help the program / department in assessing the job market requirements and provide suggestion for improvement in the program based on these requirements.
d) Provide advice on the technological trends and changes in industry
e) Provide advice on opportunities to introduce new programs in response to the needs of a specific profession, industry or sector
f) Promote good relationships with local community and businesses, industry and professional associations
g) Periodically (semester wise / yearly) review the outcomes, enrollment data, services and support facilities and progress of the program
h) Provide support and assistance in the development of new programs and its review process.
i) Assist in training and placement of graduates.

Members:

1. Head of Department
2. Head of Program Assessment Committee
3. Vice Dean of Academic Development
4. At least one HoD from another related department

5. Program Quality Coordinator
6. Members from Industry (Employers)

3.12 Role and Responsibility of other related committees

Lab and Modern Technology Committee

Responsibilities:

- Check the lecture requirement in term of hardware and software before the semester started.
- Identify any new and renew requirement of hardware and software and report to program coordinator.
- Manage the purchasing or license renew of hardware and software
- Record lecture relates assets for asset management
- Monitor the usage of lab and classroom
- Reporting software & hardware related issues to Head of the lab administration.
- Monitoring of class rooms & labs on special instructions given by the Dean or HOD.

Research and Innovation Committee

Responsibilities:

- Encourage, monitor and announce research activities
- Establish research KPI that reflects the university KPI
- Grant announcements (internal & external).
- Monitor internal and external grants application from the staff
- Organize Research Colloquium or Seminars
- Produce report on research performance among staffs in term of grants, publication, IP, professional bodies, collaboration etc.
- Establish field of expertise among the staff. It important for postgraduate mapping and research purpose.

Academic Advisory Committee

Responsibilities:

- Assign lecturer as academic advisor to a group of students.
- Announce reminder about the meeting between advisor and advisee
- Monitor student attendance record.
- The academic advisor is expected to deal with student's academic, career, and personal problems.
- The academic advisor helps his/her students examine the course offerings in their major and understand their graduation requirements.
- The academic advisor helps the student explore the career fields within his/her major, and obtain related career information and survey job opportunities.
- The academic advisor serves as a link between the student and the administration by counseling the student on matters of failure, on the procedures for dropping and adding courses, course scheduling, and academic progress.
- The academic advisor must alarm students of the exclusion procedure well in advance, and of any subsequent changes that might be enforced during the course of their studies.

CHAPTER 4: Brief Introduction of NQF Guidelines

4.1 NQF

A major function of NQF is to set standards for the way in which qualifications are developed, managed, reviewed and issued in order to maintain their validity and consistency. A first and mandatory step for program accreditation.

4.2 NQF Level Descriptors

NQF level descriptors are related to the description of learning outcomes and performance criteria. They are not by themselves learning outcomes that are supposed to be transcribed into qualification specifications. The level descriptors are designed to inform the development of qualifications (especially in terms of complexity and depth of learning) and provide a scheme for comparing and matching learning outcomes and performance criteria.

NQF level descriptors are defined in a general and neutral language in an attempt to reflect a complex and diverse national education system and to cover all levels, types and purposes of qualification. This approach aims at improving the readability and comparability of qualifications, which helps various stakeholders (especially employers) to better understand qualifications and enables the comparison of qualifications within the KSA education system and internationally.

The following descriptors should be used as reference for the complexity and depth of learning at each of level and do not represent a prescription to write learning outcomes for single qualifications. The design of qualification should first and foremost follow the identified purpose of this qualification. The following descriptors should only be used to determine the level or to adjust the complexity of learning envisaged for each qualification in order to fit the desired level. In an attempt to understand the complexity and depth of a level, the indicators should be not used individually, but together as a whole for each level.

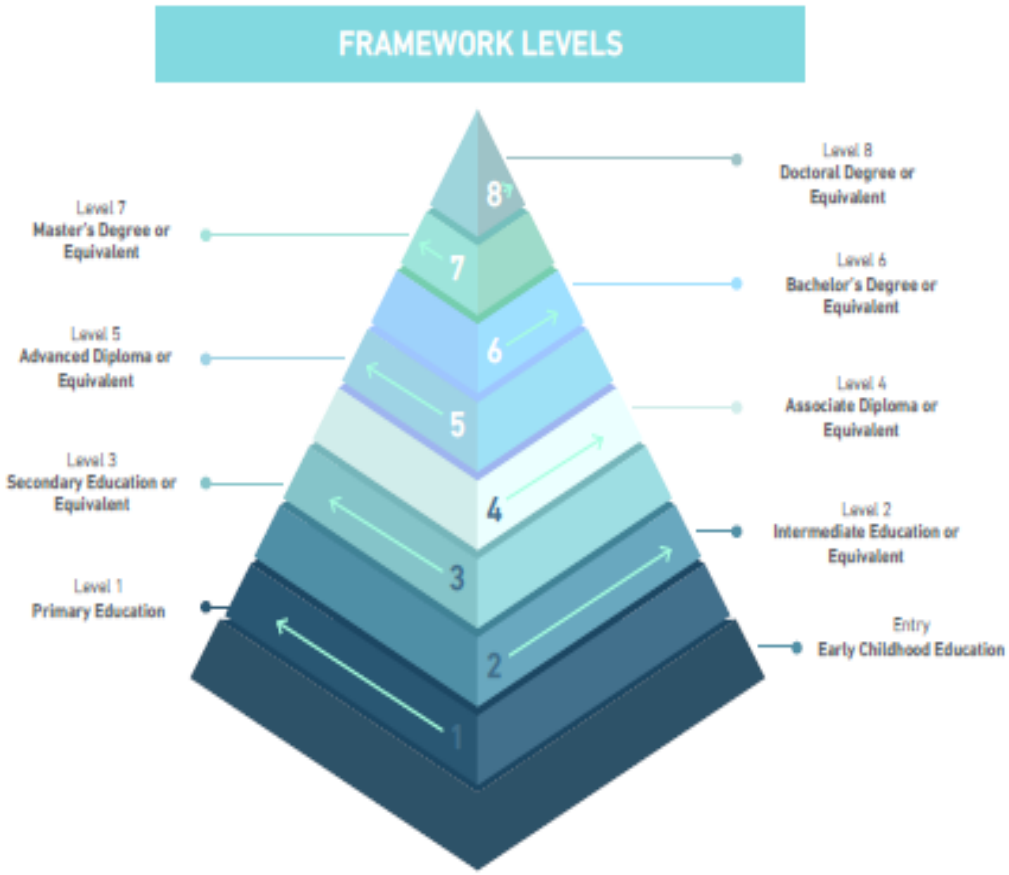

Figure 6: NQF Awarding Body Registration Standards

Placement requirements for bachelor's degree

Passing at least **120** credit hours
Duration of Study: **At least 3 academic years**
Target Learning Outcomes (Knowledge & understanding, skills and values)
Qualification level: **6**
Admission Requirement: Secondary education

Table 2 a: NQF guidelines for Learning Outcomes of Level-6 (Bachelor level)

Level 6	
Knowledge and Understanding	***The graduate at this level will have:*** – broad in depth integrated body of knowledge and understanding of the underlying theories, principles, and concepts in one or more disciplines or field of work; – in-depth knowledge and understanding of processes, materials, techniques, practices, conventions and/or terminology;

	– a broad range of specialized knowledge and understanding informed by current developments of a discipline, profession or field of work; – knowledge and understanding of research methodology and inquiry techniques.	
Skills	***The graduate at this level will have a broad range of advanced cognitive, practical and physical, and communication and ICT skills to:***	
	Cognitive Skills	– apply broad integrated underlying theories, principles, and concepts in various contexts, in a discipline, profession or field of work; – solve problems in various complex contexts in one or more disciplines or field of work. – use critical thinking and develop creative solutions to current issues and problems, in various complex contexts, in a discipline, profession or field of work; – **practice methods of inquiry, investigation and research for complex issues and problems;**
	Practical and Physical Skills	– use and adapt processes, techniques, tools, instruments, and/or materials that are advanced to deal with various complex practical activities; – **carry out various complex practical tasks and procedures related to a discipline, professional practice, or field of work;**
	Communication and ICT Skills	– **communicate in main forms to demonstrate an understanding of theoretical knowledge and transfer specialized knowledge, skills and complex ideas to a variety of audiences;** – **use mathematical operations and quantitative methods to process data and information in various complex contexts, related to a discipline or field of work;** – **select, use and adapt various standard and specialized digital technology and ICT tools and applications to process and analyse data and information, and to support and enhance research and/or projects.**
	The graduate at this level, within various complex contexts, will:	

Values, Autonomy and Responsibility	**Values and ethics**	– **demonstrate commitment to professional and academic values and standards and ethical code of conduct, and represent responsible citizenship and coexistence with others;**
	Autonomy and Responsibility	– **develop plans for academic and / or professional self-development, and work to achieve them effectively, assess own learning and performance, and take decisions regarding self-development and /or tasks based on convincing evidence, with autonomy;** – **manage tasks and activities related to the discipline and /or work in a professional manner and with autonomy;** – **work collaboratively and constructively, and lead diverse teams to perform a wide range of tasks with responsibility, and play a major role in joint work planning and evaluation;** – **participate actively in development of the discipline and society.**

Table 2 b: PLO's of bachelors in computer science program aligned with NQF guideline

NQF Domains	**Bachelor of Computer Science Program (PLO)**
Knowledge and Understanding	
• broad in depth integrated body of knowledge and understanding of the underlying theories, principles, and concepts in one or more disciplines or field of work;	**K1. Demonstrate** the sound knowledge of principles of Computing, Science and Mathematics required in the field of Computer Science.
• in-depth knowledge and understanding of processes, materials, techniques, practices, conventions and/or terminology;	
• a broad range of specialized knowledge and understanding informed by current developments of a discipline, profession or field of work;	**K2. Relate** recent trends and current research in the field of Computer Science.
• Knowledge and understanding of research methodology and inquiry techniques.	
Skills	
Cognitive Skills:	

NQF Domains	Bachelor of Computer Science Program (PLO)
• apply broad integrated underlying theories, principles, and concepts in various contexts, in a discipline, profession or field of work; • solve problems in various complex contexts in one or more disciplines or field of work. • use critical thinking and develop creative solutions to current issues and problems, in various complex contexts, in a discipline, profession or field of work; • practice methods of inquiry, investigation and research for complex issues and problems;	**S1. Analyze** complex computing problems to apply principles of computing and other relevant disciplines to identify solutions. **S2. Evaluate** the possible solutions of a given problem and come up with the optimum results. **S3. Design** and **implement** computing-based solutions to meet a given set of computing requirements in the context of the program's discipline.
Practical and Physical Skills • use and adapt processes, techniques, tools, instruments, and/or materials that are advanced to deal with various complex practical activities; • carry out various complex practical tasks and procedures related to a discipline, professional practice, or field of work;	**S4. Apply** computer science theory and software development fundamentals to produce computing-based solutions.
Communication and ICT Skills • communicate in main forms to demonstrate an understanding of theoretical knowledge and transfer specialized knowledge, skills and complex ideas to a variety of audiences; • use mathematical operations and measureable methods to process data and information in various complex contexts, related to a discipline or field of work; • select, use and adapt various standard and specialized digital technology and ICT tools and applications to process and analyse data and information, and to support and enhance research and/or projects.	**S5. Communicate** effectively in a variety of professional contexts for technical and non-technical audiences.
Values	
Values and ethics • demonstrate commitment to professional and academic values and standards and ethical code of conduct, and represent responsible citizenship and coexistence with others.	**V1. Recognize** professional and social responsibilities and make informed judgments in computing practice based on legal and ethical principles.
Autonomy and Responsibility	

NQF Domains	Bachelor of Computer Science Program (PLO)
• develop plans for academic and / or professional self-development, and work to achieve them effectively, assess own learning and performance, and take decisions regarding self-development and /or tasks based on convincing evidence, with autonomy; • manage tasks and activities related to the discipline and /or work in a professional manner and with autonomy; • work collaboratively and constructively, and lead diverse teams to perform a wide range of tasks with responsibility, and play a major role in joint work planning and evaluation; • participate actively in development of the discipline and society.	**V2. Demonstrate** the ability to function effectively as a member or leader of a team engaged in activities appropriate to the field of Computer Science. **V3. Pursue** continuing professional development and entrepreneurship.

4.3 NQF Requirements

Table 3: Requirements and practices necessary for compliance with the National Qualification Framework (NQF)
Requirement 1: Program Approval
1. The qualification intended to be registered in NQF underwent regular measures and procedures of construction and review.
2. The program has official approvals from university council to run.
Requirement 2: Stakeholders' Involvement
3. The program has policies and procedures that ensure the participation of employers in the construction, design and review of qualification (program).
4. The program has mechanisms to document meetings with stakeholders during the process of building, designing and reviewing the qualification (program)
5. The program forms an advisory committee, comprised of members of professionals and experts in the program specialization, to contribute to its evaluation, development, and performance improvement.
6. The program has approved templates to ensure employers' participation during the process of building, designing and reviewing the qualification (program).
7. The program has data for all individuals and entities from outside the institution participating in the process of building and reviewing qualification (program).
Requirement 3: Qualification Purpose
8. The institution has approved procedures for construction of qualifications and their purposes.
9. The program follows specific procedures for the participation of stakeholders and employers in determining the objective of the qualification (program).

10. Approved procedures have been followed to ensure that the qualification (program) has been designed according to actual need.
11. The program has approved procedures to ensure that the goal of the qualification (program) is linked to the goals and visions of the institution.
12. All courses of the qualification (program) contribute to the achievement of the goal of the qualification.
13. The goal of the qualification (program) has been made after benchmarking with similar qualifications.
14. The program has policies, procedures and mechanisms adopted at the level of the institution to measure the achievement of the goal of the qualification
Requirement 4: Qualification Title
15. The program has approved policies, procedures and mechanisms to determine the name of the qualification (program)
16. Specific procedures have been followed to ensure the participation of stakeholders and employers in determining the qualification title (program)
17. The program has approved Policies, procedures and mechanisms to modify the name or title of qualification (program)
18. The title of the qualification (program) contains the preposition (in) between the general and specific specialization.
19. The qualification (program) title is available in both Arabic and English
20. The benchmarking procedures were followed to ensure that the qualification (program) is compatible with the other titles of similar programs.
Requirement 5 : Qualifications components
21. The qualification level (program) has been determined based on NQF levels
22. We have approved policies, procedures and mechanisms at the institution level to determine the qualification components (program) and courses.
23. The learning outcomes of the (program) have been formulated according to the description of NQF levels (knowledge and understanding, skills, and values.
24. Professional standards were taken into consideration when of qualification learning outcomes are formulated.
25. Learning outcomes for qualification courses are interrelated and based on knowledge, skills and values
26. The program has Policies and procedures to ensure the participation of stakeholders and employers in the formulation of learning outcomes
27. The learning outcomes of the program are linked to the goals of the college, department, and consistent with the directions and visions of the institution
28. Qualification learning outcomes have been revised by the qualification advisory board, employers and professional bodies.
29. The total number of credit hours in the qualification (program) comply with NQF (15-18 credit hour per semester), (30-36 CHs per year),
30. A comparison of the number of credit hours of the program with other similar programs was made
Requirement 6: Assessment of Learning Outcomes
31. The program has an approved plan to assess learning outcomes in the qualification (program)

32. The qualification (program) contains a variety of methods assessment methods
33. The qualification (program) has direct and indirect methods to measure the achievement of learning outcomes
34. Employers of program graduates have been contacted and asked about the abilities and skills of graduates

CHAPTER 5: ACADEMIC PROGRAM DELOPEMNT AND REVIEW

5.1 Program Planning and Design

Curriculum development implies, amongst other things, familiarization with the relevant NCAAA Qualification Standards and subsequent identification of curriculum contents and strategies. NCAAA Qualification Standards prescribe purpose(s) of particular qualification, principal learning outcomes for realization of the purpose(s) and associated credit guidelines and assessment criteria. On the other hand, identification of appropriate curriculum contents, i.e. learning outcomes and strategies that will enable realization of the principal outcomes and purposes of qualification is done following specific steps as shown in Fig. 1 and elaborated in subsequent sub-sections.

Program planning is important in ensuring the range of programs offered by the university matches its strategic plans and the needs of the Kingdom. Program design, development and approval are important for setting programs at an appropriate academic standard. Explicit consideration should be given to relevant external reference points and benchmarks, demonstrating comparison of standards with nationally and internationally accepted institutions and organizations. Adaptation of any international standards needs to respect the NCAAA's Standards for Quality Assurance and Accreditation of Higher Education Programs, the National Qualifications Framework and any relevant national and international professional bodies, such as societies, commissions, committees, etc.

Proposed new programs are considered within a college for planning approval in the light of both academic and planning criteria, including the consideration of the resource implications for any proposal, and the inputs of different stakeholders. The meetings need to be structured and objective to help in program improvement, with clear decisions as an outcome including any recommendations for change to the proposals. Program planning proposals need to be later presented to the higher authorities. The process of scrutiny to arrive at a decision on approval to proceed with the development of a program shall consider the University and College strategic plans and their relation to their main goals. Final program planning agreement is given by the Standing Committee for Study Plans and Curricula, which will be approved by the University Council.

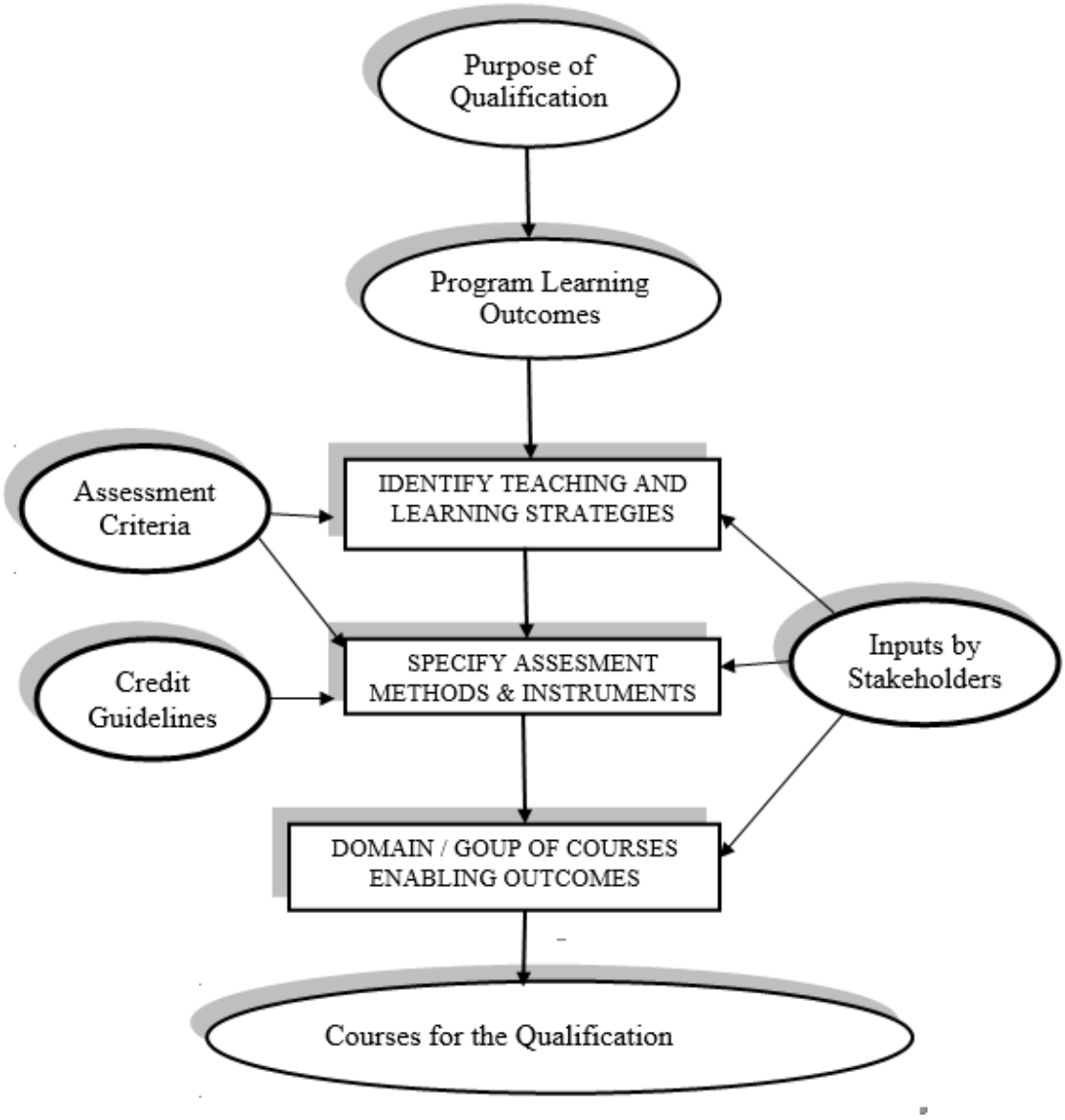

Figure 7: Key steps constituting Actual Curriculum Development Process

Once the program design is completed by the program design team, the process of scrutiny to arrive at a decision on approving a program needs to be authorized through the cycle of Department Council (where it exists), College Study Plans and Curriculum Committee, College Council and the University Standing Committee for Study Plans before being sent to the University Council of Jazan University. This has the ultimate authority to approve any academic provision within the University, before being sent to the Supreme Council of the Ministry of Education to give its approval.

5.2 Major Changes

There are two types of major changes, which are as following:

A. Changes to a key component of a program: This will typically, but not exclusively, involve a change to one or more of the following components of a program:

- Overall aims and program learning outcomes.
- Award designation or title(s), program duration and mode(s) of study.
- Regulations for the admission of students.
- Assessment regulations for the program and/ or regulations for progression through the program.
- A significant addition to the resources required.
- The overall scope and structure of the program, for example the addition of new pathways, interments, changes to the core/ elective mix.
- Pre-requisites and post-requisites.

B. Changes affecting more than 10 credit units in any level: This primarily relates to the approval of new courses and modifications to existing courses that do not come under the category of minor changes.

- For either type of major change, appropriate documentation needs to be approved by VPAA who will present them to the University Standing Committee for Study Plans and Curriculum before being sent to the University Council of Jazan University for the final decision and approval.

5.3 Minor Changes

Minor changes to course specifications are included in this category. It allows small adjustments to be made relatively easily in recognition of the dynamic nature of successful programs, which develop and evolve. Minor changes that may be approved under this category include:

- Course content updating as long as aims and learning outcomes are not affected.
- Teaching and learning methods.
- Increase or modify allocated teaching and learning time to help the students.
- Assessment weighing.

- Changes in the endorsed textbooks.

To make such minor changes to courses, appropriate documentation needs to be submitted. The change proposals should have support from the external advisor associated with the program (if appointed). The documentation will comprise as a minimum:

- A paper setting out the rationale for the change(s).
- Updated course specification.

5.4 Program Closure

The authority to remove a program or course rests with University Council, acting on the advice of the University Standing Committee for Study Plans and Curriculum. Normally, such recommendations arise from one of the following situations:

- Failure to recruit sufficient students to ensure viability.
- Failure to deliver a program of acceptable academic standards.
- Change in the College's Strategic direction.
- Failure of the program to remain current or relevant.

5.5 Program and Course Annual Monitoring and Reporting

Program and course annual monitoring is a continuous process by which a program and its constituent Courses are kept under review. After each semester Course Reports and Field Experience Reports will be produced and considered by Curriculum Review Committee (CRC). At the end of the academic year, the Program Report is also written for consideration by CRC. Combined, these reporting processes make an overall annual program and course monitoring reporting process which underpins the effective operation of the program. Student feedback is particularly important and the University uses the NCAAA Course Evaluation Survey and Student Experience Survey to inform the monitoring processes. It is an inclusive
process involving the program leader and all staff teaching on the program, student feedback and independent advice (including inputs from the Program or College Advisory Committee).

Figure 8 shows the continuous quality improvement cycle and how the process is reflective by collecting evidence and looking at course reports, analyzing the issues and evidence and

comparing the program performance against the key performance indicators or target benchmarks for the subject area. This should lead to program improvements. Hence, annual monitoring of programs and courses is the cornerstone of the quality assurance processes, and leads to a review of every program's currency, ensuring the continuing relevance, appropriateness and success of the award and student experience. The aims of annual program and course reporting are:

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

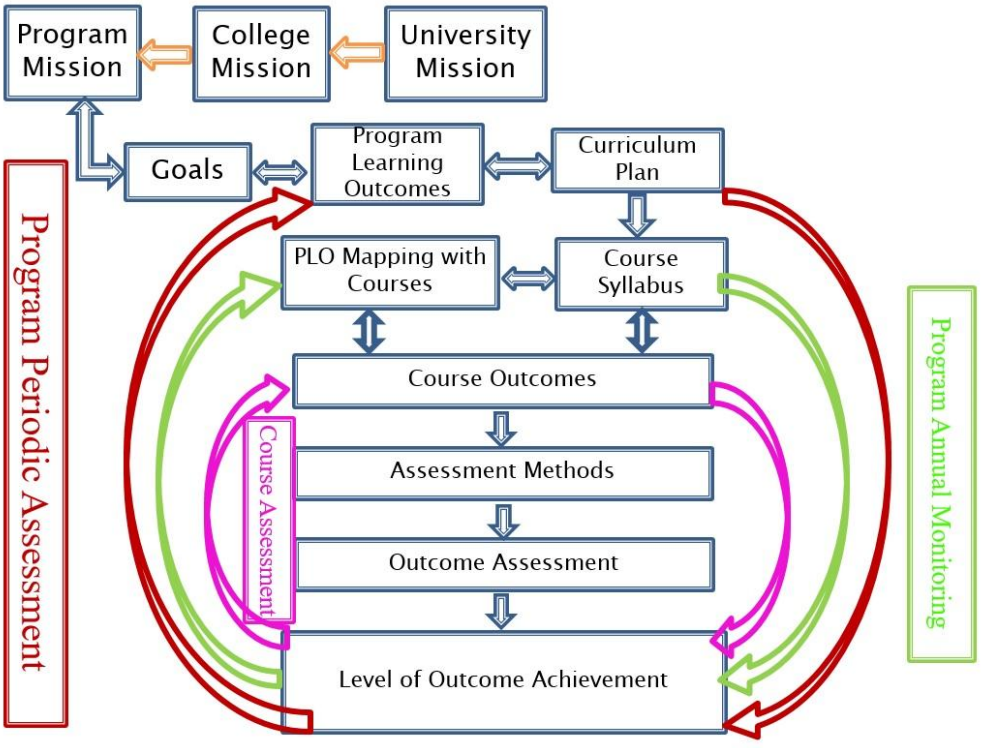

Figure 8: Program and Course Annual Monitoring and Reporting

5.5.1 Review Structure

Once the need for curriculum review is clear, which shall be demonstrated by the gap between what the performance indicators are showing and the targeted values, one will need to clearly identify the required intervention. Curriculum review could therefore be either for the purpose of:

- Improvement of competencies, in order to be in line with revised competence standards or other NCAAA norms;
- Improvement of competencies, in order to attain competitive edge;
- Ensuring flexibility of curriculum in response to modern socio-economic trends;
- Rationalizing efficiency in curriculum implementation; or
- Any combination thereof.

As it clearly seen in Fig. 9, curriculum review and evaluation essentially involve ascertaining the quality of a given curriculum. That is, the value or worth of a curriculum, in terms of curriculum inputs, processes, outputs and outcomes in line with current needs of employers, the profession, the graduates and society at large, as well as current NCAAA norms. The ultimate goal is to renew the curriculum.

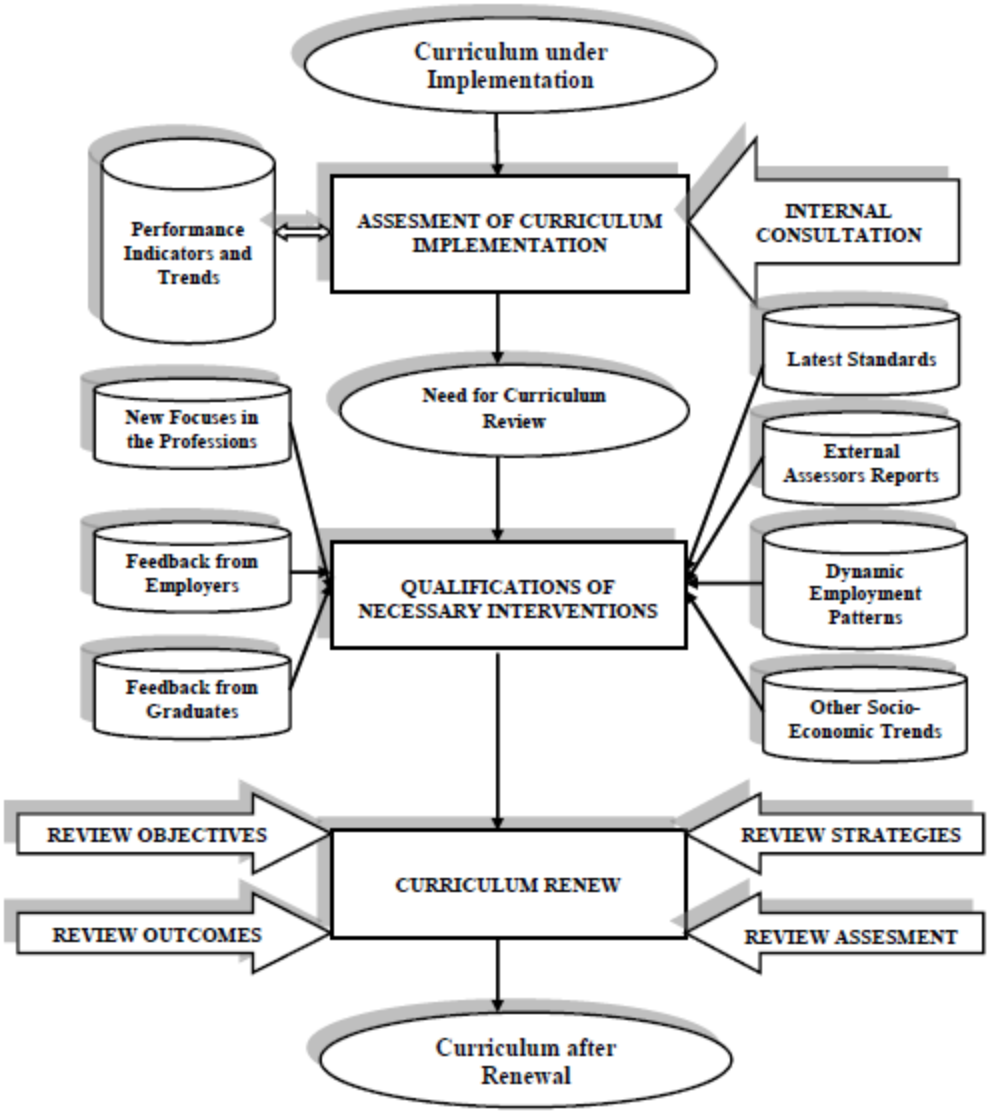

Figure 9: A System for Curriculum Review

5.6 Periodic Program Review

A Periodic Program Review (PPR) is a thorough examination of the quality and standards of a program. All programs will have had experience of annual monitoring and the production of annual program and course reports. The PPR examines the program in greater depth, re-evaluating the need for it, checking on how effectively it is achieving its mission and objectives, and considering any changes which need to be made. In particular, an in-depth review of how the subject area has developed since the last program approval event provides an opportunity to update the program content, including the balance of

courses offered. A PPR can be undertaken at any time but to coincide with the requirements for program re-accreditation by the NCAAA – one should be undertaken in the fourth year after its initial accreditation, and after that, on a five-year cycle. In this way the PPR report can become the basic resource for the external review for re-accreditation of a program.

A PPR report should be considered as a well-structured document on the quality of the program. It is primarily produced for the University itself as an important part of the process for quality assurance and improvement. It should include sufficient information to inform a reader who is unfamiliar with the University about the procedures followed and the evidence on which conclusions are based to have reasonable confidence that those conclusions are sound. It should be capable of being read as a complete self-contained report on the quality of the program.

The combination of annual monitoring and PPR are designed to ensure that all programs remain current and do not become dated. Figure 10 is the representation of the combined activity. A PPR should take due account of any professional standards relevant to the program as well as the standards for quality assurance and accreditation defined by the NCAAA including the National Qualifications Frameworks.

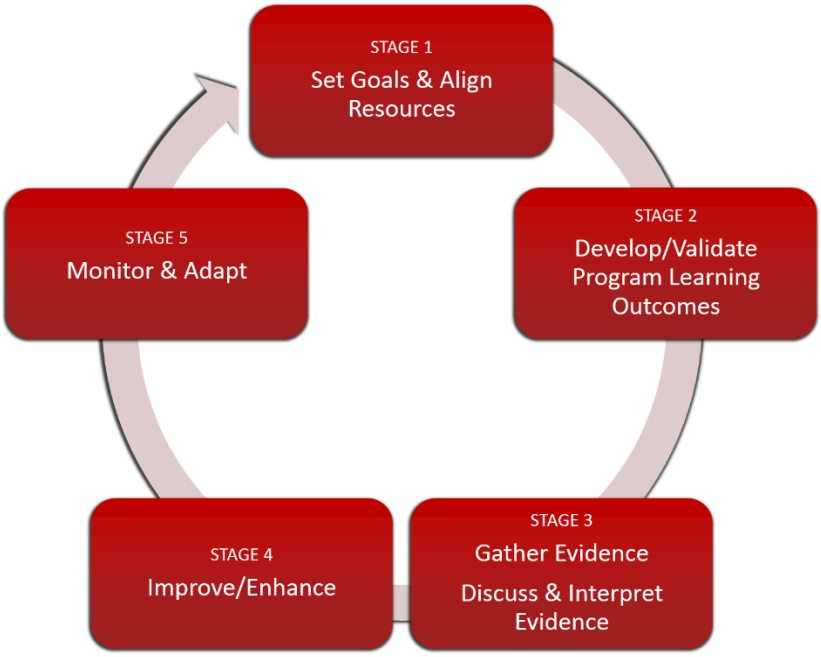

Figure 10: Periodic Program Review

5.6.1 Measurement Policy

Performance measurement and program evaluation can both help identify areas of programs that need improvement and determine whether the program is achieving its goals or objectives. They serve different but complimentary functions:

Performance measurement is an ongoing process that monitors and reports on a program's progress and accomplishments by using pre-selected performance measures.

Program evaluation, however, uses measurement and analysis to answer specific questions about how well a program is achieving its outcomes and why.

So, performance measurement data describes program achievement, and program evaluation explains why we see those results.

Performance measurement is a way to continuously monitor and report a program's progress and accomplishments, using pre-selected performance measures. By establishing program measures, offices can gauge whether their program is meeting their goals and objectives. Performance measures help programs understand "what" level of performance is achieved.

Program measurement plan consist of two main components

a. Learning Outcome Assessment: Learning outcome assessment consist of course learning outcome assessment and program learning outcome assessment. Program learning outcome is assessed by two methods namely direct (based on course learning outcome assessment) and indirect (based on three surveys conducted from exit students, alumni and employers). Learning outcome assessment is conducted annually normally at the beginning of second semester.

b. Stakeholder Surveys: Surveys are conducted from all the major stakeholders of the program annually.

Table 4 : Stakeholder Surveys		
Name of Survey	**Timeline of Survey**	**Respondents**
Course Evaluation Survey	At the end of first semester	Students of all levels
University Experience Survey (Mid-Level Students)	At the beginning of second semester	Level 5 or 6 Students
Program Evaluation Survey (Final Level Survey)	At the beginning of second semester	Level 10 Students
Exit Student Survey for Student Learning Outcome Evaluation	At the end of first semester	Level 10 Exit Students
Employer Survey for Student Learning Outcome Evaluation	At the beginning of second semester	Employers
Alumni Surveys for Student Learning Outcome Evaluation	At the beginning of second semester	Alumni
Employer Survey	During first semester	Employers
Alumni Survey	During first semester	Alumni
Faculty Satisfaction Survey	At the end of second semester	Faculty members
Learning Resources and IT Services Survey	At the end of second semester	Students, Faculty members
Leadership Survey	At the end of second semester	Faculty
Employee Satisfaction Survey	At the end of second semester	Employees

5.6.2 Improvement Plan

Based on the above mentioned assessment mechanism, an annual improvement plan is developed while considering the 5 yearly strategic plan and action plan requirements. Specific defined performance indicators are used to measure the progress and achievement of improvement plan.

5.7 Assessment principles

Program adheres with the university recognized principles to ensure the equitable treatment of all its students in assessment and to protect the standards of its awards across the range of its provision. Program follows a well-defined assessment plan and principle defined in Standard Operating Procedures for Student Assessments.

The assessment for each course will vary according to the nature of the intended learning outcomes and how the teaching team judges these can best be assessed. The assessment is

defined during program approval, and cannot be amended without re-approval of the course specification.

5.8 Involvement of stakeholders in review process

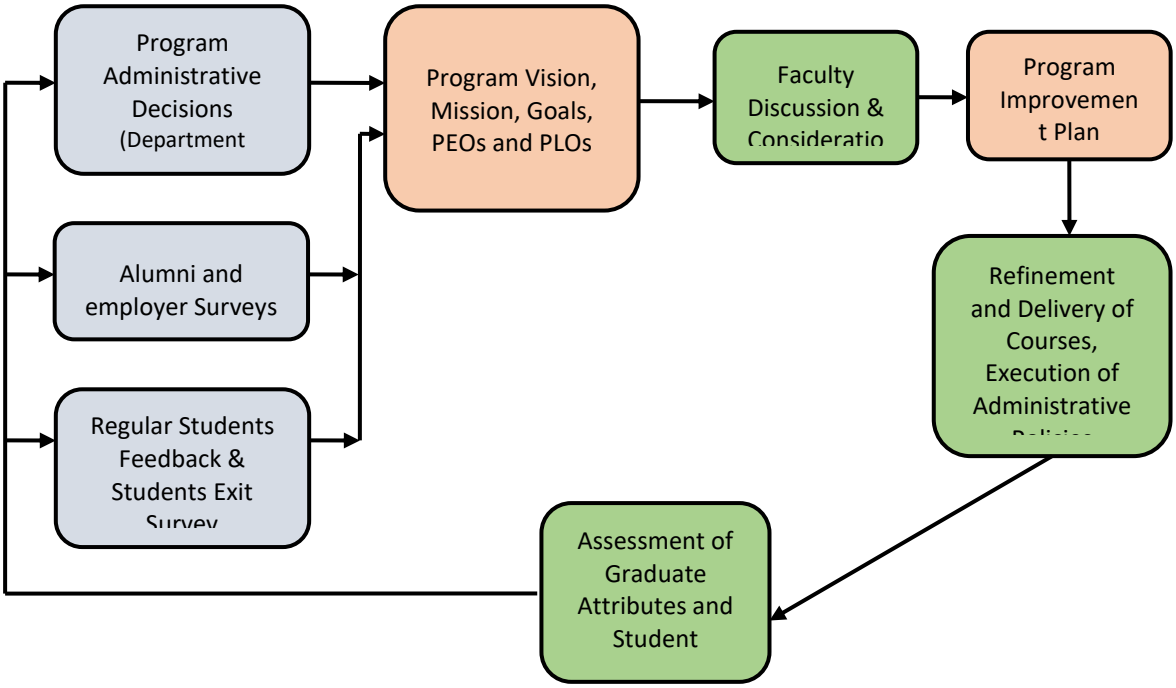

Figure 11: Stakeholder Involvement in Quality Cycle

5.9 Course File Review by QAU & Track Leader (domain experts)

Al the documents defined in the course files are reviewed periodically (semester wise) by Quality Assurance Unit that is an essential aspect for quality assurance at course and program level. Track leaders (domain experts) are involved in reviewing the various aspects like quality of study material, lab manual while QAU representative will be involved in reviewing the NCAAA documents like course specification, course reports, CLO assessment etc. in consultation with Curriculum & Teaching Committee (CTC).

College of Engineering and Computer Science
Jazan University, KSA.

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جامعة جازان ، المملكة العربية السعودية.

Course Files Review by QAU (2023-2024)

Department: CS/IT/CNET **Track Name:** ______________________ **QAU Member**: ________________

Course Code	Course Name	Course Coordinator	Course File (Static)				2023-2024- First Semester			Comments (Course material updation date)
			Course Description	Course Specification			Course Report Result Statistics and Evaluation (CLO Excel File)			
				CLO's written properly & mapped with PLO's	Teaching Strategies Appropriate	Assessment Methods Appropriate	CLO Achievement	Course Improvement report (progress of previous improvement plan)	Course Improvement plan	
			Available / Not Available	5 Likert scale	5 Likert scale	5 Likert scale	5 Likert scale	5 Likert scale	5 Likert scale	
COMP-				⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	
COMP-				⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	
COMP-				⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	
COMP-				⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	
COMP-				⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	⑤ ④ ③ ② ①	

5 Likert Scale: ⑤ Very Satisfied ④ Satisfied ③ Uncertain ② Dissatisfied ① Very Dissatisfied

Evaluation: Course 1

Course Code		Course Name	
S. No.	**Criteria for Evaluation**	**Detailed Comment**	
1.	CLO's are appropriate and covers all the major aspects of the course or not? (If not suggest issues).		
2.	Assessment methods (assignments/Mini Project/ Exams) given in course specification are appropriate for student evaluation or not? (If not suggest changes)		
3.	Teaching Strategies given in course specification are appropriate as per CLO's or not? (If not suggest changes)		
4.	Assessment methods used against each CLO's and teaching strategies are appropriate or not? (If not suggest appropriate assessment methods & teaching strategies).		

Evaluation: Course 2

Course Code		Course Name	
S. No.	**Criteria for Evaluation**	**Detailed Comment**	
1.	CLO's are appropriate and covers all the major aspects of the course or not? (If not suggest issues).		
2.	Assessment methods (assignments/Mini Project/ Exams) given in course specification are appropriate for student evaluation or not? (If not suggest changes)		
3.	Teaching Strategies given in course specification are appropriate as per CLO's or not? (If not suggest changes)		
4.	Assessment methods used against each CLO's and teaching strategies are appropriate or not? (If not suggest appropriate assessment methods & teaching strategies).		

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Course Files Review by Track Leaders (2023-2024)

Department: CS/IT/CNET **Track Name:** _______________ **Track Leader:** ______________

Course Code	Course Name	Course Coordinator	Course File (Static)				2023-2024- First Semester			Comments (Course material updation date)
			Course Description	Quality of Lecture Notes / Study Material	Quality of Lab Manual / Case study Manual	Course Specs.	Result Statistics and Evaluation (CLO) (Excel File)	Exams / Assignment / Mini Project Q. Papers + Answer Keys	Course Report (Consolidated)	
			Available / Not Available	5 Likert scale	5 Likert scale	5 Likert scale	Available / Not Available	Available / Not Available	5 Likert scale	
COMP-				⑤④③ ②①	⑤④③ ②①	⑤④③ ②①			⑤④③ ②①	
COMP-				⑤④③ ②①	⑤④③ ②①	⑤④③ ②①			⑤④③ ②①	
COMP-				⑤④③ ②①	⑤④③ ②①	⑤④③ ②①			⑤④③ ②①	
COMP-				⑤④③ ②①	⑤④③ ②①	⑤④③ ②①			⑤④③ ②①	
COMP-				⑤④③ ②①	⑤④③ ②①	⑤④③ ②①			⑤④③ ②①	

5 Likert Scale: ⑤ Very Satisfied ④ Satisfied ③ Uncertain ② Dissatisfied ① Very Dissatisfied

Course 1 Evaluation

Course Code		Course Name	Artificial Neural Network
S. No.	**Criteria for Evaluation**	**Detailed Comment**	
1	Any Addition / Deletion of topics required in Theory book (Suggest topics need to be modified)		
2	Lab manual covers the practical aspects of the courses as per theory contents (Yes / No)		
3	Any Addition / Deletion required in Lab Manual		
4	CLO's covers all the major aspects of the course appropriately or not? (if not suggest changes)		
5	Assessment methods (Assignments/Mini Project/ Exams) given in course specification are appropriate for student evaluation or not? (if not suggest changes)		
6	Teaching Strategies given in course specification are appropriate or not? (if not suggest changes)		
7	Any other comments		

Course 2 Evaluation

Course Code		Course Name	
S. No.	**Criteria for Evaluation**	**Detailed Comment**	
1	Any Addition / Deletion of topics required in Theory book (Suggest topics need to be modified)		
2	Lab manual covers the practical aspects of the courses as per theory contents (Yes / No)		
3	Any Addition / Deletion required in Lab Manual		
4	CLO's covers all the major aspects of the course appropriately or not? (if not suggest changes)		
5	Assessment methods (Assignments/Mini Project/ Exams) given in course specification are appropriate for student evaluation or not? (if not suggest changes)		
6	Teaching Strategies given in course specification are appropriate or not? (if not suggest changes)		
7	Any other comments		

CHAPTER 6: NCAAA Requirements

6.1 NCAAA Standards

In December 2018, NCAAA has defined six standards for program accreditation instead of 11 in the old standard. A summary of these standards have been given below defined by Standard of Program Accreditation 2018 document. These standards are an overall reflection of program achievements and improvement plan. Later in 2024, NCAAA reduces to 5 standards.

Standard 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 system that achieves continuous development of program performance in a framework of integrity, transparency, and fairness and within a supportive organizational climate.

Standard 2: Teaching and Learning

Learning outcomes at the program level must be precisely defined and consistent with the requirements of the National Qualifications Framework, related specialized academic standards, and 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 appropriate to the different learning outcomes. The extent of achievement of learning outcomes must be assessed through a variety of means, and the results must be used for continuous improvement.

Standard 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 students with effective guidance, counseling services, and extracurricular and enriching activities. The program must

evaluate the quality of all services and activities offered to its students and improve them. The program must follow its graduates.

Standard 4: Teaching Staff

The program must have a sufficient number of teaching staff who are qualified and 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 improve 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.

Standard 5: Learning Resources, Facilities and Equipment

Learning resources, facilities, and equipment must be adequate to meet the program's and its courses' needs 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.

6.2 NCAAA Evaluation Scale of the Standards and Criteria

The quality assurance and continuous improvement of educational programs is based on the self-evaluation carried out by the program and its various units based on the quality performance criteria. The faculty and staff responsible for the various activities in the program evaluate the level of performance according to these criteria and based on suitable evidence and proofs, with the support of performance indicators and benchmark comparisons with other programs of high-quality performance, especially in areas of high importance. This self-evaluation is supported by independent opinion through an independent evaluator or evaluators from outside the institution; to enhance the credibility, objectivity and accuracy of the evaluation.

6.2.1 Program Self-Evaluation Scale (SESp)

In order to achieve the highest degree of accuracy in the evaluation, NCAAA has developed specific elements that the evaluation processes depend on for all the criteria listed under each standard. The evaluation of the quality level is based on the extent to which the

criterion meets its elements, and effectively closes the quality loop (planning, implementation, review, and improvement). The performance evaluation takes into consideration the nature of the criterion, and the existence of practices that demonstrate any aspect of excellence and creativity in the program performance, that is in line with what many programs of higher education have reached and what they aspire to reach.

The elements of evaluation of the criteria are composed of the following:

- Extent of availability of elements and components of the criterion
- Quality level of application for each element.
- Regularity of application and assessment, and availability of evidence.
- Continuous improvement and level of results in the light of indicators and benchmarks
- Excellence and creativity in practices of the elements of the criterion.

The evaluations of the program should be based on evidence and indicators of quality, not on unsubstantiated impressions not supported by evidence.

6.2.2 Steps for Evaluation

The quality of the performance is evaluated by evaluating the criterion first, and then evaluating the standard as a whole, as follows:

6.2.3 Description of Performance Level

Starting with determining the extent of applicability of the criterion to the program using one of the two options:

Option 1: Not Applicable

That is, the program is not required to apply the criterion because it is not suitable for its nature and activities. If this is the case, the criterion is not counted within the criteria included in the evaluation of the standard.

Option 2: Applicable

That is, the criterion is related to the nature and activities of the program, and it is important to provide it. If this is the case, the criterion is evaluated using a five-point scale (1 to 5). The quality of performance can be judged by:

A. Unsatisfactory Performance:

This includes two levels: (1 and 2), as follows:

Level 1 (Non-Compliance):

There are no or few available elements of the criterion, (or) the elements of the criterion are not applied at all, (or) are applied at a very low level, (or) are rarely applied.

Level 2 (Partial Compliance)

Most of the elements of the criterion are available, (or) that the elements of the criterion are applied at low level (or) are applied irregularly, (or) there is no assessment or it is there but is irregular, (or) there is insufficient evidence, and there may be some limited improvement procedures.

B. Satisfactory Performance:

It includes three levels: (3, 4, and 5), detailed as follows:

Level 3 (Compliance):

All elements of the criterion are available, all of which are applied at a good level and regularly, there is a regular and effective assessment, sufficient evidence is available, and there are regular improvement procedures and good results.

Level 4 (Perfect Compliance):

All the elements of the criterion are available, all of which are applied at a perfect level and regularly, there is a regular and effective assessment, sufficient and varied evidence is available, and there are regular procedures for improvement and higher results compared to previous results.

Level 5 (Distinctive Compliance):

All the elements of the criterion are available, all of which are applied at a distinct level, on a regular basis, there is a regular, effective, and excellent assessment, and various, comprehensive, and cumulative evidence is available, there are regular procedures for improvement and distinct results compared to other programs, and there is creativity in the practices of the elements of the criterion.

The elements used for evaluation at the criterion level can be summarized according to the following table:

Table 5: Sample for Self-Evaluation of Quality Practices						
Levels of Evaluation / Elements of Evaluation	**NA**	**Unsatisfactory Performance**		**Satisfactory Performance**		
		Non-Compliance	**Partial Compliance**	**Compliance**	**Perfect Compliance**	**Distinctive Compliance**
		1	**2**	**3**	**4**	**5**
Extent of availability of elements and components of the criterion		• There are no available elements of the criterion • Or there are few available elements	• Most of the elements of the criterion are available	• All of the elements of the criterion are available	• All of the elements of the criterion are available	• All of the elements of the criterion are available
Quality level of application for each element		• The elements of the criterion are not applied at all, (or) are applied at a very low level	• The elements of the criterion are applied at low level	• The elements of the criterion are applied at good level	• The elements of the criterion are applied at perfect level	• The elements of the criterion are applied at distinct level
Regularity of application and assessment, and availability of evidence		• Rarely applied	• Applied irregularly, • (or) there is no assessment, or it is there but is irregular, • (or) there is insufficient evidence	• Applied regularly, • There is a regular and effective assessment, • Sufficient evidence is available	• Applied regularly, • There is a regular and effective assessment, • Sufficient and varied evidence is available	• Applied on a regular basis, • There is a regular, effective, and excellent assessment, and • Various, comprehensive, and cumulative evidence is available,
Continuous improvement and level of results in the light of indicators and benchmarking		----------	• There may be some limited improvement procedures	• There are regular improvement procedures and good results.	• There are regular procedures for improvement and higher results compared to previous results.	• There are regular procedures for improvement and distinct results compared to other programs
Excellence and creativity in practices of the elements of the criterion		----------	----------	----------	----------	• There is creativity in the practices of the elements of the criterion.

6.2.4 Quality Rating/Level of Standard

The evaluation shall be at the level of the standard as a whole, by collecting the points of evaluation for all the related criteria according to their level of quality. The average shall then be calculated by dividing the sum of these points by the number of the applicable criteria on the program. The performance level of the standard shall be calculated according to the following table:

Table 6: Star Rating Calculation for Standards		
Quality Rating/Level of Standard		Average
Level	Overall Rating	
Distinctive Compliance	Five Points	≥ 4.5
Perfect Compliance	Four Points	From 3.5 to < 4.5
Compliance	Three Points	From 2.5 to < 3.5
Partial Compliance	Two Points	From 1.5 to < 2.5
Non-Compliance	One Point	< 1.5

No program shall be admitted for accreditation unless it has obtained at least Compliance level (3 points) in each of the six standards and in each of the essential criteria.

6.3 Program Self-Study Report (SSRp)

A program self-study is a thorough examination of the quality of a 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.

A Self-Study Report for Programs (SSRP) should be 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 to have reasonable confidence that those conclusions are sound. Conclusions should be supported by evidence, with verification of analysis and advice from others able to offer informed and independent comments. This SSRP should include all the

necessary information for it to be read as a complete self-contained report on the quality of the program.

6.3.1 Program Self Study Team and Responsibilities

A team of dedicated faculty members work on various self-Study standards under the guidance of Program Quality Coordinator (PQC) and Quality Assurance Unit (QAU) head.

Responsibilities:

1. Creating a draft list of evidences for their specific SES standards
2. Consult the QAU responsible (Vice Dean, Head, Vice Head and Program Quality Coordinators) for finalizing the list of evidences and responsible committees or persons to provide evidences
3. Conduct meetings with concerned responsible committees or persons to finalize the list of evidences
4. Collect the evidences and evaluate the practices on 0-5 scale as per the NCAAA guidelines
5. Identify strengths, aspects of improvement and list of priorities that need immediate attention for improvement.
6. Identify list of evidences required for KPIs related with specific standard of SES and help KPI in-charge in analysis of KPIs
7. Writing SSRp report for specific standard
8. Preparing cover letters for specific SES sub standards and uploading of evidences on DAD / NCAAA systems as per guidance from QAU head.

6.3.2 Procedure for completing the SES tasks:

Step1: Creating a draft list of evidences required for their specific SES standards as per table 1

Output: list of evidences in Table 1

Table 1

S. No.	Quality Practices	List of Evidences

Step 2: Consult the QAU responsible (Vice Dean, Head, Vice Head and Program Quality Coordinators) for finalizing the list of evidences and responsible committees or persons to provide evidences.

Output:

1. Minutes of Meeting as per QAU minutes of meeting template
2. Draft list of evidences and responsibility in attached table 2

Table 2

S. No.	Quality Practices	List of Evidences	Name of Responsible Committee / Person

Step3: Conduct meetings with concerned responsible committees or persons to finalize the list of evidences.

Output:

1. Minutes of Meeting as per QAU minutes of meeting template
2. Finalized list of evidences and responsibility in attached table 2

Step 4: Collect the evidences and evaluate the practices on 0-5 scale as per the NCAAA guidelines

Output:

The SES evaluation table-3 based on the NCAAA guidelines provided in Self-Evaluation Scales for Higher Education guide.

Table 3

Levels of Evaluation / Elements of Evaluation		NA	Not Satisfactory		Satisfactory		
			Non-Compliance	Partial Compliance	Compliance	Perfect Compliance	Distinctive Compliance
			1	2	3	4	5
SES No	Details of Quality Practices						
Overall Evaluation of the Standard							
Total Sum of Evaluation of Criteria (Total Sum of Points)							
Number of Applicable Criteria							
Average Evaluation of the Standard							

Levels of Evaluation / Elements of Evaluation	NA	Not Satisfactory		Satisfactory		
		Non-Compliance	Partial Compliance	Compliance	Perfect Compliance	Distinctive Compliance
		1	2	3	4	5
Overall Quality Rating of the Standard						

Step 5: Identify list of evidences required for KPIs related with specific standard of SES and help KPI in-charge in analysis of KPIs

Step 6: Identify strengths (based on list of quality practices being done exceptionally well); aspects require improvement and list of priorities that need immediate attention for improvement and write a report on it.

Output: Details of strength, aspects of improvements and priorities in Table 4

Table 4

SES Standard
Strengths:
Aspects of Improvement: (Based of SES rating, where SES rating less than 3)
Priorities for improvement: (The practices that need immediate attention)
Analysis and Comments:

Step 7: Prepare improvement plan in consultation with responsible committees and QAU responsible and higher authorities (if required)

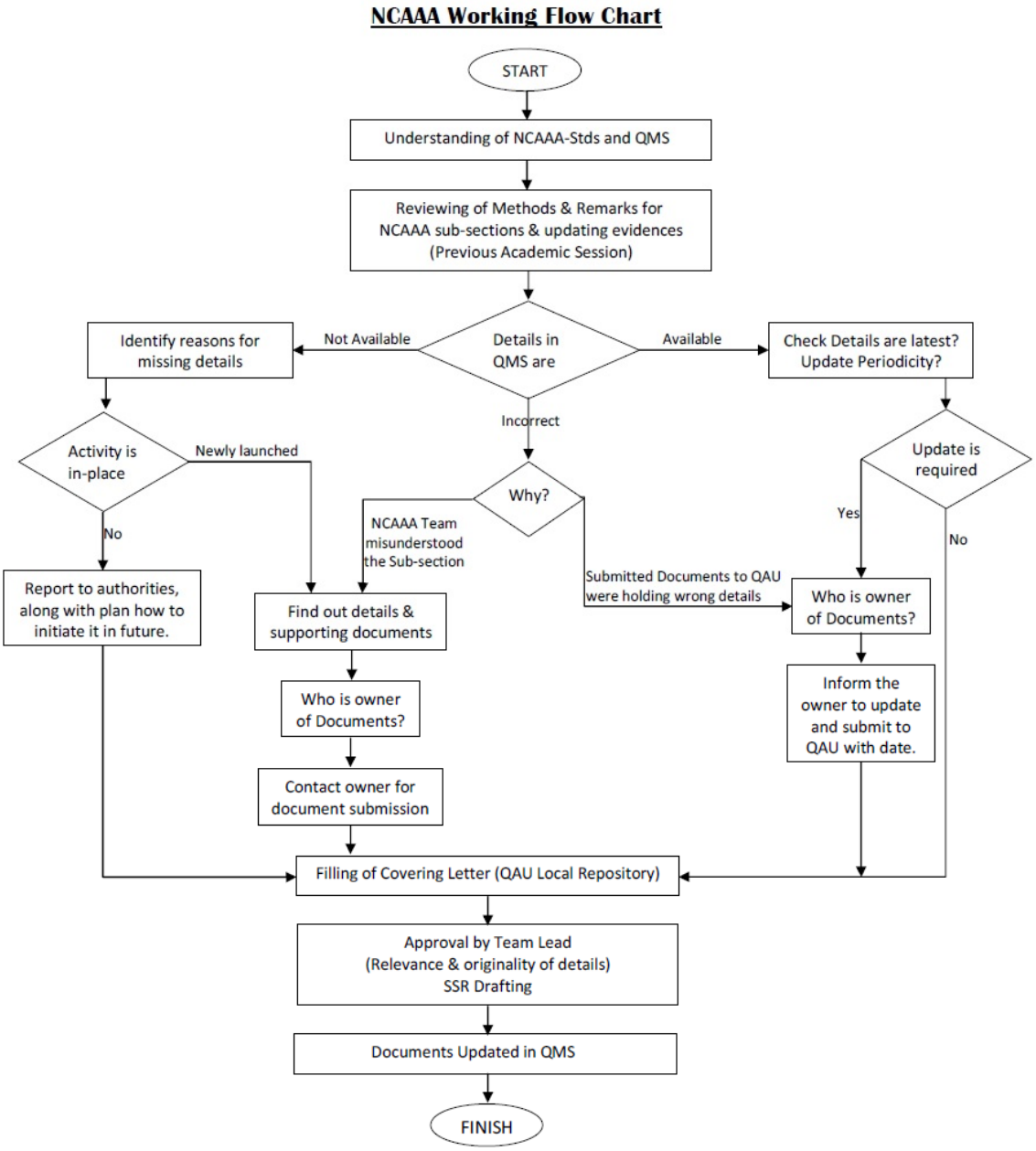
Output: Improvement Plan in Table 5

Table 5

#	SES Standard/ Practice	Action needed	Responsible	Start date	End date	evidence	Remarks (if any)
1							
2							
3							
4							
5							

Step 8: Writing SSRp report for specific standard based on NCAAA SSRp template

6.3.3 Program NCAAA Self Study Working Flow Chart



6.4 Program Eligibility Criteria

Table 7: Eligibility Requirements for Program Accreditation		
Eligibility Requirements		**Required Evidence**
1	**Program final licensing or establishment decision**	• Decision to establish the program (for public institutions) • Final program licensing decision (for private institutions)

2	**Consistency with National qualifications framework (NQF)**	• A report on program consistency with National Qualifications framework (NQF)
3	**Availability of institutional accreditation requirements**	• Accredited institution or the institution met the eligibility requirements (review visit has been scheduled)
4	**Student and staff manuals**	**Student and staff manuals including:** • Program Handbook • Admission and Registration • Study Regulations and Tests • Guidance and Counselling Services • Rights and Duties • Complaints and Grievances
5	**Program's quality assurance system and its performance reports**	• Program's quality system manual • A manual of policies and procedures for approving, modifying, and reviewing academic programs and courses • Annual program report for the last two years according to NCAAA Templates • Program's course reports for the last two years (One report for each course per year) • A report on the results of stakeholders' surveys (students, alumni, employers, teaching staff, employees) for the last two years
6	**Program and courses specifications**	• Program specifications according to NCAAA Templates • Course specifications for all courses classified according to levels
7	**Program learning outcomes assessment plan and reports**	• Program learning outcome assessment Plan • Program learning outcome assessment reports
8	**Students graduated (One cohort at least)**	• A report on the number of graduated cohorts and the number of students in each cohort
9	**Program advisory committee**	• Composition and functions of the Committee • Report on the Committee's performance and outcomes
10	**Key performance indicators and benchmarking**	• A report on program's key performance indicators' measurement and benchmarking for the last three years
11	**Program self-study**	• Program self-evaluation scales (taking into consideration that the level of evaluation is not less than three points for each of the main criteria identified by the Center and for each standard) • Program self-study report • Evidence for the self-study report.
	Additional requirements for Postgraduate Programs	

12	**Operational plan for scientific research and its follow-up**	• Operational Plan for scientific research in the program (depending on the nature of the program) • System for monitoring and documenting the scientific research activities of the program • Periodic performance reports of the scientific research plan
13	**Scientific supervision system on theses, projects, or vocational training**	• Guides, regulations, and procedures for scientific supervision of theses, projects or vocational training • Follow-up scientific supervision reports in the program

6.5 Program Accreditation Steps

Table 8: Program Accreditation steps	
Step 1	The Standing Committee for Academic Accreditation, based on a detailed report by the Quality Assurance Committee (Deanship of Academic Development), identifies the most advanced academic programs to obtain program accreditation based on the main evaluation and accreditation plan
Step 2	The Dean of the College shall direct the Program Committee for Evaluation and Accreditation to prepare the self-study in accordance with the standards of the local or international accreditation body
Step 3	The Program Committee for Evaluation and Accreditation shall submit the eligibility documents and supporting documents through the Head of Department to the College Committee for Accreditation for review
Step 4	After the review, the Dean of the College shall submit the eligibility documents and supporting documents of the Quality Assurance Committee (Deanship of Academic Development) for review within one month to ensure that they comply with the standards of the accreditation body
Step 5	The Quality Assurance Committee sends a report of the evaluation and the result of the review to the Dean of the College and a copy to the Standing Committee of the Academic Accreditation Committee
Step 6	If all requirements are completed, a team assigned by the Quality Assurance Committee shall make an initial visit to verify all requirements and submit a final report to the Standing Committee of the Academic Accreditation Committee to decide on sending the documents to an external auditor for independent opinion.
Step 7	Communicate with the accreditation body and sign the accreditation contract
Step 8	The Program Committee shall provide and process all documents required for accreditation in accordance with the requirements of the accreditation body, and then send to the accreditation body to meet the requirements of its schedule

Step 9	In cooperation between the dean of the college and the quality assurance committee, the visit of the accreditation team is planned and arrangements are coordinated
Step 10	The accreditation team site visits will be conducted, the report and results are presented at a meeting attended by the Vice President for Development and Entrepreneurship, the Dean of the College concerned, the Dean of Academic Development, the members of the Quality Assurance and Program Committee

6.6 Program Key Performance Indicators (KPIs)

Program follows the 17 KPIs provided by NCAAA.

Table 9: Program Key Performance Indicators (KPIs)

Standard	KPIs Code	KPIs
-3- Teaching and Learning	KPI-P-01	Students' Evaluation of quality of learning experience in the program
	KPI-P-02	Students' evaluation of the quality of the courses
	KPI-P-03	Completion rate.
	KPI-P-04	First-year students retention rate
	KPI-P-05	Students' performance in the professional and/or national examinations
	KPI-P-06	Graduates' employability and enrolment in postgraduate programs
	KPI-P-07	Employers' evaluation of the program graduates proficiency
-5- Teaching Staff	KPI-P-08	Ratio of students to teaching staff
	KPI-P-09	Percentage of publications of faculty members
	KPI-P-10	Rate of published research per faculty member
	KPI-P-11	Citations rate in refereed journals per faculty member

Table 9: Strategic Plan Key Performance Indicators (SP- KPIs)

No	KPIs Code	SKPIs
1	KPI-S-12	Students trained in national and international certifications.
2	KPI-S-13	Number of mini projects presented.

Table 9: Strategic Plan Key Performance Indicators (SP- KPIs)		
No	**KPIs Code**	**SKPIs**
3	KPI-S-14	The average number of professional development activities completed by the faculty (DAD/QAU / others)
4	KPI-S-15	Students attended technical competitions, workshops, seminars, and conferences.
5	KPI-S-16	The number of specialized training programs conducted for the community towards ICT.
6	KPI-S-17	The number of motivational talks/seminars towards lifelong learning & entrepreneurship.

6.7 BENCHMARKING

The essence of benchmarking is the continuous process of comparing an organizational strategy, products, processes with other organizations / institutions best-in-class. The purpose is to learn how they achieved excellence, and then setting out to match and even surpass it.

6.7.1 Benefits of Benchmarking

What benefits have been achieved by the organizations / institutions that have successfully completed their benchmarking programs?

These are the sets of benefits:

- Gain an independent perspective about how well you perform compared to other institutions.
- Explore performance gaps to identify areas for improvement.
- Develop a standardized set of processes and metrics.
- Enable a mindset and culture of continuous improvement.
- Set performance expectations.
- Monitor performance and manage changes

6.7.2 Basic Benchmarking Methodology (PLAN - ANALYZE - ACT)

PLAN:

1. What to benchmark?
   - Identify critical processes.

- Collect internal data for comparison (how performance measure; Understand strengths and weaknesses of current process).

2. Who to benchmark?
- Internal Units (comparison within an institution).
- Other Colleges and Universities (comparison across institutions).
- Functional Comparisons (across diverse settings - higher education, corporate, industry, etc.).
- Best in Class (compare with exceptional performers).

IMPLEMENT:

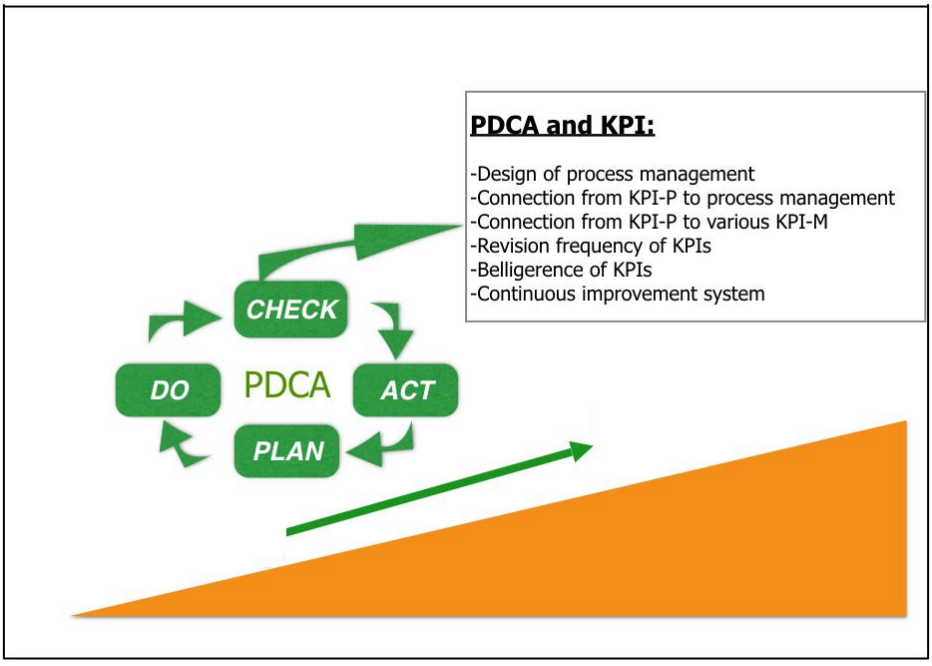
3. Collect data
- Collect comparative data (qualitative/ quantitative).
- Calls, surveys, site visits, interviews, review of websites.
- Systematic collection.

ANALYZE:

4. Analyze data
- Gap between performances (Are others better? Why are they better?).
- New strategies/ practices for adoption (What practices could we adapt and adopt?).

ACT:

5. Implement improvements
- Action plan for change.
- Implement changes.
- Measure results for effectiveness.



6.7.3 Program Plan for Benchmarking

Programs at College of Engineering and Computer Science have analyzed and reviewed colleges offering Computer Science programs under umbrella of different universities. College has shortlisted programs offered in College of Computer Science, King Khalid University, Abha as external benchmark programs and requested for official approval in this regard due to following two reasons:

- Due to similarity in regional and cultural attributes.
- All three programs selected for benchmarking have already been accredited by NCAAA.

In future, programs will be benchmarked with the computer science programs of King Fahad University of Petroleum, Dehran.

6.8 Quality Improvement Initiatives

Quality Assurance Unit (QAU) at College of Engineering and Computer Science do the following tasks for quality improvement:

- Develop policies, procedures and mechanisms for regular reviewing of its structures, functions, strategy and core activities to assure quality assurance and accreditation initiatives.
- Gather and provide evidence of review/ self-study system, the result of conducted review and action plan to implement changes and improvements.
- Correlate quality assurance with KPIs performance and analyze the progress accordingly.
- Define quality improvements based on studies and quantitative information that lead to the revisions of policies, process and best practices of QMS adopted.

REFERENCES

1) NCAAA Standards for Program and Institution.
2) SES for Program and Institution.
3) SSRp Template of NCAAA.
4) JU QMS Handbook.
5) NCAAA Documents: https://www.ncaaa.org.sa/enportal/Pages/default.aspx
6) NCAAA Handbook-for-Quality-Assurance-part-1 (2015).
7) NCAAA Handbook-for-Quality-Assurance-part-2 (2015).
8) NCAAA Handbook-for-Quality-Assurance-part-3 (2015).
9) National Qualifications Framework for The Kingdom of Saudi Arabia (NQF-KSA)- 2020
10) NQF Framework Standards
11) Handbook for Programs Quality Assurance system, University of Tabuk
12) Handbook for Programs Quality Assurance system, Qassim University

APPENDICES

Survey Forms

NCAAA Forms

Checklist of Evidence of All Standards

Standard Operating Procedures (SOPs) / Policies and Procedures

QMS, College of Engineering and Computer Science, Jazan University