Program Update and Review Procedures Guide.

for the Bachelor of Computer Science

2024

Qassim University
جامعة القصيم

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Preface:

As part of its commitment to continuous improvement and academic excellence, the College of Computer at Qassim University—through its Bachelor of Computer Science Program—presents this Program Update and Review Procedures Guide. This guide is extracted from the Program Quality Management System Manual (PQMS) and is intended to provide a clear and structured framework for managing curriculum development, program modifications, and systematic reviews.

Aligned with the institutional Quality Management System (QMS) and the standards outlined by the Deanship of Development and Quality, this guide outlines the formal procedures for initiating, approving, and documenting updates within the Computer Science program. It defines the roles and responsibilities of relevant committees and academic units in ensuring that all proposed changes support the achievement of the program's mission, learning outcomes, and strategic objectives.

The guide also details the two-level review cycles adopted by the program: the Annual Review Cycle, which focuses on continuous improvement based on annual KPIs, course reports, and stakeholder feedback; and the Comprehensive Review Cycle, which occurs every five years to ensure long-term alignment with national academic standards, labor market needs, and institutional goals.

By following the principles and mechanisms outlined in this guide, the program aims to ensure transparency, academic rigor, and quality assurance across all aspects of its development and implementation.

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7. THE CS PROGRAM UPDATE PROCEDURES AND PERIODIC REVIEW CYCLES

7.1. PROGRAM UPDATE PROCEDURES

Before delving into the update process applied in the Computer Science program, it is important to note that the process rigorously adheres to the deanship flowchart outlined in the university's Study Plan Establishment Guide, as depicted in Figure 12.

Qassim University grants sufficient permissions to college councils, departments, and program administrations to implement changes in study plans, provided these changes do not alter the Program Learning Outcomes (PLOs) or affect the overall curriculum structure. For instance:

- **Course Specification Modifications:** Adjustments to course specifications can be proposed and approved at the department level by department councils and study plan committees within the program.
- **Program Specification Modifications:** Changes to program specifications that do not affect PLOs or involve the addition or removal of courses can be made and approved by college councils and college study plan committees.
- **Major Program Modifications:** Any changes to program specifications that involve reformulating PLOs, adding or removing multiple courses, or other significant curriculum alterations must receive approval from the Standing Committee of Study Plans and, ultimately, the Qassim University Council.

The following graph (Figure 12) illustrates the acceptable levels of study plan changes, the approval hierarchy, and the associated terms of reference.

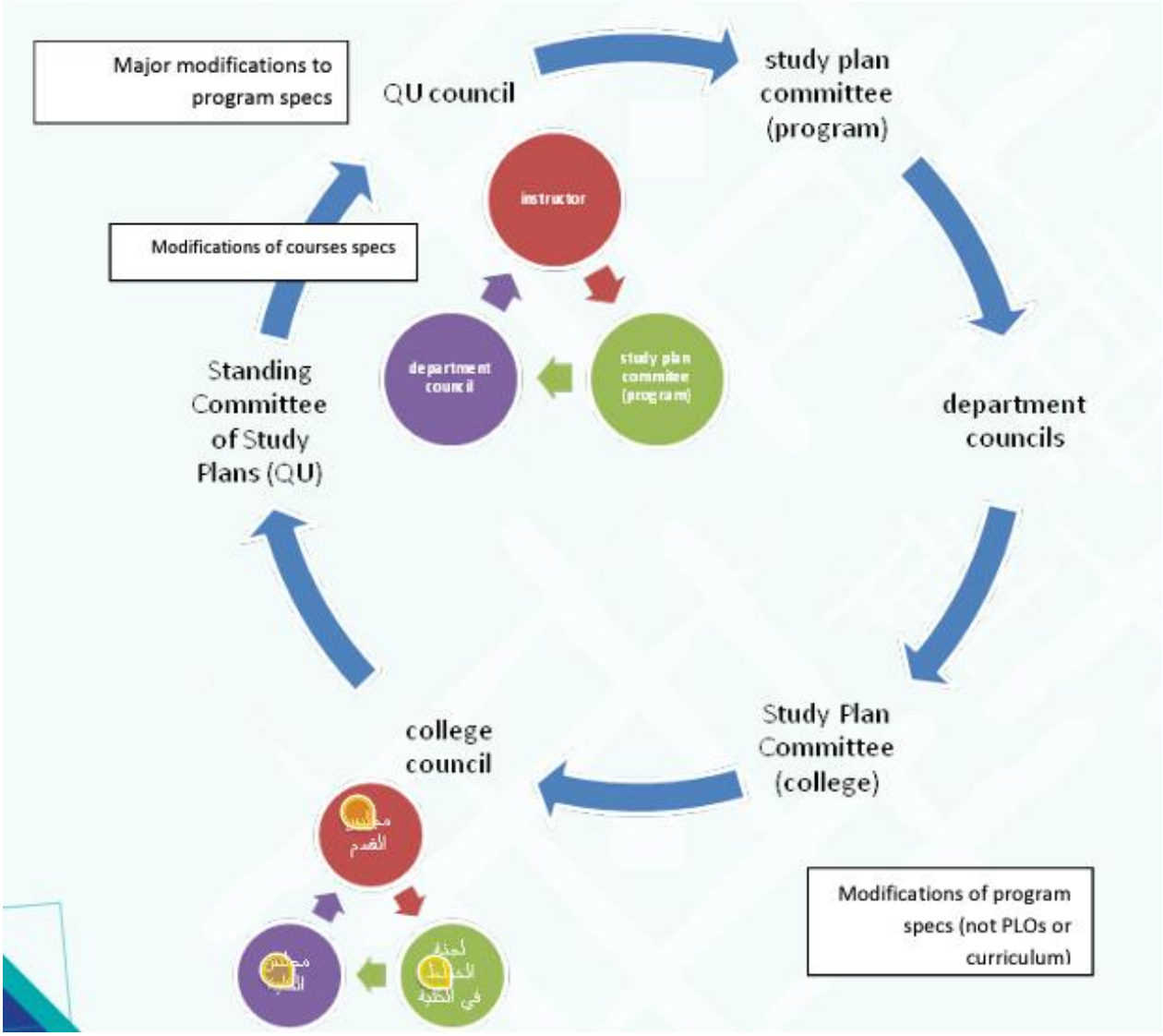

FIGURE 12: THE DDQ FLOWCHART IN SUPPORTING ACADEMIC PROGRAMS QUOTED FROM THE QU STUDY PLAN ESTABLISHMENT GUIDE

At the department level, the Study Plan Committee works in coordination with the Academic Program Committee and the Program Advisory Committee to ensure a structured and comprehensive approach to curriculum development. This coordination enhances the effectiveness of academic planning, decision-making, and continuous improvement by integrating internal quality assurance efforts with external industry and stakeholder feedback. In Figure 13, we present the flowchart adopted by the Computer

Science program to manage updates. This flowchart illustrates all interactions and recommended review processes, ensuring a systematic and collaborative approach to implementing changes.

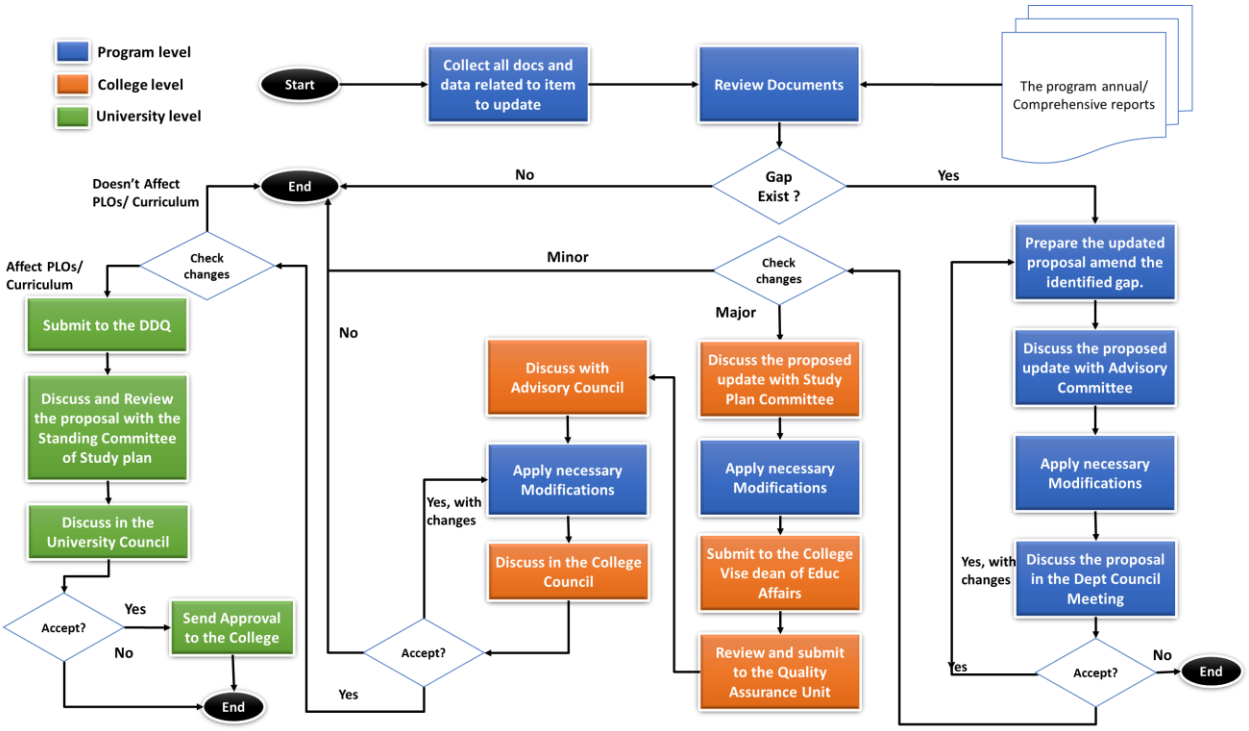

FIGURE 13: CS PROGRAM UPDATE PROCESS FLOWCHART

7.2. PROGRAM PERIODIC REVIEW CYCLES

The university outlines two periodic review cycles in the QU QMS Guide [Link], each with a defined timeline—one conducted annually and the other every five years. These structured review cycles ensure a systematic and comprehensive evaluation of the program, facilitating continuous quality enhancement and alignment with academic and industry standards.

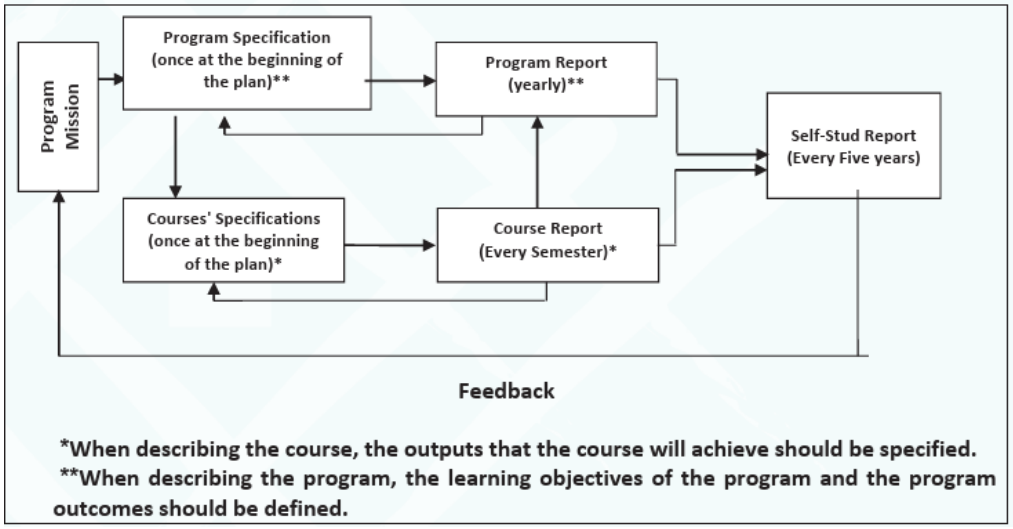

FIGURE 14: PROGRAM REVIEW CYCLES QUTOED FROM QU QMS GUIDE

Table 1 outlines the frequency of each review cycle, while **Figure 14** illustrates the relationship and interdependence between these cycles. **Table 2** provides a detailed breakdown of the elements reviewed in the annual, and comprehensive evaluation cycles.

The review cycles follow a hierarchical approach:

- **Annual Review Cycle:** Focuses on specific, high-priority elements that require frequent assessment.
- **Comprehensive Review Cycle (Five-Year Cycle):** Includes all elements from the annual cycles, alongside broader aspects of the program to ensure a holistic evaluation.

In essence, all items reviewed in the annual review cycle are included in the comprehensive review cycle as illustrated in **Figure 14**. This layered approach ensures thorough and continuous program improvement.

TABLE 1: CS PROGRAM PERIODIC REVIEW CYCLE

Program review cycle	Triggered	Based on
Annual Cycle	Every year	Program development plan

Comprehensive Cycle	Five years	SSR Report

TABLE 2: THE ITEMS REVIEWED IN THE ANNUAL AND COMPREHENSIVE PROGRAM EVALUATION CYCLES

The CS program annual review Cycle	The CS program Comprehensive review cycle
Program educational needs	The Program Mission
Program enrolment capacity	The Program Goals
Program disclosed information	The Program Graduate Attributes
Formation of quality committees	Review Alignments matrices: 1. Mission alignment matrices 2. Goals alignment matrices 3. GA alignment matrix
Program operational plan Internal and external benchmarks	Program Key Performance Indicators (KPIs)
CS program consistency with NQF CS program consistency with ETEC specialized standards CS program consistency with international academic standards. Consistency with NCAAA forms	The Study Plan: 1- Program total credit hours 2- The levels of courses 3- Career opportunities. 4- Course credit hours and contact hours. 5- Exit points. 6- Elective courses 7- Courses pre-requisites
1- Course content 2- Course practical tools 3- Course references 4- Course teaching and learning strategies 5- Course assessment methods 6- Course assessment calendar 7- Course disclosed information	
The Course Learning Outcomes (CLOs)	The Program Learning Outcomes (PLOs)
Review Alignments matrices: - CLO/PLO Matrix	Review Alignments matrices: 1. PG/PLO Alignment 2. PLO/GA Alignment 3. Program/Courses Matrix
The CLOs Performance Indicator Rubrics	The PLOs Performance Indicator Rubrics
Course study Plan	PLOs Assessment Plan and targets
Course specifications Course matrix	Program specifications
Internship training sites	Internship training policies and regulations
Alignment of professional certificates	Partnerships Competencies and Professional skills for the next five years
Activated services and systems provided to the CS program's stockholders	
The faculty member and employee annual job charters	Tasks and authorities of faculty members, employees and technical staff.
Learning resources and facilities	New Laboratories

7.3. Program Update Policy and Procedure

In this section, a comprehensive guide is provided for updating courses and programs. The overarching process has been previously outlined in Section 7.1. Here, we will delve into the details of both major and minor updates at the course and program levels. Figure 15 illustrates the structured relationship between these updates, ranging from minor course modifications to the approval of an entirely new program. This structured approach ensures that all updates align with institutional policies, accreditation requirements, and evolving academic and industry standards.

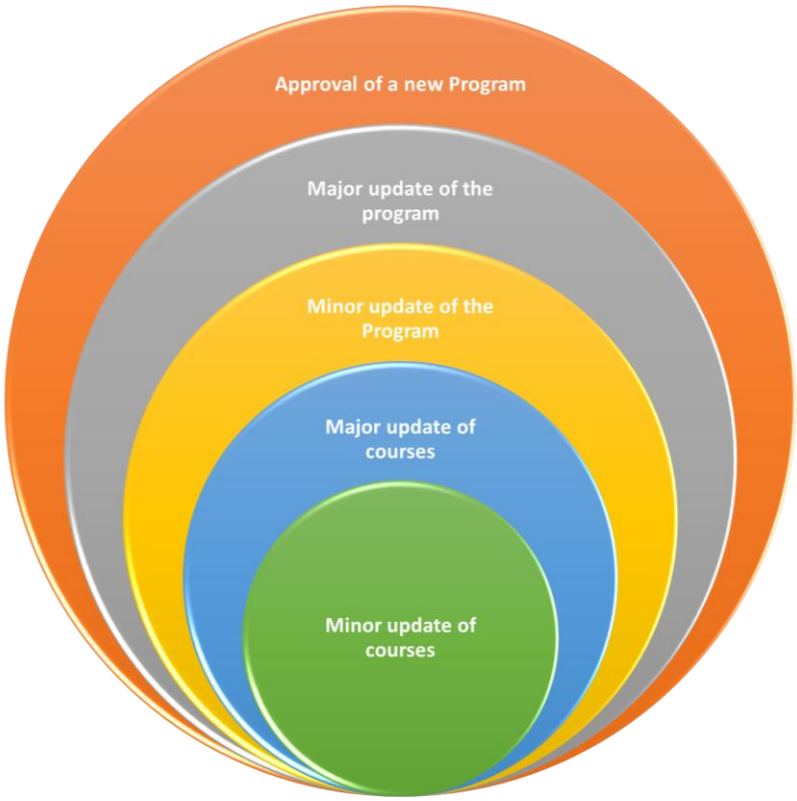

FIGURE 15: MAJOR AND MINOR UPDATES AT THE COURSE AND PROGRAM LEVELS

7.3.1. Minor update of courses

A minor update may be initiated following an annual program review or upon request from a course coordinator based on identified areas for improvement. Table 3 outlines the

specific items classified as minor updates, along with the responsible entities, approval process, timeline, and required documentation.

TABLE 3: MINOR COURSE UPDATE ITEMS AND APPROVAL PROCESS

Items	Responsible	Required document	Approval process	Timeline
Less than 20% of the course content	Course coordinator	- Benchmarking comparison - Course report with, CLOs assessment results and improuvement plan. - Student Course evaluation survey - New course specification using the latest NCAAA format - Course coordination meeting minute	1. Study plan Committee 2. Advisory Board Committee. 3. Department Council	3 weeks
Course practical tools				
Course references				
Course teaching and learning strategies			1. PLOs mesurment and evaluation committee 2. Academic program committee 3. Advisory Board Committee. 4. Department Council	4 weeks
Course assessment methods				
Course assessment calendar				

7.3.2. MAJOR UPDATE OF COURSES

A major update to a course requires comprehensive modifications to its course specifications to ensure alignment with academic standards, industry advancements, and institutional goals. Table 4 provides a detailed classification of items considered as major updates, along with the responsible entities, approval process, timeline, and required documentation necessary for implementation.

TABLE 4: MAJOR COURSE UPDATE ITEMS AND APPROVAL PROCESS

Items	Responsible	Required document		Approval process	Timeline
More than 20% of the course content	Course coordinator	- Benchmarking comparison - Course report with, CLOs assessment results and improuvement plan.	- Allignement with ETEC specialized standards SKU topics (if applicable) with the latest NCAAA format.	1. Study plan Committee 2. Advisory Board Committee. 3. Department Council 4. Study plan committee	6 weeks

		- Student Course evaluation survey - New course specification using the latest NCAAA format - Course coordination meeting minute		(College level) 5. Advisory Council 6. College Council	
Modify the contact hours	Study plan Committee		- Committee meeting minute	1. Advisory Board Committee. 2. Department Council 3. Study plan committee (College level) 4. Advisory Council 5. College Council	
Modify the CLOs	Course coordinator		- Allignment with ETEC specialized standards, SKU outcomes (if applicable) with the latest NCAAA format.	1. PLOs mesurment and evaluation committee 2. Academic program committee 3. Advisory Board Committee. 4. Department Council 5. Quality Assurance Unit (College level) 6. Advisory Council 7. College Council	
CLOs-PLOs Mappring Matrix					

7.3.3. MINOR UPDATE OF THE PROGRAM

The minor update of the program is required after an annual/comprehensive review cycle. Table 5 describes the items considered as minor updates, along with the responsible

entities, required documentation necessary for implementation, approval process, and timeline.

TABLE 5: MINOR PROGRAM UPDATE ITEMS AND APPROVAL PROCESS

<table>
<tr><th colspan="2">Items</th><th>Responsible</th><th colspan="2">Required document</th><th>Approval process</th><th>Timeline</th></tr>
<tr><td colspan="2">Update courses levels</td><td rowspan="3">Study plan committe</td><td rowspan="9">- Benchmarking comparison
- Annual Program report with the improuvement development plan
- Stakeholders surveys and evaluation
- Updated curriculum
- Updated Program specification document with the latest NCAAA format
- Committee meeting minute</td><td rowspan="3">- Course specification documents with the latest NCAAA format</td><td rowspan="3">1. Advisory Board Committee.
2. Department Council
3. Study plan committee (College level)
4. Advisory Council
5. College Council</td><td rowspan="10">8 weeks</td></tr>
<tr><td colspan="2">Update courses requirments</td></tr>
<tr><td colspan="2">Add elective courses</td></tr>
<tr><td colspan="2">Career opportunities</td><td rowspan="6">Academic Program Committee</td><td>Allignement of PLOS with JOBs outcomes</td><td rowspan="6">1. Advisory Board Committee.
2. Department Council
3. Quality Assurance Unit (College level)
4. Advisory Council College Council</td></tr>
<tr><td>CS program consistency with NQF</td><td>Without updating credit hours or PLOs</td><td>CS program consistency with NQF document following the latest NCAAA format.</td></tr>
<tr><td rowspan="2">CS program consistency with ETEC specialized standards</td><td rowspan="3">Without updating PLOs</td><td rowspan="2">CS program consistency with ETEC specialized standards document following the latest NCAAA format</td></tr>
<tr></tr>
<tr><td colspan="2">CS program consistency with international academic standards.</td><td>CS program allignement matrix with international academic standards</td></tr>
</table>

7.3.4. MAJOR UPDATE OF THE PROGRAM

A major program update is primarily initiated following a comprehensive review or as a required improvement action based on findings from an annual review. This type of update involves significant modifications to the program specifications and/or curriculum to enhance alignment with academic standards, industry demands, and institutional objectives. Table 6 outlines the key items that constitute a major program update, along with their implications for the program structure and learning outcomes.

TABLE 6: MAJOR PROGRAM UPDATE ITEMS AND APPROVAL PROCESS

<table>
<tr><th>Items</th><th>Responsible</th><th colspan="2">Required document</th><th>Approval process</th><th>Timeline</th></tr>
<tr><td>The Program Mission</td><td rowspan="3">Academic Program Committee</td><td rowspan="4">- University and college strategic plan
- DDQ forms
- Bench-marking comparison
- Self study report with the improuvement development plan
- Stakeholders surveys and evaluation
- Updated Program specification document with the latest NCAAA format
- Committee meeting minute</td><td>Mission alignment matrix with the University, College, and Department missions.</td><td>1. Advisory Board Committee.
2. Department Council
3. Quality Assurance Unit (College level)
4. Advisory Council College Council
5. DDQ reviewr
6. DDQ- standing committee
7. QU council</td><td rowspan="4">One year</td></tr>
<tr><td>The Program Goals</td><td>Goals alignment matrix with the University, College, and Department goals.</td><td></td></tr>
<tr><td>The Program Graduate Attributes</td><td>Graduate attributes alignment matrix with the University, graduate attributes.</td><td></td></tr>
<tr><td>Program Key Performance Indicators (KPIs)</td><td>Surveys and KPIs committee</td><td>- New Key Performance Indicator assessment plan</td><td>1. Academic Program Committee
2. Advisory Board Committee.
3. Department Council</td></tr>
</table>

				4. Quality Assurance Unit (College level) 5. Advisory Council College Council 6. DDQ reviewr 7. DDQ- standing committee	
Program total credit hours: **1. Adding new course** **2. Updating the courses credit hours**	Study plan committee		- Courses specification documents with the latest NCAAA format. CS program consistency with NQF document following the latest NCAAA format. - CS program consistency with ETEC specialized standards document following the latest NCAAA format	1. Academic Program Committee 2. Advisory Board Committee. 3. Department Council 4. Study plan committee (College level) 5. Quality Assurance Unit (College level) 6. Advisory Council College Council 7. DDQ reviewr 8. DDQ- standing committees 9. College council.	
PLOs Update	PLOs assessment and measurement committee + Study plan committee		- PLO allignement matrix with University PLOs - PLOs alignment matrix with GA. - All Courses specification documents with the latest		

			NCAAA format. CS program consistency with NQF document following the latest NCAAA format. - CS program consistency with ETEC specialized standards document following the latest NCAAA format. - updated PLO assessment plan		

7.3.1. NEW PROGRAM APPROVAL

The process for creating a new academic program or revising an existing curriculum is comprehensively outlined in the DDQ Quality Management System (QMS). This framework ensures that the development process aligns with institutional objectives, accreditation requirements, and industry demands. The strategic planning, benchmarking studies, and approval procedures are clearly defined within the QMS to maintain academic excellence and relevance. Each step, from initial proposal to final approval, follows a structured approach to guarantee that the program meets both national and international educational standards. For further details, refer to [link]. Table 7 describes the process for approval a new program/study plan:

TABLE 7: ESTABLISHING OR DEVELOPING A PROGRAM PROCESS

Steps	Documents	Responsible	Approval process	Timeline

1	Establishing or Developing a Program [form]	Bench-marking comparison - Self study report with the improvement development plan - Stakeholders surveys and evaluation	Study plan committee	1. Academic Program Committee 2. Advisory Board Committee. 3. Department Council 4. Quality Assurance Unit (College level) 5. Advisory Council College Council 6. DDQ reviewr 7. DDQ-standing committee	4 months
2	Program specification with the latest NCAAA format	- All cources specification	- PLO allignement matrix with University PLOs - PLOs alignment matrix with GA. - All Courses specification documents with the latest NCAAA format. CS program consistency with NQF document following the latest NCAAA format. - CS program consistency with ETEC specialized standards document following the	1. Academic Program Committee 2. Advisory Board Committee. 3. Department Council 4. Quality Assurance Unit (College level) 5. Advisory Council College Council 6. DDQ reviewr 7. DDQ-standing committee 8. QU council	6 months

			latest NCAAA format.		


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