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## Assessing the Compliance of the Civil Engineering Program with the Philippine Technological Council's Accreditation Standards

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### Abstract

**Objectives:** The Philippine Technological Council – Washington Accord (PTC WA) provides internationally accepted standards for engineering education with an emphasis on outcomes-based learning and ensuring graduates are globally competent. This study investigated the perceived compliance of the Civil Engineering program at Camarines Sur Polytechnic Colleges with the nine PTC accreditation criteria. **Methods:** This study employed a survey method that gathers information on the level of compliance of the engineering programs along PTC accreditation standards. Likewise, documentary analysis was used to analyze the program profile and support the data gathered. Faculty members of civil engineering served as the study's respondents. They were requested to respond to the survey questions explicitly crafted to determine the level of compliance of the programs to PTC accreditation standards. **Findings:** The results show that the institution understands the significance of accreditation, but there are areas that need to be addressed. These are characterized by low scores obtained in the evaluation, which include the areas of student performance monitoring, faculty development, academic exchange, facilities, extension, industry linkages, and Continuous Quality Improvement (CQI). Findings also emphasized the importance of encouraging faculty members to pursue advanced studies and enhance the passing percentage in the licensure examinations of graduates. Based on these findings, the study formulated plans of action that will serve as a roadmap for the program's quest for PTC accreditation. **Novelty:** The developed plans of action aim to enhance the quality of the program, generate international recognition, and make graduates more competitive within the global engineering community. **Keywords:** PTC; Accreditation; Civil engineering; Compliance; Washington Accord

## 1 Introduction

Globalization of economic activity is a reality that impacts engineering professionals and has changed the landscape of engineering undergraduate education<sup>(1)</sup>. It has created a more competitive and interconnected environment, requiring engineers to possess global competencies to be effective in diverse cultural and demographic settings<sup>(2)</sup>. Likewise, the rising globalization of the workforce needs an awareness of the elements that influence professionals' decisions to work overseas<sup>(3)</sup>.

The quality of engineering graduates and professionals is vital in international practice. Providing quality education requires academic institutions to build cohesive systems that encourage strong partnerships among leadership, educators, industry stakeholders, government agencies, and local communities. Many institutions have also adopted internal and external quality assurance practices to continuously enhance their programs<sup>(4)</sup>. With the extreme mobility of students and faculty, there is a need for comparability of educational programs<sup>(5)</sup>. Ensuring the comparability of education remains a challenge, as it requires a suitable framework that can accurately assess and align the academic credentials of graduates from diverse institutions<sup>(4)</sup>. Currently, various frameworks exist to recognize engineering qualifications globally, such as the International Engineering Alliance including Dublin, Sydney, and Washington Accords. These agreements are designed to ensure that graduates from accredited programs possess the essential knowledge and competencies required to practice in engineering and related professions<sup>(6)</sup>. Each of these accords has its own criteria and guidelines for accreditation and its list of signatory countries. The graduates of accredited programs under these accords are recognized and eligible to practice their professions in signatory countries.

Historically, the quality of engineering education is controlled by the institution and monitored by national-level organizations<sup>(7)</sup>. However, the quality assurance and competitiveness of engineering education have been challenged. With the impact of globalization, educational institutions have been working to keep up with the present situation in the global arena.

Engineering educational institutions have been compelled to improve quality and standards by implementing quality assurance measures and program accreditation to ensure comparability and compatibility with similar programs worldwide. However, the quality of engineering graduates still varies significantly across countries, which poses challenges for engineers collaborating effectively in global, multidisciplinary teams<sup>(7)</sup>.

With this mismatch, the International Engineering Alliance resolved the issue in 1989. Six organizations from Australia, Canada, Ireland, New Zealand, the United Kingdom, and the United States signed an agreement known as the "Washington Accord". The Washington Accord (WA) is the engineering accord of the International Engineering Alliance (IEA) that focuses on accreditation professional engineering education programs. This is in contrast to the other accords: the Dublin Accord, which focuses on the accreditation of engineering technician education programs, and the Sydney Accord, which is on engineering technologist education programs<sup>(6)</sup>.

Washington Accord is a multinational agreement that recognizes substantial equivalency of engineering degree<sup>(8)</sup>. The agreement highlights two key principles: (1) graduates of accredited engineering programs should be mutually recognized as having met the academic qualifications for entry-level practice in any member country, and (2) accreditation by a member organization affirms that graduates are equipped for entry-level engineering practice. Over time, the Accord has expanded its membership, and as of 2023, includes 23 full members and 7 provisional members, collectively referred to as signatories. Full signatories of the Washington Accord have equal participation rights and mutually recognize each other's accredited qualifications as substantially equivalent within their respective jurisdictions<sup>(9)</sup>. Likewise, provisional signatories are recognized as having appropriate systems and processes to develop towards becoming full signatories.

The Washington Accord is closely based on the accreditation of the Accreditation Board for Engineering and Technology (ABET)<sup>(10)</sup>. Membership to the Accord requires countries to adopt similar set of criteria<sup>(10)</sup>. The ABET's criteria focused on an outcome-based approach and has been adopted since 2000. This model has influenced the design of various curricula across engineering programs around the world. These programs have integrated various elements into their curriculum to meet accreditation requirements.

The Commission on Higher Education (CHED) is the governing body responsible for overseeing higher education institutions in the Philippines. Through CHED Memorandum Order No. 46, series of 2012, the agency promotes a significant shift from a traditional, instruction-focused approach to one that is student-centered, emphasizing lifelong learning as a core principle. This paradigm shift calls for higher education demand to address the industry's present needs. The Technical Panel for Engineering and Technology (TPET) mandates all engineering programs to implement an outcomes-based education (OBE) system. This system allows engineering programs to align with international recognition standards, specifically through the Philippine Technological Council (PTC) and its Accreditation and Certification Board for Engineering and Technology (ACBET). The PTC sets specific accreditation criteria for engineering programs, which serve as the foundation for evaluating and making accreditation decisions on programs submitted by higher education institutions<sup>(11)</sup>. The PTC facilitates the

recognition of engineering programs in accordance with the Washington Accord. The PTC-WA accreditation scheme could help higher education institutions (HEIs) offering engineering programs produce better-equipped and skillful technical men comparable to the engineers in the world<sup>(12)</sup>. By aligning programs with the Accord, institutions can enhance their prestige and become known globally. This recognition will be instrumental in promoting the global mobility of graduates and be recognized with the same rights and privileges as the Accord's signatory countries.

This study aimed to determine the compliance of the civil engineering program to PTC accreditation standards. The program was assessed along with its compliance with PTC accreditation standards: Program Educational Objectives; Student Outcomes; Students; Faculty and Support Staff; Curriculum; Program Resources and Learning Environment; Leadership and Institutional Support; Program Linkages; Continuous Quality Improvement. Plan of actions were developed to further improve the compliance of the civil engineering program to PTC accreditation standards.

## 2 Methodology

This study employed a descriptive research method. Descriptive research is a method used to systematically describe existing phenomena by gathering data through instruments such as tests, questionnaires, interviews, or observations<sup>(13)</sup>. This study employed a survey method that gathers information on the level of compliance of the civil engineering program along PTC accreditation standards. Likewise, documentary analysis was used to analyze the program profile and support the data gathered.

Faculty members of the civil engineering program served as the study's respondents. They were requested to respond to the survey questions explicitly crafted to determine the level of compliance of the programs to PTC accreditation standards.

A survey questionnaire was developed based on the standards set by the PTC and aligned with the nine criteria of the PTC Self-Study Report, which is part of the Certification and Accreditation System for Engineering Education (CASEE). The questionnaire utilized a 5-point Likert scale with the following interpretations: 4.50-5.00 (Very Adequate); 3.50-4.49 (Adequate); 2.50-3.49 (Moderately Adequate); 1.50-2.49 (Inadequate); 1.00-1.49 (Very Inadequate).

## 3 Results and Discussion

### 3.1 Profile of the Program

The Civil Engineering program of Camarines Sur Polytechnic Colleges is under the College of Engineering and Architecture (CEA). It is one of the oldest engineering programs, along with the electrical, electronics, and mechanical engineering programs. The CEA is headed by a Dean, while the Civil Engineering program is headed by a program chair who oversees the planning, implementation, and continuous enhancement of the curriculum, instruction, and student outcomes.

The program is supported by a pool of qualified faculty members who not only handle instruction but are also actively engaged in research and extension services. These faculty members contribute to the advancement of knowledge in the field through scholarly work while also participating in community outreach and development initiatives aligned with the institution's mission. Over the years, the program has consistently produced board passers and graduates, including several topnotchers in the licensure examination. Presently, the program is Level IV accredited by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP).

**Passing Percentage in the Licensure Examinations:** Table 1 shows the school passing percentage of the licensure examinations for civil engineers from 2021 to 2024. The said examination is being conducted every April/May and November/December. There was no licensure examination in April/May 2021 due to the continued impact of the COVID-19 pandemic, which also led to the suspension of examinations throughout 2020.

**Table 1.** Average Passing Percentage

| Year           | April/May      |                  | November/December |                  |
|----------------|----------------|------------------|-------------------|------------------|
|                | School Passing | National Passing | School Passing    | National Passing |
| 2024           | 37.00%         | 39.27%           | 43.96%            | 37.07%           |
| 2023           | 46.03%         | 34.76%           | 48.44%            | 33.26%           |
| 2022           | 41.46%         | 42.35%           | 48.06%            | 39.34%           |
| 2021           | -              | -                | 19.35%            | 36.67%           |
| <b>Average</b> | <b>41.50%</b>  | <b>38.79%</b>    | <b>39.95%</b>     | <b>36.59%</b>    |

Source: prc.gov.ph

As shown in the table, the highest passing rate for the school was in April/May 2023, with a rate of 46.03%, compared to the national passing percentage of 34.76%. In April/May of 2024, the passing rate for the school dropped to 37.00%, while the national passing percentage is 39.27%. The three-year average passing percentage for the April/May licensure exams showed the school at 41.50% compared to the national average passing percentage of 38.79%. The performance of the school in the November/December licensure exams was consistent, with the school having its highest passing rate of 48.44% in 2023, which was considerably higher than the national passing percentage of 33.26% and its lowest in 2021 at 19.35%. The four-year average was 39.95% for the school, compared to a national average of 36.59%. The data indicates that the school generally met or exceeded national performance averages, most notably in the November/December period, and emphasizes the areas of strength and continued opportunity for improvement.

**Number of Faculty Members:** There are 16 faculty members. Seven (43.75%) of faculty members are permanent, while nine (56.25%) are on a contract of service (COS) status. This shows that the teaching force of the program relies majorly on the COS faculty. While COS faculty provide flexibility and bring industry experience, they are limited in function and involvement beyond teaching. To enhance academic quality, the institution may consider increasing the number of permanent faculty positions and providing COS faculty with support along with faculty development.

**Educational Qualifications:** Two (28.57%) of the permanent faculty have a doctorate, while five (71.43%) are master's degree holders. On the other hand, none of the COS faculty possessed a doctorate; two (22.22%) were master's degree holders, and seven (77.78%), were bachelor's degree holders. Data shows that permanent positions in state universities and colleges require one to have at least a master's degree. Likewise, this disparity in the level of educational qualifications means that the permanent faculty are more suited to handle courses, especially professional courses, perform instructional research, and effectively mentor students. The higher number of COS faculty who possess a bachelor's degree suggests that these faculty members may not be able to provide adequate academic depth. To enhance instructional effectiveness, it is suggested that COS faculty members be educated and trained through graduate programs, and this may be their opportunity to be granted permanent positions.

**Number of Graduates:** There were 646 graduates across five years (2020-2024). The graduation rates demonstrate a strong and consistent number of individuals graduating since 2020, especially in 2023 and 2024, when 161 and 160 graduates were recorded, respectively. While the number of 149 graduates in 2022 is lower, it is still clearly on an upward trajectory. There was a significant drop in graduates in 2021 to 51. This decline is attributed to the curriculum transition brought about by the implementation of the K-12 program in senior high school, which resulted in a two-year gap in student enrollment in college. The 51 graduates were the remaining students of the old curriculum before the full implementation of the new educational structure. In 2020, there were 125 graduates. This may possibly be due to the impact of the COVID-19 pandemic. However, the number of graduates has increased since 2022, which demonstrates the program's ability to adjust and maintain student completion rates compared to previous academic years.

### 3.2 Level of Compliance to PTC Accreditation Standards

The evaluation along Criterion 1 - Program Educational Objectives, indicates that the program has a clear and documented vision and mission; the PEOs are well-aligned with the vision and mission. This alignment ensures that the program maintains its strategic direction and relevance<sup>(14)</sup>. The visibility and accessibility of the PEOs suggest that there is a means of effective internal communication within the institution. However, the rating suggests that there is room for improvement in enhancing stakeholder engagement. The processes for the formulation, review, and deployment of PEOs are in place and function adequately, which indicates that the objectives remain responsive to the needs of the stakeholders.

The results under Criterion 2 - Student Outcomes, indicate an adequate implementation of student outcomes. This reflects that the program has a documented framework for aligning student outcomes to the educational objectives. The outcomes are well aligned with the PEOs, ensuring graduates are prepared for long-term professional success. The process of reviewing and updating student outcomes reflects a commitment to continuous improvement. The goal of continuous improvement is to improve student outcomes<sup>(15)</sup>. Performance indicators demonstrate that student progress is monitored, assessed, and evaluated. These performance indicators are necessary to meet the outcome and against which other performances can be compared<sup>(16)</sup>. Lastly, the student outcomes are communicated and disseminated to stakeholders. This promotes transparency and shared responsibility in achieving educational goals.

The results of the evaluation of Criterion 3 - Students indicates that the program has well-established policies, processes, and guidelines for supporting students. The admission, performance evaluation, advising, and graduation requirements are in place, documented, and implemented. The inclusion of student outcomes in evaluating performance shows that the academic assessments are aligned with learning goals<sup>(17)</sup>. Processes for monitoring progress and retaining students show that the program takes an active role in supporting student success. Policies on transfer credits, credit for work in lieu of courses, and transcript issuance are all in place and documented. This only reflects that there is transparency and consistency in academic operations.

However, academic exchange shows the lowest rating. This only suggests that the program needs further improvement in this area, which will provide broader learning opportunities to students. The results of the evaluation along Criteria 4 - Faculty and Support Staff show that the program maintains a strong and well-supported academic workforce. This also indicates that the faculty and staff are generally qualified and effective in engaging and supporting the program. The program has a competent and sufficient number of faculty members. Faculty involvement is essential for promoting student success and creating an inclusive learning environment<sup>(18)</sup>. The faculty workload shows variations in terms of the functions, which reflect a balanced distribution of the four-fold functions of instruction, research, extension, and production. The adequacy of faculty members in the program shows that their involvement in interactions with students, monitoring and assessing students, advising, and other activities are evident. There are available opportunities for professional development, although this area received one of the lower scores, suggesting that the institution may expand the training and research involvement of faculty members. The authority and responsibility of faculty members in program governance and management are strong, which shows that there is a collaborative and empowered academic environment. There is an evaluation method to determine the educational contributions of faculty members. However, this area got the lowest score, suggesting that the institution may further enhance its policy along with faculty development and promotion. The presence of support staff is in place, helping ensure that both teaching quality and operational support meet institutional standards<sup>(19)</sup>.

The evaluation of Criterion 5 - Curriculum reflects that the program has an organized implementation of the academic program. The program has an approved curriculum. This curriculum is supported by the study plan, prerequisite structure, and curriculum mapping process, which ensures coherence and alignment with educational outcomes. The alignment with PEOs shows that the curriculum is designed to prepare students not only to finish or complete the program but also for long-term professional success<sup>(20)</sup>. Exposure of students to actual engineering setup and practice, including design experiences, industry-academe linkages such as On-the-Job Training (OJT) and laboratory course may help bridge the gap between theoretical knowledge and real-world applications. This may further enhance the problem-solving skills and prepare students for jobs in the engineering industry. Furthermore, quality education is further supported by sufficient teaching materials, such as books, syllabi, and samples of student work<sup>(21)</sup>.

The evaluation of Criterion 6 - Facilities and Learning Environment indicates that the program has adequate facilities and resources for student learning. The facilities, including offices, classrooms, and laboratories to facilitate the achievement of the PEOs and student outcomes are sufficient. The laboratory equipment and classrooms are sufficient. However, they received lower scores along upgrades and improvement which are necessary to ensure a productive learning environment.<sup>(22)</sup> The availability of computing resources includes an IT policy that ensures students' access to digital tools. There are also guidance and safety instructions for the use of laboratories and equipment. While there are policies for the maintenance and upgrading of facilities, they need to be strengthened to keep up with technological advancements and facilities that are relevant to the emerging trends in the industry. The library services and overall facility are rated well, indicating that the academic environment meets the needs of both students and facilities.

The evaluation of Criterion 7 - Leadership and Institutional Support indicates that the program is supported by adequate institutional framework. This suggests that the leadership and administrative systems sufficiently support the program's implementation. The institution, based on its approved organizational structure, involves all concerned individuals in planning and strategic decision-making. The program budget and financial resources support teaching, staffing, and infrastructure needs. The areas such as maintenance and upgrading of facilities and resources received slightly lower ratings, which suggests the need for an increase in funding and resource allocation. The staffing, which includes administrative and technical personnel, is considered sufficient. Faculty hiring and retention are functional. However, there needs to be an enhancement of the hiring process that will select the best for the position, an increase in funding, and additional hiring of qualified faculty members. The support for faculty professional development can be strengthened by providing opportunities for faculty members to attend professional training and pursue advanced studies aimed at enhancing instructional quality.

The evaluation of Criterion 8 - Extension Service, Community Service, and Industry-Academe Linkage shows that the program maintains engagement in the community and industry. The extension services offered include non-degree offerings such as short courses and technical training to support the professional development of engineers in the field and in the industry. The low score indicates that there is a need to broaden the services of the program along these services to increase industry impact and participation. Community-oriented programs are indicated in student activities. There are programs to assist the communities with social services to understand the impact of engineering solutions in the community<sup>(23)</sup>. There is an active participation in the industry-academe linkage. However, the result reflects a need to further enhance the engagement of the program with the industry, including the involvement of industry stakeholders in curriculum planning and other academic activities to align the current professional practices and labor market needs<sup>(24)</sup>.



The results of the evaluation of Criterion 9 - Continuous Quality Improvement reflect that there is a process for program evaluation and enhancement. Assessing student outcomes is well-implemented, and faculty members utilize data for evaluating students' competencies. However, the evaluation of PEOs received relatively low ratings, suggesting that the process for assessing long-term graduate outcomes may be further enhanced. This could impact the program's ability to ensure alignment with industry expectations and institutional. Likewise, the overall continuous improvement process received low ratings. This suggests that while data is being gathered, the use of this information for strategic enhancements may need to be more consistent or better documented. The presence of additional supporting documentation, such as minutes from evaluation meetings, indicates that actions based on assessment data are being recorded, which supports transparency and accountability.

To enrich the analysis and offer a broader perspective, the findings may be contextualized by referencing similar studies conducted among other state universities and colleges (SUCs) in the Philippines pursuing PTC-WA accreditation. For instance, a study conducted an evaluation across five SUCs in Western Visayas and found parallel outcomes—high levels of practice in curriculum delivery, student outcomes, and institutional leadership, but moderate levels in faculty training, extension services, and stakeholder involvement<sup>(25)</sup>. This alignment of findings indicates that challenges in PTC compliance are not isolated but are shared across institutions, likely influenced by similar regulatory, resource, and policy environments within Philippine higher education.

Such comparative analysis underscores the value of cross-institutional benchmarking. By comparing institutional practices and performance with those of other HEIs pursuing the same accreditation goals, programs can identify scalable models of success and refine their approaches to better align with both national and international quality standards. This practice not only fosters collaborative learning but also strengthens the national capacity to meet global engineering education benchmarks.

### 3.3 Plans of Action

Tables 2- 10 outlines the targeted initiatives across the various criteria to strengthen the academic program's quality, relevance, and responsiveness. Each action item is aligned with the institution's mission and objectives, specifying clear goals, responsible units, timelines, and expected outcomes. These plans serve as a roadmap for the program for its quest for PTC accreditation.

**Table 2.** Plans of Action – Criterion 1. Program Educational Objectives

| Action Item                                      | Objective                                        | Responsible Unit/Person      | Timeline           | Expected Outcome                   |
|--------------------------------------------------|--------------------------------------------------|------------------------------|--------------------|------------------------------------|
| Conduct periodic stakeholder consultation forums | Ensure relevance and responsiveness of PEOs      | Program Chair / CQAMS        | Every 2 years      | Updated, stakeholder-informed PEOs |
| Develop structured feedback mechanisms           | Gather systematic input for PEO review           | CQAMS                        | Within 1 year      | Data-driven improvements           |
| Institutionalize a regular review cycle          | Standardize the review process                   | Curriculum Committee         | Next academic year | Consistent evaluation and updating |
| Enhance dissemination of PEOs                    | Improve stakeholder awareness                    | Program Chair / Faculty      | 6 months           | Greater visibility and engagement  |
| Benchmark with other institutions                | Align with national/international best practices | Dean/ Program Chair/ Faculty | Annually           | Competitive and relevant PEOs      |

## 4 Conclusion

This study highlights the compliance of the civil engineering program with PTC accreditation standards. The results showed gaps in several areas. There is a common understanding of the significance of international accreditation, but there is room for improvement in aligning the programs with global standards. Some policy recommendations are made on the basis of the study's findings. The institution should introduce regular professional development activities for faculty members to help them better comprehend the accreditation standards. Also, faculty members should be motivated and supported to pursue advanced studies and research opportunities in order to enhance their skills and contribute towards ongoing improvement in the curriculum. There should be systems of evaluation, including self and peer evaluation, to monitor and ensure compliance with the PTC accreditation standards. There should be a regular review of curricula with the participation of industry partners,

**Table 3.** Plans of Action – Criterion 2. Student Outcomes

| Action Item                                          | Objective                                        | Responsible Unit/Person | Timeline       | Expected Outcome                  |
|------------------------------------------------------|--------------------------------------------------|-------------------------|----------------|-----------------------------------|
| Develop Outcome-Based Education (OBE) tracking tools | Monitor attainment of SOs effectively            | CQAMS/ MICT             | 1 year         | Reliable SO assessment reports    |
| Conduct regular training for faculty on OBE          | Strengthen capacity in outcomes-based assessment | L&D Committee           | Every semester | Improved OBE-aligned instruction  |
| Integrate SOs explicitly in course syllabi           | Ensure SOs are addressed in instruction          | Program Chair / Faculty | Each term      | SO-aligned learning activities    |
| Implement curriculum mapping                         | Link SOs to curriculum components                | Curriculum Committee    | Ongoing        | Clear SO alignment across courses |
| Use tracer studies and employer feedback             | Validate graduate performance on SOs             | Alumni Affairs Office   | Every 2 years  | External validation of outcomes   |

**Table 4.** Plans of Action – Criterion 3. Students

| Action Item                                              | Objective                               | Responsible Unit/Person     | Timeline               | Expected Outcome                      |
|----------------------------------------------------------|-----------------------------------------|-----------------------------|------------------------|---------------------------------------|
| Strengthen academic advising and mentoring               | Support student success and retention   | Program Chair/ Faculty      | Ongoing                | Improved academic performance         |
| Enhance support for student organizations and leadership | Promote holistic development            | OSAS/ Dean                  | Each academic year     | Engaged and competent student leaders |
| Expand scholarship and financial aid opportunities       | Increase access and equity              | OSAS                        | Annually               | Increased student retention           |
| Establish a student feedback loop                        | Ensure students' concerns are addressed | CQAMS / Dean/ Program Chair | Every semester         | Improved student satisfaction         |
| Improve onboarding and orientation programs              | Support transition to university life   | OSAS/ Guidance Office       | Start of each semester | Better adjustment and retention       |

**Table 5.** Plans of Action – Criterion 4. Faculty and Support Staff

| Action Item                                                   | Objective                                                                   | Responsible Unit/Person | Time-line      | Expected Outcome                                         |
|---------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------|----------------|----------------------------------------------------------|
| Enhance Faculty Development Plans                             | Support career growth and teaching excellence                               | L&D Committee           | Annually       | Competent and motivated faculty                          |
| Improve faculty workload balance                              | Promote quality teaching, research, and extension                           | Program Chair/ Dean     | Immediate      | Better faculty performance                               |
| Enhance the conduct of regular performance evaluations        | Identify strengths and areas for improvement                                | Dean/ Program Chair     | Every semester | Data-driven staff development                            |
| Provide mentoring program for research and publication        | Strengthen faculty capabilities in research writing and publishing          | VPRIC/ RDSO             | Ongoing        | Increased research productivity and publication quality  |
| Increase opportunities extension and production activities    | Expand faculty involvement in community outreach and production initiatives | VPRIC/ ECSO/ PAXSO      | Ongoing        | Higher engagement and impact of extension and production |
| Hire qualified support staff and provide training             | Enhance operational support for academics                                   | HRMDU/ VPAA             | Ongoing        | Efficient program delivery support                       |
| Promote Interdisciplinary and Collaborative Research Projects | Foster innovation and cross-sectoral solutions                              | VPRIC/ RDSO/ Faculty    | Ongoing        | Broader research impact and collaboration                |

**Table 6.** Plans of Action – Criterion 5. Curriculum

| Action Item                                      | Objective                                                    | Responsible Unit/Person                    | Timeline                   | Expected Outcome                                                           |
|--------------------------------------------------|--------------------------------------------------------------|--------------------------------------------|----------------------------|----------------------------------------------------------------------------|
| Regularly review and update curriculum           | Keep content relevant and current                            | Curriculum Committee                       | Every 3 years or as Needed | Market-aligned curriculum                                                  |
| Strengthen OBE implementation                    | Enhance learning outcome alignment                           | CQAMS/ Faculty                             | Ongoing                    | Effective outcomes-based instruction                                       |
| Integrate emerging technologies and trends       | Prepare students for future careers                          | Program Chair/ Faculty                     | Annually                   | Tech-savvy and industry-ready graduates                                    |
| Increase industry-academe collaboration          | Improve practicum and internship quality                     | CIRL/ Dean/ Program Chair/ OJT Coordinator | Each academic year         | Relevant real-world experience                                             |
| Establish faculty-student research collaboration | Enhance research culture, mentorship, and student engagement | VRPRIC/ RDSO                               | Annually                   | Joint research projects, student co-authorship, and research presentations |
| Conduct curriculum benchmarking                  | Align with national and global standards                     | Dean/ Program Chair/ Faculty               | Every 3 years or as Needed | Competitive academic programs                                              |

**Table 7.** Plans of Action – Criterion 6. Facilities and Learning Resources

| Action Item                                     | Objective                                    | Responsible Unit/Person | Timeline      | Expected Outcome                    |
|-------------------------------------------------|----------------------------------------------|-------------------------|---------------|-------------------------------------|
| Conduct facilities audit and gap analysis       | Identify needs and areas for improvement     | CQAMS/ SPMU/ VPAA/ Dean | Annually      | Prioritized facility upgrades       |
| Upgrade laboratories, classrooms, and libraries | Provide conducive learning environments      | CQAMS/ SPMU/ VPAA/ Dean | Ongoing       | Modernized infrastructure           |
| Increase digital learning resources             | Support blended and online learning          | LRD / ICTU              | Annually      | Improved access to learning tools   |
| Improve internet connectivity and equipment     | Enhance digital instruction capabilities     | ICTU                    | Ongoing       | Seamless tech-enhanced learning     |
| Establish learning resource feedback systems    | Monitor student satisfaction with facilities | CQAMS                   | Each semester | User-informed facility improvements |

**Table 8.** Plans of Action – Criterion 7. Leadership and Governance

| Action Item                                      | Objective                                        | Responsible Unit/Person | Time-line     | Expected Outcome                            |
|--------------------------------------------------|--------------------------------------------------|-------------------------|---------------|---------------------------------------------|
| Promote transparent and participative governance | Strengthen institutional trust and collaboration | Top Management / CQAMS  | Ongoing       | Inclusive decision-making culture           |
| Provide leadership training for academic heads   | Improve management and academic leadership       | HRMDU / L&D Committee   | Annually      | Competent educational leaders               |
| Monitor effectiveness of policies and decisions  | Evaluate governance performance                  | Top Management/ CQAMS   | Yearly        | Data-informed leadership actions            |
| Enhance strategic planning processes             | Align goals with stakeholder needs               | IPDU                    | Every 5 years | Vision-aligned and stakeholder-driven plans |
| Institutionalize internal QA mechanisms          | Sustain continuous improvement                   | CQAMS                   | Ongoing       | Quality-informed decision-making            |



**Table 9.** Plans of Action – Criterion 8. Extension Services, Consultancy, and Linkages

| Action Item                                                                                                    | Objective                                                      | Responsible Unit/Person     | Time-line           | Expected Outcome                                                                             |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------|---------------------|----------------------------------------------------------------------------------------------|
| Develop community engagement plans                                                                             | Address societal needs effectively                             | ECSO/ Extension Coordinator | Annually            | Impactful community programs                                                                 |
| Document and evaluate extension projects                                                                       | Ensure alignment and impact                                    | ECSO/ Extension Coordinator | Every project cycle | Continuous improvement in outreach                                                           |
| Strengthen industry and alumni linkages                                                                        | Promote collaboration and support                              | CIRL/ Dean/ Program Chair   | Ongoing             | Mutually beneficial partnerships                                                             |
| Encourage faculty and student involvement                                                                      | Build civic responsibility                                     | ECSO/ Extension Coordinator | Per semester        | Active participation in outreach                                                             |
| Secure funding for extension initiatives                                                                       | Sustain and scale community programs                           | ECSO/ Extension Coordinator | Each fiscal year    | Resource-backed social projects                                                              |
| Strengthen research collaboration, partnerships and networking for enhanced extension and linkages initiatives | Promote collaboration, and research-based extension activities | RDSO/ Research Coordinator  | Ongoing             | Established partnerships, joint research-extension projects, and increased external linkages |

**Table 10.** Plans of Action – Criterion 9. Continuous Quality Improvement

| Action Item                                       | Objective                                | Responsible Unit/Person          | Timeline            | Expected Outcome                      |
|---------------------------------------------------|------------------------------------------|----------------------------------|---------------------|---------------------------------------|
| Establish program-level CQI committees            | Institutionalize improvement initiatives | CQAMS/ Dean/ Program Chair       | Every academic year | Proactive CQI culture                 |
| Regularly analyze KPIs and metrics                | Support evidence-based decisions         | CQAMS/ IPDU/ Dean/ Program Chair | Quarterly           | Data-driven enhancements              |
| Conduct annual program self-assessments           | Promote internal accountability          | Dean/ Program Chair/ Faculty     | Yearly              | Identified gaps and solutions         |
| Encourage participation in external accreditation | Validate quality externally              | CQAMS                            | Every 3-5 years     | Recognized academic excellence        |
| Create CQI documentation systems                  | Track changes and improvement efforts    | CQAMS                            | Ongoing             | Institutional memory and transparency |

accrediting agencies, and international universities. Industry-academic collaboration should be reinforced through policy with the new trends and requirements of the industry. Policies should be instituted to enhance research, extension, and academic engagement by promoting faculty-student research collaboration, strategic partnerships, institutional networking, and collaborative initiatives. These policies should also include a Research and Publication Mentoring Program to support faculty members in developing quality research and increasing publication outputs. Mechanisms for feedback should be created to capture inputs from employers, alumni, and students. To enhance the results of the licensure examination, the institution should improve the admission and retention policies by setting clear academic support systems and implementing a separate admission requirement and examinations for the engineering programs to ensure student readiness. A bridging program may be proposed to address gaps in foundational knowledge for incoming first-year students. A policy should be proposed focusing on review programs, practice exams, and mentorship for graduating students while aligning instructional strategies based on

an analysis of licensure exam performance data. A continuous quality improvement (CQI) system should be incorporated to assess and improve the programs on a regular basis. These policy recommendations can assist the programs in aligning with international standards, enhancing the quality of the programs, and improving the global competitiveness of the graduates.

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