

Quality Assurance And Accreditation Of Batangas State University, Philippines

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Abstract: In recent years, quality assurance and accreditation have become a critical focus of most colleges and universities in the Philippines to determine whether or not the educational delivery system and program meets specified standard of educational quality. There are several legal bases issued by the Commission on Higher Education (CHED), which articulate the quality assurance policies and requirements for higher education institutions. Specifically, Batangas State University seriously considered the accreditation process as an effective tool to improve its engineering programs to make it more responsive and comparable with other international universities. Quality assurance through its continuous quality improvement initiatives provides a strategic direction for the University in attaining its quality outcomes in terms of curriculum, teaching and learning, human resource, research, instructional infrastructures and importantly its graduate mobility. Hence, this paper attempted to share the quality assurance and accreditation experiences of Batangas State University, its implications and responsiveness to the challenges of the world class educational institutions. This covered the discussion of the various accrediting bodies being considered by the University, the accreditation processes and criteria used in the assessment and evaluation of the engineering programs. Various accreditation activities have been done by the University to continuously respond to the emerging global demands and standards on engineering education. As such, the management provides utmost support to comply with the accreditation requirements, which includes human, financial and physical resources. This study mainly focused on the accreditation processes and experiences of the two engineering programs of the University namely Mechanical Engineering and Petroleum engineering on various accrediting bodies that took place to enhance and ensure the quality of the programs. Results of various accreditation activities conducted by external accrediting bodies were presented, and identified the benefits gained from such accreditations.

Keywords: accreditation process, continuous quality improvement, global mobility, international academic standards, quality assurance.

1. Introduction

Quality assurance and accreditation processes of higher education institutions in the Philippines are vital initiatives to attain global competitiveness of engineering graduates. The global mobility of graduates is dependent on the recognition of the institutions and their conformance to the international academic standards set by various external accrediting bodies. In recent years, quality assurance and accreditation have become a critical focus of most colleges and universities to determine whether or not the educational delivery system and program meets specified standard of educational quality. This provides strategic direction for them to stretch their full potential in ensuring that they substantially achieve their educational objectives and are generally equal in quality to comparable institutions both local and abroad. It is the declared policy of the Commission on Higher Education to support and value the significant role of higher education institutions, academic community, and other stakeholders in establishing a quality assurance system for higher education sector. Institutional monitoring and evaluation for quality assurance is deemed complementary to accreditation [1]. Further, Philippine higher education is mandated to contribute to building a quality nation capable of transcending the social, political, economic, cultural and ethical issues that constrain the country's human development, productivity and global competitiveness [2]. The external quality monitoring of HEIs includes accreditation, audit, assessment, evaluation, and validation. Several issues have been identified, which are categorized under the areas of finance, frameworks, and flexibility. Rapid changes in the environment mean that an external quality monitoring agency should be maximally flexible, and cost-effective; and minimally intrusive [3]. Institutional reviews are carried out by a process of extended peer review, a person or group with similar knowledge skills, experience

and status in the relevant context [4]. For external quality review, peer reviewers are usually senior people with wide experience in universities internationally and locally, or persons with substantial expertise in some aspects of quality assurance relevant to higher education. Peer reviewers bring their professional judgement to bear on the institution being reviewed. To ensure an effective, rigorous, fair and transparent process, all parties are obliged to exhibit professional conduct and integrity at all times throughout the quality review process [5]. Batangas State University (BatStateU), guided by its quality policy, is committed to the continuous improvement of its services to all customers to meet the challenges of a world class educational institution. Aligned with the Commission on Higher Education Strategic Plan 2011-2016, external review of the academic programs particularly engineering programs is one of the major quality assurance initiatives of the University. Currently, the University offers 12 engineering disciplines which include Chemical, Civil, Computer, Electrical, Electronics, Food, Industrial, Instrumentation and Control, Mechanical, Mechatronics, Petroleum and Sanitary Engineering. Striving for excellence in instruction, research and community engagement, the BatStateU continues to establish a learning culture in which teaching and research of the highest quality flourish equally. The University has a firm commitment towards developing productive and innovative individuals who can make effective contributions to society and the economy. Various accreditation activities have been done to continuously respond to the emerging global demands and standards on engineering education. As such, the management provides utmost support to comply with the accreditation requirements, which includes human, financial and physical resources. This study attempted to share the accreditation experiences of the two engineering programs of the University namely Mechanical Engineering and

Petroleum Engineering on various accrediting bodies that took place to enhance and ensure the quality of the programs.

2. Quality Assurance and Accreditation Process

This section provides the detailed discussion of the quality assurance and accreditation process of Batangas State University. This includes the accrediting bodies, accreditation levels and procedures, and the accreditation instruments used by the external accrediting bodies.

2.1 Accrediting Bodies

There are three (3) accrediting bodies that were considered by the University to evaluate their engineering programs. The Accrediting Agency of Chartered Colleges and Universities in the Philippines, Inc. (AACCUP), Philippine Technological Council (PTC) and the Accreditation Board for Engineering and Technology (ABET). These accrediting bodies utilize an outcomes-based quality assurance (OBQA) instruments in assessing and evaluating the various aspects of the programs. The following discussions describe the accrediting bodies which are considered in the accreditation of engineering programs of Batangas State University. Accrediting Agency of Chartered Colleges and Universities in the Philippines, Inc. (AACCUP). This accrediting agency is intended to assess and evaluate curricular programs particularly for state universities and colleges in the Philippines. AACCUP was organized in 1987 though officially registered and recognized under the Securities and Exchange Commission (SEC) in 1989. It is a member of the National Network of Quality Assurance Agencies, Inc. (NNQAA, formed by AACCUP and the Association of Local Colleges and Universities Commission on Accreditation, Inc. (ALCUCOA); Asia-Pacific Quality Network (APQN) which is based in Shanghai, China; and International Network of Quality Assurance Agencies in Higher Education (INQAAHE) based in Barcelona, Spain [6]. AACCUP advocates quality assurance in harmony with national and international standards. In keeping with national standards, it upholds the Commission on Higher Education (CHED) initiatives on Outcomes-Based Quality Assurance System, through CHED Memorandum Order (CMO) 46, series of 2012, also known as the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA. It discusses the role of the state in providing quality education to its citizens. It also articulates how quality in higher education has been defined in different ways, often as excellence or fitness for purpose, but also as transformation of stakeholders, especially for mature institutions [7]. Philippine Technological Council (PTC). The Philippine Technological Council is the umbrella organization of 13 professional engineering societies in the Philippines. It is sole body recognized by the Commission on Higher Education to certify and accredit engineering programs offered by Higher Educational Institutions (HEIs) in the country in accordance with Washington Accord [8]. There are two major national programs on continuous quality improvement and recognition of educational qualifications at the tertiary level in which PTC is involved, such as setting up of outcomes-based education for engineering in the various higher educational institutions as provided for in CMO No. 37 Series of 2012 of the CHED, and developing the Certification and Accreditation System for Engineering

Education (CASEE) [9]. Accreditation Board for Engineering and Technology (ABET). ABET is a non-governmental that accredits post-secondary education programs in applied science, computing, engineering and engineering technology. ABET has been recognized by the Council for Higher Education Accreditation (CHEA) since 1997. It provides leadership internationally through workshops, consultancies, memoranda of understanding, and mutual recognition agreements, such as the Washington Accord [10].

2.2 Approaches to Quality Reviews and Conduct of the Process

This describes the stages and procedures used in the conduct of accreditation by three (3) accrediting bodies. The review process is designed to help higher education institutions to improve their quality. Although it involves an external review by an independent panel, the process is guided by each institution's own self-evaluation. It allows higher education institutions to identify for themselves areas for improvement, recognizing that quality and quality assurance are primarily the responsibility of the higher education institutions themselves. The process respects the autonomy and identity of the institution and its specific mission, while applying externally determined standards or indicators. AACCUP. The accreditation process passes through different stages and activities [11]. This includes the following: Application. An educational institution files its application to undergo accreditation with AACCUP. Institutional Self-survey. Upon approval of the application, the applicant institution will be required to make an internal assessment by its internal accreditors to determine the program's readiness for external review. Preliminary Survey Visit. The evaluation of the program for the first time by external accreditors. Passing the assessment entitles the program to be awarded a Candidate Status valid for two (2) years. First (Formal) Survey Visit. The evaluation of the program which has attained Candidate Status, and if it has attained a higher level of quality, is awarded a Level I Accredited Status, good for three (3) years. Second Survey Visit. It involves the evaluation of an accredited program, and if it has passed the standards set at a higher level of quality than the immediately preceding survey visit, may qualify the program to an award of Level II Re-accredited Status, good for five (5) years. Third Survey Visit. The accreditation stage conducted after a program has enjoyed a Level II Re-accredited status for five (5) years. Passing a higher level standard of quality entitles the program to apply for Level III. The program is then evaluated and must excel in four (4) areas, namely: instruction and extension, which are mandatory; and two (2) or more areas to be chosen from among research, performance in licensure examination, faculty development, and linkages. Fourth Survey Visit. This is the highest level of accreditation, which if hurdled, may entitle the institution to an institutional accreditation status. PTC. The Philippine Technological Council provides accreditation for engineering programs of both government and private educational institutions. There are two types of review visits conducted by the council, the general review and the interim review. The general review is an on-site visit of the institution who applied for accreditation. This review may entitle the institution to gain six-year full accreditation upon satisfying all the accreditation criteria set by the council. However, an interim review may be conducted if

the institution acquired only two years partial accreditation of program. After two years, actual visit is conducted to assess and evaluate those criteria with weaknesses during the first visit. Figure 1 shows the overview of the PTC accreditation process [12].

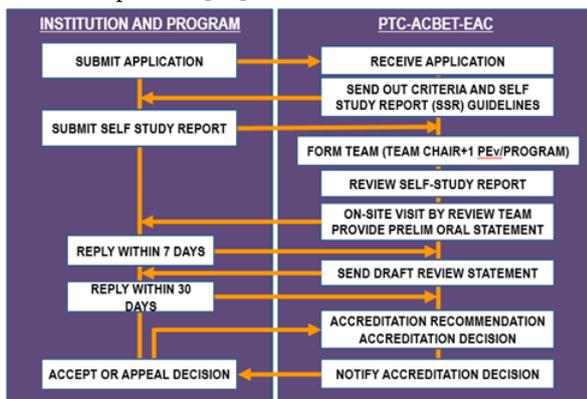


Figure 1 Overview of the PTC accreditation process.

The survey visit usually takes three days to complete the evaluation process of various criteria. The due-process period begins with the departure of the visit team. Due process is a critical part of the accreditation effort and consists of the following steps such as seven-day response, preparation of draft statement, due-process response, preparation of final statement, final action, and notification of accreditation decision. ABET. ABET accreditation is voluntarily, the request for accreditation is initiated by the institution seeking accreditation. Accreditation is given to individual programs within an institution rather than to the institution as a whole. Accredited programs must request re-evaluation every six years to retain accreditation; if the accreditation criteria are not satisfied, additional evaluations may be required within the six-year interval. Programs without previous accreditation can apply for accreditation as long as they have produced at least one program graduate. The first step in securing or retaining ABET accreditation is for an institution to request an evaluation of its program(s) by January 31 of the year in which accreditation is being sought. The eligibility of the institution must be established, which can be satisfied if the institution is accredited by a regional accreditation agency. Each program is then assigned to one of four accreditation commissions within ABET: Applied Science Accreditation Commission (ASAC); Computing Accreditation Commission (CAC); Engineering Accreditation Commission (EAC); and Engineering Technology Accreditation Commission (ETAC). The program is assigned to a commission based on its title (the program name shown on the transcript). Each commission has different accreditation criteria. Each program then conducts an internal evaluation and completes a self-study report. The self-study documents how well the program is meeting the established accreditation criteria in multiple areas, such as their students, curriculum, faculty, administration, facilities, and institutional support. The self-study report must be provided to ABET by July 1. While the program conducts its self-study, the appropriate ABET commission (Applied Science, Computing, Engineering, or Technology Commission) will choose a team chair to head the on-campus evaluation visit. A visit date (generally in the September – December time frame) is negotiated between the team chair and the institution. Once the date is set, the ABET commission will assign program evaluators (generally

one per program being evaluated). The institution is provided the opportunity to reject the team chair or program evaluators if a conflict of interest is perceived. The team chair and evaluators are volunteers from academe, government, industry, and private practice. Once the program evaluators are accepted by the institution, they are provided with the self-study report for their assigned program. This report forms the basis of their evaluation of the program, and prepares them for the campus visit. During the on-campus visit, the evaluation team will review course materials from each program, as well as student projects and sample assignments. Evaluators will also interview students, faculty, and administrators, and tour the facilities to investigate any questions raised by the self-study. The visit will normally with an exit interview with the institution's chief executive officer, dean, and other appropriate institution personnel as appropriate. This interview is intended to summarize the results of the evaluation for each program. Following the campus visit, the institution has seven (7) days in which to correct perceived errors of fact communicated during the exit interview. Following this period, the team chair will begin preparation of a draft statement to the institution; this statement undergoes extensive editing and will typically be provided to the institution several months after the visit. On receipt of the draft statement, the institution has 30 days to respond to issues identified in the evaluation. After this response, the team chair prepares a final statement to the institution. The final statement and recommended accreditation action is reviewed by the large annual meeting of all ABET commission members in July after the campus visit. Based on the findings, the commission members vote on the final accreditation action and the school is notified of the decision in August. The information the school receives identifies strengths, concerns, weaknesses, and deficiencies of the program, as well as recommendations for compliance with ABET criteria. Accreditation is granted for a maximum of six years, after which the institution must request another evaluation [13].

2.3 Accreditation Criteria/Instruments

The following are accreditation instruments that are used by the accrediting bodies. These criteria are intended to assure quality and to foster the systematic pursuit of improvement in the quality of engineering education that satisfies the needs of constituencies in a dynamic and competitive environment. It is the responsibility of the institution seeking accreditation of an engineering program to demonstrate clearly that the program meets the following criteria. AACUP. There are ten (10) areas that are considered in the program assessment and evaluation. This includes the vision, mission, goals and objectives (VMGO); faculty; curriculum and instruction; support to students; research; extension and community involvement; library; physical plant and facilities; laboratories; and administration [14]. PTC. The Philippine Technological Council uses nine (9) general criteria and program specific criteria. The general criteria includes the program educational objectives, student outcomes, students, faculty and support staff, curriculum, facilities and learning environment, leadership and institutional support, extension, community-oriented programs and industry linkage, and continuous quality improvement [15]. ABET. All programs seeking accreditation from the Engineering Accreditation

Commission of ABET must demonstrate that they satisfy all the general criteria for baccalaureate level programs. There are eight (8) criteria, which include students, program educational objectives, student outcomes, continuous improvement, curriculum, faculty, facilities and institutional support [16]

3. Accreditation Processes of Mechanical and Petroleum Engineering Programs

This section provides the information regarding the accreditation processes of the Mechanical and Petroleum Engineering programs of Batangas State University.

3.1 Mechanical Engineering Program Accreditation

The Mechanical Engineering Program was the first engineering program offered in the university in AY 1971-1972 as stipulated in Board Res. No.109, S.2008, along with BS Electrical Engineering. The program is one of the outstanding ME programs in the country because of its remarkable performance in the licensure examinations given by the Professional Regulation Commission. It has been consistently awarded as the country's Top Performing School in the Mechanical Engineering Board Examination for 19 years, and has produced a total of 72 board toppers. The program was also awarded Center of Development by the Commission on Higher Education in 2015. In 1997, the Mechanical Engineering program applied for AACCUP accreditation and was awarded Level I Status in 1998. This is the first engineering program which attained the accreditation level. Level II accreditation was obtained in 2004 and Level II Re-accredited status in 2008. The program obtained Level III Accredited Status (Phase I) in 2008 valid up to 2009. Survey visit for Level III Phase II was done in 2016 and obtained its Qualified for Level IV status in the same year. Currently, the ME program is preparing for the highest level of AACCUP accreditation which is Level IV. In 2015, the program sought accreditation certification from the Philippine Technological Council. The program was assessed and evaluated in accordance with PTC CASEE by the Engineering Accreditation Commission of the Accreditation and Certification Board for Engineering and Technology and was accredited for the academic years AY 2015-2016 thru to AY 2020-2021 inclusive. The six-year full accreditation was therefore obtained by the program. In addition, the program also underwent accreditation from the Engineering Accreditation Commission of ABET in 2016. The program just obtained this year the six-year full accreditation with two years retroactive, valid until AY 2022-2023.

3.2 Petroleum Engineering Program Accreditation

Petroleum Engineering program was offered in 2001 and had its pioneer batch of graduates in 2005. The program adheres the quality instruction through adopting outcomes-based education to produce competitive graduates imbued with the required knowledge and skills. Consistent with the university's goal of quality engineering education, the Petroleum Engineering program, though one of the youngest engineering programs, also sought accreditation from the AACCUP. Preliminary Survey visit was done in 2014 and gained the Candidate Status on the same year. In 2015, the Preliminary Survey Visit was took place, which evaluated the program using the ten (10) areas of accreditation criteria. The program obtained the Level I status in 2016 valid until

2019. Currently, the program is preparing for higher level of accreditation and in other accrediting bodies like PTC and ABET to sustain its academic standards and quality. Continuous quality improvements are being done in the program which include faculty development, upgrading of laboratory equipment, enhancement of teaching and learning strategies, improvement of assessment and evaluation tools, production of more quality research and community extension projects, and establishment of more academic and research linkages and partnerships.

4. Conclusion

The accreditation efforts of the University creates further improvement of the educational processes and instructional techniques, maintains standards and criteria for accreditation, and provides guidance to those other academic programs seeking to achieve accredited status. Several continuous quality improvement initiatives have been considered by the University to sustain the quality and excellence of the programs. Thus, accreditation protects the interests of students, their parents, the academic institution itself, and potential employers, by ensuring that the educational programs offered have attained a level that meets or exceeds standards that were developed by experts in the field. This accreditation does guarantee that the student has demonstrated a certain set of skills and abilities that are reflected in the accreditation criteria.

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