Report

External Peer Review and Validation of Self-assessment

Department of Electrical and Electronic Engineering

University of Asia Pacific (UAP)

Dhaka, Bangladesh

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Chapter 1: Introduction

Quality education refers to the fitness of the university graduates to meet the needs of stakeholders in terms of knowledge, skills, attitudes and performance. But quality in education depends on the well-functioning quality assurance system, appropriateness of educational process of the program offering entity. In addition, continuous improvement culture to meet the changing needs of the community and society is also very important for quality assurance. Self-assessment is the indispensable first step towards quality assurance in education. The SA process allows the organization to identify the strengths and areas in which improvements are required for quality education. Self-assessment provides a direction and guidelines to prepare comprehensive improvement plan addressing the issues critical to quality assurance. Recognizing the fact, with the objective of further improvement, Department of Electrical and Electronic Engineering (EEE), University of Asia Pacific (UAP), completed a self-assessment (SA) exercise and prepared a SA Report (SAR). This Self-Assessment Report (SAR) was prepared incorporating the concerns of major stakeholders covering the quality assurance areas under the guidelines of University Grants Commission of Bangladesh. The Institutional Quality Assurance Cell (IQAC) of the University of Asia Pacific (UAP), there after appointed an external peer review team to make a site visit, validate the SAR and prepare a report with useful observations to support the improvement initiatives of the EEE Department.

1.1 External Peer Review Process

According to the Terms of Reference the external peer review team was required to study the SAR prepared by the Department, to visit the university, and to observe the various aspects of quality assurance at the Department of EEE, UAP. It was also expected that the EPR Team would look into the strengths and weaknesses of the programs offered by the Department and would make meaningful recommendations for further quality enhancement. The peer review was based on the SAR prepared by the Department of

EEE and other documentary evidences made available during the site visit. The members of the EPR Team were:

- **Professor Dr. S. M. Kabir**, National QA Expert &Chair, EPR Team
  Professor
  Department of Marketing
  University of Rajshahi, Rajshahi, Bangladesh
- **Professor Ir. Dr. Mohammad Yeakub Ali,** International QA Expert &Member, EPR Team
  Professor
  Department of Manufacturing & Materials Engineering
  International Islamic University Malaysia, Malaysia
- **Professor Dr. Mohammad Faisal,** Subject Expert &Member, EPR Team
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Key features of the peer review process included the following:

- The critical review of the SAR;
- Observations of teaching-learning process;
- Review of a wide range of academic and administrative documents including statutes, prospectus, information booklet, curriculum, course files, question papers, thesis, handbook, rules regulations, minutes of meetings and so on;
- Observations of physical facilities;
- Intensive discussions with the major stakeholders including students, academic staffs, non-academic staffs, alumni, employers of graduates, key persons of university administration and top management;
- Identifying the strengths of the entity;
- Identifying the areas that need further improvement for quality enhancement in education; and
- Providing guidelines for quality assurance in education.

In preparing this peer review report following areas of quality assurance was critically reviewed at the program level:

1. Governance
2. Curriculum design and review process
3. Student admission, progress and achievements
4. Teaching Learning and Assessment of student performance
5. Physical facilities
6. Student support services including co-curricular and extra-curricular activities
7. Staff and staff development facilities
8. Research and extension
9. Process management & continuous improvement

1.2 External Peer Review Site Visit

The Program Self-Assessment Committee (PSAC) of the Department of EEE, in cooperation with the Institutional Quality Assurance Cell (IQAC) of the University, prepared the self-assessment report and organized the site visit from December 31, 2017 to January 02, 2018. The site visit activities are itemized and listed in the peer review site visit schedule (Annex).

Day-1: December 31, 2017

In the morning, the EPR Team had a meeting with the IQAC officials and PSAC members. In this meeting the IQAC made a brief presentation on the University of Asia Pacific. The peer review site visit formally commenced with a presentation by the Program Self-Assessment Committee (PSAC) on the self-assessment report (SAR). This was followed by a discussion at which several areas in the SAR were clarified and further elaborated. Before, in the morning, the External Peer Review Team discussed the review process in detail and finalized the schedule. After the presentation by PSAC the EPR Team met with the faculty members of the Department of EEE. After the meeting with the academic staffs the EPR Team observed class room teaching. Subsequently, the EPR

Team had separate meetings with the non-academic staffs and students of the Department. In the afternoon, the EPR Team visited the physical facilities including 8 Labs for Sessional courses, such as, Electrical and Electronic Circuit Lab II, Electronics Lab I, Power Electronics Lab, Electrical Machine Lab I and II, One Telecom and Microwave Lab, One Control, Measurement and Biomedical Lab, One DLD and Microprocessor Labs, classrooms, common room, IT facilities, medical facilities, canteen, indoor sports facilities and seating arrangement for the faculty members.

Day 2: January 01, 2018

The 2nd day of site visit started with review of documents relating to program management and university rules and regulations. In the morning, after review of a good number of documents the EPR Team met with the Registrar of the University. The Registrar of the University made a very informative presentation on the various aspects of the university administration. After the meeting with the Registrar, the EPR Team had a very important meeting with the honorable Vice-Chancellor and Pro Vice-Chancellor of the University. It was a very intensive and productive discussion focusing on the selected review findings, administrative aspects and future plan of the university and other issues to build a sound academic environment within the university. In second day, EPR Team also visited two more labs for sessional courses: Simulation Lab for VLSI, DSP and Numerical Analysis and Electrical Circuit Lab 1. In addition, a Project Lab having 3D printer facility for fourth year thesis/project work was also observed. After lunch and prayer break, the EPR Team had separate meetings with graduates and employer representatives and discussed many issues relating teaching learning and program management.

Day 3: January 02, 2018

On third and final day, in the morning, the EPR Team met with the Head of the Department of EEE. After the meeting the EPR Team reviewed of some other documents relating to teaching learning and assessment of students performance. Then the EPR team met with the Treasurer and Director of the Directorate of Students' Welfare (DSW). The DSW made a very informative presentation on the co-curricular, extra-curricular

activities, student support services and welfare activities of the University. After this meeting the EPR Team had an intensive discussion on the major review findings to prepare the exit report. The EPRT concluded the site visit with an exit meeting and brought out various observations. The Director of IQAC, Additional Director of IQAC, Head of the Department, PSAC and Faculty members of the EEE Department were present on the occasion. Finally, the EPR Team handed over the Exit Report and Judgment basing on the EPR site visit to the Director, IQAC of University of Asia Pacific (UAP).

On the whole, the ERP Team had a very fruitful site visit consisted of a number of meetings with a broad range of stakeholders across the University, including the Vice-Chancellor, Pro Vice-Chancellor, Registrar, Director of DSW, Head of the Department, Academic and Non-Academic Staffs, Students, Graduates and Employers representatives. All the meetings were open discussion followed by question &answer between the representatives of stakeholders and the EPR Team members. The stakeholders were open, transparent and actively participated during the discussions. The discussions with these stakeholders brought out good insights towards improvement in the quality education at the Department of EEE.

The EPR Team is very happy to put on record that it is the first attempt and initiative taken by the Department of EEE towards the quality assurance drive. The EPR Team recognized the involvement of all persons concerned in preparing the SAR and planning the site visit in an excellent manner. Special thanks go to the Director of the IQAC, PSAC and Head of the Department for their outstanding contribution in organizing the visit. The EPR Team also recognized that without their excellent cooperation it would not be possible to make such an effective site visit.

Chapter 2: Overview of the Entity

2.1 Overview of the University

University of Asia Pacific (UAP) was established in 1996 as a private university under the Private University Act 1992. UAP has been sponsored by University of Asia Pacific Foundation, a non-profit, non-commercial organization based in Dhaka, Bangladesh. University of Asia Pacific (UAP) started its journey at some rented buildings in Dhanmondi, Dhaka. In the first semester of classes in 1996, the university offered four-year bachelor degree programs in Computer Science and Technology and Business Administration only. Now UAP offers undergraduate programs in English, Law, Architecture, Business Administration, Civil Engineering, Computer Science and Engineering, Electrical and Electronic Engineering and Pharmacy. To accommodate all these departments and its rapidly increasing students, UAP foundation has undertaken activities to hasten the construction of its own permanent "CITY CAMPUS" in the center of the capital at Green Road. The campus is designed to meet all academic, professional and social requirements of the university to provide a stimulating environment for education having standard class rooms, labs, large auditorium, library, reading rooms, medical supports and various clubs for different co-curricular and extra-curricular activities. At present the total number of students at the UAP is 6,488. Total number of faculty members is 312.

Vision and mission of the University of Asia Pacific as stated in the SAR are:

Vision

UAP holds steadfastly its passion to do better and better in fulfilling our young generation's needs and aspirations for a caring and quality education in casting their future career and become a desirable destination for an identity.

Mission

UAP mission is to offer best possible education to our young generation. Towards the mission, UAP continues to develop a sustained culture of ascending to a top-tier of vibrant academic environment; maintain and foster well qualified faculty, provide

adequate research support for cutting-edge research in-house and in collaboration national and international peers; update curricula to keep up with advancing trend in science and technology, use state-of-the-art best practices in teaching-learning and modern facilities in laboratories and libraries; and provide other supports in aid to students' becoming competent graduates with their potential fully realized and personality well-developed for joining the global forces in making the future of society in a changing world.

The main objective of UAP is to provide high quality education at tertiary level relevant to the demands of a high quality dynamic academia in Bangladesh. The courses and curricula are designed to enable and equip a student to enter into the national and international job market or pursue higher academic and professional goals with a solid academic foundation. The sole objective of the university is not to make the students pass the exam only. The university equips its students with the means to become productive and proactive members of the community and continue the practice of continuous learning to become 'future leaders'& useful members of the society.

2.2 Overview of the Department

Department of Electrical and Electronic Engineering (EEE) started its journey at the year of 2004. The EEE department started its journey in Fall 2004 semester with an enrollment of a few students only. The number of students of the department is gradually increasing in every semester and at present the department has more than 723 students. At present the department has of 35 well qualified and experienced faculty members and 2 TA. The Department already produced 929 graduates. The journey to become an eminent place of learning is inspiring and exciting. The whole faculties share these excitements and are working to make the department truly a center of excellence. The long-term goal of the EEE department is to become a major center of higher education and research in Electrical and Electronic Engineering both nationally and internationally. The department is modeled to provide excellent teaching and research facilities for students with teachers of the highest quality along with well-equipped and spacious classrooms with modern instructional tools, library, laboratories and research centers in

various branches of Electrical and Electronic Engineering. The department already has the necessary faculty, classroom and laboratory facilities to run simultaneous undergraduate and graduate programs.

Vision and mission of the Department as stated in the SAR are:

Vision

The vision of Electrical and Electronic Engineering Department at University of Asia Pacific is to reach at an educational excellence in full compliance to the international standards of quality assurance. The Department will produce quality graduates capable of taking the challenges of the rapidly changing field of Electrical and Electronic Engineering as well as capable of making significant contribution to individual and societal empowerment.

Mission

The mission of the Department of Electrical and Electronic Engineering at University of Asia Pacific is to:

1. Provide quality education at an affordable cost in the areas of Electrical and Electronic engineering.
2. Enhance the competitiveness of our graduates in the job market and contribute to the economic, scientific and social development of the country.
3. Maintain a positive academic environment that promotes excellence in learning and research through constructive interaction between students, faculty, industry and community.
4. Utilize the available resources to instill latest technical knowledge and research capabilities that encourage critical thinking, problem solving skills and ethical responsibility as well as develop students' verbal and written communication skills.

2.3 Aims, Objectives and Learning Outcomes

The Department of Electrical and Electronic Engineering aims to provide theoretical and practical education of the highest quality in this field to prepare its graduates with the necessary skills to serve both nationally and internationally as worthy professionals, academicians and researchers.

Program Education Objectives

The academic programs in EEE Discipline offer opportunities for students to develop and demonstrate knowledge, understanding capability, professional qualities and research skills in three major fields of knowledge including Electronics, Power and Communication Engineering. Few years after successful graduation from this program, students are expected to attain following abilities in their early career:

PEO-1: Apply their Engineering knowledge and up-to-date skills to assume positions of technical leadership in performing Professional work in Electrical and Electronic Engineering.

PEO-2: Pursue their career through post-graduate education or professional activity and engage them in independent and life-long learning in the broadest context of technological change

PEO-3: Develop Electrical and Electronics Engineering solutions, maintaining high ethical standard and considering design criteria, realistic constraints, economic, environmental and social impact of the solutions

PEO-4: Work either individually or through interdisciplinary teams and communicate effectively using graphic, verbal and written techniques to explain and defend their solutions to technical and non-technical audiences

Program Learning Outcomes

PO 1 Engineering Knowledge

Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO 2 Problem Analysis

Identify, formulate, research literature and analyze complex engineering problems searching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

PO 3 Design/ development of solutions

Design solutions for complex engineering problems and design systems, components and processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations.

PO 4 Investigation

Conduct investigations of complex problems using research based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.

PO 5 Modern Tool Usage

Create, select and apply appropriate techniques, resources and modern engineering and IT tools, including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO 6The Engineer and Society

Apply reasoning informed by contextual knowledge to assess the societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.

PO 7 Environment and Sustainability

Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.

PO 8 Ethics

Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.

PO 9Individual and Team work

Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.

PO 10 Communication

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.

PO 11Project Management and Finance

Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and multidisciplinary environments.

PO 12 Lifelong learning

Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context to technological change.

Chapter 3: External Peer Review Outcomes

Descriptors of the Review Findings

The findings of the peer review are presented under the following descriptors:

Commendation	Those that the program offering entity (POE) is doing well and should be recognized.
Affirmation	Those that the POE has started or aspires to achieve that are positive and should be developed, enhanced and continued.
Recommendations	Those that the POE should give serious attention for improvement.

General Comments

Commendations:

a) The review was well organized under a structured site visit schedule with confidentiality and transparency.

b) The IQAC and the Department took great efforts to ensure the comfort of the peer reviewers and a smooth flow of the review exercise.

A**ffirmations:**

a) The SAR was written clearly and succinctly, with relevant analysis of the survey data.

Major Observations

3.1 Governance

Commendations

a) The University and Department have the organizational structure with defined responsibilities of the key players of governance system in compliance with the Act under which the university is established.

b) The central administration and statutory bodies like the Syndicate, Academic Council are the powerful actors in university's governance system. The players involved in ensuring the governance at the university include all the administrative layers from office of the Vice Chancellor to the Head of the Departments and administrative offices like Registrar, Controller of Examinations and so on. To ensure good governance university has the Finance Committee, Purchase & Procurement Committee, staff selection committee and committee to handle issues like sexual harassment.

c) Faculty members are sincere and work as a team.

d) Program management with strictly maintained academic calendar is commendable.

e) Vision and mission of the Department are defined.

f) The Department provides prospectus, which contains description of academic program, academic rules, examination and grading system, course contents, course outlines, name of reference books etc.

g) Program learning outcomes are defined and well-communicated.

h) Code of conduct and disciplinary rules for the students is defined and communicated.

i) The University has well-designed website with recently updated information, which contains information relating to the university administration and academic programs with easy access to the stakeholders.

j) The EEE Department did the mapping between these POs with the PEOs using standard format. The Department also did mapping between courses and POs so as to show how those POs will be addressed during 4 year of this program through different courses.

k) Departmental Committee meeting minutes documented and circulated properly.

l) At the program level, the Head of the Department is the academic leader. Within the structure and set rules of the university Head of the Department is enjoying sufficient autonomy to monitor the progress of academic activities regularly and to make faculty members accountable and responsible to their assigned responsibilities.

Affirmations

a) Vision of the University is defined. But needs to revisit with appropriate wording to make these more meaningful showing the bigger picture. Currently defined mission of the university sounds like objectives. Mission of the University statement may be re-organized with appropriate wording.

b) IT based university automation system is on-going. Documentation, management of programs and other academic and administrative activities including library management need to bring under the IT based university management system. This may be effective for better governance.

c) IT based student feedback collection system is in place.

Recommendations

a) Vision and mission of the Department could be displayed prominently at the Department, which would make the internal stakeholders and visitors well-informed and aware about the subject.

b) The Department may have some defined objectives and values to support the achievement of vision and mission.

c) Peer observation and feedback process may be formalized with proper documentation.

d) The University may develop ethical guidelines for the staffs.

3.2 Curriculum Content, Design and Review

Commendations

a) The Department has a well-defined procedure to design and review the curriculum.

b) Program education objectives and program learning outcomes are well-defined.

c) In respect of the program learning outcomes curriculum alignment or skill mapping is commendable.

d) Course load is affordable to the students.

e) A few interdisciplinary and non-engineering courses are included in the curriculum, which are relevant and supporting holistic development, mobility and employability of the graduates.

Affirmations

a) The EPR team observed that the Department reviewed the existing curriculum and proposed a revised curriculum for approval. But the use of students, employer and alumni feedback on curriculum need to be formalized in curriculum review.

Recommendations

a) Representatives of employers and alumni need to be included in the curriculum committee.

b) Program learning outcomes and course learning outcomes need to be aligned properly with teaching-learning and assessment techniques. The whole exercise needs to be documented properly.

c) It is recommended to mention the learning outcome/s for each of topic side by side instead of stating them separately.

d) From the course curriculum, it is found that total 152.5 credits are required to complete in order to obtain a degree of Bachelor of Science in EEE. Out of 152.5 credits, 80 credits (52.46% of total credits) are for core courses (mandatory courses of EEE), 22.5 credits (14.75%) are for elective courses of EEE, basic science subjects carry 23.5 credits (15.41%), general education i.e., non-engineering coursestake14 credits (9.18%), interdisciplinary courses take 6.5 credits (4.26%), and finally thesis/project is 6 credits (3.93%).Each theory course is of 3.0 credits or

4.0 credits and each sessional course is only 1.5 credits. There are good number of courses from electrical power, electronics and telecommunication groups. Furthermore, there are courses on DSP, VLSI, control system, and biomedical engineering. It is highly recommended to increase the number of courses for core subjects of EEE. Each theory course should not be more than 3.0 credits irrespective of the category of course. Total credits may be increased to around 160.

e) In the core courses, Chemistry, Telecommunication Networks, Wireless Communications, Numerical Methods (now optional), Measurement and Instrumentation (now optional), Solid State Devices, Power Electronics (now optional), Embedded Systems can be included. Furthermore, courses on Renewable Energy, Big Data and IoT can be introduced as optional courses.

3.3 Student Admission, Progress and Achievements

Commendations

a) Admission requirements are well defined and well-communicated.

b) Full transparency is maintained with equal opportunity to all aspirants.

c) The University maintains the record of the progress for each student to be eligible for graduation and other credentials.

d) The Department maintains progress and achievement records of the students. Initiative is in place to identify and take care of the slow learners using such information.

Affirmations

a) The Department maintains progress and achievement records of the students. But no provision or initiative is in place to use such information in review of curriculum or teaching learning practices.

Recommendations

a) The University may review the admission criteria and admission process toselect the right candidates for the programs.

3.4 Physical Facilities

Commendations

a) The university has a central library with connectivity for online resources.

b) Central library has total 19,797 books, out of which 3020 books for the EEE Department.

Affirmations

a) Internet connectivity is in place but speed needs to be enhanced.

b) The Department maintains Lab manual and safety measures.

c) Online access to digital content of different publishers available through BAS is appreciating. But these are not sufficient for research and development activities. The access to digital content of reputed journal/e-book publishers like Nature, IEEE, OSA, ELSEVIER, SPIE etc. is necessary.

d) Classrooms for theory courses are equipped with multimedia projector and whiteboard. The space in a room is suitable for around 40 students. The acoustic quality is acceptable. However, the whiteboard is partially visible from the back side of the room. Projector screen should be provided.

e) There are 10 Labs in the department. Each lab has a good number of experimental setups/modules for around 20 students at a time. More fundamental and advanced equipment/modules on electrical machines, telecommunication, power electronics, control systems, biomedical engineering and measurement and instrumentation can be introduced in the labs.

f) It is much appreciating that there are a Computer Room and a Project Room with a 3D printer facility. However, further high speed computing facility can be introduced with high speed Internet and more software and hardware facility for the Project Lab.

g) The library has a good number of text/reference books on different subjects of EEE.It has limited access to digital store of e-books/journals through BAS. Full automation of the library along with access facility from in and outside of campus is recommended.

h) There is an indoor health care facility at the Medical Center with limited medicine capacity.

i) Students have some indoor game facilities within the campus.

Recommendations

a) Cubical type seating arrangements for the Lecturers and Assistant Professor are not suitable for effective teaching-learning environment. Seating arrangement for the faculty members need to be enhanced to support the formalized academic guidance and counseling to the students. In addition, a common room is suggested for all the faculty members having facility of indoor games and refreshments etc.

b) University Library may be connected with UDL of UGC to make use of huge online resources.

c) The Simulation facilities in Simulation Lab may be improved with more simulation tools and high speed computers.

d) The experimental equipment/modules in different Labs may be updated and improved with latest technology with more number of set-ups.

e) More Labs may be provided dividing the single lab containing several different sessional courses

f) University canteen should have washing room facilities.

g) The price of foods in the cafeteria should be less than outside.

h) More space may be given for non-academic members for their office, they may have training facility, health care facility, health insurance facility etc.

3.5 Teaching, Learning and Assessment

Commendations

a) The Department maintains very good student performance assessment criteria.

b) It is observed that classroom teaching is interactive with use of technology supports.

c) The Department maintains a process to identify the slow learners or the reluctant students and to make them sincere about academic preparation accordingly.

d) Class size in terms of number of student is very good for interactive teaching learning.

e) Thesis evaluation includes external examiner.

Affirmations

a) Randomly reviewed examination question papers show that in many cases significant emphasis is given on higher order of thinking skills (HOTS).

b) Course teachers use course plan. But course plan may specify teaching learning and assessment techniques with appropriate alignment.

c) University organizes ELPC orientation program for the newly enrolled students, which to some extent helping students to follow the teaching learning practices.

d) There is a prescribed format for writing the dissertation. However, all the students should follow that standard format consistently.

e) Lab sheets for each sessional course are maintained. Number of experiments of a sessional course is considerable. However, it is suggested to reduce number of experiments on the same topic.

Recommendations

a) Initiative may be taken to bring the recognized and competent industry practitioners as honorary/adjunct faculty to support teaching and learning and bridge the gap between academia and industry. Such initiative would provide the students with new ways of thinking and learning with practical orientation.

b) To support practice oriented teaching learning and to make familiar with the industry problems the Department may take the initiative to increase industry visit for the students on a regular basis.

c) The Department may use separate rubrics for assessment of thesis/project papers and other tests and examination papers.

d) Teaching learning practices may have a little more emphasis on the basic electrical knowledge, presentation and communication skills.

3.6 Student Support Services

Commendations

a) Each student is given attachment to a teacher who acts as academic guide. This helps the student throughout the academic process of the course.

b) Currently, 16 clubs are working to organize co-curricular and extra-curricular activities centrally.

c) Co-curricular activities recognized with budgetary provision on a regular basis.

d) DSW office is conducting the co-curricular and extra-curricular activities of the students. These activities are being performed by the office and different clubs under this office. There are also some clubs under the administration of Department of EEE. DSW office is organizing many other activities like grooming session for career, Youth Engagement and Support program in collaboration with TIB etc.

Affirmations

a) The academic group advisors provide timely consultation to the students.

b) Academic guidance and counseling is formalized. But need to be documented properly.

c) Provision of tuition fee waiver on the basis performance and to attract quality students.

d) Medical facilities are being provided to the students inside the campus. One male and one female physician are available for the students during the class hour. However, the medicine facility should be improved.

e) Plan to purchase an ambulance for medical emergency is appreciating.

Recommendations

a) The Department needs to take the initiative to form Alumni Association. Experience and strength of the Alumni need to be used for capacity building and improving the curriculum on a regular basis leveraging the university industry collaboration (UIC).

b) The Department may take initiative to engage students with community services in a planned manner.

c) University may have a career counseling and placement cell, which can work for the final placement, industry attachments and the industry visits.

d) The Office of the Directorate of Students' Welfare (DSW) and University Medical Centre jointly may organize orientation and awareness programs on health, food safety, hygiene, vaccination etc.

e) EEE Department may organize workshop or training on entrepreneurship to provide hands on experience. Such initiative may be effective to change the mindset of graduates from job seekers to job creators and motivate them towards entrepreneurial career.

f) DSW office can maintain the relation with alumni and coordinate the alumni activities in the campus.

g) The Office of the Directorate of Students' Welfare (DSW) and University Medical Centre jointly may organize orientation and awareness programs on stress management, food safety, hygiene and vaccination.

3.7 Staff and Facilities

Commendations

a) The Entry qualification and recruitment policy for both academic and non-academic staffs follows the general guideline of recruitment policy of the university.

b) The Department has qualified faculty members with a good academic track record and research based higher degrees.

c) Teaching performance evaluation by the students on a regular basis is in place.

Affirmations

a) Existing KPIs are well-defined and well-communicated. But KPIs need to be revised with inclusion of some new KPIs to make the staffs more sincere and committed.

b) University organizes need-based training programs like ILTS and OBE for the faculty members. Such programs may be organized through a well-established staff development center under a clear policy. Staff development training may be considered as one of the key performance indicators (KPIs).

Recommendations

a) At present, two Professors, two Associate Professors, eighteen Assistant Professors and thirteen Lecturers are working in the EEE Department. Out of this 35 (thirty five) faculty members of EEE department, only five of them have PhD degree. Remaining thirty members are with M.Sc. or only B.Sc. degree. University may take initiative to recruit a few experienced faculty members at the senior level like Associate Professor and Professor with PhD.

b) Quality of education may be enhanced by appointing experienced faculty from other renowned universities as a visiting professor/guest teacher.

c) Now the teacher student ratio is 1:20 in the Department of EEE. This ratio is suggested to reduce to a reasonable level.

d) The university may take initiative of group or health insurance facilities for both academic and non-academic staffs to provide financial support in case of major health problems.

e) Non-academic staffs may have some sort of financial incentive on the basis of extra workload and performance.

f) University may have a provision for payment of fees for the membership of professional association.

3.8 Research and Extension

Commendations

a) The Department has very good research capacity.

b) Faculty members have a good number of publications in reputed journals.

c) University has a provision of funding research activities run by the faculty members.

Affirmations

a) Currently research outcomes are disseminating through published articles. But the Department may have a system and policy to disseminate and transfer the research findings through extension services to the community.

b) There is a good number of publications by the faculty members, mostly conference papers and some journal papers (as published in 2016 and 2017). Publishing journal papers with good impact factor and reputed journals having index are recommended. The university website could be used to show such activities of the teachers individually.

Recommendations

a) Implement reward system to encourage academics for achieving excellence in research and outreach activities.

b) University may encourage faculty members for patentable research with well-defined research policy and legal supports.

3.9 Process Management and Continuous Improvement

Commendations

a) An IQAC has been formed as enabling framework for QA practices at the university.

b) IQAC is found to be very active to support the Departments for conducting self-assessment exercise.

Affirmations

a) The Department defined the course learning outcomes in the revised curriculum to adopt OBE.

b) The Department identified the SWOT for strategic improvement plan.

Recommendations

a) Formation of an International Advisory Council may be effective to get insights on the emerging and contemporary issues relating to the discipline.

b) Formation of an Industrial Advisory Council may be effective to establish the foundation of university industry collaboration (UIC) and to get insights on the emerging needs of the industry and contemporary issues.

c) Peer observation may be formalized, which may be useful to improve the performance of staffs.

d) Based on the finding of SA exercise the Department should develop a strategic improvement plan in respect of identified SWOT.

e) The Department may take the initiative to encourage staffs and the students for exchange under MoUs with other reputed universities and organization beyond the national boundary.

f) The Office of the Directorate of Students' Welfare (DSW) may take initiative to monitor student satisfaction of the various facilities provided throughout the university, such as medical, canteen, sports, Internet, counseling/advising facilities, printing-photocopy facility etc.

g) The Department may develop a set of indicators of excellence in teaching and research to evaluate performance of faculty members and the Department as well.

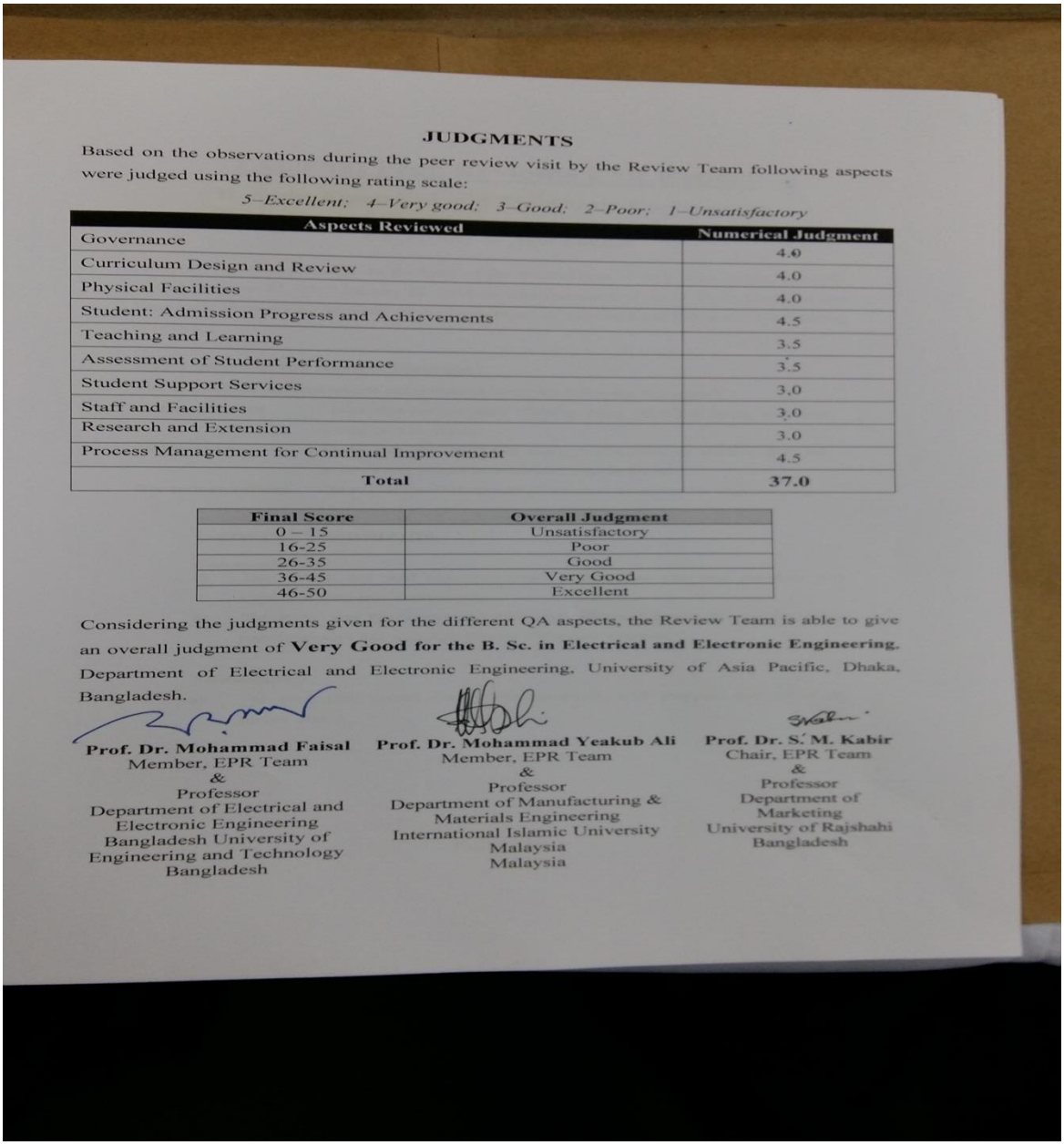
Chapter 4: Conclusion and Judgment

4.1 Conclusion

This report is prepared with the view to support the QA activities in the Department of Electrical and Electronic Engineering (EEE), University of Asia Pacific. The external peer review team members wish to recognize the considerable interest of the Department of EEE, UAP towards quality assurance in education. There are some identifiable and commendable good practices at the Department of EEE, which may be considered as pockets of excellence. However, after deep study of the SAR, observations and interactions with the representatives of stakeholders, the EPR Team has identified a few areas for further improvement towards quality assurance in education. The PSAC will now be required to review this report and incorporate the findings into the Improvement plan. It is true that everything cannot be done overnight. But considering the strengths and weaknesses, the Department should set priority with achievable benchmark for sustainable quality assurance and continual improvement culture. For better implementation, the improvement plan may be divided into components with specific timeline. But it is important that timelines remain reasonable and achievable.

The University is committed in providing quality education in Bangladesh. The promoters have provided very good facilities and have given enough autonomy to the administrators to run the University efficiently. The university attained a certain level of academic excellence, which is commendable. Now, in order to make a name for itself and to grow beyond Bangladesh the University should free up faculty time for patentable research, consultancy and industry interactions. The community service also may be improved with clear focus on solving the local problems. It was apparent that the honorable Vice Chancellor is committed to support the QA efforts taken by the Department and develop the facilities needed for effective teaching-learning. The EPR Team observed that the academic and non-academic staffs are also sincere to adopt standard good practices. The EPR Team believes that through effective co-ordination and commitment the Department of EEE, UAP in near future will become a **center of excellence** in the region.

4.2 Judgment



JUDGMENTS

Based on the observations during the peer review visit by the Review Team following aspects were judged using the following rating scale:

5–Excellent; 4–Very good; 3–Good; 2–Poor; 1–Unsatisfactory

Aspects Reviewed	Numerical Judgment
Governance	4.0
Curriculum Design and Review	4.0
Physical Facilities	4.0
Student: Admission Progress and Achievements	4.5
Teaching and Learning	3.5
Assessment of Student Performance	3.5
Student Support Services	3.0
Staff and Facilities	3.0
Research and Extension	3.0
Process Management for Continual Improvement	4.5
Total	**37.0**

Final Score	Overall Judgment
0 – 15	Unsatisfactory
16-25	Poor
26-35	Good
36-45	Very Good
46-50	Excellent

Considering the judgments given for the different QA aspects, the Review Team is able to give an overall judgment of **Very Good for the B. Sc. in Electrical and Electronic Engineering**, Department of Electrical and Electronic Engineering, University of Asia Pacific, Dhaka, Bangladesh.

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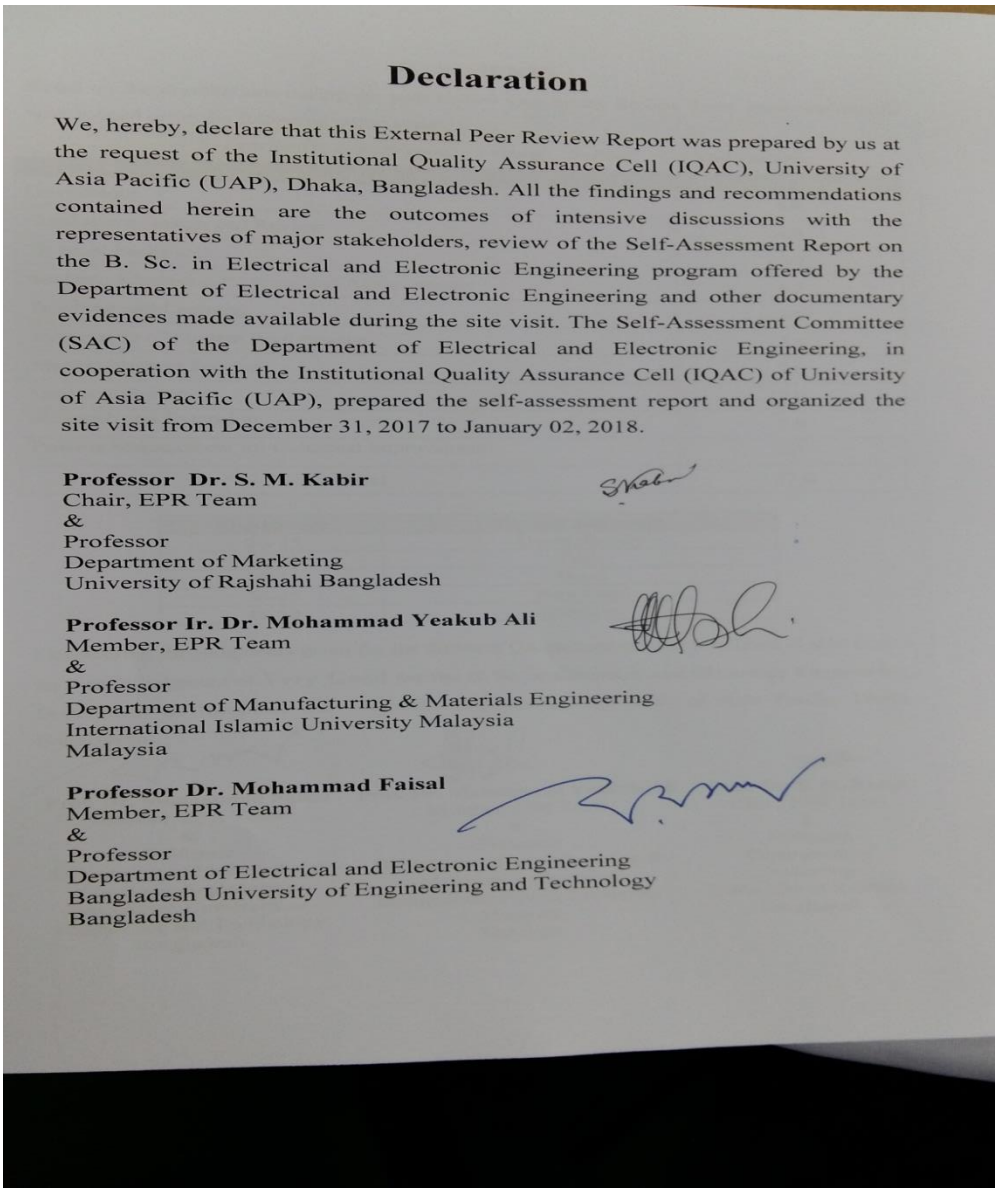

Declaration

We, hereby, declare that this External Peer Review Report was prepared by us at the request of the Institutional Quality Assurance Cell (IQAC), University of Asia Pacific (UAP), Dhaka, Bangladesh. All the findings and recommendations contained herein are the outcomes of intensive discussions with the representatives of major stakeholders, review of the Self-Assessment Report on the B. Sc. in Electrical and Electronic Engineering program offered by the Department of Electrical and Electronic Engineering and other documentary evidences made available during the site visit. The Self-Assessment Committee (SAC) of the Department of Electrical and Electronic Engineering, in cooperation with the Institutional Quality Assurance Cell (IQAC) of University of Asia Pacific (UAP), prepared the self-assessment report and organized the site visit from December 31, 2017 to January 02, 2018.

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Annexure - 1

Department of Electrical and Electronic Engineering
External Peer Review Site Visit Schedule
Date: December 31, 2017 to January 02, 2018

	Time	Activities	Venue
Day1; December 31, 2017	09:00 AM - 09:30 AM	Arrival & Meeting with the IQAC	IQAC Office
	09:30 AM – 09:45 AM	Introductory Meeting with the Head of the Department & PSAC	Entity Office
	09:45 AM – 10:00 AM	EPR Team Meeting	Entity Office
	10:00 AM – 10:30 AM	Presentation by IQAC on UAP	Conference Room
	10:30 AM – 11:20 AM	Meeting with PSAC: Presentation on SAR by PSAC	Conference Room
	11:20 AM – 11:45 PM	**Tea Break**	Conference Room
	11:45 PM – 01:00 PM	EPRT Meeting with the Academic Staffs	Conference Room
	01:00 PM – 02:00 PM	**Prayer and Lunch Beak**	
	02:00 PM – 02:45 PM	Class Teaching Observation by EPR Team	
	02:45 PM – 03:15 PM	EPRT Meeting with the Non-Academic Staffs	Conference Room
	03:15 PM – 04:15 PM	EPR Team Meeting with the Students	Conference Room
	04:15 PM – 05:00 PM	Physical facilities visit by the EPR Team	
Day 2; January 01, 2018	09:00 AM – 10:00 AM	Review of Documents by the EPR Team	Entity Office
	10:00 AM – 11:15 AM	EPR Team Meeting with the Registrar	VC's Conference Room
	11:15 AM – 12:15 PM	EPR Team Meeting with Honorable VC & Pro VC of UAP	VC's Conference Room
	12:15 PM – 01:15 PM	Visiting Physical facilities	
	01:00 PM – 02:30 PM	**Prayer & Lunch Break**	
	02:30 PM – 03:00 PM	EPRT Meeting with Librarian	Conference Room
	03:00 PM – 04:00 PM	EPRT Meeting with Alumni	Conference Room
	04:00 PM – 05:00 PM	EPRT Meeting with the Employers	Conference Room
Day 3; January 02, 2018	09:00 AM – 10:00 AM	Review of Documents by the EPR Team	Conference Room
	10:00 AM – 11:00 AM	EPR Team Meeting with the DSW	DSW Office
	11:00 AM – 01:00 PM	EPR Team Meeting for Preparation of Exit Report	Conference Room
	01:00 PM – 02:30 PM	**Prayer & Lunch Break**	
	02:30 PM – 03:30 PM	EPR Exit Meeting with IQAC, Head, PSAC and Faculty Members	Conference Room
	03:30 PM – 04:30PM	EPR Exit Meeting with IQAC	Conference Room
	04:45 PM	Closing of Site Visit	