QEC GAZETTE
2016 - 17

QUALITY ENHANCEMENT CELL
AIR UNIVERSITY, ISLAMABAD

Sector E-9 (PAF Complex), Islamabad, Pakistan.
http://www.au.edu.pk/qec/

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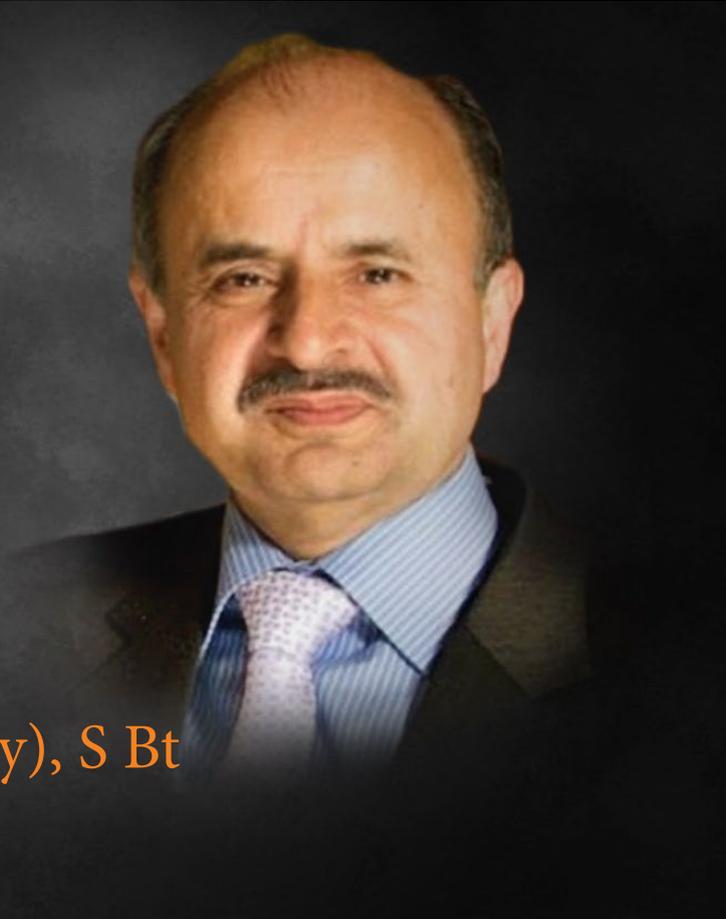Air Commodore (R) Abdul Wahab Motla

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FAAIZ AMIR
Air Vice Marshal (R)
Hilal-e-Imtiaz (Military), S Bt

Air University within fifteen years has emerged as comprehensive Higher Education Institution with 34 programs in Engineering, Administrative Sciences, Social Sciences, Applied Sciences, Aerospace Sciences, Strategic Studies and Health Sciences.   University aspires to be among the leading national universities and has acquired 8th position in engineering category of HEC ranking 2015. Our Quality Enhancement Cell has played a pivotal role in achievements of University milestones. Initially QEC role was limited to Internal Quality Assurance (IQA) mechanism through Self Assessment of programs but gradually it was enhanced by involving into the processes of Accreditation Self Study, subjective evaluation of faculty, preparation of Pakistan Qualification Register (PQR) and internal audit of documents to assure quality in each academic and administrative process. We are making all efforts to create Quality Culture where attitude and skills of teachers are enhanced and students are motivated to learn. QEC plans and organizes faculty development through Professional Competency Enhancement Program for Teachers (PCEPT) on the input from student's feedback and Chair Department's recommendations to enhance teaching skills. While University is consolidating its existing programs and focusing on quality of teaching, learning and research, it is also vigorously pursuing its expansion to enhance accessibility in higher education as envisaged by Government of Pakistan in Vision 2025. Air University has established new campus at Pakistan Aeronautical Complex Karma (AU Aviation and Aeronautical Complex) and started MS Aerospace and Avionics programs to support national aviation industry. All Engineering programs at University are engaged in multidisciplinary research and have adopted Outcome Based Education (OBE) methodology in teaching and evaluation. It will not only enhance knowledge and skills of students but also provide better job opportunities to our graduates in Pakistan and abroad. University stands committed to create knowledge and contribute positively in development of prosperous, peaceful and enlightened society through soft strengths.
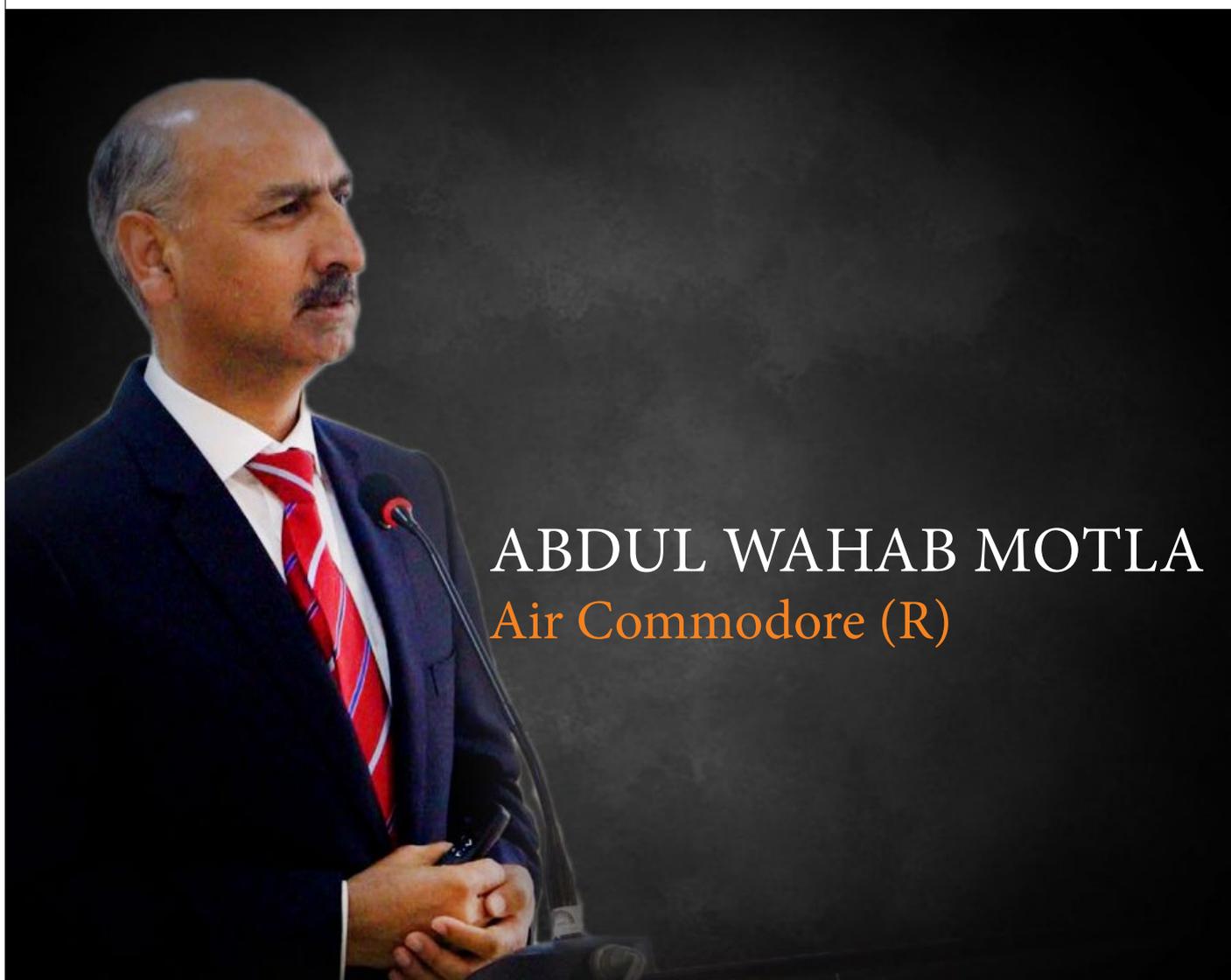
ABDUL WAHAB MOTLA
Air Commodore (R)

Air University is a dynamic community of students, teachers and staff committed to perform their duties at the highest standards. To assure quality of teaching, learning and research, academic processes at university are monitored, evaluated and periodically reviewed to identify gaps and make improvements by taking corrective actions. The university has automated system to take feedback from Internal and External stake holders to improve upon teaching skills and curriculum. Air University is shifting from normal accreditation process to Outcome Based Education (OBE) in engineering programs which will harmonize the Air University degrees with International standards. We are also focusing on academia- Industrial linkages to synergize academic activities with Government and industry to provide knowledge based economy. University equally gives importance to wellbeing of students, staff and faculty through different committees to strengthen culture of community services and develop soft strengths and inculcate social values, empathy and creativity to become better citizens. The Quality Management system at university is being managed through Quality Enhancement Cell (QEC) which comprises of Internal Quality Assurance (IQA) mechanism at University and External Quality Assurance (EQA) through accreditation bodies, Higher Education Commission and Third party visits. We at university are making all efforts to shift from normal Quality management system to Quality culture in which attitudes and skills of teacher are enhanced and students are motivated to learn. Quality Enhancement Cell has acquired highest category "W" with score of 93.33 during quantitative assessment by HEC in 2016 and aspiring to improve quality of teaching, learning and research.

OVER VIEW OF QA SYSTEM AT UNIVERSITY

Quality Enhancement Cell (QEC) was established at Air University in 2010 to assess, assure, monitor and manage quality of educational programs in the light of HEC defined criteria and standards. QEC strives hard to achieve its vision and Mission with all out support from Vice Chancellor . We at Air University are devoted to bring excellence in teaching and research by implementing process control effectively and develop faculty through continuous training and interacting with industry. QEC is making all its efforts to implement quality criteria and Institutional Performance Evaluation Standards (IPEs) defined by HEC. University management is not just aiming to implement these standards but also trying to create quality culture within the institution, where all stakeholders can communicate through top-down and bottom-up interaction and enjoy the combination of cultural elements, structural dimensions and shared values.

Quality Enhancement Cell (QEC) Officials

Air Commodore (Retd.)
Abdul Wahab Motla
Director Quality

Ayesha Nayab
Data Analyst QEC

Shjia Gul
Assistant Director QEC

MILSTONES Achieved by QEC 2016-17

▶ Acquired Highest 'W' category in 2016 during quantitative assessment for ranking by HEC

▶ Self-Assessment Reports of 32 Programs have been developed out of total 34 programs.

▶ Internal assessment for 32 programs in nine departments has been conducted.

▶ Developed a quarter-wise activity calendar, trainings and awareness sessions for faculty and staff on different areas of Quality Assurance.

▶ QEC conducted student's feedback on teachers and curriculum evaluation for spring and fall semesters in 2016-17 and developed trend to identify areas for improvement by using advance data management techniques.

▶ QEC has organized training workshop for accreditation on OBE format at engineering departments

▶ QEC managed the data of Pakistan Qualification Register(PQR) and fed it on e-portal of HEC

▶ QEC conducted academic audits at each department to review the curriculum and identify the gaps for improvements.

QEC ACTIVITIES DOMAIN

Quality Enhancement Cell at Air University has two domains of working: Internal Quality Assurance (IQA) domain and External Quality Assurance (EQA) domain.

Internal Quality Assurance (IQA)

The IQA focuses on Self-Assessment by implementing quality criteria's defined by HEC and includes following:

- Accreditation Self-study for all accredited programs.
- Trainings and awareness sessions for faculty and staff at university
- Development and conduct of Academic Training Program
- Collection, compilation and provisioning of data to HEC for QEC and University ranking.
- Development of Self-Assessment reports of all programs and assessment reviews
- Implement anti-plagiarism policy in university.
- Self-Assessment of academic programs by internal/external specialists.
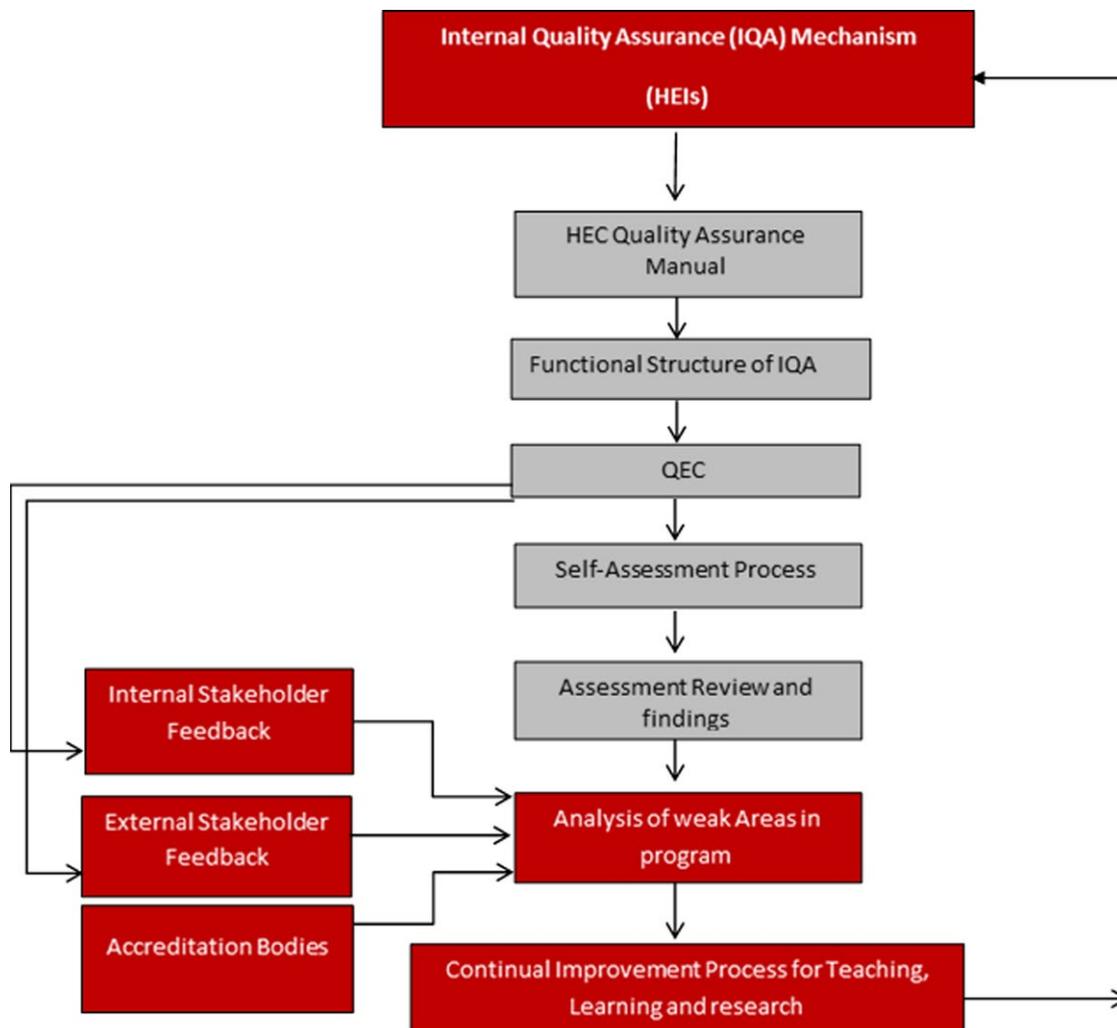
External Quality Assurance (EQA)

The EQA will include assessment by external agencies like accreditation bodies and HEC. QEC has managed external assessments through following bodies:

- IPE visits by HEC teams.
- Third Party Audit.
- MS/M.Phil./ PhD program review by HEC.
- Accreditation of programs.

INTERNAL QUALITY ASSURANCE MECHANISM LAYOUT

Functional structure of Internal Quality Assurance Mechanism at HEIs

- ▶ Establish Quality Management System to assess, monitor and improve teaching, learning and research at any HEI of Pakistan.
- ▶ Develop Self-Assessment Reports for each program.
- ▶ Develop standard operating procedures for implementation of Quality criteria and standards.
- ▶ Assess quality management system and processes in the light of criteria's and standards.
- ▶ Coordinate with departments, university management and HEC to effectively implement quality assurance system.
- ▶ Monitor programs through KPIs
- ▶ To collect data of program performance through internal and external stake holders and analyze to identify weak areas and make improvements.

EXTERNAL QUALITY ASSURANCE (EQA) MECHANISM

Higher Education Commission QAA has established credible and transparent system to assure quality of tertiary education through internal and external quality assurance mechanism. The Internal Quality Assurance (IQA) deals with processes inside universities and managed by Quality Enhancement Cells through Self-Assessment while external quality assurance (EQA) is managed through external bodies like accreditations councils and HEC evaluation and review committees to evaluate institutional performance and MS/MPhil, PhD programs. The accreditation bodies evaluate the performance of undergraduate programs through provisional and full accreditation. The provisional accreditation is an evaluation to determine whether program feasibility study of HEI meet minimum criteria's and standards before the program is offered while full accreditation is an evaluation to determine that program on delivery has met all criterion's and standards set for the purpose of full accreditation .The institutional performance evaluations (IPE) are done periodically by verifying data and information provided by university in the form of University Portfolio Report (UPR) in the light of IPE standards to assess that performance of academic programs and administrative support. The MS/MPhil and PhD reviews are done by HEC evaluation teams for graduate programs which has been established and operational. The program monitoring and review has a central role in ensuring Quality of teaching, learning and research in universities.

External Quality Assurance Mechanism

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│      BODIES      │           │  │     │       HEC        │
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│  BODIES VISITS   │  │                  │ │   IPE    │ │ MS/MPHIL/PHD │
│     REPORTS      │  └──────────────────┘ │ STANDARDS│ │    REVIEW    │
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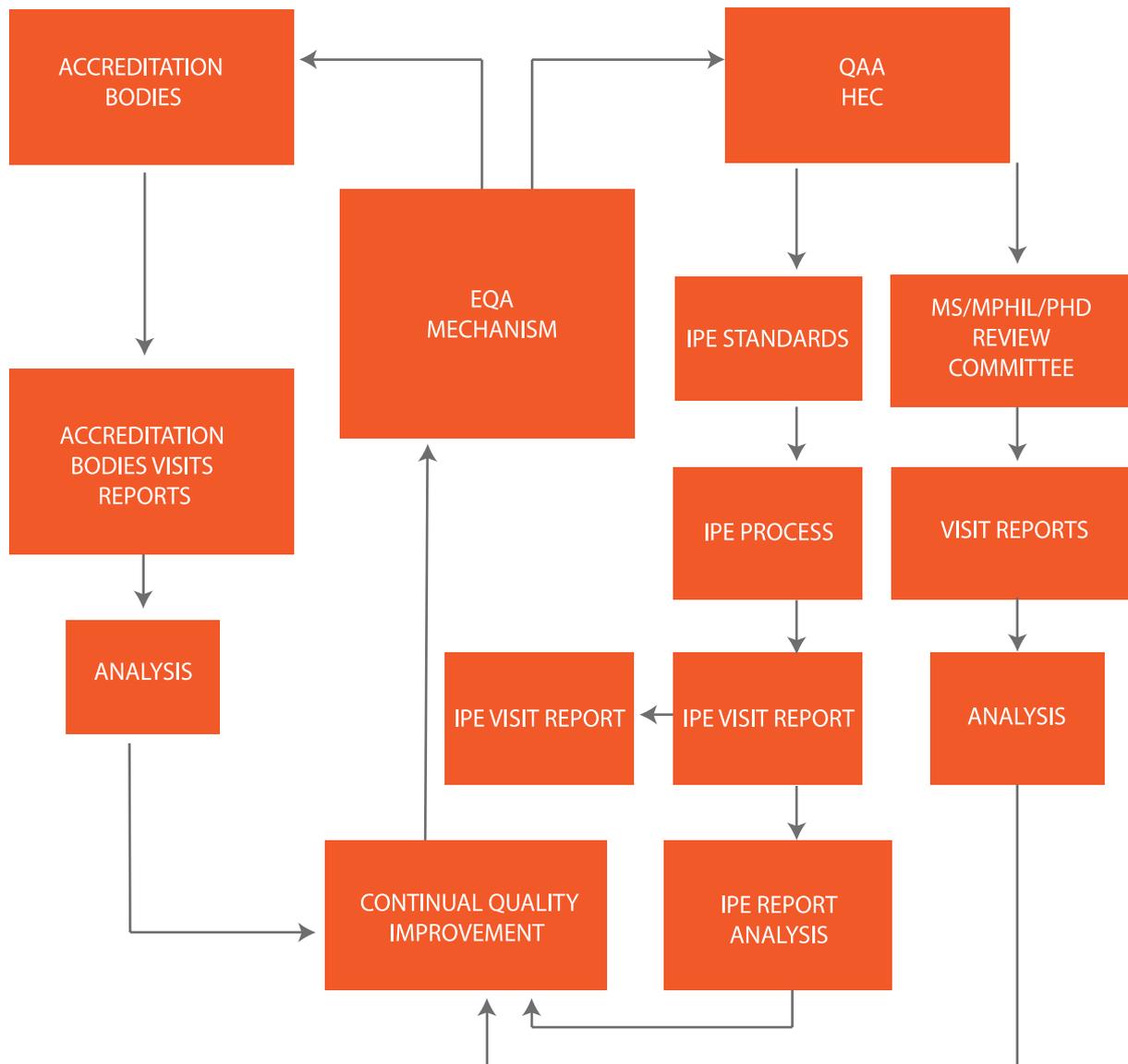
CONTINUAL QUALITY IMPROVEMENT (CQI) PROCESS

Teacher Evaluation by students at the end of each semester is an important feedback to improve upon quality of teaching methodologies and plan faculty development. Higher Education Commission (HEC) designed attributes and instruments for teacher evaluation in 2003 and included in eleven feedback proformas.
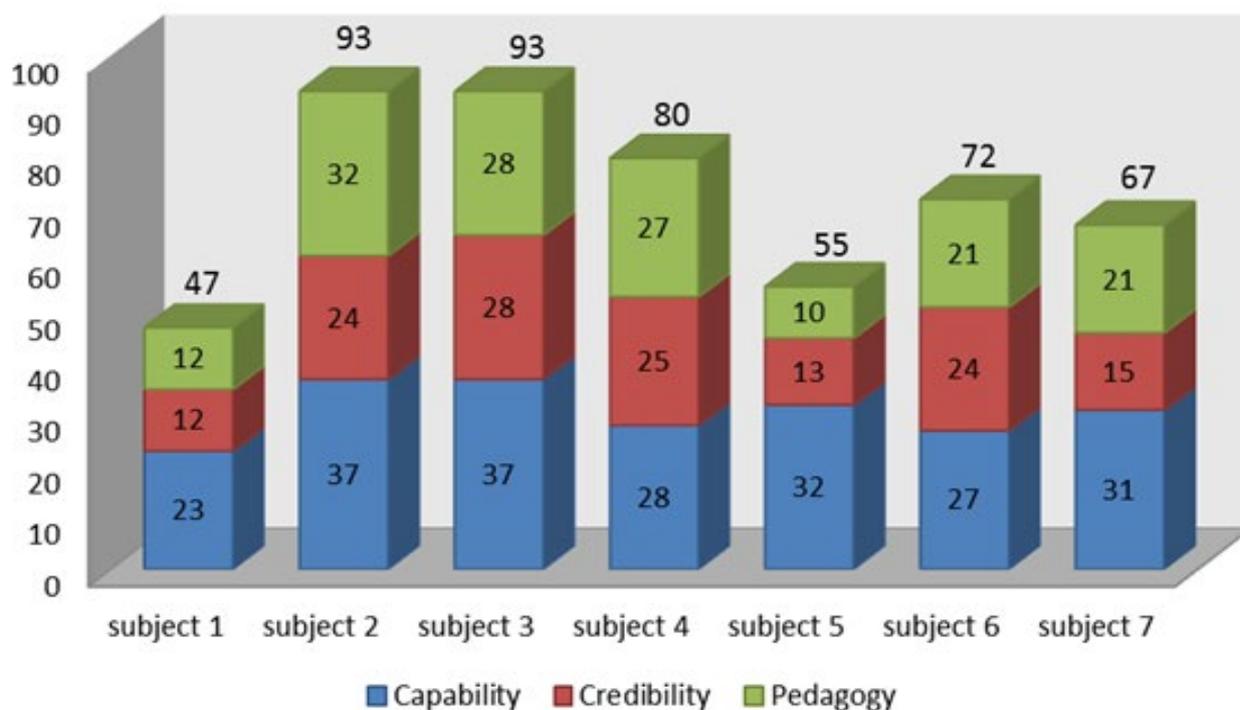

Teacher Evaluation Proforma (P-10) Improvement

Figure 1 Teacher Evaluation Proforma (P-10) Improvement

Air University has reviewed predesigned attributes and made teacher evaluation more realistic by giving weightages to each response and grouping attributes in three main domains as Capability, Credibility and Pedagogy. Likert Scale weighted averages method is used for analyzing the positive and negative responses of students against teachers' performance. Specific weight is assigned to each survey response option i.e. weight 4 is used for Strongly Agree, weight 3 is used for Agree, weight 2 is used for Disagree and weight 1 is used for Strongly Disagree. A stacked bar chart about subject taught by a teacher is shown in Figure 1.

Image of Performance Trend of Faculty Members

Sr. No.	TEACHER NAME	DESIGNATION	Spring 2014	Fall 2014	Spring 2015	Fall 2015	Spring 2016	Fall 2016	Spring 2017	SEMESTER TREND S14_S-17	DEPARTEMENT/ PROGRAM
1	Dr Ghulam Dastgeer	Assistant Professor	_	Sheet19!A1	Sheet504!A1	Sheet300!A1	Sheet236!A1	Sheet46!A1	Sheet578!A1	Sheet353!A1	Management Sciences
2	Mr.Khurram Ali Khan	Lecturer		Sheet17!A1	Sheet503!A1	Sheet301!A1	Sheet237!A1	Sheet65!A1	_	Sheet354!A1	
3	Dr. Faqir Muhammad	Professor	Sheet5!A1	Sheet7!A1	Sheet201!A1	Sheet506!A1	Sheet238!A1	_	_	Sheet9!A1	
4	Mr. Zeeshan Abbasi	Assistant Professor	Sheet11!A1	Sheet13!A1	Sheet501!A1			_	_	Sheet16!A1	
5	Mr. Rashid Younus	Assistant Professor	Sheet20!A1	Sheet22!A1	Sheet500!A1	Sheet304!A1	Sheet239!A1	Sheet106!A1	Sheet580!A1	Sheet25!A1	
6	Ms. Monal Ramzan	Assistant Professor	Sheet26!A1	Sheet28!A1	Sheet499!A1	Sheet305!A1	Sheet240!A1	Sheet110!A1	Sheet581!A1	Sheet31!A1	
7	Mr. Farooq Rasheed	Assistant Professor	Sheet32!A1	Sheet34!A1	Sheet498!A1	Sheet306!A1	Sheet241!A1	Sheet128!A1	Sheet582!A1	Sheet35!A1	
8	Dr. Nadeem Ahmad	Full Time Faculty	Sheet37!A1	Sheet39!A1	Sheet497!A1	Sheet307!A1			_	Sheet42!A1	
9	Dr. Wasim Shahid Malik	Researcher	Sheet43!A1	Sheet47!A1	_	_	_	_	_	Sheet49!A1	
10	Dr. Shahzan A. Rauf	Full Time Faculty	Sheet51!A1	Sheet52!A1						Sheet54!A1	
11	Fit Lt (R) Shakira Huma Siddiqu	Assistant Professor	Sheet60!A1	Sheet61!A1	Sheet493!A1	Sheet505!A1	Sheet243!A1	Sheet133!A1		Sheet63!A1	
12	Mr. Imran Hameed	Assistant Professor	Sheet64!A1	Sheet105!A1	Sheet492!A1	Sheet312!A1	Sheet244!A1	Sheet141!A1	Sheet583!A1	Sheet108!A1	
13	Mr Qaiser Rashid Janjua	Assistant Professor	Sheet44!A1	Sheet109!A1	_	Sheet313!A1	_	Sheet205!A1	Sheet584!A1	Sheet112!A1	
14	Mr Bilal Arshad Chaudhry	Lecturer	Sheet113!A1	Sheet114!A1	Sheet203!A1	_	_	_	_	Sheet116!A1	
15	Ms Fazaila Ali Qazi	Lecturer	Sheet117!A1	Sheet118!A1	Sheet489!A1	Sheet315!A1	_	_		Sheet121!A1	
16	Mr. Muhammad Akmal Pasha	Lecturer	Sheet122!A1	Sheet123!A1	Sheet488!A1	Sheet316!A1	Sheet245!A1	_	_	Sheet125!A1	
18	Mr. Muhammad Faisal Siddiqu	Assistant Professor	Sheet126!A1	Sheet127!A1	Sheet487!A1	Sheet317!A1	Sheet246!A1	Sheet534!A1	Sheet585!A1	Sheet130!A1	
19	Ms. Bushra Karim Mirza	Lecturer	Sheet131!A1	Sheet132!A1	Sheet486!A1	Sheet318!A1	Sheet247!A1	Sheet507!A1	Sheet586!A1	Sheet135!A1	
20	Dr. Mueen Aizaz Zafar	Full Time Faculty	Sheet3!A1	Sheet2!A1	Sheet485!A1	Sheet319!A1	_	_	_	Sheet4!A1	
21	Mr. Umer Ghauri	Lecturer	Sheet136!A1	Sheet137!A1	Sheet484!A1	Sheet320!A1	Sheet248!A1	Sheet508!A1	Sheet587!A1	Sheet139!A1	
22	Ms. Fakhra Mushtaq	Lecturer	Sheet140!A1	Sheet355!A1	Sheet483!A1		Sheet249!A1	Sheet509!A1	Sheet588!A1	Sheet356!A1	
23	Mr. Husain A. Babur	Full Time Faculty	Sheet357!A1	Sheet358!A1	Sheet482!A1	Sheet322!A1	_	_	_	Sheet359!A1	
24	Dr Abdul Rasheed	VFM			Sheet481!A1	Sheet323!A1				Sheet480!A1	

Figure 2 Students' Feedback Data

Air University has automated Students' Feedback mechanism and performance trend of faculty members is recorded at QEC. This data is shared with Chair departments for taking corrective actions and briefed to Vice Chancellor for planning faculty development. An image of Students' Feedback Data record is shown in Figure 2. Semester wise performance record of a teacher can be seen by a single click on respective cell. Overall Performance trend of teachers is also added in performance record which provides complete information about a teacher's performance over the semesters. Semester wise trend is shown in Figure 3.
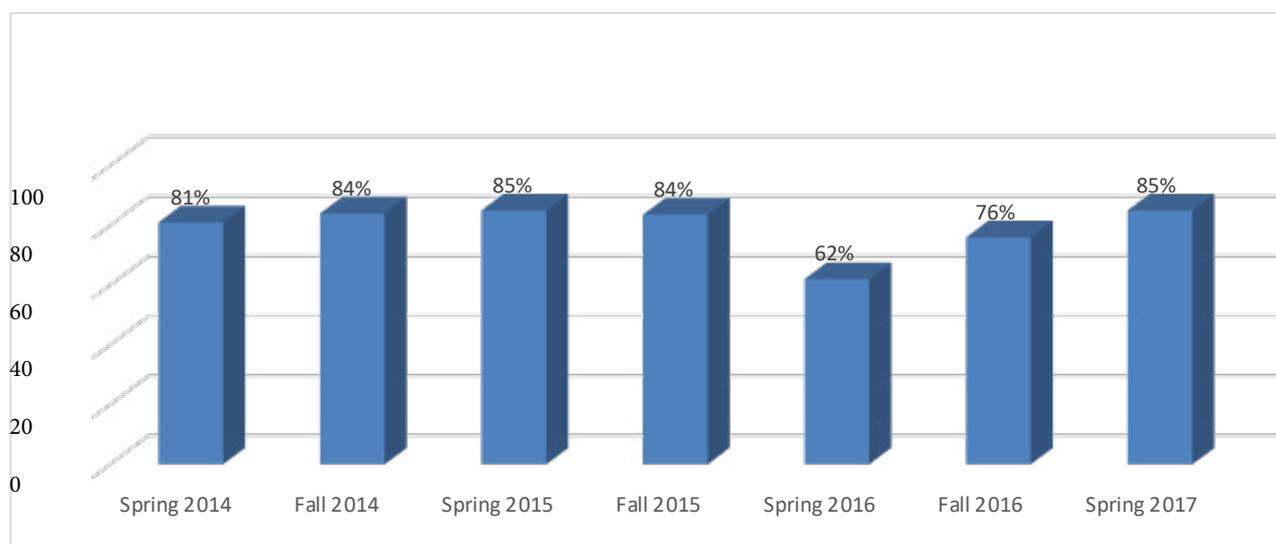
SEMESTER PERFORMANCE TREND

Figure 3 Semester wise Performance Trend of a faculty member

FACULTY DEVELOPMENT AND TRAINING OF STAFF

Development of Effective and Efficient Career Counseling Centre at Public Sector HEIs in Pakistan Organized by HRDC-HEC:

Air University management has focused on development of faculty and staff by organizing workshops/ seminars within university or at other organizations. HEC organized two days' workshop on establishment of Career Counseling Centers at HEIs. MS. Sana Hameed (Manager HR), Ms Tayyaba Kiran (HR Officer), Ms. Shjia Gul (Assistant Director-QEC), and MR. Amjad Mehmood (Acting Deputy Registrar) participated in the workshop and proposed strategic plans for establishment of Career Counseling Centers at HEIs.

AD QEC Ms. Shjia Gul receiving certificate from Executive Director HEC Dr Arshad Ali after the successful completion of workshop

Air University Team with the Representative of other Universities and Executive Director HEC at a workshop conducted by HRDC on Development of Career Counseling Centers at HEIs

Training workshop on Professional development for teachers teaching through medium of English was conducted at Air University.

Quality Enhancement Cell in coordination with Learning Innovation Division of HEC organized five days workshop on "Professional Development for Teachers, Teaching through Medium of English". A total of 19 faculty members from all departments participated. The training modules included "writing for academic and professional success, summary writing, proposal writing, avoiding plagiarism, class room management and qualities of research supervision".

Training workshop on Professional Development for Teachers, Teaching through Medium of English

Training Workshop on Outcome Based Education System

Outcome Based Education (OBE) system is an educational theory which is based on goals(outcomes) of programs . By the end of educational experiences each student should have achieved the goals. Outcome-based methods have been adopted in education system around the world. Air University organized one-day workshop on outcome based education for faculty and students and invited Prof. Ir Megat Johari Megat Mohd. Noor: who is the founder of Malaysia-Japan International Institute of Technology at UTM Kuala lumpur and Mr.Ir Ezlan Abdul Aziz is a senior lecturer at university of Putra Malaysia.
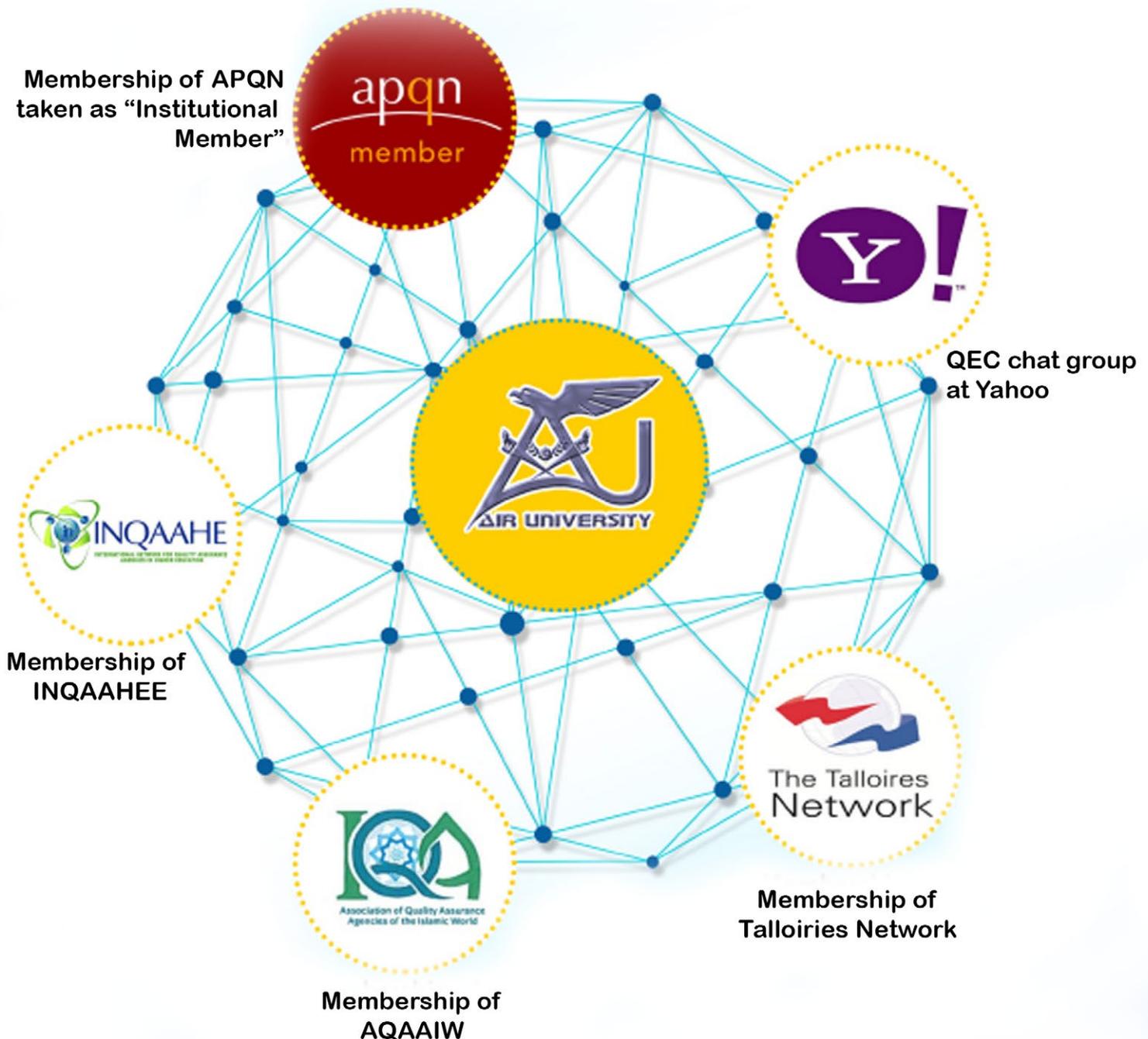
QEC CALENDAR 2017

**Quality Enhancement Cell Activity Calender
2017-2018
Air University Islamabad**

Sep-17	Oct-17	Nov-17
1. Self Assessment Report of B.Ed College of Education Peshawar. 2. Data compilation of QS Ranking. 3. Training of Staff. (IoT) 4. Orientation Session with students on Feedback system. 5. Compilation of University Ranking Data 2016/17. 6. Submission of QEC Ranking Data. (Sep-Oct)	1.Self Assessment Report of B.Ed Fazaia College of Education Peshawar. 2. Initiation and coordination of Faculty Survey P5, P7 and P8. 3. Training of QEC staff on Quality Parameters. (14 Sep 2017) 4. Submission of university ranking data (as per HEC date)	1. Director Quality visit to Air University, Multan Campus. 2. Review of Feedback performances on basis of student input. 3. Prepration of IPE visit. 4. Prepration of MS/M.Phil Review by HEC. 5. Prepration of PhD review by HEC.
Dec-17	**Jan-18**	**Feb-18**
1. Initiation of Student Feedback Fall-2017. 2. Execution of MS/ M.Phil Review. 3. Awareness Session for faculty and staff on Turnitin software. 4. Initiation and coordination of Internal Quality Audit for All Departments of AU.	1. Training of QEC staff on ISO 9001-2015 (9 Jan 2018) 2. Internal audit of CS Deptt (18 Jan 2018) 3. Assessment Review of PhD Management Program (25 Jan 2018)	1. Awareness sessions on the techniques and methods of preventing plagiarism (7 Feb 2018) 2. Prepration of SAR MS MGT Sci-Multan Campus (22 Feb 2018) 3. Workshop on OBE for students and faculty.
Mar-18	**Apr-18**	**May-18**
1. Academic audit of MGT Sci Department (15 Mar 2018) 2. Reviewing of M.Phil SAR Linguistics. 3. Student Feed-back for spring-2018	1. Academic audit of Maths Deptt (14 Apr 2018) 2. Awareness session on OBE (19 Apr 2018) 3. Training of PT Members on Self-Assessment Report writing (25 Apr 2018)	1. Self Assessment Review of MSCS. 2. Self Assessment Review of PhD Mechanical. 3.Assessment Review of MS avionics Engg.
Jun-18	**Jul-18**	**Aug-18**
1. Student feedback analysis and compilation. Spring-18 2. Compilation of QEC newsletter. 3. Prepration and compilation of data for ARWU China Ranking.	1. QEC visit to departments of Maths for faculty folder evaluation. 2. Planning for PCEPT. 3. Students' feedback analysis S-2018.	1. Execution of PCEPT. 2. QEC Visit of Mechanical Department for faculty coursse folders. 3. Assessment Review of MS/M.Phil. Program. 4. Prepration of QEC ranking data and submission to HEC.

PHOTO GALLERY OF QEC ACTIVITES DURING YEAR 2016-17

QEC LINKAGES

Membership of APQN taken as "Institutional Member"

QEC chat group at Yahoo

Membership of INQAAHEE

Membership of AQAAIW

Membership of Talloiries Network

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