

# QEC

## NEWSLETTER

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**Capital University**  
of Science and Technology  
Islamabad



## Quality Assurance Committee



## QUALITY ENHANCEMENT CELL

The concept of institutional effectiveness presumes that an institution is engaged in an ongoing quest for quality and is able to demonstrate how well it fulfills its stated purpose. Planning and evaluation of teaching, research, public service, administration, and educational support should therefore be thorough, broad-based, integrated and appropriate. Understandably, Higher Education Commission of Pakistan (HEC) and Pakistan Engineering Council (PEC) require every University to document quality and effectiveness by employing a comprehensive system of planning and evaluation in all major aspects of the institution. Institutional effectiveness stipulates documentation of planning, assessment, the action plan, and analysis (use of the assessment results) for decision-making across the campus.

CUST has always been in the forefront for accepting and adapting best practices in the field of Education. Recognizing the role that it has to play in higher education sector, CUST has established a Quality Enhancement Cell. This cell has the responsibility to ensure that the University's quality assurance

procedures are designed to improve the quality of higher education and are compatible with the international standards.

QEC at CUST is taking deliberate steps to bring continual improvement in the effectiveness of the learning experience of students. This is brought about through an increased emphasis on Internal Quality Assessment and the encouragement of an institutional "Quality Culture". It is believed that quality enhancement and assurance is a collective responsibility of all stakeholders, including students and faculty with high order dedication, professional integrity and creativity. This is achieved by safeguarding the academic standards, and ensuring highest quality learning, teaching, curricula, research and academic operations of the university to meet the national and international expectations.

The QEC serves CUST's vision of becoming a reputable center of higher learning and research, and promoting the development of ethical, professional and skilled graduates with leadership qualities, in all disciplines, enabling them to contribute effectively towards uplifting the quality of life for local and global communities.

The model defining the vision, mission, aims, strategy and values is given in Fig 1.

# QEC at CUST



Figure 1 QEC Model at CUST



## COMPUTER SCIENCE NEWS:

### *The discussion on QEC matter in the two Departmental Meetings:*

- In 30th departmental meeting, held on 1<sup>st</sup> of September 2016, Dean FoC Dr. Muhammad Abdul Qadir shared the students' feedback which was received from QEC. During this meeting various strengths and weaknesses were discussed which were identified by the graduating students through the student exit survey.
- In 31<sup>st</sup> departmental meeting, held on 26<sup>th</sup> of October 2016, the progress of measures identified in the 30<sup>th</sup> departmental meeting was reviewed.

1. Department expressed its gratification over the tutorial sessions arranged by the team of lab instructors. Subsequently, lab instructors also shared their experiences regarding this activity. They informed the participants that students are not only valuing and appreciating these sessions but also their notable improvement in the performance is being observed.
2. Furthermore, participants were informed of the several arrangements of workshop to improve the presentation and interview skills of the students.

### *Inspection Committee Visit*

Department of Computer Sciences applied for NCEAC creditor for BS Computer Science Degree program on 15<sup>th</sup> February 2016. The application consisted

of 16 NCEAC forms, course grading evidence, faculty course load policy schedule, and curriculum documentation. This process was coordinated by Dr. Muhammad Aleem. Main highlights are appended below.

1. The field audit visit was conducted by accreditation inspection committee on 13<sup>th</sup> of April 2016. The committee consisted of Dr. Jehangir Ikram (LUMS) and Dr. Muhammad Sharif (COMSAT, wah campus). The proceedings of the evaluation day comprised of meeting with Dean FoC and HoD CS followed by CS program presentation by the HoD CS. The committee also interacted with the faculty members individually which was followed by campus visit. The committee audited course files of the selected courses and discussed the relevant issues with the concerned instructors.
2. HoD CS received the preliminary response from NCEAC on 8<sup>th</sup> of June 2016, in which they raised a few concerns about the program and requested an explanation for the same. The department prepared its response for the mentioned issues and replied on 16<sup>th</sup> of June 2016. Subsequently NCEAC awarded accreditation category X to BS CS program for batches 2012 and 2013 on 3<sup>rd</sup> of October 2016. The review report appreciated several strengths along with pointing to some weaknesses. The points where the committee was fully satisfied, includes full time core PhD faculty, complete computing books in library, program goals, and compliance with HEC curriculum. The points of concerns included biannual admissions, number of students per batch along with a few infrastructural concerns such as, (thin clients in programming labs, open faculty offices, and hardware lab).



Accreditation inspection committee in VC office

**BIO INFORMATICS NEWS:****7TH ONE DAY WORKSHOP ON THE SIGNIFICANCE OF BIOINFORMATICS IN LIFE SCIENCES HELD AT CUST, ISLAMABAD**

Department of BI & BS of CUST organized 7th One Day Workshop on the Significance of Bioinformatics in Life Sciences on May 07, 2016. This was an annual event of the department. The main objectives of the Workshop were to create awareness of Bioinformatics and give basic training in Bioinformatics including hands on lab sessions to the students, faculty and researchers of Colleges, Institutes and Universities. This series of workshop built a good image of the department and the University as a pioneer in the field

of Bioinformatics. The department invited renowned resource persons to deliver lectures in two technical sessions. 78 participants attended the event from 23 different Institutes including Quaid-i-Azam University, NUST, COMSATS, Hazara University, NIBGE, Shaheed Benazir Bhutto University Peshawar, University of Gujrat etc.

The inaugural session was chaired by Dr. Aamer Nadeem, HoD BI & BS, and Dr. Nayyer Masood HoD CS. Dr. Zafar Iqbal Qadir, (Chairman Taleem Foundation) was the Chief Guest and Dr. A. K. Tanwani (FMDC-PIMS) was the Keynote Speaker in the inaugural session.

The event ended with the distribution of certificates and shields among the speakers, participants and organizers.



Group photo of 7th one day workshop on the significance of bioinformatics in life sciences

**MANAGEMENT SCIENCES NEWS:**

Dr. Muhammad Ishfaq Khan, Assistant Professor, Department of Management Science, Capital University of Science and Technology completed his Diploma in Quality Management in 32<sup>nd</sup> batch and certified on March 2016 from Pakistan Institute of Quality Control (PIQC), Lahore. Dr. Khan research project was "the deployment of quality tools in academia". Dr. Khan is also representing department of management science as member of Quality Enhancement Cell, CUST, Islamabad.

**MECHANICAL ENGINEERING NEWS:**

Capital University of Science & Technology (CUST) applied to PEC for Interim visit in March 2016. PEC thereby sent a visitation team comprising of Engr. Prof. Abdul Ghafoor (Convener), Engr. Dr. Amir Mubashir, Engr. Dr. Ghulam Hussain and Engr. Dr. Nasir Mehmood Khan (Additional Registrar, PEC) on 21<sup>st</sup> September 2016. PEC visitation team was received by Dean (FoE) and HoD (ME Deptt.). A presentation about the activities and developments in Mechanical Engineering Department was given to the team by HoD in the staff room, E-Block. Discussions and clarifications regarding implementation of OBE system in the department of Mechanical Engineering were made during the presentation. After the presentation, the team visited laboratories, library, and other facilities on the campus. The visitation discussed and reviewed course folders and other files in the display room of Mechanical Engineering



Department. A detailed discussion with each faculty member regarding, respective course files was carried out. The team expressed its satisfaction on the regular, proper maintenance of the course files and folders. A detailed discussion with the departmental QAC member about the procedure and quality checks that

were implemented for observing continuous quality improvements of OBE system was also carried. The visitation appreciated the efforts and arrangements made by the Mechanical Engineering Department. The team raised no major objection and showed satisfaction to continue the BS program.



HoD Mechanical Engineering briefing PEC Interim visit

## CIVIL ENGINEERING NEWS:

### *Interim Visit of PEC*

Capital University of Science & Technology (CUST) applied to PEC for Interim visit in March 2016. PEC subsequently sent a visitation team comprising Engr. Prof. Dr. Abdul Sattar Shakir (Convener) and Engr. Jehanzeb (Rep. PEC) on 27<sup>th</sup> April 2016. PEC visitation team was received by Dean (FoE) and HoD (CE Deptt.) A presentation about the activities and developments in Civil Engineering Department was given by HoD in the conference room, D-Block.

Discussions and clarifications were also made during the presentation. After the presentation, the visitation visited library, laboratories, faculty offices and other facilities available on campus. The visitation team also received the course folders and other files in the display room of Civil Engineering Department. They showed satisfaction on the course folders and files which were not only maintained regularly and properly but also passed through quality checks. The visitation also appreciated the efforts and arrangements made by the Civil Engineering Department and raised no major objection and expressed satisfaction on the continuation of the BS program.



Interim Visit checking Civil Engineering Lab



## Report on PEC visit for Change of Scope

Capital University of Science & Technology (CUST) applied to PEC for Change of Scope in March 2016. PEC thereby sent a visitation comprising of Engr. Prof. Dr. Habib-ur-Rehman (Convener) and Engr. Wasif Irshad Bhatti (Rep. PEC) on 28<sup>th</sup> July 2016.

PEC visitation was received by Dean (FoE) and HoD (CE Deptt.) A presentation on the activities and developments in Civil Engineering Department was given by HoD in the Workshop room B-Block to the visitation. Discussions and clarifications were also made during the presentation. After the presentation, the visitation was guided to visit the library, laboratories, faculty offices and other facilities within the campus. The team reviewed the course folders and other files in the display room of Civil Engineering Department. They showed great satisfaction on the course folders and files on regular and proper maintenance and passing them through quality checks. The visitation appreciated the efforts and arrangements made by the Civil Engineering Department. On the basis of the visit, PEC accorded Change of Scope to Civil Engineering Department vide owing to which an intake of 80 students was allowed against the previous 40 students stipulation.

## ELECTRICAL ENGINEERING NEWS

In the beginning of 2016, the Bachelors of Science in Electrical Engineering (BS EE) program being offered by the Department of Electrical Engineering (DEE) at CUST was selected by Pakistan Engineering Council (PEC) for the implementation of internationally recognized Outcome Based Education (OBE) system. The DEE worked day and night on the project and successfully



VC-CUST presenting shield to Engr. Prof. Dr. Abdul Sattar Shakir

transformed all of its traditional teaching methods to OBE system. The team of international OBE evaluators visited DEE three times this year to evaluate OBE based teaching, learning, and assessment procedures. During these visits, it was found that the teaching, training, learning, and assessment procedures adopted at EE Department were of international standards and the BS EE program being offered at DEE had the potential to be accredited by any international engineering accrediting body like Washington Accord and ABET.



Interim Visit Civil Engineering



**QEC New Office News****Participation in QA HEC meeting.**

HEC Organized Progress Review Meeting of Quality Enhancement Cells, falling under group IX, X & XI from 30-31<sup>st</sup> August, Chaired by Dr. Rafique Baloch (DG Quality Assurance Agency HEC). The meeting agenda was to review the Progress of Participating Universities



QEC's Progress Review Meeting Organized by HEC

in terms of the various programs. Dr. Mueen Aizaz Zafar (Dean QEC) & Prof. Arif Vasser (Director QEC) from CUST, participated in this meeting and presented the various programs, Accreditation status of SARs and programs at CUST. All activities monitored for the

improvement of education standard at CUST were duly appreciated.

**Collection Of finalized PLOs & PEOs of All BS/BBA Programs**

QEC was assigned task by VC-CUST in 15<sup>th</sup> QAC meeting for the collection of finalized PLOs and PEOs for all BS/BBA programs offered at CUST. QEC collected and affixed the QEC stamp on them, to ensure that the same should remain in practice, unaltered till a future need for review/revision. In case any of the PLOs or PEOs needs to be revised in future, the departments will have to put up the revisions in the subsequent academic council meeting for approval.

**Survey Conducted by QEC**

QEC is responsible for conducting various assessment surveys in keeping Education Quality Improvement Process at CUST. Keeping up-to with its mission, different surveys were conducted on annual and bi-annual basis in 2016 including Freshmen Survey for new admission, Student course feedback twice in a semester, Student response assessment for each course, Student exit survey for graduating. On the completion of every survey conducted by QEC, data was then assessed and compiled in the form of reports/graphs highlighting the issue identified in survey. Reports were forwarded to higher authorities for further necessary actions.

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## What students at CUST say?

*The QEC office interviewed the top graduating students from the graduating faculties i.e. FOC and FOMSS. This is what they had to say about the different aspects of the university:*

**Adeeb Khalid - BCS**

According to him it was his personal decision to study CS and his interest in the field and degree was only strengthened owing to his stay at CUST. The expectations that he had from the degree and the institution, were largely met here. However, he felt that the university and the departments are needed to align closely themselves with the industry requirements, which he thought needs a greater effort. Courses/applications such as Data Science, Data Analytics, Big Data, in his opinion, should be taught at CUST. He felt programming to be the main area for CS and hence those were the courses which required a greater attention of the students. He opined that students would gain more if in any semester there would only be one programming course and students found it difficult to cope with the study requirements of two courses of programming in one semester.



Adeeb Khalid

He found teachers on the whole to be very professional and supportive, although he thought some of the newer teachers could do with some grooming and guidance on class management. He loved the CUST environment and infrastructure. Lab should be improved as the PCs there were quite slow and needed uplift. He was all praise for the University's co-curricular and extracurricular activities.

In terms of scholarships and grants he felt that the Punjab College Students were supported the most, to the extent of being biased. This he found to be damaging for the betterment of students as it overlooked merit.

Comparing institutions, Khalid felt confident and duly prepared to compete favorably with any good student of any other university. He recalled winning a lot of competitions during his bachelors and attributed it to the good studies and learning at CUST. He suggested liberal funding to the departments so that more students could take part and compete in similar events outside CUST. He thought that students needed special advice in making their future plans beyond CUST, and wanted teachers to counsel and guide students in making good, sound, judicious decisions relating to their futures.

### Darrak Moin Quddusi - BSBI

My main inspiration of coming to CUST was the BS degree in BI. The other two options were COMSATS and Islamic University, but coming to CUST with my father I instantly knew that this was where I would want to study for my bachelors. I loved the environment on the very first sight. Over the course of the next 4 years, this university actually exceeded my expectations. I keep telling others that CUST has a very good environment, as compared to the other universities where "gender" comes out as a big issue. This place is very disciplined and conducive to learning.

The core courses in BI were great but I found problems with elective courses, which I do not think are closely related to my degree. We had no options in choosing electives, although by definition they are optional courses. I thought I was wasting my time, money and effort pursuing electives I did not like.

Teachers were all wonderful here, no exceptions. I think teachers gel in with students who respond better in classes than others. I think all teachers should give more than their 100%. The infrastructure is good, however, having internet in the labs is essential. In many cases, we have to download applications to run programs, which one finds hard to manage if no internet is available.

I have been working in many societies on the departmental level. I feel the faculty is very dedicated in our department; they are fully focused and train students all the way to participation or hosting events. University allows students to go to the other institutions to compete, but it does not provide funding, which is quite de-motivating at times. I think there is a good balance of curricular and extracurricular activities. The sports facilities I guess are fine, although I never had any time for those. However, I do feel girls need to have a separate place of their own to play badminton,

table tennis and other sports.

I am quite satisfied with scholarships. I was previously getting Jinnah scholarship, but I moved to merit scholarship which provides a greater financial incentive. With respect to curriculum, I think we have been taught well and are fully equipped to compete favorably with the best students of other universities. I am very happy and satisfied with the university environment. At times, some rules are a little stiff, like



Darrak Moin Quddusi

you cannot celebrate birthdays on campus. I do not quite understand that, but I like more things here, so I guess I am ok.

I would like to pursue MS after BI. My siblings want me to pursue a foreign education, but I want to look after my parents. I think I would stay and serve my family.

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**Hassan Javaid - MBA**

I spent a wonderful time here at CUST during my studies. Infact, I was just looking around and thinking how much I would miss this lovely environment once I left.

Before coming here, I had heard how Finance was the strength of the department of management sciences. I realized this a bit earlier on when I studied from Mr. Nasir Rasul and then Dr. Ahmed Faraz, but really got the full flavor sitting in Dean Dr. Arshad Hassan's classes. The teachers are all very good here, and really polish students during their stay at the university. There are many PhDs who are teaching in the Bachelor and Masters classes which is a big advantage here. The level of assignments is really high, and reaching our final semesters we can only appreciate the ragra (tough time) we were given.

In terms of the environment, it is not a very liberal environment. A few days ago I was studying with a female student and a peon objected on the way we were sitting next to each other. Even listening to hands free music here may not be tolerated, as a student was once reprimanded. I guess these types of incidents should be accommodated, especially in a co-ed university. I feel there should be a proper student lounge where students can freely interact.

The computer lab is too small and hence cannot accommodate enough students. Moreover during exams the work stations in the library are closed which one finds difficult to understand as it is a pressure time and we would need every computer we can lay our hands on.

In terms of achievements I can only say that I have achieved all that I hoped to, and expect that the same

would be well appreciated when I share that in front of the interview panel for my first job. Actually, I sat in a couple of interviews recently and had answers for all the academic questions asked, which was duly appreciated by one of the panelists.

The courses we took here were quite up to date. I think the course Financial Modeling, a very important course, was introduced at a much later stage and should be moved up as working on Excel is a big industry requirement. The other course on Supply Chain Management, which was offered earlier, should be re-included as we gained a lot from that course taught by Sir Shakeelur Rehman Raja.

I am very happy to report that I remained on merit scholarship throughout my MBA studies, for which I am extremely grateful, as without it, I may not have been able to pursue this quality education.

**Hassan Javed****Naveed-ur-Rehman - BSEF**

My stay at CUST on the whole has been very satisfactory. My specialization was Finance and courses in that domain went extraordinarily well. Some subjects such as operations management and program management seemed to overlap, lacking new knowledge, and hence were easy to deal with.

The disappointing factor was that we were forced to have common classes with BBA and not with our own batch mates. Despite doing only four different courses from our senior batch, we were kept away from them till the 5th semester. Batches have their own dynamics and studying with bigger BBA batches was not exciting at times, especially since they tended to dominate in marks owing to greater

coverage of courses in their own disciplines of general management and HR. I think the university needs to do a more effective marketing for BSEF, as in its present fold, it is not a self-sustaining program with very small batches.

Other than the above issue the courses were fine. An area where there can be greater learning for students is involving them in market research, and including local industry information in courses. Without this, the courses can become very bookish, devoid of relevant real world examples. In general, the courses were quite up-to-date and the faculty was good throughout, especially in Finance. In fact, I feel that the special attraction about the program is its faculty. The other being the University's infrastructure.

I do not have any complaints regarding the environment



at CUST, but feel that it needs to be a little more liberal. In one incident, my card was confiscated as I was sitting next to a female while studying. There have been other instances reported of a similar nature. I just think university students are more mature than college students and need to be trusted accordingly. Labs are good but dedicated time per student is minimal due to limited work stations. I think male students need a separate adequate sized study room like the one allocated for females. Students receive a good exposure through seminars. I arranged a few myself, whereby teachers had assigned marks to motivate students.

Regarding extracurricular activities, I am not at all happy with sports. There are some 3000-4000 students on campus. There is only one bat, and no balls, available for students. Moreover, there is neither a doctor, nor any first aid facility on offer. We desperately need a doctor, and a coach for sports. Sports week alone does not do justice, we need something more consistent – like throughout the year arrangement. Gym has been a good addition, but an instructor should be provided too.

I plan to continue studies, alongside a job. I would also be making efforts to compete favorably for a fully funded US MS degree program.



Naveed-ur-Rehman







Capital University of Science and Technology  
Off Kaak Pul, Sihala Road, Zone-V, Islamabad  
UAN: 111-555-666  
<http://www.cust.edu.pk>