# Minutes of the Meeting 13<sup>th</sup> Faculty Board of Studies of Engineering Sciences At 9:30 hours on Thursday 10<sup>th</sup>August, 2017(through video link)

## Attendance

<u>Attendance</u>								
<u>Present</u>								
BUIC:								
1.	Prof. Dr. M. Najam-ul-Islam	Dean (ES)	Chairman					
2.	Prof. Dr. Tahseenullah Khan	HoD(E&ES)	Member					
3.	Prof. Dr. Tamim Ahmed Khan	HoD(SE)	Member					
4.	Dr. Faisal Bashir	HoD(CS)	Member					
5.	Dr. Atif Jaffri	HoD(EE)	Member					
6.	Dr. Khurram Shehzad	HoD(CE)	Member					
BUKC:								
7.	Dr. Haroon Rasheed	HoD(EE)	Member					
8.	Dr. Humera Farooq	HoD(CS)	Member					
9.	Dr. Sohaib Ahmad	HoD(C&SE)	Member					
BULC:								
10.	Mr. Farhan Saeed Sheerazi	HoD(CS)	Member					
In attendance								
BUIC								
1.	Prof. Dr. Muhammad Zafar	EES						
2.	Dr. Awais Majeed	SE						
3.	Dr. Amina Jameel	CE						
4.	Dr. Junaid Imtiaz	EE						
5.	Dr. Muhammad Muzammil	CS						

## **Proceedings**

## **Commencement of the Meeting**

- 1. The Chairman declared the meeting open at 9:30 hours and welcomed the members. The chair urged the members to participate actively.
- 2. The minutes of the 12<sup>th</sup>FBoS were confirmed by the house as no observations were received.

## Agenda Item # 1301

**Initiated by: HoD.SE(BUIC)** 

## **Inclusion of CLO/PLO Mapping in semester results**

## a. Background to the Case

PEC has become signatory to Washington Accord and it is now time to make our programs ready for accreditation under new OBE system. For that matter, CLO/PLO based results reporting system is required.

## b. Financial Effect

Nil

#### c. Recommendations

The presentation may be discussed and approval may be granted. Proposed mappings between current roadmap and Course Learning Outcomes are prepared, approved by the DBOS.

#### d. Establishment/HR effect if any

Nil

## **Discussion and Decision**

- HoD.CS(BUKC) is of the view that remedial will be too much if we include mapping of CLO/PLO semester wise.
- Dr. Amina Jameel suggested that there must be some KPI (Key Performance Indicator)
- Chair suggested formulating a committee to develop comprehensive software. He further added that departments should share status in each FBoS.

**Action By: HoD.SE (BUIC)** 

**Initiated by: HoD.SE (BUIC)** 

#### MS (Data Science) Launch with effect from Fall 2018:

### a. Background to the Case

During last meeting with Honorable Rector, it was directed by the Rector to HOD SE that a new program in MS may be discovered and prepared for launch. HoD SE is also member of NCRC and MS DS was discussed at length in the last meeting.

#### b. <u>Financial Effect</u>

Nil.

### c. Recommendations

Launch proposal may be approved and sent to FBOS.

## d. Establishment/HR effect if any

Nil.

#### **Discussion & Decision**

- Chair asked HoD.CS (BUIC) and HoD.SE (BUIC) to give presentations on their arguments to start MS(Data Science)
- Dr. Awais Majeed suggested that SE Department in BUIC has strength to start and initiate this program.
- Dr. Muhammad Muzammil suggested that it would be better to revisit our MS program structure instead of starting a new program.
- Dr. Amina Jameel supported Dr. Muhammad Muzammil's argument
- HoD CS BUIC told house that only two universities in Pakistan have started this program and this is high time to initiate the program.
- It is recommended that both departments (BESE-IC and BSCS-IC) can start new streams with Data Science in their departments in context of following parameters
  - Number of permanent Faculty Members.
  - Number of relevant thesis supervised.
  - Number of relevant publications.
  - Number of courses taught or being taught.

## Action By: HoD. CS (BUIC) and HoD.SE (BUIC)

**Initiated by: HoD.CS (BUIC)** 

#### **Launch Proposal of MS Data Science**

#### a. Background to the Case

There is a growing demand for data scientists who can apply powerful tools and advanced statistical modeling techniques to make discoveries about business problems, processes and platforms. Master of Science in Data Science, MS (DS), will address the intersection of three areas driving data science: technologies, analytics and business needs. MS(DS) is being proposed as per requirements of Postgraduate Academic Regulations of Bahria University and HEC.

#### b. Financial Effect

Nil

#### c. Recommendations

MS Data Science Program is recommended for approval.

## d. Establishment/HR effect if any

Nil

#### **Discussion & Decision**

• After detailed discussion MS Data Science Program is recommended for approval.

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## Agenda Item # 1304

**Initiated by: HoD.EE (BUKC)** 

## Addition of course "Nonlinear Control Systems" in BEE elective

## a. Background to the Case

There is always a room for improvement in the list of elective courses of BEE (Electronics/Telecom) program. A new course covering the foundation of the field of nonlinear control systems could be added in the list as per new research trends and industrial demand.

This course introduces the fundamentals of nonlinear systems and their control. Almost all systems that exist in field of engineering are nonlinear however at UG level all over the country; only Linear Control Systems Course is offered (which is also core course of BEE

program). Recently new design philosophies and methodologies involving nonlinear strategies applied to control of dynamic systems, have gained popularity, especially after the work of Prof Hassan K Khalil of Michigan University State. Topics include Lyapunov theory, mathematical modeling of nonlinear phenomenon and their Lyapunov stability analysis, stabilization and integral control, nonlinear control design tools such as feedback linearization, sliding mode control, Lyapunov Redesign, Back stepping. It is felt that equipping our students with this new tool-set will give them a strong edge over students of other universities.

#### b. Financial Effect

Nil

#### c. Recommendations

It is recommended that a new elective course titled 'Nonlinear Control Systems' with 3+1 credits can be added in the list of electives.

## d. Establishment/HR effect if any

Nil.

#### **Discussion & Decision**

- Nonlinear Control System is already in in MS nomenclature.
- The Chair suggested revising road map.

**Action By: HoD.EE (BUKC)** 

## Agenda Item # 1305

**Initiated by: HoD.EE(BUKC)** 

## Degree title should be synchronized for Islamabad and Karachi with PEC.

#### 1. <u>Background to the Case</u>

BUKC BEE students are facing problems in their PEC registration process due to degree title, field of specialization etc., and the situation gets worst once there is a change in clerical staff in accreditation division. Recently, PEC objected over the degree title of BEE program, and declined applications of BUKC students over unnecessary issues. Interestingly, the degree title and nomenclature of offered streams are similar, but BUIC have not faced such kind of problem from PEC. This undue concern is also affecting the intake of BEE program at BUKC.

## 2. Financial Effect

Nil

## 3. Recommendations

This issue should be solved at PEC head quarter as PEC Karachi office has shown their limitations and guided us to contact PEC HQ. Furthermore, PEC letters for accreditation and observations can be shared to pursue the case more properly.

## 4. Establishment/HR effect if any

Nil

#### **Discussion & Decision**

• The Chair asked Faculty Coordinator to resolve the issue on urgent basis, with the help of HoD.(BUKC)

Action By: Faculty Coordinator.

## Agenda Item # 1306

**Initiated by: HoD.EE(BUKC)** 

#### <u>Unified CLO/PLO for Electrical Engineering Program.</u>

### a. Background to the Case

EE Department is working on CLO/PLO modification and updating various courses objectives etc. It would be suitable if EED at BUIC could share their efforts and mutual unified CLO/PLO can be formulated for BEE program.

## b. Financial Effect

Nil

### c. Recommendations

Collaboration is required from each department of both campuses to generate unified learning objectives of BEE program.

#### **Discussion & Decision**

- HoD.SE(BUIC) gave detailed explanation regarding mapping of CLO/PLO.
- Committee will be formed on University level.
- Committee in-charge will give presentation on unified learning objectives in all Engineering Programs.

## Action By: HoD.EE(BUKC)

**Initiated by: HoD.EE(BUKC)** 

## **Change of Scope in BEE program at BUKC**

## a. Background to the Case

Power Systems is the most demanding stream undertaking the present scenario of Pakistan. It includes generation, transmission, distribution, customer service, operations and maintenance, markets and service provide. With above context, EE Dept. is going to submit Change of Scope request to PEC. It is expected that BUKC will be allowed to get an in take of 40 students section for Power Systems Track in addition to Electronics and Telecom streams. Preemptively, to fulfill the criteria of PEC, we already set up a Power Systems Lab and expecting more trainers in FY 2016-17.

## b. Financial Effect

Nil

## c. Recommendations

Approval is required from FBOS and ACM to advertise and get admissions in Fall 2017 intake.

## d. Establishment/HR effect if any

Nil

## **Discussion & Decision**

Agenda item is approved along with changes in the road map.

**Action By:** 

**Initiated by: HoD.C&SE(BUKC)** 

## **Revision of Computer Engineering road map**

#### a. Background to the Case

During PEC visit, it is highlighted that the curriculum of computer engineering was revised. Therefore, the department is required to align BU curriculum with the revised HEC curriculum. However, it is still in draft on the HEC website and the final version of the curriculum is still awaited.

#### **b.** Financial Effect

Nil

#### c. Recommendations

At the department level, a committee was constituted to see the differences in our current curriculum with the revised HEC curriculum. Further, it is recommended that these suggestions/modifications will be incorporated to make a committee at the faculty level so that changes can be incorporated between both campuses.

## d. Establishment/HR effect if any

Nil

#### **Discussion & Decision**

- HoD.C&SE (BUKC) suggested formulating a committee on faculty level to review the curriculum.
- The Chair constituted a Curriculum Review Committee, Dr. Sohaib Ahmad (HoD.CE), Dr. Osama Rehman, Dr. Shahzad Hassan and Ms. Bushra Sabir will be committee members.
- Committee is to submit their report till November 15, 2017.

Action By: Curriculum Review Committee

## Agenda Item # 1309

**Initiated by: HoD.C&SE(BUKC)** 

## **Revision of Software Engineering road map**

#### a. Background to the Case

The "Data Science" is emerged as one of the new area for exploration in software engineering domain. Currently, the Bachelor of Software Engineering roadmap has couple of courses namely "Big Data Analytics – SEN 332", "Data Mining – CSC-452" and "Data

Warehousing. Therefore, DBOS suggested that a new domain name with "Data Science" should be introduced and the similar courses should be added to the domain elective.

## b. Financial Effect

Nil

## c. Recommendations

At the DBOS, it is recommended that a new sub-domain "Data Science" with these courses should be introduced in the software engineering roadmap for catering the demands of this area and effective from Fall-2017.

## d. Establishment/HR effect if any

Nil

#### **Discussion & Decision**

- HoD.CS (BUIC) commented that accreditation bodies take course codes very seriously, so we must be very specific and courses must be properly aligned.
- A new domain "Data Science" may be introduced for catering the current trends. Further, a new course proposed in the BS(CS) roadmap "Introduction to Data Science CSC-487" along with other above defined electives may be added to the BSE roadmap
- Inclusion of Data Science as sub-domain in BSE is approved and forwarded to ACM.

## Action By: Mr.Fazal e Haq Zia & Dr Muhammad Muzammil

## Agenda Item # 1310

**Initiated by: HoD.C&SE (BUKC)** 

## **Updation/modification at the campus management system**

## a. Background to the Case

Currently, the faculty is facing number of problems with the campus management system (CMS) as mentioned:

- 1. In the examination portal, only averages of quizzes and assignments are taken instead of any availability of best of two/three quizzes. Therefore, the faculty added marks cumulatively.
- 2. There is no such distribution of electives in the portal where students can select electives according to their requirements (domain, supporting, and general). This may also helpful in order to cater the needs of the repeated students who used to map their electives automatically.

## b. Financial Effect

Nil

#### c. Recommendations

At the DBOS, it is recommended that this CMS needs to be user friendly so that faculty members and students can utilize in an efficient manner.

#### **Discussion & Decision**

- The Chair pointed out that all departments observations on new CMS, we can nominate a faculty member and formulate a document regarding the issues in CMS.
- Mr. Adeel M. Syed in consultation with all the campuses will finalize the document by November 01,2017.

**Action By:** Adeel M. Syed (AP SE-BUIC)

### Agenda Item # 1311

**Initiated by: HoD.C&SE (BUKC)** 

## MS admission in the same discipline by Student Advisor

#### a. Background to the Case

Student advisor of the same discipline is not allowed to take admission at the master/PhD level because he/she handles the campus management system. However, he/she only deals in the course allocation of the students at the bachelor level. Further, the examination and attendance system is read only. Due to this restriction, she/he could not be able to continue his/her higher studies.

### b. Financial Effect

Nil

#### c. Recommendations

At the DBOS, it is recommended that he/she should be allowed to continue his/her higher studies.

#### **Discussion & Decision**

- HoD.SE (BUIC) said that there is no such rule and status quo must be maintained.
- HoD.CE (BUIC) supported the agenda item by saying that nobody should be stopped from pursuing higher studies.
- HoD.E&ES (BUIC) suggested that rule must be reviewed and SA must be allowed to pursue further studies.
- Dr. Awais Majeed said that this is administrative position and we can go for SA from other disciplines.
- Student advisor may be allowed because he/she can have view-only at CMS but he/she can't

edit / alter anything

- Student advisor can't allocate/offer courses without HoD approval so he/she can't by-pass anything. Further, log is maintained at the CMS level.
- CMS may be modified in such a way that the results of his/her batch mates (MS/PhD) may not be visible to student advisor
- If any other staff member such as IT staff who can view-only CMS, may not be allowed to enroll in any University program
- The Chair asked Dr. Sohaib Ahmad to modify and prepare an agenda item to be forwarded to ACM.

## Action By: HoD.C&SE (BUKC)

#### Agenda Item # 1312

**Initiated by: HOD.C&SE(BUKC)** 

### Student travel for National/International Conference/Exhibition/Competition

#### a. Background to the Case

Many students are not willing or motivated to apply in Competition/Exhibition/Conference due to travel and living cost for outside city (nationally and internationally). Students are Bahria University responsibility therefore one faculty member will go with them, if any female student is going so one female & one male faculty members will go with them.

#### b. Financial Effect

Yes

#### c. Recommendations

On the basis the background of this case it is therefore recommended that this agenda item may kindly be approved.

#### **Discussion & Decision**

- Dr. Haroon Rashid supported the agenda item and said it will encourage students to step forward to participate in competitions, there must be some allocated budget.
- Dr. Awais Majeed added that registration and travel fee must be given to students.
- The departments shall be allocated PKR 200,000 per annum for student technical events including workshops, conferences, exhibitions, competitions at university / national level.
- Head of Department will be responsible for the fund utilization, and the funds will be spent as per BU rules.
- End of year (fiscal) report as per BU rules along with receipts would be submitted in the campus.
- The decision of participation in an event will be taken by departmental committee constituted

by Dean.

Action By: HOD.C&SE (BUKC) & HOD.CS(BULC)

### Agenda Item # 1313

**Initiated by: HoD.CS (BUKC)** 

### Addition of Courses in BS(CS) and BS(IT) Elective List

#### a. Background to the Case

Due to emerging field of Computer science there is always need of new courses. Based on the market survey and technology demand following courses are recommended in DBOS for the addition in Elective List of BS(CS) and BS(IT) program:

1) Big Data Analytics 2) Introduction to Data Science 3) Ubiquitous Computing

The case was presented by HOD (CS), Karachi Campus (Agenda Item # 1246) and advised to present detail outline in next FBOS.

#### b. Financial Effect

Nil

#### c. Recommendations

It is recommended to consider the above courses as an Electives in BS(CS) and BS(IT) program from Spring 2018 semester.

#### **Discussion & Decision**

Agenda Item is approved and forwarded to ACM.

**Action By: HoD.CS (BUKC)** 

## Agenda Item # 1314

**Initiated by: HoD.CS(BUKC)** 

# **Availability of Student Evaluation Summary to the Faculty**

## 1. Background to the Case

The student evaluation is a quality assurance tool used to solve / monitor the issues with the courses and faculty. The summary reports are prepared by HOD and shared by Head Office twice a semester. The HOD also responsible to take necessary actions based on the student evaluation. However, it is at the same time important for faculty members to take necessary action by their self. Due to up gradation of CMS system, we can filter out quality assurance data of each Faculty Member without mentioning their courses and sections separately.

Hence this blindly collected data may easily share with the faculty through CMS system. This data may available to the each faculty member after announcement of Final Exam Result via CMS System.

### 2. Financial Effect

Nil.

#### 3. Recommendations

Student Evaluation Data may be available to each Faculty Members after announcement of Final Exam Result

#### **Discussion & Decision**

• It is the responsibility of HOD to share student's feedback with concerned faculty member after the declaration of final term result.

**Action By: All HoDs** 

## Agenda Item # 1315

**Initiated by: HoD.E&ES(BUIC)** 

#### Extension of BS Thesis timeframe in accordance with MS Thesis timeframe.

#### a. Background to the Case

According to Bahria University Academic Rules 2016 (BU Academic Rules, Sec 3.9) for all BS programs, Theses are to be registered according to regular road map and the target date for completing shall be allotted by the respective departments (Sec 3.9.1.1). Students unable to complete the thesis requirement of time shall be required to register again (Sec 3.9.1.2). A student shall be eligible for an Academic Honor if the student has completed the program within the regular program duration (Sec 9.2.1.1). The agenda item was placed before DBOS meeting for discussion that the BS Thesis of the students of Department of Earth and Environmental Sciences is very difficult to be completed within 8th semester as it requires more time because the data has to be issued by the Directorate General of Petroleum Concession, Pakistan (DGPC) after which the students work on their thesis.

#### b. Financial Effect

Nil.

#### c. Recommendations

Same timeframe which is given to MS students should also be approved for the BS programs. MS students are given 10 weeks of the next semester after the completion of their regular degree duration (MS/MPhil Rules 2016, Sec 14.6), same should be given to BS students.

#### **Discussion & Decision**

- Dr. Muhammad Zafar supported the argument by saying that it is difficult to get required data in time.
- Dr. Faisal Bashir suggested that it will be better if we start thesis bit earlier.
- Dr. Awais Majeed pointed out that due to time limitations quality of projects/thesis is compromised.
- Recommended for consideration in ACM

## **Action By: HoD.E&ES (BUIC)**

#### Agenda Item # 1316

**Initiated by: HoD.E&ES(BUIC)** 

## Revised Vision, Mission & Program Objective

## a. Background to the Case

After the Self Academic Audit of the MS Environmental Science program and their recommendation, the Department of Earth and Environmental Sciences revised the road map of the all programs (BS and MS Geology/Geophysics/Environmental Sciences) as per HEC guideline. After discussion regarding the course revision with the permanent faculty, visiting faculty and the industry professionals, it has been decided that some changes must be made in the road maps of BS programs only.

## b. Financial Effect

Nil.

### c. Recommendations

In order to stream line the courses with the industry requirements, all the members of DBOS agreed to forward the revised road map of BS programs of the department at par with HEC approved road map to FBOS for subsequent approval from ACM.

#### **Discussion & Decision**

 Revised road maps of BS Geology, BS Geophysics, and BS Environmental Sciences are approved and forwarded to ACM.

**Action By:** 

## Agenda Item # 1317

**Initiated by: HOD.EE(BUIC)** 

## Fee Waiver Policy in case of Father's death of student during his/her studies in BU.

## a. Background to the Case

It has been observed by HOD EE that there is no written policy for students whose father dies during his/her studies in Bahria University. It is very difficult for such students to carry on their studies because of financial burden and mental stress. It is therefore suggested that if the father of a student (enrolled in any semester in BU) dies during his/her studies, the university shall wave his /her fee for the rest of semesters keeping in view his /her financial conditions. The student's case may be automatically transferred to need based scholarships and approved from there without interview in every semester, the rules should be relaxed for such cases. The student will provide death certificate of his/her father along with proof of financial status and his/her CGPA should be at least 2.5.

### b. Financial Effect

Tuition fee /semester

#### c. Recommendations

There should be written policy of fee waiver for such cases. Bahria University should completely waive fee of such students to carry on their studies

#### Discussion & Decision

• This case can be moved on file, whenever any student's guardian die, he/she can be granted some fee waiver.

#### **Action By: HoD.EE(BUIC)**

**Initiated by: HoD.EE(BUIC)** 

# Proposal Defense Presentations of the final year project students by the end of 6<sup>th</sup> semester.

## a. Background to the Case

At present the final year students have their FYP proposal defense at the start of  $7^{th}$  semester. Most of students waste summer vacations after  $6^{th}$  semester and therefore the quality of projects are compromised. It is therefore suggested that the FYP proposal defense may be held at the end of  $6^{th}$  semester rather than in  $7^{th}$  semester. Students will have the whole summer semester along with two regular semesters. In the summer semester, they will have no other academic load and can focus totally on their FYPs. The quality of projects will be improved.

## b. Financial Effect

Nil

## c. Recommendations

The FYP proposal defense should be at the end of 6<sup>th</sup> semester.

## **Discussion & Decision**

• This is department's internal affair, department must take decision.

#### **Action By: All HODs**

## Agenda Item # 1319

**Initiated by: HOD.EE(BUIC)** 

## Automatic Allocation of the Open House (Engg Sciences) budget.

#### a. Background to the Case

Every year the department of Electrical Engineering organizes the Open House with the help of other departments. A lot of time is wasted every year for the processing of the Open House file and every time the approvals are given only few days before the event. The board members suggested that the department of Electrical Engineering should be allocated the

budget amount (With 15% Annual Increase), for smooth operation of the said event.

## b. Financial Effect

Nil

## c. Recommendations

The allocation of budget to EE department is recommended.

## **Discussion & Decision**

• SOP regarding Open House already exists. The case may be presented again if required.

## **Action By: HOD.EE(BUIC)**

## Agenda Item # 1320

**Initiated by: HOD.EE(BUIC)** 

## To Add Elective Courses in Ph.D Road Map.

## a. Background to the Case

The EE department at BUIC offers PhD in four major areas.

- Communications
- Embedded systems
- Power
- Control systems

It has been observed by the research group heads and HOD EE that some important courses of the three major areas needed to be included in the PhD road map.

## **Power domain courses**

- Modelling and Control of Power converters
- Power Cable engineering
- Distributed Generation & Micro grids

## **Control systems**

• Advanced Digital Control Systems

## **Communications**

- LTE Mobile Communication Systems
- Radio Resource and Spectrum Management
- Advance Wireless Systems Design

## b. Financial Effect

Nil

#### c. Recommendations

Addition of above mentioned courses in PhD road map is recommended.

#### **Discussion & Decision**

- Dr. Khurram Shehzad commented if some course contents are covered in existing courses then new course must not be included.
- The Chair suggested that new course should only be included if necessary.
- PhD road map revision committee is constituted with following members:
  - 1. Dr Awais Majeed (Committee Head) SE(BUIC)
  - 2. Dr.Imran Siddiqi CS(BUIC)
  - 3. Dr.Muhammad Aamir EE(BUIC)
  - 4. Dr.Naveed Qaim Khani EE(BUKC)
  - 5. Dr.Osama Rehman C&SE(BUKC)
  - 6. Dr.Syed Safdar Ali Rizvi CS(BUKC)
  - 7. Dr .Asim Qureshi CS(BULC)

Action By: Dr. Awais Mahmood

#### **Closing the Meeting**

There being no further points, the Chair brought the meeting to close at about 17:15 hrs, thanking the participants for their wholehearted participation.

**Prof. Dr. M. Najam-ul-Islam** Dean (ES), Head FBoS

12<sup>th</sup> September, 2017

## **Distribution:**

BUHQ: Rector, Pro-Rector, Registrar,

DAA, DE, DQA, D(ORIC)

BUIC: DG BUIC, DIC,

HOD(EE), HOD(SE), HOD(CE), HOD(CS),

HOD(EES)

BUKC: DG BUKC, DKC,

HOD(EE), HOD(CSE), HOD(CS), HOD(EES)

BULC: DLC, HOD(CS)