

## **Minutes of the Meeting**

### **11<sup>th</sup> Faculty Board of Studies of Engineering Sciences**

**at 1000 hours on Thursday 8<sup>th</sup> September, 2016 (through Video Link)**

#### **Attendance**

##### **Present**

##### **BUIC:**

1.	Prof. Dr. M. Najam-ul-Islam	Dean (ES)	Chairman
2.	Prof. Dr. Tahseenullah Khan	HoD(E&ES)	Member
3.	Prof. Dr. Shehzad Khalid	Director PGP	Member
4.	Assoc. Prof. Dr. Tamim Ahmed Khan	HoD(SE)	Member
5.	Dr Faisal Bashir	HoD(CS)	Member
6.	Dr. SaleemAslam	HoD(EE)	Member
7.	Dr. KhurramShehzad	HoD(CE)	Member

##### **BUKC:**

8.	Prof. Dr. Mubarak Ali	HoD(E&ES)	Member
9.	Assoc. Prof. Dr. HaroonRasheed	HoD(EE)	Member
10.	Assoc. Prof. Dr. HumeraFarooq	HoD(CS)	Member
11.	Asstt. Prof. Dr.Sohaib Ahmad	HoD(C&SE)	Member

##### **BULC:**

12.	Asstt. Prof. FarhanSaeedSheerazi	HoD(CS)	Member
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##### **In attendance**

##### **BUIC**

1.	Prof. Dr. Muhammad Zafar	FM(EES)
2.	Asstt. Prof. Dr. ImtiazAlam	FM(EE)
4.	Assoc. Prof. Dr. AwaisMajeed	FM(SE)

#### **Proceedings**

##### **Commencement of the Meeting**

1. The Chairman declared the meeting open at 1000 hours and welcomed the members.  
The chair urged the members to participate actively.  
The minutes of the 10<sup>th</sup>FBoS were confirmed by the house as no observations were received.

## **Agenda Item # 1101**

**Initiated by:** HOD CE, Islamabad Campus

### **SUBJECT: ADD NEW COURSES TO THE LIST OF ELECTIVE COURSES**

#### **1. Background to the Case**

In 2015, the department of computer engineering had two corporate advisory committee meetings with an intent to propose necessary amendments to the roadmap keeping in view the current and forecasting future demands of the IT/Telecom industry, where most of our graduates will be absorbed after graduation. With that in mind, we have made a list of courses that can be added to our current elective course offering list so that a student can choose a chain of elective courses and get expertise in embedded systems, networking and communications, or in software design. We have not included any new courses; instead courses are in the roadmap of CS, IT, SE or EE department.

#### **2. Recommendations**

It is requested that the following new courses may kindly be approved as elective courses for the BCE program.

1. EEN 434 Computer Networks
2. CSC 345 Information Theory
3. CEN 451 Data Encryption and Security
4. CEN 468 Introduction to Communication Systems
5. SEN 448 System Application for mobile Devices
6. SEN 310 Web Engineering
7. SEN 210 Software Engineering
8. CSC 210 Object Oriented Software Engineering
9. SCS 313 Visual Programming

### **Discussion and Decision**

The house agreed to the proposal

<b>Agenda Item # 1102</b>	
<b>Initiated by: <u>HOD CS, Islamabad Campus</u></b>	
<b><u>SUBJECT: CURRICULUM REVISION OF BS (IT) PROGRAM</u></b>	
<p><b>1. <u>Background to the Case</u></b></p> <p>Revision of the Curriculum is a continuous process as per HEC guidelines. Curriculum revision will bring improvement in the program and it will make a strong alignment of BS (IT) Road-Map with HEC guidelines promulgated from time to time.</p> <p><b>2. <u>Recommendations</u></b></p> <p>The revisions in BS(IT) road-map are recommended for approval</p>	
<b>Discussion and Decision</b>	
Consult with concerned department in Lahore campus and Karachi campus to decide revised curriculum.	
<b>Action By: HOD CS BUIC,BULC and HOD C&amp;SE BUKC</b>	

<b>Agenda Item # 1103</b>	
<b><u>Initiated by: HOD, C&amp;SE,BUKC</u></b>	
<b><u>SUBJECT: REVISION OF BCE CURRICULUM</u></b>	
<p><b>1. <u>Background to the Case</u></b></p> <p>In the confirmatory visit by PEC on 29<sup>th</sup> July, 2016, the team highlighted its concerns regarding the revision of BCE curriculum. The following were the raised points:</p> <ul style="list-style-type: none"> <li>• Some of the courses have double pre-requisites; that make difficult for students to take a regular course</li> <li>• Revised list of depth electives and interdisciplinary depth electives</li> <li>• English-1 should be named as Functional English</li> </ul> <p><b>2. <u>Financial Effect</u></b></p> <p>Nil</p> <p><b>3. <u>Recommendations</u></b></p> <p>DBOS has unanimously recommended to revise BCE curriculum as suggested in the confirmatory visit by PEC team</p>	

<b>4. <u>Establishment/HR effect if any</u></b>
Nil
<b>Discussion &amp; Decision</b>
Send list of depth electives and IDEE.

<b>Agenda Item # 1104</b>
<p style="text-align: right;"><b><u>Initiated by: HOD, C&amp;SE, BUKC</u></b></p> <p><b><u>SUBJECT: REPLACEMENT OF THE “SOFTWARE APPLICATION FOR MOBILE DEVICES” WITH “MOBILE APPLICATION DEVELOPMENT”</u></b></p> <p><b>1. <u>Background to the Case</u></b></p> <p>Software Application for Mobile Devices (SEN-448) has been taught in the BS, Software Engineering. With the advancement of technologies, it is one of the demanding courses these days. However, the course content taught in this course were targeted as a mobile development course. In BS(CS) roadmap, there is a course “Mobile Application Development (CSC-341) (2 +1) found that can be replaced with this existing Course as a software application domain elective.</p> <p><b>2. <u>Financial Effect</u></b></p> <p>Nil</p> <p><b>3. <u>Recommendations</u></b></p> <p>It is suggested that the replacement should be considered for this course so that a proper Lab/theory components can be designed and implemented</p> <p><b>4. <u>Establishment/HR effect if any</u></b></p> <p>Nil</p>
<b>Discussion &amp; Decision</b>
After detailed discussion proposal is recommended with major revisions

<b>Agenda Item # 1105</b>	
<b><u>Initiated by:</u> HOD, C&amp;SE, BUKC</b>	
<b><u>SUBJECT: ADDITION OF CREDIT HOUR IN BCE DEPTH ELECTIVE COURSE – REAL TIME SYSTEMS</u></b>	
<p>1. Background to the Case</p> <p>In the BCE roadmap, all the depth elective courses have 4 credit hour course (3 + 1). However, Real time system is the only depth elective in the roadmap, which has no lab component. If this course will be offered as a depth elective then students may not be able to get degree in time because of the shortage of 1 credit hour.</p>	
<p>2. Financial Effect</p> <p>Nil</p>	
<p>3. Recommendations</p> <p>It is suggested that the course should have a lab component so that the department can offer this depth elective easily.</p>	
<p>4. Establishment/HR effect if any</p> <p>Nil</p>	
<b>Discussion &amp; Decision</b>	
Merge with roadmap revision	

<b>Agenda Item # 1106</b>	
<b><u>Initiated by:</u> HOD,C&amp;SE, BUKC</b>	
<b><u>SUBJECT: SELECTION OF GENERAL/SUPPORTING/DOMAIN/DEPTH ELECTIVES FROM NEW ROADMAPS FOR BCE AND BSE PROGRAMS</u></b>	
<p>1. <b><u>Background to the Case</u></b></p> <p>The departmental cluster head has proposed that an opportunity should be provided to bachelor students of computer engineering and software engineering to select general/supporting/domain/depth electives from new roadmaps. In this way, students can register in new courses added in new roadmaps of the programs.</p>	
<p>2. <b><u>Financial Effect</u></b></p> <p>Nil</p>	

**3. Recommendations**

It is recommended that the case may be forwarded to FBOS/ACM for approval

**4. Establishment/HR effect if any**

Nil

**Discussion & Decision**

Provide new program Performa. Provide details of faculty .Approved by house

**Agenda Item # 1107**

**Initiated by: HOD C&SE, BUKC**

**SUBJECT: STARTING PhD PROGRAM FOR SOFTWARE ENGINEERING**

**1. Background to the Case**

The current strength of PhDs in C&SE department is 2 in number and one of them is HEC approved supervisor. One more PhD will be inducted before Fall 2016. With this strength of PhDs in the department, launching PhD in Software Engineering would be an opportunity to strengthen our research culture and would attract MS (SE) students/FMs to enhance their academic qualifications in the said field. One of the FM has already started her PhD in other department. The other two FMs are also interested to continue his/her study in Software Engineering Department.

**2. Financial Effect**

(Financial aspects/break-even analysis is under progress)

**3. Recommendations**

The DBoS unanimously recommends the initiation of PhD in SE

**4. Establishment/HR effect if any**

Nil

**Discussion & Decision**

Make a pool of electives. Get approved from ACM. Approved for all ES

**Agenda Item #1108**

**Initiated by: HoD(EE), Islamabad Campus**

**SUBJECT: STUDY OF MS TELECOM & NETWORKING IN EE & CS**

**DEPARTMENMTS**

**1. Background to the Case**

With reference to the letter BU/Dean ES/T&N/BUKC/16/115 a committee of Dean (ES), HOD (EEKC) and HOD(CSKC) was constituted to carry out study of MS T&N Program at BUKC and to place the program in either EE or CS.

- MS-T&N program at BUKC to be offered in EE department w.e.f fall 2016 due to similarity in curriculum and possible Telecom intake from graduating BEE student.
- As per existing practice, non-engineers should be allowed to enroll in MS-T&N program provided they full fill other admission criteria.

**2. Financial Effect**

Nil

**3. Recommendation**

- The Board observed that if a student with CS background seeks to get admission in MS Telecom & Networking then it will be very hard for him/her to study the graduate level courses of communication since the CS students do not study courses such as Signals & systems, Digital Signal Processing, communication systems and data communication.
- The Board suggested that for non-engineers it should be made compulsory to undertake two additional courses (signals & systems and communication systems).
- The Board also pointed out that the students may not be interested in taking extra courses and specially paying for the additional courses and the university might not be interested to offer the courses free of charge.
- HOD must discuss this case in FBOS to discuss the students with deficiency courses and how to offer these students extra courses at the expense of university/student.

**Discussion & Decision**

FBOS asked to provide working paper and detailed output of program

**Agenda Item # 1109**

**Initiated by: HoD(EE), Islamabad Campus**

**SUBJECT: OBSERVATIONS OF HEC REGARDING MS-THESIS STUDENTS AND PhD FACULTY MEMBERS.**

**1. Background to the Case**

The HEC has observed that most of the Universities have commenced MS program with only two PhD faculty members in the relevant field. Since a PhD scholar is allowed to supervise 7 MS thesis, so the university should take this matter into consideration that the number of students enrolled in MS program should be directly proportional to the number of PhD's in the relevant field.

**2. Financial Effect**

Nil

**3. Recommendations:**

- This rule is for these programs in which the thesis option is compulsory.
- In Bahria University, the thesis is optional and students decide about the thesis after two semester. Therefore, this rule as it is not applicable to the program in Bahria University.
- The DBOS suggested allocating tentative supervisor at the time of enrollment since it is the requirement of HEC to allocate the supervisor to students at the time of admission.
- Students may submit written consents at the time of enrollment, stating whether they will go for thesis or non-thesis option since all the students do not go for Thesis option.
- The university will then allocate tentative supervisors to the students who are interested in thesis.
- The university should take into account whether they have sufficient strength of PhD's in the relevant field to supervise the students who opt for thesis.

**Discussion & Decision**

Faculty to student ratio is according to HEC requirements in all departments



<b>Agenda Item # 10</b>	
<b>Initiated by:</b> <u>HOD EE, Karachi Campus</u>	
<b><u>SUBJECT: MODIFICATION IN LIST OF ELECTIVES FOR BEE PROGRAM</u></b>	
<b>1. <u>Background</u></b> <ul style="list-style-type: none"> <li>EE department at Bahria University offers many courses as elective Electronics and Telecommunication field. “Digital control systems” and “Computer Vision”.</li> <li>There is still a room for improvement and some more courses should be included in the list according to new research trends and industrial demand.</li> </ul>	
<b>2. <u>Recommendation</u></b> <ul style="list-style-type: none"> <li>Following courses may be added in Electronics and Telecommunication streams. “Digital control systems” and “Computer Vision”.</li> <li>Other courses which have never been taught may be removed for example “Introduction to Nano Technology” and “Fault Tolerant System etc.,</li> </ul>	
<b>3. <u>Establishments/HR Effect if any</u></b>  Nil.	
<b>4. <u>Financial Effect</u></b>  Nil.	
<b>Discussion &amp; Decision</b>	
Consult with Dr Ali Shami to decide Electives.	

<b>Agenda Item # 11</b>
<b><u>Initiated by:</u></b> <u>Earth &amp; Environmental Sciences, Islamabad Campus</u>
<b><u>SUBJECT: LAUNCHING OF DOCTOR OF PHILOSOPHY (PHD), PROGRAM IN GEOPHYSICS AND ENVIRONMENTAL SCIENCES</u></b>
<b>1. <u>Background to the case:</u></b>  <p>Since its inception in 2000, the student strength of the department has crossed 1000 mark with more than 100 Master level students in Geology, Geophysics and Environmental Sciences. PhD program in geology is being started from Fall 2016. The department is in a strong position to start PhD in Environment Sciences from Spring 2017 as the department has adequate number of PhD faculty members in Environmental Sciences. However, on contrary, department cannot start PhD in Geophysics from Spring 2017 because of non availability of</p>

PhDs in the field of geophysics. The department plans to start PhD program in Geophysics from Fall 2017 after induction of relevant PhD faculty members. If there is any shortage of PhD faculty, Adjunct PhD faculty in the relevant field can also be engaged.

**2. Recommendations:**

The initiation of PhD programs in Environmental Sciences and Geophysics may please be approved. Road maps already approved by HEC for BUIK are attached for perusal and information. PhD-2015Geophysics, BOOKLET.docx; ROADMAP FOR PHD Environmental Sciences.doc

**3. Establishment/HR effects, if any:**

Nil

**4. Financial effects:**

Nil

**Discussion & Decision**

Go for Environmental sciences. Provide details of faculty and labs required. Provide new program Performa.

**Agenda Item # 12**

**Initiated by:** Earth & Environmental Sciences, Islamabad Campus

**SUBJECT:** REPLACEMENT OF BS GEOLOGY, GEOPHYSICS AND ENVIRONMENTAL SCIENCES THESES INTO ONE COURSE AND A PROJECT

**1. Background to the case:**

At present there are 45-50 students in BS Geology and Geophysics 8th semester. In the last semesters they have to carry out theses work of 6 credit hours, i.e. one final semester but extendable to two more semesters. Afterwards, the theses load becomes multifold. Moreover, as the data is very limited and hardly available therefore 2 to 3 students group in each discipline is to be devised. To supervise 5 groups at the most at BS level and 5 or more students at MS level, exerts tremendous burden on the faculty. Besides, they are also supposed to teach 4 courses and to involve in research, conferences, trainings and extra curricula activities. Due to insufficient time, the students make queues waiting for their turns to meet their supervisors for guidance. The BS theses if replace with one course and a project in 8th semester will yield better results.

**2. Recommendations:**

The changes proposed may please be approved.

**3. Establishment/HR effects, if any:**

Nil

**4. Financial effects:**

Nil.

**Discussion & Decision**

Department at both campus should work for a way-out.

**Agenda Item # 13**

**Initiated by:** Earth & Environmental Sciences, Islamabad Campus

**SUBJECT: INCREASED INTAKE OF STUDENTS IN BS GEOLOGY,**

**GEOPHYSICS AND ENVIRONMENTAL SCIENCES FROM SPRING 2018**

**1. Background to the case:**

The department E & ES has shown growth in the intake of students in geology and geophysics. More than 100 students apply in each semester and only up to 45 students are admitted in Geology and Geophysics as per class room capacity. Keeping in view the growth demand and confidence and reputation of the E & ES department of Bahria University, it is proposed to start two sections in each discipline accommodating initially 35-40 students in each class subject to the availability of more class rooms. Double sections in Environmental Sciences can only be possible subject to more intakes of students in this discipline. The E & ES department also plans starting double sections in Environmental Sciences from Spring 2018 along with Geology and Geophysics disciplines. This can be only possible if more class rooms are provided.

**2. Recommendations:**

The proposal starting double sections in all three disciplines from Spring 2018 may be approved.

**3. Establishment/HR effects, if any:**

Nil

**4. Financial effects:**

Nil

**Discussion & Decision**

Provide all details of faculty, infrastructure etc. Intake can be increased by fall 2018.

### **Agenda Item # 14**

**Initiated by:** Earth & Environmental Sciences, Islamabad Campus

**SUBJECT: INCREASED INTAKE OF STUDENTS (SPRING AND FALL) IN MS (GEOLOGY/GEOPHYSICS/ENVIRONMENTAL SCIENCES) FROM SPRING 2017**

#### **1. Background to the case:**

Due to theses load in BS geology and geophysics, the MS programs in these two disciplines could not be launched twice a year. After restricting theses at BS level, the faculty may utilize energy and time for supervision at Postgraduate level. Admission in Fall semester is also the present day need. The students who cannot complete their BS degree in due time may not take admission therefore they have to wait for one year. This creates distress and instigates frustration among students. If the theses load per faculty exceeds the limit devised by HEC then the services of Adjunct faculty can be hired.

#### **5. Recommendations:**

The proposal starting MS programs spring and Fall, twice a year from 2017 may please be approved.

#### **6. Establishment/HR effects, if any:**

Nil

#### **7. Financial effects:**

Nil

### **Discussion & Decision**

Proposal is pended for the time being.

### **Agenda Item # 15**

**Initiated by:** Earth & Environmental Sciences, Islamabad Campus

**SUBJECT: Launching of BS (Biotechnology) from Fall 2018**

Provide detailed analysis, roadmap, infrastructure and faculty required. Provide new program Performa

#### **1. Background to the case:**

Biotechnology has rapidly emerged as an area of activity having a marked realization as well as potential impact on virtually all domains of human welfare,

ranging from food processing, protecting the environment, to human health etc. It now plays a very important role in employment, production and productivity, trade, economics and economy, human health, and the quality of human life throughout the world. This is clearly reflected in the emergence of numerous biotechnology companies throughout the world. The total volume of trade in biotechnology products is increasing every year, and is expected to soon become the major contributor to world trade. The 21st century will be the century of biotechnology, just as the 20th century is the era of electronics.

The department of E & ES, Islamabad campus aimed to start BS program in biotechnology from Fall 2017. This program was approved previously in DBOS meeting with the road map but could not be executed due to shortage of space. It is reiterated that this program will run in conjunction with BS Environmental Sciences as both the programs share common courses in initial semesters. As BS biotechnology is yet at its infant stage of growth and is offered by a few institutions in Pakistan, the department expects a regular intake of about 30-40 students per semester. This program can be started after acquiring extra class rooms. BS Biotech-curriculum-Biotechnology.pdf.

**2. Recommendations:**

The proposal starting BS in biotechnology from Fall 2018 may be approved

**3. Establishment/HR effects, if any:**

Nil.

**4. Financial effects:**

Nil.

**Discussion & Decision**

Provide detailed analysis, roadmap, infrastructure and faculty required. Provide new program Performa

**Agenda Item # 16**

**Initiated by:** Earth & Environmental Sciences, Islamabad Campus

**SUBJECT: ESTABLISHMENT OF CLIMATE CHANGE AND ENVIRONMENT RESEARCH CENTRE (CCERC) AND LAUNCHING MS DEGREE PROGRAM**

**1. Background to the case:**

The earth's climate is affecting the weather systems with reference to snow and rainfall, storms, and the ecosystems including agriculture and natural hazards such as landslides. To cope with such changes it is important to devise strategies to deal

with the threats for mitigation the disasters and making best use of the opportunities emerged from the Climate Change. As per Rector's desire and the present day need, department of E & ES is planning to establish Climate Change and Environment Research Centre in collaboration with Ministry of Climate Change Islamabad. At present the department has four faculty members with PhD qualifications in Environmental Sciences and further three faculty members are the PhD scholars therefore their services will also be best utilized in the Centre. The Centre may start its function in September and MS degree program in Climate Change from Fall 2016. The road map (Curriculum) has already been prepared in this regard, which place here for perusal and information.

**2. Recommendations:**

The proposal establishing CCERC and starting MS degree Program in Climate Change from Fall 2017 may be approved

**3. Establishment/HR effects, if any:**

Nil

**4. Financial effects:**

Nil

**Discussion & Decision**

Provide detailed analysis, faculty required and available resources for programs

**Agenda Item # 17**

**Initiated by: HOD SE BUIC**

**SUBJECT: REPLACEMENT OF HSS 424: ENGINEERING ETHICS WITH SEN 425: SOCIAL, LEGAL AND ETHICAL ISSUES IN ENGINEERING SCIENCES**

**1. Problem Statement.**

With the advent of evolution of cyber laws, there is a requirement to replace Engineering ethics with a new course Social, Legal and Ethical Issues in Engineering Sciences

**2. Recommendation:**

Since Ms Sadaf Farhan is teaching this course for past few years, she may be assisted by Ms Sadiashraf for the revision of course. The course outline is placed at Annexure-

### **3. Decision at DBOS:**

The course revision stands approved at the level of DBOS. It is recommended that the roadmap revision may be submitted to FBOS for approval.

This proposal is also shared with BUKC (CSE Department), their consent for approval is solicited, subsequently granted by Head, CSE department (BUKC). This roadmap, if approved by FBOS and subsequently by ACM, shall be effective from Fall 2016 entry onwards.

### **Discussion & Decision**

The house agreed to update course content but advised not to change nomenclature and category of subject



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

### **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)