

## University College of Engineering & Technology

The University College of Engineering & Technology excels in innovative teaching and research, in developing practical applications and approaches to problems and areas of study, and in preparing professionals and leaders who will have worldwide influence on technologies and societies.

### Introduction

In 1975, the Government of the Punjab decided to set up four Engineering Colleges at Taxila, Multan, Faisalabad and Bahawalpur in the same order of priority. In accordance with the decision of the Punjab Cabinet, the first Engineering College initially started functioning at Sahiwal and was later, in 1978, shifted to Taxila as a second campus of the University of Engineering and Technology, Lahore. Later its status was raised to an independent University of Engineering and Technology. The proposal for the second College of Engineering and Technology at Multan met the approval of the ECNEC in September 1990.

The College of Engineering and Technology was thus established as a Constituent College of the Bahauddin Zakariya University, Multan. Its broad objective is to produce engineers at undergraduate level with bachelor's degree in conventional fields of Civil, Building & Architectural, Electrical, Computer and Mechanical Engineering to meet the engineering and technological manpower requirements of the province/country.

The College offers courses leading to the award of 4-Year engineering degree in Civil, Electrical, Building & Architectural, Computer and Mechanical Engineering. The College envisages to provide for teaching facilities to 1013 students at an annual intake of 243 students (in all disciplines of engineering) after the completion of the project. Due to certain spatial, financial and administrative constraints, the College started Civil Engineering Program in 1994. In 1997, Electrical Engineering Program was started. In 2004 three new disciplines namely Building & Architectural Engineering, Computer Engineering and Mechanical Engineering were started.

Seventy acres of land at the campus of the University has been allocated for the construction of various academic and administrative blocks of the College. The plans of the administrative and academic blocks, with adequate space for class rooms and laboratories have been prepared. Purchase of equipment for laboratories and books for library has already been taken in hand. The construction work of the

Civil Engineering Department was completed in January, 1998. The construction work of Electrical Engineering Department was completed in January, 2000 and construction of Mechanical Engineering Department was completed in May 2007. Moreover, the extension of Civil and Electrical Engineering departments are also completed. The construction of a boys hostel to accommodate 250 students, five residences of teaching staff and six residences of other staff have also been completed.

### Faculty

#### Department of Civil Engineering Professor

Prof. Dr. Akhtar Ali Kalrou

**Principal/Dean**

#### Assistant Professor

Engr. Rana Farooq Shabir

Engr. Abdul Ghaffar

Engr. Mudasser Muneer Khan

Engr. Abid Latif

Engr. Muhammad Ilyas Sheikh

Engr. Syed Safdar Raza Abdi

Engr. Azhar Khitab

**Head of the Department**

#### Lecturer

Engr. Tahir Sultan

Engr. Sobia Riaz

Engr. Tanveer Ahmad Khan

Engr. Saima Batool

Engr. Nosheen Zaib

Engr. Hufsa Kanwal

Mr. Muhammad Rafique Mufti

#### Department of Electrical Engineering

##### Assistant Professor

Engr. Nek Muhammad

Engr. Abdul Sattar

Engr. Zafar Iqbal Ch.

Engr. Muhammad Abrar

**Head of the Department**

**Lecturer**

Engr. Ali Ahmad  
 Engr. Tauheed ur Rahman  
 Engr. Ahmed Hesham Pasha  
 Engr. Majid Hussain  
 Engr. Shahzad Moin  
 Engr. Saira Javaid  
 Engr. Amna Riaz  
 Engr. Sohail Afzal  
 Engr. Adil Bashir  
 Engr. Kiran Khalil  
 Engr. Summaya Bibi  
 Engr. Muhammad Zulfiqar Ali  
 Engr. Syed Hammad Hassan Gillani

**Department of Mechanical Engineering****Assistant Professor**

Engr. Akhlaq Ahmed  
 Engr. Shazia Noor  
 Engr. Abdul Bari  
 Engr. Asad Raza Gardazi

**Head of the Department****Lecturer**

Engr. Tahir Hassan Qureshi  
 Engr. Abdul Bari Farooq  
 Engr. Muhammad Bilal Bapi  
 Engr. Farukh Arsalan Siddiqui

**Department of Building and Architectural Engineering****Assistant Professor**

Engr. Syed Shahid Ali Bukhari  
 Engr. Kamran Ali Qureshi  
 Engr. Muhammad Asif Ch.  
 Arch. Rashid Adil  
 Engr. Saleem Fakhar

**Head of the Department****Lecturer**

Engr. Sumra Yousuf  
 Engr. Beenish Jamil  
 Engr. Sunera Imtiaz  
 Engr. Ambreen Shahid

**Lab Engr.**

Arch. Syeda Mahwish Zahra

**Department of Computer Engineering****Assistant Professor**

Engr. Asif Rasool  
 Engr. Imran Malik  
 Engr. Ahsan Khalil Siddiqui

**Lecturer**

Engr. Shahida Jabeen  
 Engr. Zahid Iqbal  
 Engr. Muhammad Bilal  
 Engr. Muhammad Waqar  
 Engr. Usman Humayun Qureshi  
 Engr. Muhammad Mohsin Bhatti  
 Engr. Ahsan Ejaz  
 Engr. Muhammad Kashif  
 Engr. Ch. Yasir Anwar  
 Engr. Erminah Jafri

**Department of Basic Sciences****Assistant Professor**

Dr. Abu Zar Abid

**Head of the Department****Lecturer**

Ahmad Hassan  
 Muhammad Fazil  
 Huma Bashir

**Admission Committee**

The following Admission Committee has been approved by the Vice Chancellor and according to the admission /merit criteria announced by the College it will make admissions.

i.	Prof. Dr. Akhtar Ali Kalrou	Chairman
ii.	Engr. Abdul Sattar Malik	Secretary
iii.	Engr. Usman Humayun Qureshi	Member
iv.	Engr. Tanveer Ahmed	Member
v.	Engr. M. Majid Hussain	Member
vi.	Mr. Muhammad Fazil	Member
vii.	Engr. Shahid Bokhari	Member

## ADMISSION PROCEDURES/ INSTRUCTIONS

### A1 GENERAL INSTRUCTIONS

- Try to submit the application along with the required documents as early as possible. Do not wait for the last date.
- As soon as the process of selection is complete, the merit list will be notified showing the percentage admission marks of the applicants admitted in different disciplines against different categories.
- All documents to be attached with the application form (F-1) should be attested by a Class-I gazetted officer of the government or Class-A officer of this University.

### A2 ELIGIBILITY FOR ADMISSION

#### A2.1 Eligibility Requirements

An applicant for admission to any of the B.Sc. Degree Courses in Civil, Electrical, Mechanical, Building & Architectural and Computer Engineering must fulfill the following eligibility requirements:- He should have passed the Intermediate (*Pre-Engineering Examination with Chemistry, Mathematics and Physics*) from a Board of Intermediate and Secondary Education of Punjab, Federal or an equivalent examination recognized by the University. However, Intermediate with **Physics, Mathematics and Computer Science** shall be acceptable only for admission in Computer Engineering

#### A2.2 General Eligibility Requirements:

An applicant for admission to any of the B.Sc. Engineering Degree Course offered by the University must fulfill the following requirements:

- He should have obtained at least 60% marks in examination on the basis of which he seeks admission. Marks for Hafiz-e-Quran and entry test where applicable shall be added only for determination of merit.
- He should be a bonafide resident of the area from where he seeks admission.
- He should meet standards of physique and eye sight laid down in the medical certificate.
- He must have appeared in the entry test for **Session 2010** arranged by the University of Engineering & Technology Lahore, Pakistan

#### A2.3 Seats for Diploma Holders

- For admission against seats reserved for the holders of Diploma of Associate Engineer, the candidate should have passed diploma examination of a Board of Technical Education in the relevant technology with minimum 60% aggregate marks.
- Applicants seeking admission against seats reserved for the holders of 3 years Diploma of Associate Engineer shall not be eligible unless their diplomas are in relevant technology as specified against each degree course given below.

#### Electrical Engineering

- Diploma in Electrical Technology
- Diploma in Electronics Technology

#### Mechanical Engineering

- Diploma in Mechanical Technology

#### Civil Engineering

- Diploma in Civil Technology

#### Building & Architectural Engineering

- Diploma in Architecture
- Diploma in Civil Technology

#### Computer Engineering

- Diploma in Computer Technology

#### Explanation:

- A candidate having diploma in any other technology shall not be eligible for admission. The admission of all eligible diploma holders in a specific discipline will be purely based on merit.

#### A2.4 Provisions about admission on the Basis of a B.Sc. Degree:

- For admission to the B.Sc. courses in Electrical, Mechanical, Building & Architectural, Civil and Computer Engineering, an applicant must have passed the B.Sc. examination with Mathematics and Physics.
- A person possessing a B.Sc. degree is **NOT** eligible for admission to any Bachelors degree course at the College unless he has also passed F.Sc. (Pre-Engineering or Pre Medical) examination as per clause A2.1.

#### A2.5 Equivalent Examinations:

The University recognizes the following examinations as equivalent to the Intermediate (Pre Engineering) Examination with Chemistry, Mathematics and Physics of the Pakistani Boards of Intermediate and Secondary Education:

- a) Cambridge Overseas Higher School Certificate with Physics, Chemistry and Mathematics;
- b) British General Certificate of Education (Advanced Level) with Physics, Chemistry and Mathematics;
- c) F.Sc. (Pre-Medical) with Mathematics as an additional subject.
- d) American High School Graduation Diploma (12th Grade) or equivalent.

**A2.6 Sex**

Both Male and Female applicants are eligible to apply for admission to B.Sc. Engineering Degree Programmes.

**A3 DETERMINATION OF MERIT****A3.1 Examination considered for Merit Purpose**

For admission to all the Bachelor's Degree Courses and determination of merit the following examinations are considered:-

- a) Marks of Entry Test for **Session 2010**.
- b) Higher Secondary School Certificate Examination (H.S.S.C) Pre-Engineering or equivalent.
- c) Bachelor of Science (B.Sc.) or B.A.Sc.
- d) Diploma of Associate Engineer.

**A3.2 Merit Determination**

The comparative merit of applicants will be determined on the basis of **adjusted admission marks** obtained by them in these examinations:-

**A) For applicant with H.S.C. (Pre Engineering) as the highest qualification:**

- i) H.S.S.C (Pre Engineering) or equivalent including Hafiz-e-Quran marks. **70%**
- ii) Entry Test marks **30%**

**B) For applicants with B.Sc. or BA. Sc. as the highest qualification**

- i) B.Sc. or B.A. Sc **35%**
- ii) H.S.S.C. or equivalent exam including Hafiz-e-Quran marks. **35%**
- iii) Entry Test Marks **30%**

**C) For Applicants having Diploma of Associate Engineer as the Highest Qualification**

- i) Diploma of Associate Engineer including Hafiz-e-Quran marks **70%**
- ii) Entry Test Marks **30%**

**A3.3 EQUIVALENCE OF CERTIFICATES UPTO H.S.S.C. LEVEL**

The equivalence and issuance of certificates, marks up to HSSC level other than issued by Pakistan's Board is to be determined by the IBCC (Inter Board Committee of Chairmen as per decision of the Supreme Court of Pakistan). Such applicants are required to attach an Equivalence Certificate showing marks with the application for admission issued by the IBCC.

The following is the address of the IBCC:

**Inter Board Committee of Chairmen,**

Islamabad, at F.B.I.S.E Building H-8/4, Islamabad-PAKISTAN

For more information, please visit, <http://www.ibcc.edu.pk>

**A3.4 Credit for Hifz-e-Quran**

Twenty marks are added to the academic marks in HSSC or equivalent examination of an applicant who is Hafiz-e-Quran. He gets the benefit only if he has:

- i) Filled in the necessary column provided in the application form, and
- ii) Appeared before the "Verification Committee" appointed by the University and the Committee accepts his claim of being a Hafiz e-Quran.

**A3.5 Determination of Merit in case of Equal Percentage of Admission Marks**

If two or more applicants have equal percentage of admission marks (up to three places of decimal), they shall be treated at par for the purpose of admission.

**EXPLANATION**

In case there is a tie for the last seat in a particular discipline/category, then all the candidates who have secured equal percentage of admission marks (up to three places of decimal) shall be admitted. No transfer or new entry into that discipline/category shall, however, be considered unless the actual number of candidates already admitted falls below the number of allocated seats for that discipline/category.

**A3.6 Merit Determination Category-wise**

The seats for admission to the Bachelor's Degree courses at the College are distributed over various categories. These categories are discussed in Section A-4 below. The details of the distribution of seats are available in the Seats Allocation Chart.

The applicants for each category are grouped separately. Then on the basis of the percentage admission marks, comparative merit of the applicants comprising the group is prepared. The

applicants belonging to a category thus compete for admission amongst themselves for the seats allocated to it.

### A3.7 Transfer on the basis of given preferences

In case a seat in any discipline/ category of higher preference given by a candidate falls vacant and he is eligible for transfer to that discipline/ category on the basis of his merit, he shall be automatically transferred to the discipline/ category. He will have no right to retain his admission in the previous discipline/category unless he submit a written with drawl of higher preference well in time before displaying the next merit list.

The candidate whose name appears in any merit list against any category/ discipline (even of lower preference) will have to deposit fee so that his name may be considered for transfer to the higher preference (if available) as mentioned above.

If a candidate fails to deposit fee at any stage when he is offered admission, he will be taken out of the admission process and have no right to claim for admission against any category/discipline.

### A3.8 Unutilized Seats

If some seats allocated to any category remain unutilized after expiry of the merit list advertised in the newspaper then those seats will be filled according to the policy defined by the BZU Admission Committee on the recommendation of Admission Committee, UCE&T

### A4 CATEGORIES & SYMBOLS

The seats for the Bachelor's Degree Courses are distributed over different categories. For brevity, these

categories are assigned symbols. The list of symbols is given as under:

#### Symbols Categories

A	Open Merit seats (All Punjab)
C	Children of University Teachers.
D	Diploma Holders (Open Merit)
E	Children of University Employees.
FA	Females on open merit.
G	Foreign students.
H	Disable students.
I	Tribal areas of D.G. Khan Division.
K	Seats for Baluchistan
M	Seats for FATA
EQ	Earthquake area

#### A4.1 Category A

Open merit seats (All Punjab, For candidates having domicile of Punjab Province).

#### Category C

Seats for real son/daughter of the working / retired /deceased teachers of B.Z. University, Multan.

#### Category D

Seats for students holding 3 years Diploma of Associate Engineer.

#### Category E

Seats for real son/daughter of the working / retired /deceased employees other than teachers of B.Z. University, Multan.

#### Category FA

Seats for female applicants, all Punjab

#### Category G

Seats for Foreign Students only (by nomination from the concerned authority)

#### Category H

Seats for Disabled Candidates only

#### Category I

Seats for Tribal areas of D. G. Khan Division (by nomination from the concerned authority)

#### Category K

Seats for Baluchistan (by nomination from the concerned authority)

#### Category M

Seats for FATA (by nomination from the concerned authority)

#### Category EQ

Seat for Earthquake area of Azad Kashmir (by nomination from the concerned authority)

Selection in **Category 'H'** will depend upon merit and the severity of disability as well as the suitability towards a particular discipline. The candidates applying under category "H" must produce a certificate of disability from District Assessment Board duly signed by Director General Social Welfare, Provincial Council for Rehabilitation of disabled persons, Lahore.

**Note:** (i) Distribution of seats is given in the seat allocation chart.  
(ii) The applicant should mention suitable category under which he/she is seeking admission.

### A5 DOCUMENTS REQUIREMENTS

#### A5.1 Documents to be submitted by applicants (attested photocopies)

- Degree, Diploma or Certificate of all the examinations on the basis of which admission is sought (i.e. S.S.C. or equivalent, F. Sc. or equivalent, B.Sc., Diploma of Associate Engineer).
- Detailed Marks Certificates
- Domicile Certificate (Punjab Only)
- Application Form duly filled in (in original)
- Entry Test Marks Certificate
- Passport size Photograph. (02

No) to be pasted on the application form.

- g) Original Demand Draft (Bank Draft) of the amount mentioned in section A10 with application in favor of Treasurer, B.Z. University Multan. (For applicants of Category SA & SD only).

#### A5.2 Additional Documents To whom applicable

- If an applicant has passed F.Sc. (pre-medical),
- If an applicant has passed F. Sc. (pre-medical), he has to submit an attested photocopy of the certificate for additional mathematics.
- If an applicant is applying for the C & E category seats, he has to submit in original a certificate from the Registrar of the University on prescribed Form.
- If an applicant is claiming 20 marks for being Hafiz-e-Quran, he must read the instructions given in section A3.4 under heading "CREDIT FOR HAFIZE-e-QURAN" in the Prospectus carefully.

#### A6 DOMICILE REQUIREMENTS

##### A6.1 Domicile Certificate to be submitted by all applicants

All applicants are required to submit with their applications an attested photocopy of their domicile certificate failing which their applications shall not be considered for admission.

#### A7 APPLICATION PREFERENCE FEE

**A7.1** *An application preference fee will be charged at the time of submission of application as per given below:  
Rs: 100/- for each preference charged for each preference Rs: 500/- for 5 or more.*

#### A8 DEADLINE FOR RECEIPT OF APPLICATION

The application form complete in all respect, along with the requisite documents, the preference fee (*charged at the time of submission of application*) should reach in the office of:

*The Secretary, Admission Committee, University College of Engineering and Technology, Bahauddin Zakariya University Multan.*

On or before the last date notified for receipt of applications in national newspapers.

The application may be delivered personally or sent under registered post. Application received after the closing date shall not be entertained, irrespective of the fact that it was posted before the closing date.

##### A8.1 Incomplete Applications

Applications which are incomplete in any respect shall not be entertained. Application form, fee and the documents submitted with it shall not be returned on any ground.

#### A9 PROCEDURE FOR THE SELECTED CANDIDATES

##### A9.1 Notification of Selection

A list of selectees will be put up on the Notice Boards of **Civil Engineering Department**,

University College of Engineering & Technology, Bahauddin Zakariya University, Multan.

**No candidate will be informed individually about his selection for admission/withdrawal or cancellation of admission in a department.**

#### A9.2 Depositing of Dues and Documents

The schedule for payment of dues and submission of documents will be displayed on the notice board of Civil Engineering Department with merit lists. A selectee is required to pay the University dues and submit the following documents to the Secretary Admission Committee.

- Medical Certificate duly signed and stamped by University Medical Officer.
- Five attested copies of the most recent passport size photographs.
- Original degree and certificates of Matric, F. Sc., B.Sc., GCE(A), Diploma of Associate Engineer, or the equivalent qualifications along with two sets of attested photo copies of all the documents.
- Original Domicile certificate.
- Affidavit (Undertaking) duly completed given in the prospectus.
- Original entry test marks sheet.

##### A9.3 Forfeiture of right of admission

A selectee who fails to fulfill the requirements laid down in Clause A9.2 within the prescribed time-limit shall forfeit his right of admission. However such affectee may appeal to admission committee of UCE&T after fulfilling the requirement laid down in clause A9.2 if any vacant seat in that

particular category of the specific program is available.

#### **A9.4 Provisional Admission**

On fulfillment of the obligations mentioned in section A9.2 a selectee will be admitted to the University. This admission shall, however, be provisional until all the original degrees or certificates submitted by him have been checked for their veracity. In case any document proves to be false, fake, or fabricated at a later stage, a provisionally admitted student shall be liable to expulsion from the University and to any other disciplinary or legal action the University may deem fit. Moreover, all the fees and charges deposited by him shall stand forfeited in favor of the University.

#### **A9.5 Warning**

If at any stage, a student is found indulging in *politics*, his admission will be cancelled as referred to in affidavit form.

## **RULES AND REGULATIONS**

1. **Liability for Injury, Damage & Loss**  
The College teaching programmes include training in its workshops and laboratories, places of engineering and architectural interest, industrial concern, and construction jobs. The University or other concerns shall not be responsible in the event of an injury, damage or loss to a student resulting from any cause whatsoever during the course of such training
2. **Modification of Rules & Regulations**  
The rules and regulations governing various aspects of student's life at the University (such as discipline, admission, examination, migration, fees and charges etc.) are given in this prospectus as they stood at the time of its publication. There is no guarantee that these rules and regulations will remain unchanged throughout a student's stay at the College, nor does it in any way restrict or curtail the inherent powers for the University authorities to modify them whenever in their judgment any modifications are called for, and to implement the modified rules and regulations from a date which they deem appropriate.

Entry 2010 is under Annual System in UCE&T.

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**Rules & Regulation for annual system are available with the department.**

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### **B.Sc. in Civil Engineering**

**Scheme of Studies Available with the Department**

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### **B.Sc. Electrical Engineering**

**Scheme of Studies Available with the Department**

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### **B.Sc. Mechanical Engineering**

**Scheme of Studies Available with the Department**

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### **B.Sc. Computer Engineering**

**Scheme of Studies Available with the Department**

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### **B.Sc. in Building and Architectural Engineering**

**Scheme of Studies Available with the Department**

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## B. Z. University College of Textile Engineering, Multan

<b>Established</b>	2004
<b>Location</b>	Near Edhi Village, 6-Km, Khanewal Road, Multan
<b>Academic Programs</b>	1. B. Sc. Textile Engineering
<b>Enrollment</b>	see the relevant chart at the end

### Faculty

#### Principal

Engr. Muhammad Tahir Sajjid Bappi      Acting Principal

#### Assistant Professor

Mr. Khalid Hussain  
Engr. Niaz Ahmad

#### Lecturer

Mr. Farid Ahmad Yasin  
Eng. Khayale Jan  
Eng. Awais Mushtaq  
Mr. Nadeem Afraz  
Eng. Muhammad Ashraf  
Mr. Azmat Hussain  
Mr. Saleem Akhtar  
Eng. Muhammad Asad Ch.  
Eng. Muhammad Furqan Khurshid  
Eng. Shehzeen Arshad Ali  
Eng. Usman Iqbal  
Eng. Zubair Khalik  
Eng. Tariq Mahmood      on study leave  
Eng. Amir Abbas Shirazi      on study leave  
Eng. Sarmad Aslam      on study leave  
Eng. Ghulzar Ahmad Baig      on study leave  
Eng. Anwar ul Aleem      on study leave  
Eng. Usman Ali      on study leave  
Eng. Abdul Waqar      on study leave  
Eng. Zeeshan Yousaf      on study leave  
Mr. Muhammad Ibrahim  
Hafiz Abdul Haseeb Azmi  
Hafiz Tayyab Saeed

#### Lecturer Assistant

Mr. Khalid Mahmood

#### Demonstrator

Mr. Abdul Jabbar

#### Instructor

Mr. Khalid Saleem  
Mr. Zulfiqar Ali

### Introduction

Multan is not only famous as the most ancient city of South Asia but also skills of its artisan & craftsmen in the sector of pottery, textile, leather, embroidery products etc. On the top of the above Multan is also at the heart of cotton growing area. Cotton is raw material for Textile products which is also synonym to white gold that indeed is back bone of the economy of Pakistan and contributes more than 60% of overall exports. In order to develop and provide professionally trained textile engineers, managers and researchers according to the modern needs of the most important industry, Bahauddin Zakariya University, Multan, took over the then IHHTT established by the joint venture of Export Promotion Bureau Government of Pakistan and Multan Textile Education Trust, Multan, in August 2004 as a constituent College of Textile Engineering. The University started classes of B.Sc. Textile Engineering with 50 students in the four specializations of Textile Engineering viz., Yarn Manufacturing, Fabric Manufacturing, Wet Processing and Garment Manufacturing. The college also offers short courses and on job trainings to the people from local textile industry.

### Mission Statement

The College of Textile Engineering believes in establishing conducive environment for top of the class professional education and research in the field of Textile Engineering. The College is committed to produce quality textile engineers and technicians with expertise in operation and design of textile processes and machinery. The College of Textile Engineering is also devoted to solve the industry's technical and managerial issues targeting not only the current needs of industry but also acting as a key source of ideas and expertise for the long term competitiveness of the entire textile industry of Pakistan. This will



also be a source centre for technical human resources, executives and consultants.

### Objectives

- To produce professional textile engineers of high caliber and expertise to meet the demand of textile industry of Pakistan
- To enable the youngsters of Pakistan to acquire expertise in the different areas/ fields of textile engineering
- To produce trained human resources for textile process industry and textile machine manufacturing industry of Pakistan.
- To establish a Centre of Excellence in textile engineering in general and cotton processing-in particular.

### Desired Outcomes

The College would produce 50 to 60 B.Sc. Textile Engineering 10 to 20 Masters in Textile Engineering and 1 to 5 MPhil/PhD degree holders every year. The courses offered by the College of Textile Engineering and Technology are intended to result in:

- Improvement of technical and scientific approach for production of textile commodities
- Effective utilization of textile resources/ raw material like cotton.
- Minimization of unemployment
- Improving the neglected aspects of business such as marketing, research, finance etc.
- Creating a basic understanding strategic thinking among the traditional entrepreneurs of the region.

### Admission Committee

Engr. Tahir Sajjad Bappi	Chairman
Engr. Niaz Ahmed Mughal	Member
Engr. Muhammad Ashraf	Member
Mr. Azmat Hussain	Member / Secretary

### Enrolment:

Session	Enrolment	Current Status
2007-2011	90	81
2008-2012	54	49
2009-2013	62	55
2010-2014		

### Facilities

#### Laboratories

##### Yarn Manufacturing

Conversion of fibre to yarn is a basic process of woven and knitted fabrics. The state-of-the-art machines from Switzerland are installed in the yarn manufacturing laboratory. This is complete laboratory for yarn manufacturing. It consists of Unifloc All, Uniclean B 12, Unimix B71, Uniflex B60, Vission Sheild (Jossi). Condenser A21, Hi Per Card C60, RSB-D 40 draw frame, F15 roving, G 35 ring frame and Autoconer 338RM.

##### Fabric Manufacturing

Next process in the textile production is fabric manufacturing. Fabric manufacturing laboratory has variety of weaving machines from hand loom to high speed air jet loom. This laboratory consist of dobby and jacquard hand looms, dobby and jacquard shuttle looms, terry towel looms, rapier dobby and jacquard looms, air jet loom, sectional warping machine and sizing machine.

##### Wet Processing

Third process in textile manufacturing is dyeing, printing and finishing. The state-of-the-art laboratory scale machines are installed in the Wet Processing Laboratory. This includes all sort of dyeing and printing machines.

##### Garment Manufacturing

The finished fabric is used to manufacture garment and apparel. This laboratory includes all sorts of industrial cutting,

sewing, over-locking, interlocking and embroidery machines.

### Textile Testing and Quality Control

Textile testing laboratory is most important laboratory for testing the textile product and for quality assurance. This laboratory includes; USTER HVI - 1000, LISTER AF1S Pro- II, USTER Tester 5, USTER Tensorapid 4, USTER Autosorter, twist testers, fabric strength testers, crease recovery tester, fabric stiffness tester, tearing strength tester and much more.

### Microscopy and Colour Measurement

Microscopes are used to observe the physical parameters of fibre, yarn, fabric and other textile product which cannot be observed with necked eyes. Colour measurement and matching is a common feature of dyeing and printing processes. This laboratory includes different types of optical and video microscopes, Colour Eye and other color measuring equipments.

### CAD/CAM

A CAD/CAM laboratory has been established with 15 working stations. This laboratory is used to create weave and print designs which are transferred on weaving, knitting and printing machines.

### Chemistry

Chemistry laboratory has been established with all facilities which are used to prove basis chemical laws, to analyze and conduct titration of chemical substances.

### Physics

Our Physics laboratory is rich in equipment. In this laboratory, law of physics, mechanics, electrical and electronics are proved by the students.

### Computer

Computer laboratory has 45 work stations. All computers are connected with Internet. This laboratory is used by the students for practical work of computer related subjects and for internet,

**Workshops**

There are six workshops viz. Machine Shop, Forging Shop, Fitting Shop, Foundry Shop, Woodwork Shop, Electrical Shop and Electronics Shop. These workshops are equipped with latest machines and equipment.

**Library**

The College Library has more than 1934 Books on different fields of textile and related subjects.

**Sports**

There are cricket, football and volley ball grounds in the premises of the college.

## Admission Procedures/ Instructions

**A1 General Instructions**

- Try to submit the application along with required documents as early as possible. Do not wait for the date.
- As soon as the process of selection is complete, the merit list will be notified showing the percentage admission marks of the applicants admitted in Textile Engineering against different categories.
- All documents to be attached with the application form should be attested by a Class-1 Gazetted Officer of the Government or Class-A Officer of this University.

**A2 Eligibility for Admission****A2.1 Eligibility Requirements**

An applicant for admission to the Degree of B.Sc. Textile Engineering should have passed the Intermediate *Pre-Engineering with Chemistry, Physics and Mathematics* from a Board of Intermediate and Secondary Education of Punjab, Federal Board and or an equivalent examination recognized by the University.

**A2.2 General Eligibility requirement**

An applicant for admission to B.Sc. Textile

Engineering must fulfill the following requirements:

- He/She should obtained at least 60% marks in examination on the basis which he seeks admission. Marks for Hafiz-e-Quran and entry test where applicable shall be added only for determination of merit.
- He should be a bonafide resident of the area from where he seeks admission.
- He should meet standards of physique and eye sight laid down in the medical certificate.
- He must have appeared in the entry test for **Session 2010** arranged by the University of Engineering & Technology Lahore.
- Candidate/applicant must prove his physical fitness according to standards laid down by the University for Provisional Admission in degree program.

**A2.3 Seats for Diploma Holders**

For admission against seats reserved for the holders of Diploma of Associate Engineer, the candidate should have passed diploma examination of a Board of Technical Education in the Textile Technology with minimum 60% aggregate marks.

**A2.4 Sex**

Both male and female applicants are eligible to apply for admission to B.Sc Textile Engineering Degree program.

**A3 Determination of Merit****A3.1 Examination Considered for Merit Purpose**

For admission to B.Sc Textile Engineering and determination of merit the following examinations are considered:-

- Marks of Entry Test for Session 2010
- Higher Secondary School Certificate Examination (HSSC) Pre-Engineering or equivalent.
- Diploma of Associate Engineer.

**A3.2 Merit Determination**

Determination of merit is as given herein:-

- For candidates applying on the basis of HSSC Pre - Engineering or Diploma of Associate Engineer or equivalent.**

Examination	Weight
a) SSC (Pre-Engineering) or equivalent including with Hifz-e-Quran marks. <b>Or</b> Diploma of Associate Engineer including with Hifz-e-Quran marks.	70%
b) Entry Test marks	30%

- For candidates applying on the basis of B. Sc.**

Examination	Weight
a) Total marks secured in B.Sc	35%
b) Total marks secured in HSSC Pre-Engineering	35%
c) Entry Test marks	30%

**A3.3 Credit for Hifz-e-Quran**

Twenty marks are added to the academic marks in HSSC or equivalent examination of an applicant who is Hifz-e-Quran. He gets the benefit only if he has:

- Filled in the necessary column provided in the application form, and
- Appeared before the "Verification Committee" appointed by the University and the Committee accepts his claim of being a Hifz-e-Quran.

**A4 Admission Categories****A4.1 Category A: Open Merit Seats:**

Candidates applying for this category must have passed the intermediate examination with pre-engineering subjects (i.e. Mathematics, Chemistry and Physics) from any of Intermediate and Secondary Education Boards of Punjab or Federal Board of Intermediate and Secondary Education, Islamabad. Candidates with university recognized equivalent educational back

grounds (A-levels according to British education system) are also eligible to apply for this category. Both Male and Female candidates/applicants are eligible to apply for this category.

**A4.2 Categories B and C: Employee's Son/Daughter and Teacher's Son/Daughter**

Both male and female candidates/applicants are eligible to apply for these categories provided that rules and regulations laid down by the University for these Categories are duly applied.

**A4.3 Category D and E:**

Seats for Balochistan / Fata areas

**A4.4 Category F:**

Seats reserved for candidates holding three year diploma of Associate Engineer (DAE) on open merit

**A4.5 Category G: Three Year Diploma in Textile Technology awarded by Bahauddin Zakariya University, Multan.**

Top five students of Three Year Diploma in Textile Technology, awarded by Bahauddin Zakariya University, Multan, will be promoted to B.Sc Textile Engineering. Both male and female candidates/applicants are eligible to apply for this category.

**A4.6 Category H:**

Seats reserved for female candidates

**A4.7 Category I:**

Seats for foreign candidate

**A4.8 Category J:**

Seat for disabled candidates

**A4.9 Category K and L:**

Seats for tribal areas of D.G. Khan, Rajanpur Division and nominee from Azad Kashmir

**A4.10 Provisions for Admission on the basis of B.Sc Degree**

A person is eligible for admission to B. Sc Textile Engineering on the basis of B. Sc Degree provided that he/she

fulfils the criterion given herein:-

A person in possession of a B.Sc Degree is not eligible for admission unless he/she has passed the intermediate examination with pre-engineering subjects (i.e. Mathematics, Chemistry and Physics).

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**Scheme of Studies Available with the Department**

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# Institute of Advanced Materials

<b>Established</b>	2007
<b>Academic Program</b>	B.Sc. Metallurgy and Materials Engineering.
<b>Enrollment</b>	see the relevant chart at the end
<b>Prerequisites</b>	Intermediate Examination (Pre-Engineering or an equivalent examination recognized by the University) as per clause 2.5

## Faculty

### Professor

Prof. Dr. Shabbar Atiq

**Director**

### Assistant Professor

Engr. Mr. Amir Riaz

Engr. Waheed Qamar Khan

(Academic Advisor)

### Lecturer

Engr. Tahir Ahmad

Engr. Abdul Basit

Engr. Waheed Ahmad

Engr. Sidra Zahid

Engr. Taveer Ahmad Tabish

(On Study Leave)

DSA

### Lab. Engineer

Engr. Muhammad Zulfiqar

## Introduction

Materials Engineering, being one of the most important branches of engineering brings various disciplines of engineering and science closer in fulfilling present day technological requirements. In view of the ever increasing demand for highly qualified manpower in Materials Engineering, the Bahauddin Zakariya University has established Institute of Advanced Materials to offer quality education and training in this vital area of Engineering.

The institute has been established in a purpose built civil structure which houses lecture rooms, a modern library facility having access to various institutes and research organizations through internet facility. The hall-mark of the institute is its laboratories which distinguish it from other institutes. The laboratories have been equipped with most

modern and state of the art training and research equipment such as Scanning Electron Microscope, X-ray diffractometer, Thermal analyzer, furnaces for various purposes, and various instruments for testing of engineering materials along with facilities for determining physical and electrical properties of materials. The Labs have been established to prepare its graduates to provide services in sectors such as aerospace, metals and alloys, electrical and electronics, engineering ceramics and industries of strategic importance.

In the first instance, the Institute is offering 4-year degree program leading to B.Sc. Metallurgy and Materials Engineering. The revised curriculum of this program is so designed as to educate its graduates with various theoretical concepts in Materials Engineering and Technology, along with scientific principles governing designing, processing and applications of materials with a view to meet the needs of student-employer constituencies. The Institute places high degree of emphasis on practical training in relation to theoretical concepts and scientific principles, which is demonstrated by its well-equipped laboratories. The students would find the labs extremely useful in carrying out their research projects, as a part of degree program.

## Facilities

### Laboratory

### Details

#### Materials Preparation Lab

The Lab would serve as basic facility for preparation of various alloys, composites and sintered materials. High temperature arc melting furnace with vacuum is a unique facility.

#### Metallography Lab.

Metallurgical microscope with Image Analyzer, Optical Microscope, Student Microscopes and a comprehensive sample preparation setup has been established. This lab also holds a state of art, Micro Hardness Tester with software controlling for hardness measurement of different materials.

#### Heat Treatment Lab.

Vacuum and controlled atmosphere Tube Furnaces, Box Furnaces and Muffle Furnaces for heat treatments of different materials.

#### Materials

Scanning Electron Microscope.

#### Characterization Lab.

Simultaneous Thermal Analyzer. Xray Diffracto Meter and X-ray Florescence.

#### Mechanical Testing Lab.

20kN Universal Testing Machine, Impact Testing Machine, Brinell and Rockwell Hardness Testers. This facility will be used

	for evaluation of mechanical properties of metals, non-metals and polymers.
<b>Physical Properties Lab.</b>	Thermal constants measuring operators. Electrical resistivity measurement setup. Density measurement kit and Viscosity measuring apparatus.
<b>Foundry and Casting Lab.</b>	The lab would provide practical training in molding and casting techniques for ferrous and non-ferrous materials. It would house facilities such as crucible melting and induction furnace with necessary accessories alongwith mold preparation facilities.
<b>Welding and Non-Destructive Testing Lab.</b>	This lab will provide training on various joining techniques for metals and alloys comprising of electric arc welding, gas cutting and welding and TIG, MIG techniques. The non-destructive testing facilities would include Ultrasonic Testing, Magnetic Flaw Detectors and Radiography techniques.
<b>Mineral Processing Lab.</b>	This lab will hold the facilities of Crushers, Grinding Mills, Wet Magnetic Separators, Shaking Tables and Flotation techniques etc. for processing and beneficiation of different minerals, ores and other raw materials.

### Admissions

The admissions will be conducted by the following Departmental Admission Committee according to the admission criteria laid down by the BZU.

#### Admission Committee

Dr. Shabbar Atiq	Chairman
Engr. Amir Riaz.	Secretary
Engr. Waheed Ahmad	Member

The committee shall look after the admission process and can be accessed for interpretation of the rules and regulations.

#### Admission Procedure

(General Instructions)

Try to submit the application along with the required documents as early as possible. Do not wait for the last dates.

As soon as the process of selection is complete, the merit list will be

notified as per schedule approved showing the percentage of admission marks of the applicants admitted in B.Sc. in Metallurgy and Materials Engineering.

All the documents to be attached with application form should be attested by a Class-I Gazetted officer of the Government or Class-A officer of this University.

### Eligibility Requirements

1. The applicant should have passed the intermediate examination (Pre-Engineering) with Chemistry, Mathematics and Physics from a Board of Intermediate and Secondary Education of Punjab and Federal or an equivalent examination recognized by the University (as per clause 2.5). All male and female students are eligible to apply. For admission to the B.Sc. course in Metallurgy and Materials Engineering on the basis B.Sc., an applicant must have passed B.Sc. examination with Mathematics and Physics.
2. He must have appeared in the entry test for session 2008 conducted by UET Lahore.

#### 2.1 Eligibility Requirements

An applicant for admission to B.Sc. Degree Course in Metallurgy and Materials Engineering must fulfill the following eligibility requirements:-

He should have passed the Intermediate (*Pre-Engineering Examination with Chemistry, Mathematics and Physics*) from a Board of Intermediate and Secondary Education of Punjab, Federal or an equivalent examination recognized by the University (as per clause 2.5).

#### 2.2 General Eligibility Requirements:

An applicant for admission to any of the B.Sc. Engineering Degree Course offered by the University must fulfill the following requirements:

- a) He should have obtained at least 60% marks in examination on the basis of which he seeks admission. Marks for Hifz-e-Quran and entry test where applicable shall be added only for determination of merit.
- b) He should meet standards of physique and eye sight laid down in the medical certificate.
- c) He must have appeared in the entry test for **Session 2010** arranged by the University of Engineering & Technology Lahore, Pakistan

#### 2.3 Seats for Diploma Holders

For admission against seats reserved for the holders of Diploma of Associate Engineer, the candidate should have passed diploma examination of a Board of Technical Education in the relevant technology with minimum 60% aggregate marks.

**2.4 Provisions about admission on the Basis of a B.Sc. Degree:**

- For admission to the B.Sc. courses in Metallurgy and Materials Engineering an applicant must have passed the B.Sc. examination with Mathematics and Physics.
- A person possessing a B.Sc. degree is **NOT** eligible for admission unless he/she has also passed F.Sc. (Pre-Engineering or Pre Medical) examination as per clause 2.1.

**2.5 Equivalent Examinations:**

The University recognizes the following examinations as equivalent to the Intermediate (Pre Engineering) Examination with Chemistry, Mathematics and Physics of the Pakistani Boards of Intermediate and Secondary Education:

- Cambridge Overseas Higher School Certificate with Physics, Chemistry and Mathematics;
- British General Certificate of Education (Advanced Level) with Physics, Chemistry and Mathematics;
- F.Sc. (Pre-Medical) with Mathematics as an additional subject.
- American High School Graduation Diploma (12th Grade) or equivalent.

**2.6 Sex**

Both male and female applicants are eligible to apply for admission to B.Sc. Engineering Degree Programmes.

**2.7 Credit for Hifz-e-Quran**

Twenty marks are added to the academic marks in HSSC or equivalent examination of an applicant who is Hifz-e-Quran. He gets the benefit only if he has:

- Filled in the necessary column provided in the application form, and
- Appeared before the "Verification Committee" appointed by the University and the Committee accepts his claim of being a Hafiz e-Quran.

**3 Determination of Merit****3.1 Examination considered for Merit Purpose**

For admission to all the Bachelor's Degree Courses and determination of merit the following examinations are considered:-

- Marks of Entry Test for **Session 2010**.
- Higher Secondary School Certificate Examination (H.S.S.C) Pre-Engineering or equivalent.
- Bachelor of Science (B.Sc.)
- Diploma of Associate Engineer (Metallurgy).

**3.2 Merit Determination**

The comparative merit of applicants will be determined on the basis of **adjusted admission marks** obtained by them in these examinations:-

**A) For applicant with H.S.C. (Pre Engineering) as the highest qualification:**

- H.S.S.C (Pre Engineering) or equivalent including Hifz-e-Quran marks. **70%**
- Entry Test marks **30%**

**B) For applicants with B.Sc. as the highest qualification**

- B.Sc. **35%**
- H.S.S.C. or equivalent exam including Hifz-e-Quran marks. **35%**
- Entry Test Marks **30%**

**C) For Applicants having Diploma of Associate Engineer as the Highest Qualification**

- Diploma of Associate Engineer marks **70%**
- Entry Test Marks **30%**

**Note: 20 marks for Hifz-e-Quran will be added to the marks of the examination on the basis of which, admission is being sought.**

**3.3 Determination of Merit in case of Equal Percentage of Admission Marks**

If two or more applicants have equal percentage of admission marks (up to three places of decimal), they shall be treated as per for the purpose of admission.

**EXPLANATION**

In case there is a tie for the last seat in a particular discipline/category, then all the candidates who have secured equal percentage of admission marks (up to three places of decimal) shall be admitted. No transfer or new entry into that discipline/category shall, however, be considered unless the actual number of candidates already admitted falls below the number of allocated seats for that discipline/category.

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**Scheme of Studies Available with the Department**

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