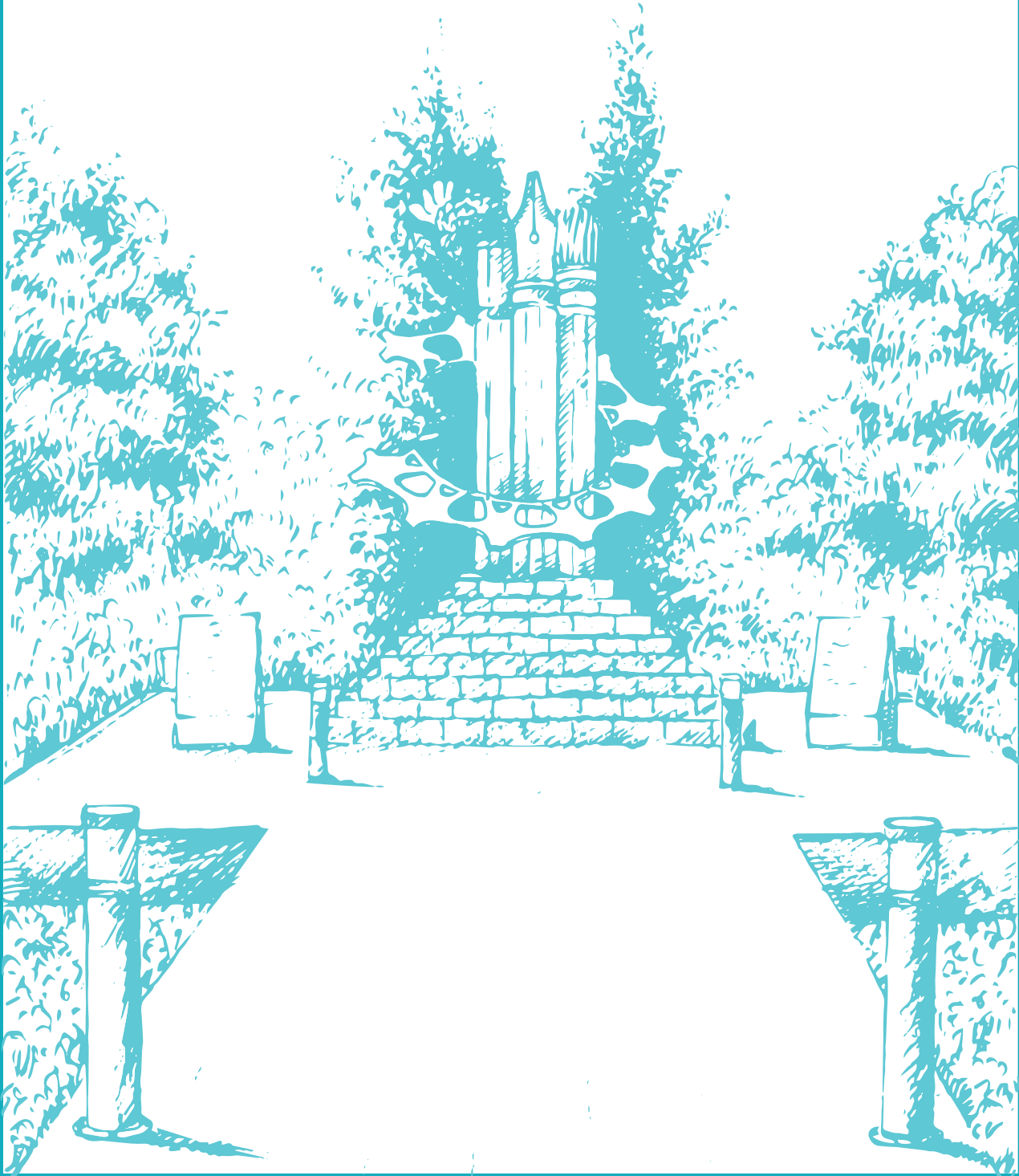




**BUITEMS**  
Quality & Excellence in Education

# Prospectus

Faculty of Information and  
Communication Technology





# Welcome to BUIITEMS

Standing as the prestigious and world class university to design the future beginning today with academic excellence defined by its quality and rigour in education and applied research through its talented youth and learned academicians.

## No. 4

In the Higher Education Commission ranking for Computer Science and Information Technology.

## Top international recognitions

BUIITEMS is the member of 6 reputed international networks and associations.

## 100+

Open days and events round the year

## A World class university in Balochistan

*The Express Tribune*, May 2015.

## 80%

Job placement ratio within the first year after graduation.

## 1 of every 3

Students receive financial assistance.

## BUIITEMS events

Come to BUIITEMS on an event day to explore the university yourself and see who we are and what we do.

 <http://www.buitms.edu.pk>

# Welcome



The importance of Information and Communication Technology in the present times can hardly be over emphasized, and we are aware of its tremendous potential as a means of progress and prosperity for our country. Knowledge has become the most important contributor to economic development.

The productivity of a nation or productivity of an individual enterprise is based on a combination of qualified human resource capital and technology.

Those who are more technically sophisticated will always outperform those who are relatively lagging behind. When people adopt new approaches, they are able to find timely solutions to the problems that would have otherwise taken a long time to solve. Education and knowledge accumulation make effective use of the ubiquitous computer.

We have to keep abreast of the constant changes and developments in ICT to make meaningful and effective use of the computational power and the rapid flow of information. Emphasis in higher education on developing an interface between research and industry and on institutional development always yields fruitful results. We aim at maximizing the resource utilization, training of manpower and interaction with the industry in these technologies to benefit the economy of our country.

The university has state of the art laboratories, latest equipment and competent faculty. Our students are expected to avail this splendid opportunity for confident and competitive performance of learning and acquiring maximum creativity and skill for interaction with industry and today's market.

**Engr. Ahmed Farooq Bazai (SI)**  
Vice-Chancellor

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# BUIITEMS Explained

Balochistan University of Information Technology, Engineering and Management Sciences (BUIITEMS) has given a new vision and a distinct meaning to education. Its guidelines for academic achievements are comparable to those of the most renowned institutions of the world.

The BUIITEMS Advantage: **Wide range of programs**

We are committed to provide quality education with a focus on research and to equip students with the art of living as productive members of the society, contributing to the socio-economic uplift of Pakistan in general, and Balochistan in particular. Before getting started let's explain the difference.

## Our Programs

BUIITEMS transformative education provides a wide range of academic programs spanning comprehensive areas of engineering, sciences and arts. It also provides multidisciplinary and cross-faculty learning opportunities.

## Flexibility and exploration

BUIITEMS offers a diverse and comprehensive choice of courses in five faculties with a range of undergraduate and graduate programs. We motivate our students to explore their interests, discover their talents and pursue their passions, and to create their own BUIITEMS experience!

## BUIITEMS Structure who does what?

BUIITEMS quest for academic excellence is based on five fundamental pillars; the students, the faculty, curriculum, the learning environment and the civil society we serve. We stand committed that in our academic offering we shall not only follow the standards, we shall also set new "Records of Excellence."



### The University:

There are five faculties and each faculty is comprised of multiple departments. The Faculty of Information and Communication Technology (FICT) has seven departments: Computer Science, Information Technology, Computer Engineering, Electronic Engineering, Electrical Engineering, Software Engineering and Telecommunication Engineering. The university through the office of the Registrar, Controller of Examinations and the Directorates helps in maintaining a conducive environment for teaching and learning at BUIITEMS.

### The Faculties:

The Faculty and its Departments are responsible to

- Determine the curriculum
- Organize lectures, seminars, practicals and projects
- Set and mark examinations
- Maintain academic excellence and professionalism
- Provide an environment conducive to learning, teaching, academic inquiry and innovation

## What are we looking for?

We are looking for individuals who can make it to be great future contributors in the fields of science, engineering and arts. We strongly encourage all applicants to choose fields of study that truly interest them. With the brilliant faculty at FICT and students with their best interest in a given field, we are confident that we will make great scientists and engineers out of our students. We are looking for students who:

- have a strong academic ability and potential
- have a strong interest in the fields they are applying for
- will benefit from and grow in the BUIITEMS environment

### Academic ability and potential

We are looking for students with a compelling academic background and potential. This should be reflected in all the past qualifications and the entry test. BUIITEMS expects its students to excel further in terms of academic performance. Therefore, you should be aiming at excellent cumulative grade point average (CGPA) throughout your degree program. According to our experts, keeping up closely with all the instruction and independent study throughout the semester helps you perform brilliantly.

### Interest in your field of study

At BUIITEMS, we are looking for students who are truly excited with the field of study they have chosen and are not just interested in the degree at the end. We firmly believe that the academic excellence can only be achieved when the student is stimulated by his or her field of study; we believe that learning comes through stimulation and interest. Therefore,

we strongly advise you to think carefully when you are choosing your field of study. You should not choose a field of study just because you think you ought to do, think about a field of study you are most excited and inspired about as you will be studying the field for the next few years.

### Self motivation

We are looking for students who are self motivated and who can think critically. We are looking for students who can understand the model of the higher learning where a student is required to study and work independently in addition to classroom learning. If you believe you can excel in higher learning you need to be self-motivated, self-disciplined and have a desire to learn the breadths and depths of knowledge in your field of study.

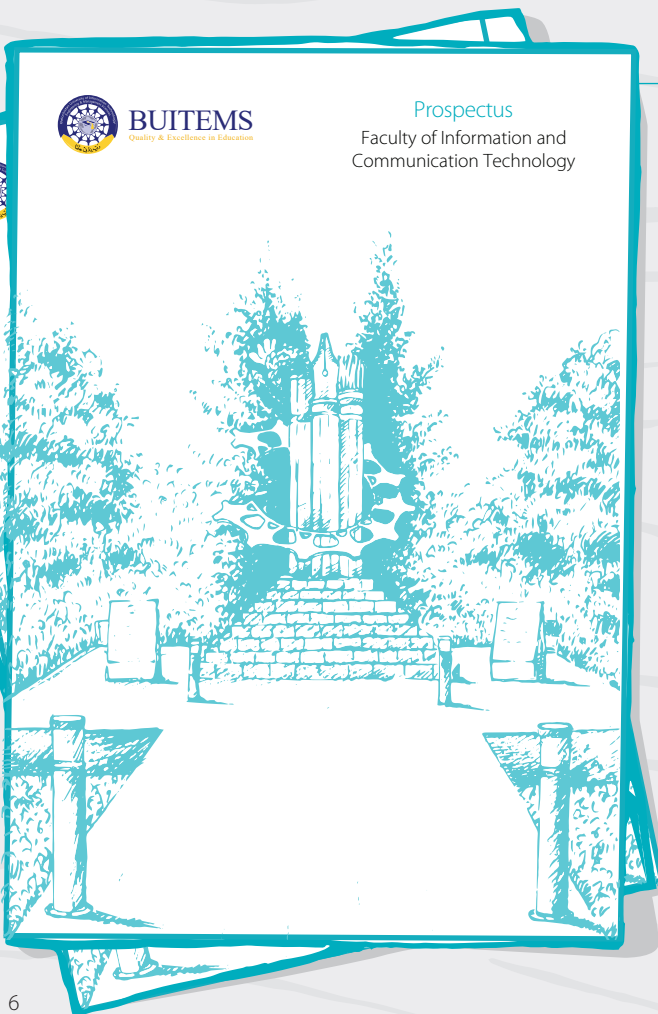
If you think you have these abilities, we're looking for students like you and hope you will apply. See Applying to BUIITEMS for further information.

# Applying to BUIITEMS:

## Four simple steps

If you want to apply to BUIITEMS, here are the four simple steps

Remember!!  
Application  
deadline



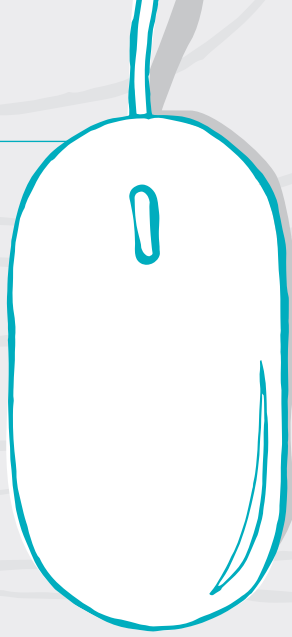
### 1 Major *(or field of study)*

You will be studying a particular field (also called major) for several years. Therefore, you should make sure that you choose a field that interests and excites you.



## 2 Apply

Fill out the admission form available by visiting [admissions.buitms.edu.pk](http://admissions.buitms.edu.pk) or the admissions office at campus. Submit the form online or at the admissions office along with the requisite documents and bank receipt of admission processing fee.



### Calculating the merit

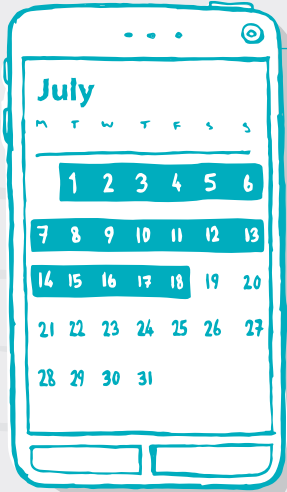
Merit is based on the cumulative of 20% for the marks scored in matriculation examination, 50% for the marks scored in intermediate examination and 30% for the marks scored in the NTS admissions test.

### Further information

 [admissions.buitms.edu.pk](http://admissions.buitms.edu.pk)

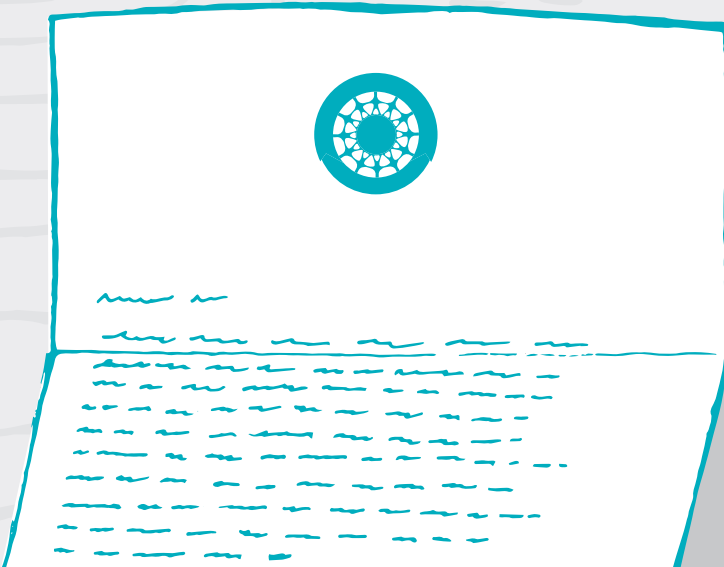
## 3 Test

Eligible students are invited to the NTS admissions test. The test is conducted on the NTS standard test for a given major.



## 4 Admission Offer

Admission will be offered based on the merit calculated from the marks scored in metric, intermediate and the NTS admission test.



## International students

We, at BUITEMS, believe that diversity brings innovation. We highly encourage international students to apply for admission at BUITEMS. Many international students from different parts of the world are enrolled in various study programs at BUITEMS. The eligibility requirements for international applicants are the same as for the applicants from within Pakistan. An applicant for transfer from a local or foreign institution is required to have passed the BUITEMS admission test by securing equal or more marks than the minimum merit of the program in which the student seeks admission. However, acceptance of request for transfer will depend on availability of seats, and the quality of academic work already done by the applicant.

As a BUITEMS student, you will be part of one of the nation's largest engineering, sciences and art schools. BUITEMS is a community known for its excellence - a student body of more than 8,000 faculty from the world's leading institutions. You are advised to look up for full details on individual field of study, credit hours and research aspects so as to get the maximum out of your chosen field of study.



## How do I apply?

You can apply through online BUITEMS admissions system. Download and print the application form. Attach all relevant documents and the receipt of application processing fee with the application. Send the complete application to the BUITEMS admissions office, make sure that the hard copy of your application reaches the admission office before the closing date.

## What are the entry requirements?

Entry requirements for undergraduate and graduate programs are available in the Disciplines and Departments section of this prospectus.

### Supporting documents

1. Attested copy of Secondary School Certificate
2. Attested copy of Higher Secondary School Certificate
3. Attested copy of the Applicant's CNIC / B-form
4. Attested copy of Local/Domicile
5. Bank draft/pay order/receipt of cash payment (admission processing fee)
6. Six recent photographs (passport size)
7. Attested copy of CNIC of the applicant's father/guardian
8. Attested copy of Character Certificate from the last institute attended

## What are the payment options?

Online application processing fee is Rs. 2500 for national applicants and US \$75 for foreign applicants. Whereas fee for manual application processing is Rs. 2000. Please note that these amounts are non-refundable and must be deposited on or before the last date of the application submission.

You can avail one of the following options to deposit the application processing fee:

- Bank draft / pay order drawn in favor of Registrar BUITEMS, Quetta.
- Cash deposited in Account Number: 23587000000201, Habib Bank Limited, BUITEMS University branch, Quetta, Pakistan.

## Where to send the documents?

Post your supporting documents and hardcopy of the Admission Form along with bank draft / pay order (admission processing fee) on the following address:

*Admissions Office,  
Balochistan University of Information Technology, Engineering and  
Management Sciences,*

*Takatu Campus, Airport Road, Baleli. Quetta.*

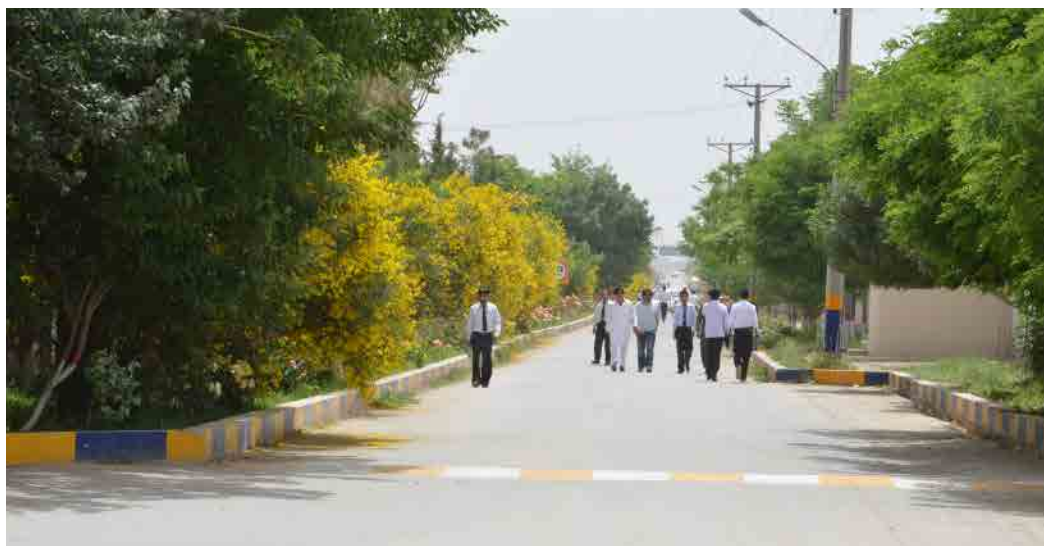
UAN: +92 81 111-717-111

Other lines: +92 81 2880560 / 2880136 / 2880140 / 2880386 / 2880432  
/2880527 / 2881076 / 2880511

Extensions: 163, 216, 217

## What next?

Applicants will be called to take the admission test. The admit card for the test will be issued. In case of non-receipt of admit card, the admission office may be contacted. Please note that only candidates with complete applications will be notified. Candidate without the admit card will not be allowed to take the test/interview.



## Frequently asked questions

### What is the duration of a program at BUIITEMS?

The duration of BS programs is four years, equally divided into eight semesters. However, the B. Arch program is spread over five years (ten semesters). Each semester is 18 weeks long, 16 weeks for teaching, and two weeks for the conduct of midterm and final examinations. The duration for completion of the MS program is 2 years from the date of enrolment into the MS program.

### Can I change my program of study after admission?

Change of academic program is generally not encouraged. However, it may be allowed on the recommendation of the Chairpersons concerned and approval of the Dean(s), within the first two weeks of the first semester, subject to the fulfillment of eligibility criterion and availability of the seat. Merit of the student has to be above the merit of the last student admitted into the program to which transfer is desired.

### What is a probation period?

Whenever a student's CGPA falls between 1.0 and 2.0 he / she shall be put on the first probation for the next semester

- If the student fails to raise the CGPA to 2.0 or above, he/ she shall be placed on the probation for the next semester.
- If the student who was earlier on second probation fails to raise CGPA to 2.0 or above, he/she shall be placed on the last probation.
- If the student fails to raise CGPA to 2.0 or above in the last probation, he / she shall be dropped from the university rolls.

For undergraduate and MS programs a minimum of 2.0 and 2.5 CGPA respectively, is required to pass out.

### Can I freeze a semester?

Freezing is not allowed in the first semester of a program. A student shall be allowed to apply for freezing of at most two semesters in his / her entire program of study, after the first semester.

### What is the limit of courses in a single semester?

A student is required to take 15-18 credit hours course work per regular semester. However the Chairperson of the department may allow a maximum of 21 credit hour course work in one semester on the approval of the Dean.

### What are the different financial assistance options at BUIITEMS?

The BUIITEMS Fee Concession & Scholarship Policy has the following aspects:

- Merit scholarship (available after the first semester)
- Work and study program
- Fee concession for needy students
- Fee concession for siblings
- Fee concession for dependants of BUIITEMS employees
- Fee in installments
- USAID need-based scholarship

For more information related to financial assistance you can contact the university advancement and financial assistance office.



# Teaching and Learning:

## A world class provision

We provide great learning opportunities for our students. We boast with the most personalized teaching method for our students complimented with effective supervisions.

### The BUIEMS Advantage: **Academic excellence**

#### ICT R&D fund

Every year 10 innovative research projects from FICT are funded by Ministry of Information Technology.

#### Supervisions

Supervisors are specialists in particular areas of your subject.

#### 14 : 1

Student teacher ratio.

As a research-intensive institution with a commitment to provide high-quality education, BUIEMS ensures an academically rigorous and stimulating experience for its students. Our Graduate Studies Office is dedicated to provide assistance and a systematic mechanism for the completion of graduate programs (MS and PhD). Graduate programs at BUIEMS are aspired to meet the competitive edge by considering the global requirements and by improving students' academic competence through course work, field-based exercises and research studies that are relevant and useful in real world.

Programs are designed by keeping in view the global trends and requirements of the Higher Education Commission, and by improving the capacity in

meeting the competitive edge at national and international level. Highly-qualified faculty members, equipped labs and structured program at BUIEMS provide a high-class learning experience in the undergraduate and graduate programs.

We are committed to provide outstanding academic programs that offer an excellent teaching and learning opportunity. We are here to foster the leaders of tomorrow in Science, Technology, Engineering and Mathematics (STEM) and arts, enabling the students to feel and experience the standards prevailing in the best universities of the world. We aspire to raise revenues from partnerships, research grants and technology transfer while strengthening our ability to

Programs at BUITEMS are inspired by our commitment to equip students, employers and the wider community with the knowledge, skills and ideas to become agents of a pleasant change in the global community. In addition to receiving course instruction and supervision from internationally recognized faculty, you benefit from a supportive and enriching learning experience at BUITEMS.

### How will I be taught?

You will benefit from a contemporary teaching and learning environment at BUITEMS. Our facilities include modern lecture rooms, state-of-the-art labs, research clusters, and senior design labs as well as online access to many international databases including IEEE, Springer, ACM and ScienceDirect.

In line with global academic trends, we equally emphasize on independent and self study. You are responsible for your own studies and are expected to study beyond the class lectures and study material.

### Lectures

Lecture is the core teaching and learning point and also your starting point for research which lasts for a minimum of one hour and a maximum of three hours per week for a given course. Lectures delivered by experienced faculty can be highly stimulating; depending on the course material, the instructor may use a whiteboard, a digital multimedia (or both) complemented with oral instruction.

### Experiments

These are the laboratory classes. Subjects with real time applications are instructed for three hours hands-on practice on the equipment and tools; and are separately assessed.

### Supervisions

Supervisions are special hours of in depth discussions between



individual student or groups with a subject or research area specialist teacher.

### Study tours and field trips

The departments conduct study tours and field trips to industries and labs in different parts of the country. Students are facilitated to participate in different intra university competitions and are also assisted in visiting other universities for experience. Study tours are usually an extended form of field trips that involve out-bound trips for more than a night. During the course of these tours, a student is encouraged to build interpersonal skills with other batch mates through shared learning.

### Independent research

*(final year projects and theses)*

Undergraduate students are engaged to carry out a one-year long research and development project under the supervision of a specialist faculty member. The students usually conduct this work in the Senior Design labs. The graduate students conduct independent research work in the form of thesis under the guidance of a thesis supervisor.

### Peer mentoring

Student volunteer tutoring is available in the form of peer-mentoring. Select senior students who are young gurus in a given field of study are enrolled as mentors in the peer-mentoring program. The peer mentors guide and counsel students



who require extra tutoring. At FICT, we provide support, encouragement, and advice to students who are facing problems related to academics or life at campus.

### Internships

Internship is an opportunity to apply the knowledge gained from academic studies in a practical, workplace setting. All internship experiences provide exposure to occupations, industries and career field, with a clear purpose to complete specific projects, gives students the chance to evaluate, reflect upon and try a specific career field and a huge source of self awareness to identify their skills. Over 400 students at FICT are directly placed under the internship program every year; while many students get advice and indirect assistance in finding internship placements.

# Support along the way

## Facilities and resources

We are committed to connecting you with the right resources, from dedicated teaching staff to a world class library and a range of co-curricular facilities. At BUITEMS, we spend millions on our equipment and academic support services to create a quality environment where you feel stimulated and strengthened.

### Libraries

With over 40,000+ books, the BUITEMS central library continues to add to student's passion for reading. Both the campuses house one central library each with a number of small departmental libraries. The libraries also provide our students with free access to a world of books through digital library access. The library experience is augmented through a state-of-the-art automated library management system that assists in searching and locating books in the library anywhere from the campus.

#### Online access to:

#### *Institute of Electrical and Electronics Engineers (IEEE) :*

The IEEE/IET Electronic Library (IEL) provides access to almost a third of the world's current electrical engineering and computer science literature, featuring high-quality content from the Institute of Electrical and Electronics Engineers (IEEE) and the Institution of Engineering and Technology (IET).

#### *Springer Link :*

Springer Link provides access to 503 full-text Springer-Verlag Journals and 738 full-text journals formerly published by Kluwer Academic Publishing, one of the world's leading information services for Science, Technical and Medical journals.

#### *Association of Computing Machinery :*

The ACM Digital Library provides online access to thirty magazines and journals in computing and IT, with complete archive reaching back to 1950's. Also includes the ACM Special Interest Group newsletters and conference proceedings, many with full archives. The ACM Online Guide, allows ACM users to expand their searches to include non ACM works in their results.

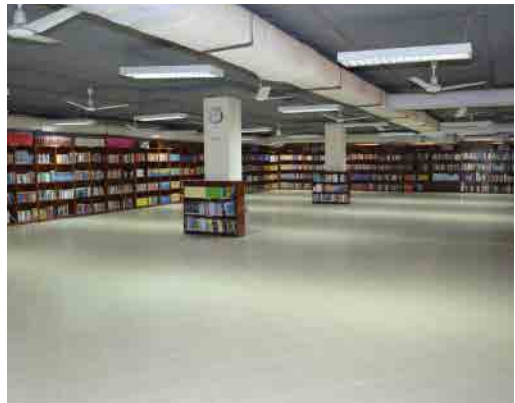
### Research center and senior design labs

BUITEMS is committed to provide a conducive environment to the entire learning experience of students. The research center located in the Sir Syed block is a cutting-edge facility to serve that commitment. The research center has dedicated research desks for graduate students. The research desks are equipped with high performance computing and related resources necessary to carry out graduate research. To cater the needs of undergraduate students working on

final year projects, senior design labs are provided where student groups are assigned a research space with computing and other necessary resources depending on the student discipline within ICT.

### Art galleries

Thanks to the Faculty of Arts and Basic sciences, the campus has a number of art galleries showcasing fascinating collection of modern art ranging from artifacts, paintings, and sculptures made by the students and faculty of FABS. Even if not directly related to your course, students of FICT spend time and receive their share learning and knowing arts at the galleries.





*"What impresses me more about BUIEMS is the high standards that it holds for quality, objectivity and the growth opportunities that it provides to talented and hardworking people."*

**Babar Ali,**  
Graduate Student (MS Electronic Engineering)

# Student Life: More than just studying



Life at BUITEMS is a work hard and have fun culture. As members of the BUITEMS family, the student, faculty and staff enjoy an exciting, vibrant and colourful life at BUITEMS. From high class academic lectures and laboratory experiments, to exciting sports, art events and service projects, there are always great things happening on campus.

The BUITEMS Advantage: **Work hard and have fun**

20+

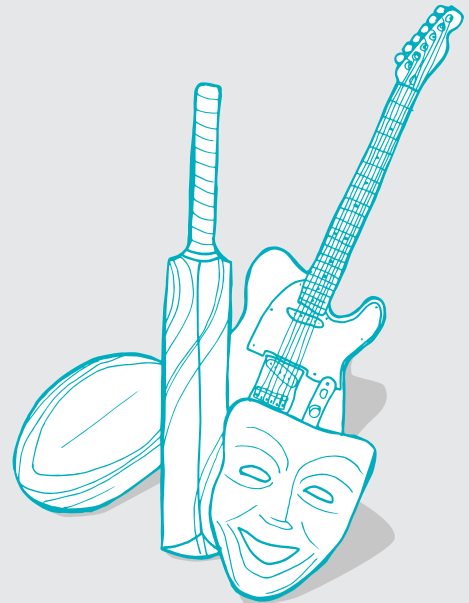
Student clubs and societies to choose from.

## World class sports facilities

BUITEMS sports complex and stadiums are among the best in the country.

## Arts and culture

Non-stop events complemented with excellent venues.







*Bustling place, great campus, lively people. Definitely would recommend it to others who prefer more interaction with tutors.*

**Zulkafil Abbas**

Student

BS Computer Engineering



*I cannot find enough words to express my gratitude to this institute ... since I have learned so much and most importantly, my thoughts have developed enormously and critically.*

**Umer Farooq**

Student

BS Electronic Engineering

## Events and fests

From the one-of-a-kind cultural festivals on campus to accomplished student performances in theatre, arts and culture, the student affairs plays a leading role in the life at BUIITEMS. Student affairs comprises of more than twenty student clubs and organizations that continuously provide fuel for constructive social life at BUIITEMS. The Student Affairs, on average, virtually conducts at least one event each day on campus. The scale of the events varies from attendance of 50 participants to thousands of participants and spectators in the flagship events like the Spring Festival, Culture Fest and the Home Coming. The preparations for the events and the events days make an amazing atmosphere in the campus where every student and staff seems to be working with an exceptional bond. The sense of ownership of the institution among the students and staff is exemplary at BUIITEMS. The quarterly newsletter and Markhor magazine provide a coverage of the events and developments on campus.

## The Olympiad

The annual Olympiad marks the culmination of athletics and sports at BUIITEMS. The Olympiad is a

week of non-stop sports and athletics competitions in more than fifteen sports categories with over one thousand athletes participating from among the staff and students. The Olympiad is witnessed by thousands of spectators and sports fans from within campus and the city.

## Community service

Another important aspect of the life of BUIITEMS family has been community involvement and service. BUIITEMS family members have a very special motivation for social service and social contribution for the society. The students and staff are contributing in the elementary education for child labor under the Free Citizen Schools. The organization has been formed by the staff and students of BUIITEMS. Through the organization, the students and staff of BUIITEMS have been directly educating young children who are laboring to meet the finances of their families. The children are educated on basic reading, writing in Urdu and English, and basic math and science. The students and staff also visit special community schools on weekends in different parts of the city and educate students using modern instruction methods. The students and staff are also helping the poor and needy citizens who are in need of support in their health problems. BUIITEMS blood donation

drives have earned good recognition in the province. A large number of citizens have been helped with BUIITEMS blood donations. BUIITEMS has also been helping the citizens of the province in their career planning, and providing counseling on scholarships. The counseling and trainings are organized for the young graduates of different universities of the province.

## Continuous buzz

BUIITEMS enhances the ability of students and staff to reach their fullest potential through diverse academic, personal, and professional development experiences. To achieve this, we foster a welcoming, stimulating campus life environment where students and staff develop intellectually, experience meaningful co-curricular opportunities, evidence civic responsibility, model intercultural and interpersonal understanding, and promote health and well-being. BUIITEMS family is prepared to freely pursue life-long personal and professional fulfillment, engagement, and stewardship of ever-changing local and global communities.

# Get ahead of the game

## Sports

Whether you're a world-class athlete or new to exercise, we have the facilities and expertise to keep you motivated.

From the fun to the competition side of the sport, we love it all at BUIITEMS. We have more than 3,000 members of our sports facilities and approximately 1,000 students participate in different sports tournaments inside and outside the province. With so many activities to try out and plenty of post-exertion socializing opportunities available, you can get fit and have fun at the same time.

If you are a talented athlete in training, we offer a range of services to support you as well as sports bursaries and funds for team participations in the inter-university championships and tournaments.

## Facilities

BUIITEMS boasts in providing one of the best sports facilities in the nation. Sports and athletics form one of the core features of life at BUIITEMS. The newly constructed sports complex is a jewel of recreation facilities at BUIITEMS.

The Sports Complex provides venues and gear for a range of sports including basketball, handball, badminton, table tennis and volleyball. Fully equipped gym and fitness center is part of the Sports Complex that houses the finest fitness equipments to keep you agile and healthy.

The world class cricket stadium at BUIITEMS is commendable facility for cricket lovers. The stadium is operated with the support of the Pakistan Cricket Board (PCB) and regular regional tournaments are held at the stadium.

The football ground at BUIITEMS is no less treat for football fans and players. The lush green ground remains one of the most busy sporting facilities on campus around the year.

In addition, a number of separate facilities for basketball and other sports are located in different parts of the campus. Get registered and enjoy the excellent facilities to cope with your tedious work and study routine.



## The University also has:

- Multi-purpose sports complex
- High class gym
- PCB standard cricket stadium
- High class football ground
- Basketball courts

## In and around BUIITEMS

BUIITEMS is located in Quetta, also called the *fruit basket of Pakistan*. Quetta is one of the most beautiful cities of Pakistan distinguished by the unique backdrop of mountains, beautiful lakes and fruit orchards in the outskirts.



The city is famous for its amazing weather and beautiful fruit orchards in and around. Quetta is surrounded by small valleys and hills. The juniper forest in Ziarat, located at about 125 kilometers north of Quetta, is another natural distinction of being the second largest juniper forest in the world. Located in Pakistan's most attractive destination, BUIITEMS has loads to offer you as a student.

### The World in BUIITEMS

With students and faculty from different cities around Pakistan and the world, BUIITEMS brings a diverse world to the campus. With such a unique blend of people, life in the university is never dull. Apart from the fervent exchange of academic ideas, a host of programs and

activities are offered. An event like the spring Olympiad and cultural show allows students to showcase their own country's culture and share the festive mood and vibes with the BUIITEMS community.

### Campus tours

A frequent sight at BUIITEMS is that of young school children escorted by a guide, and the group walks across different facilities on campus. Young school children from different schools of the province are invited to the campus for university life orientation. Young school children are given an orientation of the variety of science, engineering and arts disciplines offered at the university. The children spend a day at the campus and witness the university

life. The unique experience at BUIITEMS for school children is aimed at helping the students plan their careers and future early in their lives. The exercise will help producing professionals in the province and in the country who will truly excel in their fields of specialization.

### Restaurants and Cafeterias

Home is where the heart is. From food carts to fine dining, the University is full of places with good eats, drinks and treats. The tea and food houses of BUIITEMS serve the best. Retail dining options include Road Stoves, Hot & Chili, Gosh-e-Fikr-o-Nosh, Life café, and City café. BUIITEMS dining recognizes the great power and importance of food. Dining rooms are gathering places, and breaking bread together helps create a sense of community and comfort. You can

easily drop in the cafes and put an order of your choice. You can also join the freewheeling academic debates, poetry recitation and literary repartee in the cafes.

### Entertainment

At BUITEMS, we believe in fun every day, every milestone, every challenge, and every achievement around the year. There are many collaborative competitions and celebrations organized to make you feel being part of the family. Each day on campus there is an event engaging the BUITEMS family and visitors from outside. The scale of the events varies from attendance of a small group of participants to thousands of participants and spectators in the flagship events like the Spring Festival, Culture Fest, Olympiad and the Home Coming. The preparations for the events and the events days make an amazing atmosphere in the campus where every student and staff seems to be working with an exceptional bond.

### Airport and highway

BUITEMS is located just three kilometers away from Quetta International Airport. The airport, through many national and international carriers, provides a round the clock connection to other major cities of Pakistan and abroad. The campus is located adjacent to the RCD international

highway that provides road access to the rest of the nation and the Central Asian countries.

### Going places with BUITEMS

In an interconnected world, graduates need to stand out as culturally sensitive, well-informed and articulate individuals who can learn and think for themselves. They will also need to keep abreast with global developments in order to meet its challenges. Here in BUITEMS we encourage, support and assist our students to participate in many national and international conferences, competitions, and study tours. BUITEMS effectively helps in fostering national and international relationships across cultures and borders through its programs.

### Attractions in and outside the city

Hanna Lake, which nestles in the hills ten kilometres east of the city, is a turquoise body of water that contrasts markedly with the bare surrounding hills. It is an attractive destination for vacationers, with facilities for boat hire. A lakeside restaurant is crowded with hikers and campers during holiday periods.

The Hazarganji Chiltan National Park, 20 km south-west of Quetta, is a protected park area. In the folds of the mountains, according to legend, there are over a thousand buried treasures, reminders of the passage over the ages of great

armies including the Bactrians, the Scythians, the Muslims, and the Mongols. Pir Ghaib is a waterfall and picnic spot located 70 km from the Quetta City in historic Bolan valley. Kharkhasa is located 10 km west of Quetta in a 16 km long narrow valley that contains a variety of flora and fauna species. The Chiltan Hill Viewpoint in the park provides a panoramic view of the city. A visit to the nearby cities of Kirani and Ziarat are popular scenic places for tourists travelling to and from Quetta. The Quetta Geological Museum, located on Sariab Road has a collection of rocks and fossils. The Command and Staff College Museum is a museum dedicated to British military history. It is housed in the former bungalow of Field Marshal Bernard Montgomery. The Quetta Archaeological Museum, located on Wafa Road has a collection of rare antique guns, swords, manuscripts and a display of Stone Age tools, prehistoric pottery and articles found in Mehrgarh. There are also coins, manuscripts and photos of Quetta before the 1935 earthquake. The Balochistan Arts Council Library houses arts and crafts from the province. If you want to explore further a field and looking for somewhere to relax and escape city buss, Hanna lake, Urak valley, holiday stations such as Ziarat and Pishin are home for fresh fruits and natural forests and are famous outing spots around Quetta.





# Fields of study

Information and Communication Technology is continuously restructuring our world!

## The BUIEMS Advantage: **Extensive range of programs**

Today's Information and Communication Technology experts are driven by interests that are directly improving and assisting life and physics of this world. Electrical engineers are revamping the world's energy through smart grid. Computer engineers and scientists are contributing in areas ranging from business information processing to helping explore the universe beyond our planet; while Telecommunication engineers are virtually removing all distances. As a result, we at the Faculty of Information and Communication Technology (FICT) at BUIEMS are redefining education in engineering and information sciences by preparing students to build a coherent connection between knowledge and solutions to challenges faced by humanity and the world. It is this mission that has enabled us to continuously prepare graduates that are contributing at the leading technology and academic organizations in the region and worldwide. The faculty of ICT boasts on our most proficient faculty qualified from the finest educational institutions of the world, state of the art facilities, a very helpful admin and support staff, and a perfect teaching and learning environment.

**We encourage you to explore us on our website, learn about our unique programs or, better yet, come visit us and see for yourself how we are redefining education in engineering and information sciences.**

Dr. Faisal Ahmad Khan  
Dean FICT



# Software Engineering

BS Software Engineering degree is focused on preparing for future job roles in software industry. It transforms students to work as Software Engineer, Enterprise Solution Developer, Software Architect, Systems Engineer, Business Analyst and Software Quality Engineer in software industry.

BS Software Engineering program is designed to equip the students with technical knowledge of the fundamentals of computing, their mathematical foundations and application. A sequence of courses is designed so that theoretical study is amalgamated with practical on ground exercises. The pedagogy employed is learning by doing thereby marking the most distinguished aspect of our program. We believe that teaching should not be confined in between the class room walls, rather it should be activity driven combining lecturing, assigning real life projects and imparting soft skills. This beyond class room experience prepares the students with computing skills, ability to solve problems, and for tackling the challenges in team work environment

## Software Engineering at BUITEMS

The department of Software Engineering at BUITEMS was founded in 2012, as an undergraduate program with just three faculty members and fifty students. Today, the Software Engineering has seven faculty members; most of them are foreign qualified from best universities of the world. The department has a growing, vibrant, research-oriented faculty who take great pride in research and in undergraduate educa-

tion. We, at Department of Software Engineering, are committed to imparting quality education in the fields of computer communication, networking, security, software development, database management systems, programming, and to examine the features, attributes, technical issues, and concepts in these areas.

## Programs offered in Software Engineering

We offer following programs in Software Engineering

- Four years BS-SE

## Objectives

- to build a strong foundation in theoretical concepts in computing and software engineering.
- to enable the use of software engineering methodologies and tools for requirements gathering, designing, engineering and testing software systems.
- to nurture problem-solving skills, clarity of thought, and creativity.
- to prepare students for rigours of graduate studies, as well as for careers in the industry.
- to provide a balanced exposure to liberal arts.
- to prepare students for effective oral and technical communication
- to foster a sense of professional and ethical responsibilities

## Fact file

### Code

BSSE

### Duration

Four years  
(8 Semesters)

## Mission

*Our mission is to produce the next-generation Software Engineers, creating well-aware developments and techniques for contributing to the advancement of computing and research.*

## Achievements

BUITMS has clinched fourth position among top ranking universities of the country in Computer Science/IT. The ranking was based on the number of students, research productivity and quality, innovation and knowledge transfer, infrastructure, annual graduate output, international collaborations, student satisfaction and financial health of the institution. Our program is accredited by PEC.

## Scheme of study

### Semester 1

Introduction to Computing  
Programming Fundamentals  
(Math-I) Calculus & Analytical Geometry  
Pakistan Studies  
(English I) English Language Proficiency  
Islamic Studies/Ethics

### Semester 2

Graphics Designing (UE 2)  
Introduction to web Development  
Introduction to Software Engineering  
Multivariable Calculus  
Digital Logic and Design  
Object Oriented Programming

### Semester 3

Discrete Structures  
Numerical & Symbolic computing  
Software Requirements Engineering  
Operating System  
Data Structures and Algorithms

### Semester 4

Computer Communication and Networks  
Software Design and Architecture  
Simulation and Modelling  
Linear Algebra  
English III (Communication Skills)

### Semester 5

DBMS  
Software Construction  
Human computer Interaction  
Probability and statistics  
Operational Research  
Psychology

### Semester 6

Software Quality Engineering  
Distributed Systems  
Software engineering economics  
Information System Audit  
Web Engineering  
Professional Practices

### Semester 7

Multimedia Applications (UE 4)  
Software Project Management  
English II (Technical Report Writing  
Senior Design Project – I  
Application of AI in Game Programming (UE 5)

### Semester 8

Formal Methods in software Engineering  
Entrepreneurship and Leadership  
Data warehousing and Data mining  
Senior Design Project – II  
Software Testing

Teaching is provided through lectures and practical classes. Typically six assignments and three quizzes are given for sessional marks. Moreover, some subjects need presentations during the semester. Practical work is assessed separately.

## BS Program Summary

Total Credit hours:	137
Theory	113
Lab	24

## Contact Us

*Chairperson*  
Engr. Shah Rukh Rayaz  
(Ext:708)

UAN: +92 (81) 111 717 111

www.buitms.edu.pk/

## Essentials

F.Sc(Pre Eng)/ICS with Mathematics & Physics from any recognized board or equivalent with at least 60% marks.  
Diploma of Associate Engineer in the same field, securing at least 60% marks.

## Admission Test

Qualifying the admission test.



# Electrical Engineering

Electrical engineering is one of the dynamic fields which is continually introducing new technologies to benefit the society.

## Electrical Engineering at BUITEMS

The department of Electrical Engineering at BUITEMS was founded in 2012, as an undergraduate program. The progress of the department, in a very short time, has been laudable.

At this moment, it has 12 faculty members and; most of them are foreign qualified from best universities of the world. The department has a growing, vibrant, research-oriented faculty who take great pride in research and in undergraduate and graduate education. We, at Department of Electrical Engineering, are committed to imparting quality education in the fields of power, electronics, telecommunication, control engineering, renewable energy, and to examine the features, attributes, technical issues, and concepts in these areas. It also started its Master degree program in spring 2014.

### Programs offered in Electrical Engineering

We offer following programs in Electrical Engineering

- Four years BSELE
- Master of Science (MSELE)

## Achievements

Currently 170 students are enrolled in BS and 40 students in the MS programs. We have been successful in clinching the top priority of most of the prospective engineering students of BUITEMS.

Our program is accredited by Pakistan Engineering

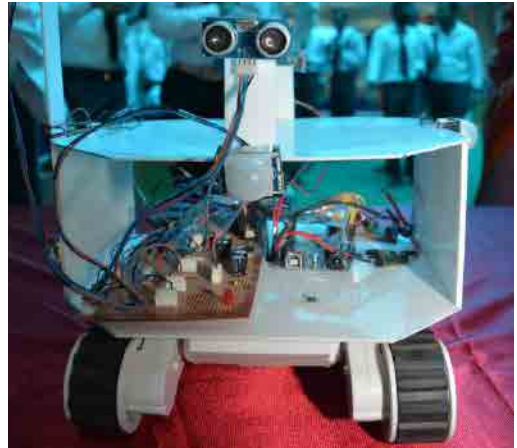
Council (PEC).

## Facilities and work experience

Computer laboratories equipped with latest technologies.

Similarly students can benefit from internships and study tours offered by department. Workshops and guest talks are arranged on regular basis to increase practical knowledge of students.

Students get the chance to work as an assistant to the senior faculty members where they get experience of research and teaching.



## Fact file

### Code

**BSELE**

### Duration

Four years  
(8 Semesters)

## Mission

*Our mission is to provide our students a firm base in Electrical Engineering which can lead them in lifelong learning, postgraduate studies and research*



## Scheme of study

### Semester 1

Computing Fundamentals  
Applied Physics  
Linear Circuit Analysis  
Functional English  
Calculus & Analytical Geometry  
Islamic Studies  
Workshop Practice

### Semester 2

Electronic Devices & Circuits  
Engineering Drawing  
Communication Skills  
Linear Algebra  
Digital Logic Design  
Programming Fundamentals

### Semester 3

Electrical Machines-I  
Electrical Network Analysis  
Data Structure and Algorithms  
Differential Equations  
Pakistan Studies

### Semester 4

Electrical Machines-II  
Complex Variable & Transforms  
Electromagnetic Field Theory  
Microprocessor Systems  
Applied Thermodynamics

### Semester 5

Probability Methods in Engineering  
Power Distribution & Utilization -Elective I  
Computer Communication and Networks  
Signals & Systems  
Power Electronics Elective-II

### Semester 6

Power Generation Elective -III  
Technical Report Writing  
Digital Communication  
Linear Control Systems  
Instrumentation & Measurements

### Semester 7

Power Transmission & Protection-Elective IV  
Engineering Economics & Management  
Digital Signal Processing  
Senior Project I

### Semester 8

Power System Analysis-Elective V  
PLC & Industrial Drives  
Organizational Behaviour  
Senior Design Project II

Teaching is provided through lectures and practical classes. Typically six assignments and three quizzes are given for sessional marks. Moreover, some subjects need presentations during the semester. Practical work is assessed separately.

## BS Program Summary

Total Credit hours:	136
Theory	110
Lab	26

## Contact Us

*Chairperson*  
*Engr. Ayesha Baloch*  
(Ext:411)

UAN: +92 (81) 111 717 111

www.buitms.edu.pk/

## Essentials

FSC (Pre Eng) from any recognized board or equivalent with at least 60% marks.  
Diploma of Association Engineering in the same field securing at least 60% marks.

## Admission Test

Qualifying the admission test.



## Graduate Program Information

The Department offers the Master of Science (MS) degree in Electrical Engineering with specialization in Power.

### Summary of Basic Degree Requirements

- At least 24 hours of graduate level coursework
- At least 6 hours Master's Thesis.

### Core Courses

Advanced Power System Analysis-I  
 Advanced Power System Analysis-II  
 Advanced Power System Protection  
 Advanced Electrical Power Distribution System Engineering –I  
 Advanced Electrical Power Transmission System Engineering-II  
 Research Methodology  
 Linear Control Systems  
 Optimal Control Systems  
 Adaptive Control System  
 Stochastic Processes in Electrical Engineering  
 Digital Control Systems  
 Advanced Linear Algebra  
 Advanced Numerical Techniques

### Elective Course's Domains

Power Generation  
 Power Transmission  
 Power Distribution & Utilization  
 Power Electronics  
 Power Stability and Control  
 Renewable Energy  
 Control Systems  
 Telecommunications

### MS Program Summary

Total Credit hours:	30
Theory	24
Thesis	6

### Contact Us

Graduate Coordinator  
 Dr. Anayat Ullah  
 (Ext:416)

UAN: +92 (81) 111 717 111

www.buitms.edu.pk/

### Essentials

- BS(ELE) 4 years Degree Program

### Admission Test

Graduate Assessment Test (GAT General) scores are required for admission consideration.



# Computer Science

Computer Science is an exciting and fast growing field that impacts everyday life. Careers in computer science are in high demand, providing new prospects in education and employment.

## Computer Science at BUIITEMS

The department of Computer Science at BUIITEMS was founded in 2002, as an undergraduate program with just five faculty members and thirty students. Today, the computer science has twenty seven faculty members; most of them are foreign qualified from best universities of the world. The department has a growing, vibrant, research-oriented faculty who take great pride in research and in undergraduate and graduate education. We, at Department of Computer Science, are committed to imparting quality education in the fields of computer communication, networking, security, software development, database management systems, programming, and to examine the features, attributes, technical issues, and concepts in these areas.

### *Programs offered in Computer Science*

We offer following programs in Computer Science

- Four years BSCS
- Master of Science (MScS)
- Doctor of Philosophy in Computer Science.

## Achievements

BUIITEMS has clinched fourth position among top ranking universities of the country in Computer Science. The ranking was based on the number of students, research productivity and quality, innovation and knowledge transfer, infrastructure, annual graduate

output, international collaborations, student satisfaction and financial health of the institution.

Our course is accredited by National Computing Education Accreditation Council (NCEAC) and categorized in 'w' highest category.

## Facilities and work experience

Our students have access to computer laboratories equipped with latest technologies. Besides students can benefit from internships and study tours offered by department. Workshops and guest talks are arranged on regular basis to increase practical knowledge of students.

Students get the chance to work as an assistant to the senior faculty members where they get experience of research and teaching.

## Fact file

### Code

BSCS

### Duration

Four years  
(8 Semesters)

## Mission

*Our mission is to produce the next-generation Computer Scientists, and to develop techniques for contributing to the advancement of computing and research.*

## Scheme of study

### Semester 1

Introduction to Computing  
Programming Fundamentals  
Calculus and Analytical Geometry  
Islamic Studies  
English I (Functional English)

### Semester 2

Discrete Structures  
Object Oriented Programming  
Multivariable Calculus  
Basic Electronic  
Pakistan Studies  
English II (Communication Skills)

### Semester 3

Digital Logic and Design  
Data Structures and Algorithms  
Linear Algebra  
Technical Report Writing  
Probability and Statistics  
CS Elective I - Computer Graphics

### Semester 4

Operating Systems  
Introduction to Database Systems  
Differential Equations  
Introduction to Software Engineering  
Computer Organization and Assembly Language

### Semester 5

Computer Communication and Networks  
Theory of Automata & Formal Languages  
Computer Architecture  
Human Computer Interaction  
University Elective I – Visual Programming  
University Elective II – Advanced Software Engineering

### Semester 6

Compiler Construction  
Computer Science Elective II – Mobile Application Development  
Numerical Computing  
Design and Analysis of Algorithms  
University Elective III – Introduction to Psychology  
University Elective IV - Human Resource Management

### Semester 7

Project Part I  
Computer Science Elective III – Wireless Networks  
Computer Science Elective IV – Web Engineering  
Artificial Intelligence  
Professional Practices

### Semester 8

Project Part II  
Computer Science Elective V – Advanced DBMS  
Computer Science Elective VI – Data and Network Security  
Computer Science Elective VII – System Administration

Teaching is provided through lectures and practical classes. Typically six assignments and three quizzes are given for sessional marks. Moreover, some subjects need presentations during the semester. Practical work is assessed separately.

## BS Program Summary

Total Credit hours:	133
Theory	117
Lab	16

## Contact Us

*Chairperson*  
*Dr. Riaz ul Amin*  
(Ext:710)

UAN: +92 (81) 111 717 111

www.buitms.edu.pk/

## Essentials

F.Sc(Pre Eng)/ICS with Mathematics & Physics from any recognized board or equivalent with at least 60% marks.  
Diploma of Association Engineering in the same field securing at least 60% marks.

## Admission Test

Qualifying the admission test.



## Graduate Program Information

The Department offers the Master of Science (MS) degree in computer science. The Department presently has active research groups in the following areas

- Communication Systems Group (CSG)
- Computational Intelligence Group (CIG)
- Information Retrieval & Processing (IRP)
- Wireless & Sensor Networks (WSN)
- System Security Group (SSG)
- Distributed & Networked Systems (DNS)
- Machine Learning and Big Data

## Summary of Basic Degree Requirements

- At least 24 hours of graduate level coursework
- At least 6 hours Master's Thesis.

## Core Courses

Advance theory of computation  
Advance Algorithm Analysis  
Advance Operating System  
Advance Computer Architecture

## Elective Course Domains

Software Engineering  
Artificial Intelligence  
Information Management  
Human Computer Interaction  
Computer Science Education  
Network Performance Evaluation

“

*"I have to admit I was very nervous on my first day but there was no reason at all to be so. All the students, teachers, and other people I've met, everyone is so friendly, helpful and supportive, especially in the first time. And even after you got used to the basic daily procedures, there is no pressure either from University works or from the teachers."*

**Muhammad Fayzan Malik**

Undergraduate student

## MS Program Summary

Total Credit hours:	30
Theory	24
Thesis	6

## Contact Us

Graduate Coordinator  
Dr. Anayat Ullah  
(Ext:416)

UAN: +92 (81) 111 717 111

www.buitms.edu.pk/

## Essentials

- BS(CS) 4 years Degree Program or equivalent

## Admission Test

Graduate Assessment Test (GAT General) scores are required for admission consideration.



# Information Technology

Technology and Science are transforming our world, changing the way we do business, the way we learn, the way we communicate, and even the way we entertain ourselves. Success in any field – law, medicine, business, education, entertainment, finance and investment – requires a command of Technology.

B.S. in Information Technology draws on the university's rich resources in engineering, computer science, architecture, management and the sciences to prepare students for a career in integration, design and management of computing and telecommunication resources and services in such diverse fields as bioengineering, e-commerce, multimedia, network security, software engineering and telecommunications. A sequence of courses is designed so that theoretical study is amalgamated with practical on ground exercises. The pedagogy employed is learning by doing thereby marking the most distinguished aspect of our program. We believe that teaching should not be confined in between the class room walls, rather it should be activity driven combining lecturing, assigning real life projects and imparting soft skills. This beyond class room experience prepares the students with IT skills, ability to solve problems, and for tackling the challenges in team work environment.

## Information Technology at BUIITEMS

The department of Information Technology at BUIITEMS was founded as an undergraduate program later on expanded its offerings to MS in Information Technology as well. The department has a growing, vibrant, research-oriented faculty who take great pride in

research and in undergraduate education. We, at Department of Information Technology, are committed to imparting quality education in the fields of computer communication, networking, security, software development, database management systems, programming, telecommunication management and to examine the technical issues related to technology implementation

### Programs offered in Information Technology

We offer following programs in Information Technology (IT)

- Four years (BSIT)
- Two Years Master of Science in Information Technology (MSIT)

### Objectives

- To give the students sound knowledge base of programming, systems analysis and design, business telecommunications, and database management with concentration in a variety of areas
- To produce graduates who have good rounding and a wide range of knowledge and competence in the sector of information science and technology
- To train students for work in the field of the production, development, management and maintenance

## Fact file

### Code

BSIT

### Duration

Four years  
(8 Semesters)

## Mission

*Collection, storage, processing, dissemination and use of information with computers not confined to hardware and software, but acknowledging the importance and the goals one sets for this technology. Applying Information Technology to the scientific, technological and engineering disciplines and the management techniques used in information handling and processing; accentuating computers and their interaction with men and machines; and associated social, economic and cultural matters.*

-nance of Technological systems, both for companies that produce information systems and computer networks, and for companies, administrations, services and laboratories that use them.

## Achievements

BUITEMS has clinched fourth position among top ranking universities of the country in Computer Science and IT. The ranking was based on the number of students, research productivity and quality, innovation and knowledge transfer, infrastructure, annual graduate output, international collaborations, student satisfaction and financial health of the institution.

## Scheme of study

### Semester 1

Introduction to ICT  
Programming Fundamentals  
(Math-I) Calculus & Analytical Geometry  
Basic Electronics  
Functional English

### Semester 2

Discrete Structures  
Object Oriented Programming  
Fundamentals of Information Technology  
Digital Logic & Design  
Communication Skills  
Pakistan Studies

### Semester 3

Data Structures and Algorithms  
Linear Algebra  
Technical Report Writing  
Islamic Studies/ Ethics  
University Elective 1 – Visual Programing  
University Elective 2 – Computer Architecture

### Semester 4

Introduction to Database Systems  
Organizational Behaviour  
Probability & Statistics  
Computer Communication & Networks  
University Elective 3 – Operating Systems  
University Elective 4 – E- Commerce

### Semester 5

Web System & Technologies  
Introduction to Software Development  
Information Security  
Multimedia Systems & Design  
Information Systems  
University Elective 5 – Cluster & Grid Computing

### Semester 6

System & Network Administration  
Knowledge-Based Systems  
Web Services  
Human Computer Interaction  
University Elective – Communication Technologies  
University Elective 6 – Wireless Communication

### Semester 7

IT Capstone Part – 1  
Technology Management  
Mobile & Pervasive Computing  
Network Security  
System Integration & Architecture  
Database Management

### Semester 8

IT Capstone Part – 2  
IT Services Management  
Profession Practices  
Data Warehousing

Teaching is provided through lectures and practical classes. Typically six assignments and three quizzes are given for sessional marks. Moreover, some subjects need presentations during the semester. Practical work is assessed separately.

## BS Program Summary

Total Credit hours:	134
Theory	110
Lab	24

## Contact Us

Chairperson  
Farhan Elahi  
(Ext:415)

UAN: +92 (81) 111 717 111

www.buitms.edu.pk/

## Essentials

F.Sc (Pre Engg)/ICS with Mathematics & Physics from any recognized board or equivalent with at least 50% marks.

## Admission Test

Qualifying the admission test.



# Computer Engineering

Computer Engineering is fast emerging and an exhilarating field that impacts most aspects of everyday life. Careers in Computer Engineering are in high demand, covering both Software Programming and Hardware Designing & Implementation areas, and in Application of Computing System and Networks providing new prospects in education, research and employment. Computer Engineers apply electrical engineering techniques and computer science concepts to develop dependable, cost effective hardware and software systems.

## Computer Engineering at BUIITEMS

The department of Computer Engineering at BUIITEMS was founded in 2002. Today, the department has 20 faculty members; most of them are either foreign qualified or pursuing their doctorate degrees from best universities of the world. Computer engineering department provides program that develops the necessary skills and competence required to design and implement computer systems and networks. We, at Department of Computer Engineering, are committed to imparting quality education that provides students with the ability to enter local, national and global technology workforce, and make significant contributions to computer engineering through research, design and development of a wide range of computer engineering applications.

### *Programs offered in Computer Engineering*

We offer following programs in Computer Engineering

- Four years BSCE
- Master of Science (MSCE)

## Facilities and work experience

Our students are provided with computer laboratories equipped with latest technologies. Besides students can benefit from internships and study tours offered by department. Workshops and guest talks are arranged on regular bases to increase practical knowledge of students. Students get the chance to work as an assistant to the senior faculty members where they get experience of research and teaching.

## Fact file

### Code

BSCE

### Duration

Four years  
(8 Semesters)

## Mission

*Our mission is to produce graduates with the ability to analyse, synthesize, and design both core parts of modern computing systems and integrated application systems based on computers through learning the scientific foundation for hardware and software engineering and applying it in engineering exercises.*



## Scheme of study

### Semester 1

Computing Fundamental  
Basic Electrical Engineering  
Calculus and Analytical Geometry  
English Language Proficiency  
Pakistan Studies  
Applied Physics

### Semester 2

Programming Fundamentals  
Discrete Mathematics  
Circuit Analysis  
Islamic Studies/Ethical Behaviour  
Communication Skills  
Linear Algebra

### Semester 3

Computer Application in Engg Design  
Differential Equations  
Digital Logic and Design  
Object Oriented programming  
Electronic Circuits & Devices

### Semester 4

Computer Organization and Architecture  
Data Structures and Algorithms  
Data Communication  
Probability Methods in Engineering  
Engineering Economics  
Workshop practice

### Semester 5

Operating Systems  
Database Management Systems  
Technical Report Writing  
Numerical Methods  
CE Elective I

### Semester 6

Signals & Systems  
Microprocessors & Embedded Systems  
Computer Communication Networks  
CE Elective II  
CE Elective III

### Semester 7

Organizational Behaviour  
Engineering Practices & Ethics  
CE Elective IV  
IDE Elective I  
Senior Design Project-I

### Semester 8

Entrepreneurship and Leadership  
Critical Thinking  
CE Elective V  
IDE Elective II  
Senior Design Project- II

Teaching is provided through lectures and practical classes. Typically six assignments and three quizzes are given for sessional marks. Moreover, some subjects need presentations during the semester. Practical work is assessed separately.

### BS Program Summary

Total Credit hours:	137
Theory	107
Lab	30

### Contact Us

Chairperson  
Dr. Bakhtiar Kasi  
(Ext:403)

UAN: +92 (81) 111 717 111

www.buitms.edu.pk/

### Essentials

F.Sc(Pre Engg)/ICS with Mathematics & Physics from any recognized board or equivalent with at least 60% marks.  
Diploma of Associate Engineer (DAE) in the same field securing at least 60% marks

### Admission Test

Qualifying the admission test.



## Graduate Program Information

The Department offers the Master of Science (MS) degree in Computer Engineering. The Department presently has active research groups in the following areas

- Communication Systems Group (CSG)
- Computational Intelligence Group (CIG)
- Wireless & Sensor Networks (WSN)
- Distributed & Networked Systems (DNS)

## Summary of Basic Degree Requirements

- At least 9 credit hours of core graduate level courses
- At least 15 credit hours of advanced elective graduate level courses.
- At least 6 credit hours Master's Thesis.

## Core Courses

Mathematical & Simulation Modelling  
Distributed Computer Systems  
Research Methodologies

## Elective Courses Domains

Advanced Computer Systems Architecture  
Advanced Digital Signal Processing  
Introduction to Robotics  
Elective courses contain nearly 40 elective courses of engineering field.



*It made me what I am today. A place that enabled me to struggle, progress and work hard for a better life ! .. Proud of it"*

**Muhammad Jahanzaib**  
Alumnus

## MS Program Summary

Total Credit hours:	30
Theory	24
Thesis	6

## Contact Us

Graduate Coordinator  
Dr. Anayat Ullah  
(Ext:416)

UAN: +92 (81) 111 717 111

www.buitms.edu.pk/

## Essentials

- BS(CE) 4 years Degree Program or equivalent

## Admission Test

Graduate Assessment Test (GAT General) scores are required for admission consideration.



# Electronic Engineering

Electronic Engineering is the study associated with electronic circuits and systems, and is one of the major branches of electrical engineering. Defense, Medical Instrumentation, Mobile Technology, Nanotechnology, Satellite Communication and Robotics are among the fields in which Electronic Engineers are employed.

## Electronic Engineering at BUITEMS

The department of Electronic Engineering at BUITEMS was founded in 2003, as an Undergraduate Program. Today, the Electronic Engineering has twenty seven faculty members and now also offering Graduate Program. The department has a growing, vibrant, research-oriented faculty who take great pride in research and in undergraduate and graduate education. We, at Department of Electronic Engineering, are committed to imparting quality education in the fields of Electronic Engineering, Communication, Instrumentation, Control, Power Electronics, Industrial Electronics, Nanotechnology, Opto Electronics, Semiconductor Physics and VLSI to examine the features, attributes, technical issues, and concepts in these areas.

### Programs offered in Electronic Engineering

We offer following programs in Electronic Engineering.

- 4 years BS(EE)
- 2 years MS(EE)

## Facilities and work experience

Our students are provided with Computer Labs, Basic Electronics Lab, Digital System Lab, Microprocessor Lab, Basic Telecommunication Lab, PCB Lab, Control, automation and robotics lab and Embedded System

Lab equipped with latest technologies. Besides students can benefit from internships and study tours offered by department. Workshops and guest talks are arranged on regular basis to increase practical knowledge of students.

BUITEMS is offering BS in Electronic Engineering since 2003 and is recognized by Pakistan Engineering Council (PEC). The department of Electronic Engineering received the title of best department among all the 40 departments of BUITEMS in year 2013 based on achievement of whole year in project competitions, representation of university at national level and quality of education. Our graduates are serving at PAEC, SUPRACO, PPL, CAA, OGDCL, SNGPL, and NTDC to name a few. Some graduates of Electronic Engineering are also post graduate students at foreign institutions.

## Fact file

### Code

BSEE

### Duration

Four years  
(8 Semesters)

## Mission

*Our mission is to produce the next-generation Electronic Engineers, creating well-aware developments and techniques for contributing to the advancement of Electronic engineering field.*

## Scheme of study

### Semester 1

Introduction to Computing  
Fundamental English  
Pakistan Studies  
Calculus and Analytical Geometry  
Workshop Practice  
Engineering Drawing  
Applied Physics

### Semester 2

Programming Fundamentals  
Linear Circuit Analysis  
Islamic Studies/Ethics  
Differential Equation  
Communication Skills

### Semester 3

Data Structures & Algorithms  
Electrical Network Analysis  
Digital Logic Design  
Complex Variables and Transforms  
Electronic Devices and Circuits

### Semester 4

Computer Organization and Architecture  
Data Structures and Algorithms  
Data Communication  
Probability Methods in Engineering  
Engineering Economics  
Workshop practice

### Semester 5

Electromagnetic Field Theory  
Electrical Machines  
Technical Report Writing and Presentation  
Communication Systems  
Instrumentation and Measurement

### Semester 6

Elective – I Analog Integrated Electronics  
Engineering Economics and Management  
Digital Communication  
Linear Control Systems  
Humanities Elective

### Semester 7

Senior Design Project-I  
Digital Signal Processing  
(IDEE-1) Embedded Systems  
Elective - II  
Elective - III

### Semester 8

Senior Design Project-II  
MGT-Elective-2  
IDEE-II(Elective-2)  
Elective - IV  
Elective - V

Teaching is provided through lectures and practical classes. Typically six assignments and three quizzes are given for sessional marks. Moreover, some subjects need presentations during the semester. Practical work is assessed separately.

### BS Program Summary

Total Credit hours:	136
Theory	106
Lab	30

### Contact Us

Chairperson  
Dr. Anayat Ullah  
(Ext:416)

UAN: +92 (81) 111 717 111

www.buitms.edu.pk/

### Essentials

F.Sc(Pre Eng)/ICS with Mathematics & Physics from any recognized board or equivalent with at least 60% marks.  
Diploma of Associate Engineer (DAE) in the same field securing at least 60% marks

### Admission Test

Qualifying the admission test.



## Graduate Program Information

The Department offers the Master of Science (MS) degree in Electronic Engineering.

### Core Courses

Linear Control  
Stochastic Processes

### Elective Courses

Electronics and embedded systems  
Advance DSP  
Advanced Integrated Electronics  
Advanced Computer Architecture  
Advance Industrial Electronics  
Advanced VLSI Design  
Nano Electronics  
MEMS Sensor Design  
3D Printing  
Advanced Opto Electronics  
Advanced FPGA Design  
Advanced Instrumentation Systems  
Multirate Systems And Filter Banks  
Advanced Machine Drives  
Switched Mode Converter Analysis And Design  
Advanced Power Electronics  
Advanced Image Processing  
Control systems  
Modelling And Simulations  
Multivariable Control  
Optimal Control  
Nonlinear Control  
Digital Control Systems  
Advanced Control Systems  
Adaptive Control  
Stochastic Control  
Model Predictive Control  
Robotics  
Advanced IPC  
Intelligent Control  
Advanced Topics In Control Systems  
RF Electronics  
Advanced Microwave Engineering  
Advanced Antenna Design  
Advanced RF Electronics  
Advanced Electromagnetic Theory  
Transmission Lines  
Advanced Concepts In RADAR Applications

Microwave-Based Testing  
Microwave integrated circuit design  
Communication systems  
Advanced Digital Communication  
Cellular And Mobile Communication  
Stochastic Processes  
Information And Coding Theory  
Advanced Topics In Communication Systems  
Advanced Mobile Networks  
Advanced Optical Comm.  
Advance Satellite Comm.  
Radio Wave Propagation  
Management Elective  
Engineering management  
Research methodology  
Project management

### MS Program Summary

Total Credit hours:	30
Theory	24
Thesis	6

### Contact Us

Graduate Coordinator  
Dr. Anayat Ullah  
(Ext:416)

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www.buitms.edu.pk/

### Essentials

- BS(EE) 4 years degree

### Admission Test

Graduate Assessment Test (GAT General) scores are required for admission consideration.



# Telecommunication Engineering

The Telecommunication Engineering academic program covers the structure of Telecommunication systems, Networks, Software and Computer systems. Using their knowledge of electronics, computer hardware and software, signal processing and networking techniques, our graduates can contribute in a range of voice, data and multimedia communication activities.

## Telecommunication Engineering at BUITEMS

The department of Telecom Engineering at BUITEMS was established in 2005, as an undergraduate program. The contribution of the department over the years has been incredible.

Currently the department has 17 faculty members including 3 PhDs, 2 masters and rest of the faculty is either enrolled in PhD or master program. Most of them are foreign qualified from best universities of the world. It also started its Master degree program in spring 2013.

### Programs offered in Telecom Engineering

- 4 years BS(TE)
- 2 years MS(TE)

## Objectives

- BS in Telecommunication Engineering is designed to produce graduates with specialized skills.
- They will be able to design telecommunication devices, circuits and systems.

## Achievements

Currently 180 students are enrolled in BS and up to 50 students in MS program. We have been successful in clinching the top priority of most of the prospective engineering students of BUITEMS.

Our program is accredited by Pakistan Engineering Council (PEC)

## Facilities and Practical Exposure

Telecom Department has a range of well equipped laboratories.

Students are also provided with computer laboratories equipped with latest technologies.

Similarly students can benefit from internships and study tours offered by department. Workshops and guest talks are arranged on regular basis to increase practical knowledge of students.

Students get the chance to work as an assistant to the senior faculty members where they get experience of research and teaching.

## Fact file

### Code

BSTE

### Duration

Four years  
(8 Semesters)

## Mission

*The mission of the Telecommunication Engineering degree program is to provide quality education in communication networks and systems; to train our graduates in a variety of subfields of telecommunication engineering at the systems level and prepare them for rewarding and successful careers in data communications, network architecture, wireless, optical networking and next generation networks.*

## Scheme of Study

### Semester 1

Functional English  
Calculus and Analytical Geometry  
Islamic Studies/ Ethical Behavior (for non-Muslims)  
Applied Physics  
Pak Studies

### Semester 2

Fundamentals of Telecommunication  
Differential Equation  
Communication Skills  
Electronic Workbench  
Electronic Devices & Circuits  
Computer Programming

### Semester 3

Complex Variables & Transforms  
Digital Logic Design  
Circuit Analysis  
Technical Report Writing & Presentation  
Data Structure and Algorithms

### Semester 4

Computer Communication & Networks (Breadth Core I)  
Instruments & Measurements (Elective I)  
Engineering Drawing  
Signals & Systems  
Electromagnetic Theory  
Linear Algebra

### Semester 5

Probability & Statistics  
Communication System  
Wave Propagation & Antennas  
(Elective II)  
Digital Signal Processing (Elective III)  
Computer Architecture & Organization

### Semester 6

Engineering Mechanics (IDEE I)  
RF & Microwave Engineering (Elective IV)  
Digital Communication (Elective V)  
Microprocessor & Interfacing Techniques  
Numerical Analysis

### Semester 7

Control Systems  
Wireless & Mobile Communication (Elective VI)  
Optical Communication (Elective VII)  
Engineering Economics  
Electrical Machines  
Project-I

### Semester 8

Transmission & Switching Systems (Breadth Core II)  
Telecom Traffic Engineering  
Power Distribution and Utilization (IDEE II)  
Professional Practice  
Engineering Management  
Project-II

Teaching is provided through lectures and practical classes. Typically six assignments and three quizzes are given for sessional marks. Moreover, some subjects need presentations during the semester. Practical work is assessed separately.

### BS Program Summary

Total Credit hours:	138
Theory	108
Lab	30

### Contact Us

Chairperson  
Engr. Faizullah Khan  
(Ext:413)

UAN: +92 (81) 111 717 111

www.buitms.edu.pk/

### Essentials

F.Sc(Pre Eng)/ICS with Mathematics & Physics from any recognized board or equivalent with at least 60% marks.  
Diploma of Associate Engineer (DAE) in the same field securing at least 60% marks

### Admission Test

Qualifying the admission test.



## Graduate Program Information

The Department offers the Master of Science (MS) degree in Telecommunication Engineering.

### Core Courses

Stochastic Processes  
Telecom Systems & Networks  
Advanced Digital Communication

### Elective Course

#### Specialization (Communication System)

Optical Fiber Communications  
Advanced Computer Networks  
Advanced Wireless Communication  
Telecom Management Network  
QOS in Telecommunication Networks  
Telecom Policies and Regulations

#### Specialization (Signal Processing)

Advanced Digital Signal Processing  
Adaptive Signal Processing  
Real Time DSP  
Digital Image Processing  
Statistical Signal Processing  
Video Signal processing  
Speech Processing

#### Specialization (RF & Wireless Communication)

Antenna Design  
Microwave Engineering  
Advanced Engineering Electromagnetic  
Radar Engineering  
Advanced Wireless Communication  
Mobile Communications  
Satellite Communication

#### Specialization (Telecommunication Networks)

Mobile Ad-hoc Networks  
Optical Communication & Networks  
Advanced GSM Architecture  
Telecom Management Network  
Broadband Communication  
SS7 & Intelligent Networks  
CDMA based Networks  
Network Security  
Next Generation Networks  
Sensor Networks

#### Electives

Research Methodology  
Simulation and Modeling  
Operational Research

“

*"I have been at BUITEMS for four years. BUITEMS offers me so many sporting opportunities, academic skills. The high reputation, excellent sporting competition, and the 'brotherhood' lifestyle here make BUITEMS a unique University. I also led the BUITEMS Cricket team at Peshawar for me this was very special. Coming to BUITEMS will give you a great experience and you will learn many lessons to use for the rest of your life. I will never forget the valuable four years I had in this University."*

**Syed Asghar Ali Shah**

(Undergraduate student)

### MS Program Summary

Total Credit hours:	30
Theory	24
Thesis	6

### Contact Us

Graduate Coordinator  
Dr. Anayat Ullah  
(Ext:416)

UAN: +92 (81) 111 717 111

www.buitms.edu.pk/

### Essentials

- BS(TE) 4 years degree

### Admission Test

Graduate Assessment Test (GAT General) scores are required for admission consideration.





# Faculty Profiles

FICT has the most remarkable interdisciplinary faculty. We have faculty working in a wide range of disciplines ranging in Computing, Embedded Systems, Communications and Wireless Networks, Electrical and Power Engineering and Technology Management. One of the notable features of our faculty is the high degree of scholarly collaboration between faculty who come from diverse fields with academic achievements from across the globe.



**Faisal Ahmed Khan Kakar**

Dean

*Ph.D., Georgia Institute of Technology, USA.*

[faisal.khan@buitms.edu.pk](mailto:faisal.khan@buitms.edu.pk)

Dr. Faisal Khan is the Dean of the Faculty of Information and

Communication Technology, BUITEMS Quetta. He is also the Director of Communications Systems Laboratory. He holds a PhD degree in Electrical and Computer Engineering from the Georgia Institute of Technology, USA. Dr. Khan's research interests include intelligent vehicle area networks, disaster resilient communications and network security. Dr. Khan is an active member of the IEEE Standards Association. He is a prolific researcher and active contributor for IEEE conferences and transactions. Dr Khan is the member of Computing Education Accreditation Council. He has worked with the Communications Systems Center (CSC) at the Georgia Institute of Technology from 2009 to 2013. Awards and distinctions to his credit include Fulbright PhD scholarship award 2009-2013, Bahria University scholarship award 2006, distinction Bahria University 2005, and the best teacher award BUITEMS 2008.



**Mumraiz Khan Kasi**

Faculty Coordinator,  
Assistant Professor

*Ph.D., University of Waikato, New Zealand*

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Dr. Mumraiz Kasi is Assistant

Professor of Computer Science. He holds a PhD in computer science from University of Waikato, a master's degree from University of Adelaide, and a bachelor's degree from Government College University, Lahore. He has a wide range of research interests, including semantic web technologies, sensor networks, query processing, and context-aware systems. His current work focuses on the use of energy-efficient methods for processing sensor data in heterogeneous wireless sensor networks.



**Ayesha Shaukat Baloch**

Chairperson,

*Electrical Engineering*

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Ayesha is Assistant Professor in

Electrical Engineering department and has been chairing the department since December 2012. Her fields of interest are Nanotechnology and Quantum mechanics. Her MS research work is titled "Comparative Study of Si and GaAs in Ballistic Transport using NEGF".



**Faizullah Khan**  
Chairperson,  
*Telecommunication Engineering*  
*Ph.D., Beijing University of Post and*  
*Telecommunications, China*  
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Dr. Faizullah Khan is working as Assistant Professor and chairperson Department of Telecommunication Engineering. Before joining BUITEMS he has worked in Power (PEPCO) and Telecommunication (PTCL) sectors of Pakistan for 14 years at various positions. He got a PhD degree in Management Science and Engineering from Beijing University of Posts and Telecommunication (BUPT) P.R China. His research areas include Telecommunication Policies & Regulation, Digital Divide and eGovernment.



**Shah Rukh Rayaz**  
Chairperson,  
*Software Engineering*  
[Shahrukh@buitms.edu.pk](mailto:Shahrukh@buitms.edu.pk)

Engr. Shah Rukh Rayaz received his MS degree in Software Engineering from Hamdard University Karachi and Bachelor's degree in BS Computer Engineering from BUITEMS. He joined BUITEMS in September 2007. His Subjects of Interest includes Cloud Computing Architecture and Software Project Management.



**Bakhtiar Khan Kasi**  
Chairperson,  
*Computer Engineering*  
*Ph.D., University of Nebraska-Lincoln,*  
*USA*  
[bakhtiar.kasi@buitms.edu.pk](mailto:bakhtiar.kasi@buitms.edu.pk)

Dr. Bakhtiar Kasi has been serving BUITEMS as Assistant professor in the Computer Engineering department since Nov 2008. He proceeded to USA on study leave for PhD funded through through Fulbright scholarship in 2010. Dr. Kasi received his Ph.D. degree in Computer Science from University of Nebraska-Lincoln, USA, in Dec 2015. He received his M.S. degree in Computer Science from SZABIST, Karachi, and B.E. in Software Engineering from Bahria University, Karachi. His research interests are to understand how coordination issues in distributed software development affects developers' productivity. His interests include machine learning, information retrieval, constraint processing, static analysis, and 'big data' analysis; more specifically, he has worked in multi-label classifications, SMT solving, and natural language processing. He has presented his research at top-tier international conferences on software engineering, and has also served on program committees, and co-reviewed papers in international conferences.



**Anayat Ullah**  
Chairperson,  
*Electronic Engineering*  
*Ph.D., University of Kassel, Germany*  
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Dr. Engr. Anayat Ullah is Assistant Professor at the Electronic Engineering Department whose research centers on optical filters and sensors, spectroscopy, nanotechnology and MEMS devices. He has extensively worked with MEMS and NEMS device fabrication and Nano Imprint Lithography. He also has vast experience in the Telecom field and has been associated with Pakistan Telecom Company Limited. His current research involves interference bandpass filter and MEMS device design.



**Riaz-Ul-Amin**  
Chairperson,  
*Computer Science*  
*Ph.D., University of Glasgow, UK*  
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Prior to his PhD, Dr. Riaz-Ul-Amin immersed in the field of Computer science with MSCS from UCP Lahore, and Bachelor's degree in Computer Science from B.Z.U Multan. He has been involved in the teaching and research activities in BUITEMS Quetta since 2005. He was the Team Lead in the HEC's Research Project of Cluster Computing. He is one of the pioneers to teach Graduate-Level courses in MS Programs at BUITEMS. During his PhD, he tutored several courses in School of Computing Science, University of Glasgow for four years. In his PhD, he conducted research on context-aware service migration in VANET over integrated network environments. In MS research, he performed analysis of resource allocation strategies in grid computing platforms. He is an expert in the fields of mobile service design and distributed computing. The areas of his specialisation include Distributed systems, Mobile computing and system programming.



**Farhan Elahi**  
Chairperson,  
*Information Technology*  
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Farhan Elahi received his Masters degree in Computer Science from University of Balochistan, Quetta in 2003. He joined as Lecturer in the department of Computer Science BUITEMS in September 2005 where he has been teaching courses of Data Communications, Computer Communication & Networks, Programming Fundamentals and Information Systems. He did his MS degree from BUITEMS in 2010. His research interests

include but not limited to Network Security, Wireless Networks and Vehicular ad-hoc Networks.



**Aftab Ahmed Shaikh**  
Professor,  
*Ph.D., BUAA. P.R. China*  
[aftab.ahmed@buitms.edu.pk](mailto:aftab.ahmed@buitms.edu.pk)

Dr. Aftab is one of the pioneer faculty members of BUITEMS since 2002. He has more than sixteen years experience in education and research. He earned his Doctorate Degree in Computer Application & Technology from Beihang University Beijing in 2010. He also rendered his services as Dean, Faculty of Information and Communication Technology during 2012-13. Dr. Aftab has published several research articles in reputable international Journals and Conference Proceedings. He received the 'Best Teacher Award's in during years 2005, 2006 and 2011. His research interest(s) include Computational Intelligence, Machine Learning, Multi-Agents Technology, Analysis of Algorithms and many other similar themes.



**Jan Muhammad**  
Associate Professor,  
*Computer Engineering*  
*Ph.D., University of Glasgow, UK*  
[jan.muhammad@buitms.edu.pk](mailto:jan.muhammad@buitms.edu.pk)

Dr. Jan Muhammad is Associate Professor in the department of Computer Engineering with research focused in Distributed Systems. He has a teaching experience of 15 years and has been teaching a broad range of undergrad and graduate level courses including: Computer System Architecture, Microprocessors & Assembly Language, Operating Systems, Database Management Systems, Programming Fundamentals and Research Methodology. His current work focuses on cloud based learning management systems and distributed systems security (Cloud and Grid security).



**Abdul Wahid Traeen**  
Assistant Professor  
[abdul.wahid@buitms.edu.pk](mailto:abdul.wahid@buitms.edu.pk)

Engr. Abdul Wahid is Assistant Professor in Telecommunication Engineering. His research interests are Telecommunication policy, internet regulation and broadband internet access in unlicensed bands. He is conducting research on market structure of telecommunication industry and telecommunication policy affects.



**Zahid Rauf**  
Associate Professor,  
*Ph.D., University of Canterbury, New Zealand*  
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Dr. Zahid Rauf is Associate Professor at the Faculty of Information and Communication Technology (FICT). He is also serving as the Director of Quality Enhancement and Accreditation (QE&A). He teaches Communication and Networks. His research interests are digital wireless communications, including MIMO, Multiuser Communication Systems, Channel Estimation, Equalization and Low-complexity Iterative Detection Algorithms, Cooperative Relaying Networks, Network Coding, Optimal and Adaptive Resource Allocation in Wireless Networks, and Cross-layer Design and Analysis (primarily Physical and Link layer).



**Sadique Ahmed Bugti**  
Associate Professor,  
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Dr. Bugti completed his early education from Balochistan. For higher education he went to university of Sindh Jamshoro, where he earned the degree of Master in Computer Sciences. He joined the BUITEMS in 2003 as a faculty member. He earned his MS (Computer Science) degree from BUITEMS in 2006. He left for Higher education abroad in September 2008, Beijing University of aeronautics and astronautics (BUAA), China and got his Doctorate Degree (PhD). After his PhD he joined as Assistant Professor.



**Abdul Samad**  
Assistant Professor,  
*Ph.D., University of Georgia*  
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Dr. Abdul Samad is Assistant Professor in Computer Science, BUITEMS. His research interests includes machine learning, data mining, big data and analysis of algorithms. He is particularly interested in scaleable machine learning methods.



**Surat Khan**  
Assistant Professor,  
Ph.D., BUPT P.R. China  
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Dr. Surat Khan is Assistant Professor in the department of Telecom Engineering (FICT). His teaching and research focus includes Engineering Management, Telecom Management, Supply Chain Management Organizational Behavior, Professional Practices, e-Business and e-Commerce. He received his Ph.D in Management Science and Engineering from Beijing University of Posts and Telecommunications (BUPT) PR China. He has more than 15 years experience in managing Electrical Projects and Telecommunication Organizations.



**Rahila Umer Sumalani**  
Assistant Professor  
[rahilaumer@buitms.edu.pk](mailto:rahilaumer@buitms.edu.pk)

Rahila Umer is Assistant Professor in Computer Science department. Her field of interest is Machine learning, Behavior targeting, Data mining. She worked on Machine learning approaches for Computer Aided diagnosis and prediction of Alzheimer's Diseases based on clinical data in her MS thesis. She is currently on study leave.



**Asad Ali**  
Lecturer,  
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[asad.ali@seecs.nust.edu.pk](mailto:asad.ali@seecs.nust.edu.pk)

Asad Ali is serving as lecturer at Faculty of Information and Communication Technology. Currently, he is working on Adaptive Streaming of high quality multimedia applications over the internet.



**Kanza Ali**  
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Kanza Ali received her BS (CS) from Sardar Bahadur Khan Womens' University Quetta in 2010. During her BS she worked on different assignments including International Project. She Joined BUITEMS in September 2011 as Lecturer in the department of Computer Science and is now pursuing her MS (CS) studies at BUITEMS.



**Syed Usman**  
Lecturer,  
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Syed Usman received his Bachelor of Engineering in Electrical with specialization in Communications from MUST, Mirpur in 1999. He did his PGD from COMSATS Islamabad in 2002. He was associated with Pakistan Television Corporation (PTV) Quetta for two years as an Assistant Engineer. Later on he joined Pakistan Telecommunication Company Limited (PTCL) as an Assistant Divisional Engineer He served PTCL for 10 years as an ADE & Senior Engineer. He joined BUITEMS in September 2010 in the Department of Telecommunication Engineering, Faculty of Information & Communication Technology. His research areas include C-RAN, Conversion of TDM into Packed based networks, Wireless Networks & Next Generation Networks.



**Saima Gul**  
Assistant Professor,  
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Saima Gul is Assistant Professor of Computer Science department. Her research and teaching interests include theoretical computer sciences as well as the practical essence of programming and software engineering. Her future research goals are to work on data security engineering and cryptography. Her research is on crypto techniques and cybersecurity.



**Poma Panezai**  
Lecturer,  
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Poma Panezai is Lecturer in the department of Computer Science. She received her Bachelors in Computer Science in December 2011 with interest in Software Development. She was appointed as Lecturer in December 2012. She teaches courses of Computer Graphics, Software Development, Database System, Object Oriented Programming and Bioinformatics Computing.



**Sadaf Riaz**  
Assistant Professor,  
[Sadaf.riaz@buitms.edu.pk](mailto:Sadaf.riaz@buitms.edu.pk)

Sadaf Riaz is Lecturer in BUITEMS. Her Research area is Cloud

Computing. She has also done research in Human Computer Interaction. Her fields of Interests are Data Base Management System, Web Application, Object Oriented Programming, Human Computer Interaction and Software Engineering. She did her MSCS from BUITEMS.



**Attiya Shoaib**  
Assistant Professor,  
[Attiya.shoaib@buitms.edu.pk](mailto:Attiya.shoaib@buitms.edu.pk)

Attiya has maintained a brilliant Academic career throughout her life. She joined BUITEMS in January 2006 as Lecturer in department of Computer Science. Her fields of interest include Software Engineering, Cloud Computing, Human Computing Interaction, Data Base Management System, Electronic Commerce, Computer Graphics.



**Amir Shahzad Khokhar**  
Assistant Professor,  
[amir.shahzad@buitms.edu.pk](mailto:amir.shahzad@buitms.edu.pk)

Amir Shahzad Khokhar received his MS degree in Computer Science from Blekinge Tekniska Hogskola (BTH) Sweden in 2010. He joined the university as a Lecturer Faculty of Information & Communication Technology (ICT) in December 2010 and later on as Assistant Professor. Prior to joining BUITEMS, he worked as System Engineer at NADRA, Quetta. His MS thesis with Ericsson AB, Sweden was in "Distributed Database Systems in Telecom Environment". He was awarded scholarship at Sweden.



**Muhammad Junaid Khan**  
Assistant Professor,  
[muhammad.junaid@buitms.edu.pk](mailto:muhammad.junaid@buitms.edu.pk)

Muhammad Junaid is working as Assistant Professor in the

Department of Computer Science. He was one of the pioneer students of BUITEMS. He received his MS in Computer Science MS (CS) with distinction in 2013. Prior to joining BUITEMS, he worked as System Engineer at NADRA, Quetta. He had also worked as Software Engineer at Folio 3 in Karachi.



**Siraj-un-Muneer**  
Assistant Professor,  
[siraj.muneer@buitms.edu.pk](mailto:siraj.muneer@buitms.edu.pk)

Siraj received his BS (CS) & MS (CS) from BUITEMS in 2009 and 2015, respectively. He joined BUITEMS, department of Computer Science, FICT as Lecturer in 2011. Siraj was also an active member of the team that deployed the Campus Management Solution in BUITEMS. His research areas include Cloud Computing, Software Development, Software Engineering and Cloud Security.



**Ahtasham Sajid**  
Assistant Professor,  
[ahtasham.sajid@buitms.edu.pk](mailto:ahtasham.sajid@buitms.edu.pk)

Ahtasham Sajid received MS (CS) from SZABIST Karachi in "Communication & Networks" in 2007 securing C.GPA 3.70. He joined BUITEMS in November 2009 as a Lecturer in the department of Computer Science and later appointed as Assistant Professor.



**Mohammad Adeel Mahmood**  
Assistant Professor,  
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Muhammad Adeel Mahmood is working as Assistant Professor in the department of Computer Science. He received his MS in Computer Science from University of Adelaide, Australia with research focused on wireless sensor networks. He was awarded scholarship for higher studies under Faculty Development Program in 2007.



**Imran Siddique**  
Assistant Professor,  
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Mr. Imran Siddique is working as Assistant Professor in the department of Computer Science, BUITEMS. He received his MS degree from the University of Adelaide, Australia. Now he is on study leave for PhD studies.



**Sheikh Mir Ahmed**  
Lecturer,  
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Sheikh Mir Ahmed is working as Lecturer in department of Computer Sciences. He served in different ISPs and Telecommunication companies before joining BUITEMS. His work currently concentrates upon the application & management of Big Data and Analytics processes in different field scenarios.



**Sibghatullah Bazai**  
Assistant Professor,  
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Engr. Sibghatullah Bazai is a Lecturer at department of Computer Engineering. He joined the department in September, 2011. He received his MS Computer Engineering from BUITEMS and also MS Telecom and Networks from PAF-KIET Karachi. He received a Certificate of Distinction for securing second position in session 2012- 2014. Prior to embarking on his academic career, Mr. Bazai worked as an IT Administrator in Conwill Pakistan Pvt Ltd. and as ICT Consultant at Applied Technology Research Center, Karachi. His research centers on Cloud Infrastructure, Virtualization, IOT and E-Cloud Policies.



**Shah Marjan**  
Lecturer,  
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Engr. Shah Marjan is a Lecturer of Computer Engineering department. He has been serving BUITEMS since October 2008. He received his MS Computer Engineering degree from BUITEMS in 2014,

in which he secured Gold Medal. Engr. Shah Marjan teaches Programming and Networking Skills. He is currently pursuing his PhD degree.



**Waheeda Panezai**  
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Waheeda is working as Lecturer in the department of Computer Engineering. Her areas of research are in the field of wireless communications and data communications. Currently she is teaching various subject; Fundamentals of Communications, Digital Communications, Control Engineering, C Programming, Digital System Design, Database Management Systems and Circuit analysis.



**Muhammad Nadeem**  
Assistant Professor,  
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Engr. Muhammad Nadeem is working as Assistant Professor at department of Computer Engineering. He received his BS Computer Engineering from Sir Syed University of Engineering & Technology Karachi in 2002. He completed MS in Computer Science from BUITEMS with specialization in Software Engineering. His technical expertise is web applications (developed in J2EE, and .NET platform) and databases (Oracle 9i, SQL Server, and MySQL). He is also working as a beta tester for Microsoft. He has also designed applications for automation of different systems at BUITEMS. Currently he is pursuing his PhD on fullbright scholarship from Mississippi State University, USA.



**Muhammad Aadil Siddiqui**  
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Engr. Muhammad Aadil Siddiqui did his B.E (Computers & Information Systems Engineering) from NED University, Karachi in 2010. He joined BUITEMS as a Lecturer in Sep 2011 in the Department of Computer Engineering. Previously worked at PIA as Network Engineer in 2011.



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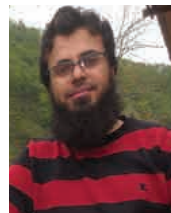
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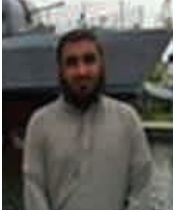
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We take your career seriously, so we work to incorporate the qualities and abilities that employers require from your experience at the university, whether you're studying, volunteering, playing sport or taking part in work placement programs. The University has various services and a number of people to look after your academics and personal well-being, and support you throughout your time at BUIEMS. The hierarchy of support goes like this:

#### **Class counselor**

Class counselor is your first stop when you need any assistance. At FICT every class has a class counselor whose duties include supporting and helping students of his or her class in all kinds of academic and non-academic issues. They:

- advise you on your subjects
- sometimes arrange supervisors for you
- help you in planning your progress

#### **Departmental focal person**

Every department has one focal person (also called CMS focal person) who is responsible for course registrations/enrollments, student records, results

and all other issues related to the automated Campus Management Solution (CMS).

#### **Chairperson's office**

The Chairperson's office is available for assistance in case you need assistance beyond the class counselor and the focal person's responsibility. The Chairperson and staff are available during the office hours to listen to your problems. The office can also be accessed via email and telephone. The counselor and focal person may themselves consult the Chairperson's office to resolve your problem or query. The Chairperson and his or her office are always there to provide you full support with a smile



with a smile and can advise you on academic, personal or financial matters.

### Faculty Coordinator

The Faculty Coordinator overlooks the academic and non-academic matters at the overall level of the Faculty of Information and Communication Technology. Occasionally, you might need to consult the Faculty Coordinator in case the Chairperson's office refers your request / problem further. One-to-one consultations can be scheduled to discuss to plan a successful learning and all kinds of issues can be advised by the coordinator.

### Dean's office

The Dean's office is the highest office at the Faculty of Information and Communication Technology. Characterised by instant support with smile, the office sows and spreads courtesy and student support throughout the FICT. The office assists students in resolving problems that require the help of the Registrar's office, the Finance section and the office of Controller of Examinations, when the problem cannot be resolved at the Chairperson's and the Faculty Coordinator's office.

### International Students Coordinator

Programs offered at FICT have been popular among the international students hailing from diverse nationalities. FICT has an International Students Coordinator dedicated to help the international students at the faculty. The international students coordinator helps students with a wide range of general assistance and support on issues that relate to international student admissions, cultural adjustment, academics, community relations, and campus-wide assistance.

### Disabled students

BUITEMS extends extra support to students with disabilities. The infrastructure at BUITEMS is developed keeping in consideration the needs of disabled students. The building facilities of FICT have the necessary access features for disabled students. Students with a specific learning difficulty, physical/mobility or visual impairments are fully

facilitated; when needed, the instruction and evaluation are also adapted to the needs of disabled students.

### Financial support

We boast with our financial support at BUITEMS where every third student receives financial assistance in the form of scholarships and fee waivers. The students receive scholarships and fee waivers under a wide range of programs. The assistance is provided from our own resources as well as with the support of our friends including the USAID, PPL and many more. BUITEMS also offers the work and study program that not only supports students with full fee waiver but also provides an exposure to work environment; thus providing the opportunity of learning about practical life during their academic journey. The office of financial assistance at BUITEMS lets you know more about the financial support available at BUITEMS.

### Career services

We want you to be a success, both now and in the future. From the moment you arrive at BUITEMS, we can help you to enhance your CV, build your experience, and network with potential employers. The mission of BUITEMS Career Unit is to provide advice, services, programs, resources, to empower the students and alumni throughout their career development journey. We provide opportunities to assist our students in decision making, identifying skills, interests, and values to discover meaningful professional experiences. We partner with potential employers for internship and job opportunities. We offer:

- Career Assessment
- Career Advising /Counseling
- Workshops and Panels
- Job Listing/Job Placement
- Mock Interviews with Feedback
- On-Campus Interviewing/Recruitment
- Internship Program
- Career Fairs



### Further information Career Support Team

- ☎ 081-2880511
- @ imran.khan@buitms.edu.pk
- 🌐 [www.buitms.edu.pk](http://www.buitms.edu.pk)

# Research:



Research and development forms the core of life at Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS). As an institution of higher learning, BUITEMS is increasingly focusing its efforts and energy on R&D.

## The BUITEMS Advantage: **Innovation and Commercialization**

To this end, research groups at BUITEMS are continuously busy solving problems pertinent to the province, the nation and the world. Research at BUITEMS is rapidly evolving to a level where it will inspire game-changing ideas and new technologies that will help drive economic growth, while improving human life on both the regional and global scale.

This is all possible because the culture at BUITEMS encourages thinking big and fearless pursuit of grand challenges. Another factor that sets BUITEMS apart from other research universities is the harmonious, highly collaborative environment among the faculty that fuels the university. The challenging research goals at BUITEMS are continuously accomplished through funding from BUITEMS and with the support of national and international agencies who share a passion for great ideas, courageous thinking and a desire to shape the future to come. With the courage and passion of the people at BUITEMS and with the help of friends, BUITEMS will achieve its greatest aspirations to become the technological research university of the

twenty first century.

### **Office of Research, Innovation and Commercialization**

To manage the enthusiastic and comprehensive research objectives, BUITEMS has established a central Office of Research, Innovation, and Commercialization (ORIC). ORIC has become a pivotal entity to promote research in the university and is assisting researchers within the university to think the unthinkable research solutions and seek national and international funding for their endeavors. Through ORIC, BUITEMS is also encouraging its researchers by providing them incentives to publish quality research work in the most reputable research journals worldwide.

# Travelling to BUIITEMS

Quetta is the capital of the province of Balochistan. Being one of the important cities of Pakistan, Quetta is easily accessible by all modern means of transportation.

## By car/bus

If you are planning to travel to Quetta via road, you can take the major national highway connecting to Quetta. The city is connected to Karachi at a distance of 686 km via the national highway N25. Quetta is connected to Lahore at a distance of 935 km via N70 and N5 and 980 km via N50. The distance between Quetta and Islamabad is 911 km via N50. The distance between Quetta and Peshawar is 835 km via N50 and N55. All major bus service companies provide service to Quetta from all major cities of the country.

## By air

BUIITEMS is located at a distance of 3 km from Quetta International Airport. The airport, through many national and international carriers, provides a round the clock connection to other major cities of Pakistan and abroad.

## By train

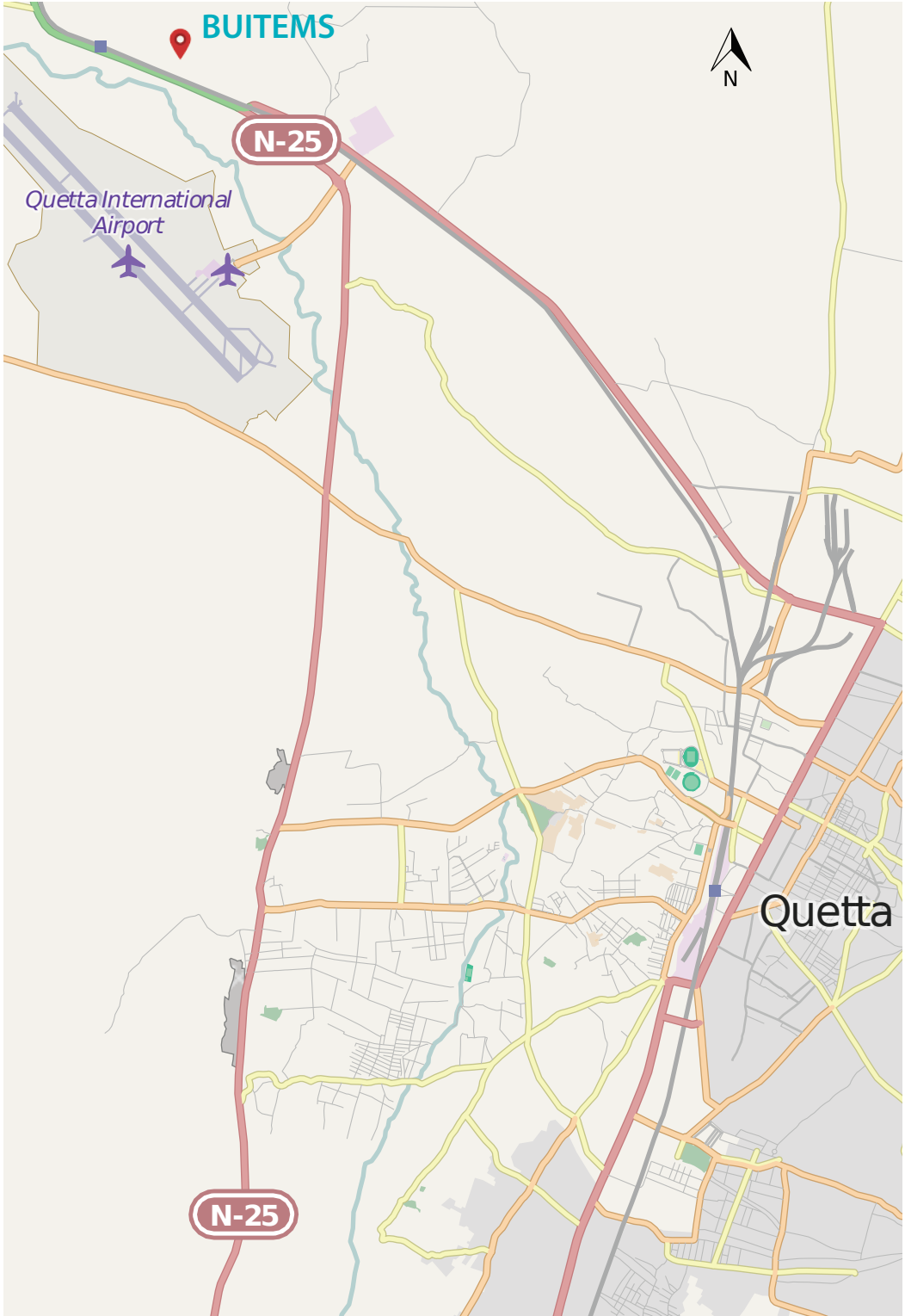
Quetta Railway Station is one of the major railway stations in the country. The railway track was laid in the 1890s during the British era to link Quetta with rest of the country. The extensive network of Pakistan Railways connects Quetta to Karachi in the south, by a 863 km track, Lahore in the northeast (1,170 km) and Peshawar further northeast (1,587 km). Regular train service of Pakistan railways connects Quetta to the rest of the country.

## Distances to BUIITEMS

Karachi	<u>686 km</u>	Lahore	<u>935 km</u>
Islamabad	<u>911 km</u>	Peshawar	<u>835 km</u>
Multan	<u>586 km</u>	Hyderabad	<u>712 km</u>



# City Map



# Site Map





# Credits

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