



BACHELOR *of* COMPUTER SCIENCE

KATEB UNIVERSITY

HOUSE OF ELITE



دانشگاه کاتب
Kateb University

INTRODUCTION

The KU Faculty of Engineering and computer science was established in 2013. The Faculty brings together an outstanding group of students, educators, scholars and researchers who want to learn and practice engineering and computer science to make a difference in their communities.

Computer sciences students study theoretical and practical foundations and techniques of computation – basic theories of formation, design and use of computers. As computer scientists, these students specialize in the theory of computation and the design of computational systems. With a degree in computer science, they can work in both government and private sectors. They can be employed in a wide variety of sectors as software engineers, software testers, project managers, and application developers.

At Kateb University, students are offered pre-requisite courses prior to UG programs. Designed to optimally prepare them for US in computer science, some of those courses are Discrete Math, Calculus, C, C++ and Probability.

KU Department of Computer Science offers two majors: Software Engineering and Information Technology (IT).

CAREER PATHS

A computer science graduate can normally find jobs in the following areas:

Application Development



Web Development



Database Development



Network Specialist



PROGRAM OUTCOMES

In addition to strong comprehension skills in math, science, and basics of computer, Computer Science students are also enabled to apply mathematical foundations, algorithmic principles, and computer science theory in modeling and designing computer-based systems.

Moreover, Computer Science students are enriched with problem-solving skills to utilize the required techniques, skills, and modern-software tools necessary for their professional practice. Thus, our graduates demonstrate the ability to plan and conduct laboratory experiments, and analyze and report results on them. Also, they are enabled to exercise strong oral and written-communication skills including those needed for technical writing.

BBA AT KATEB UNIVERSITY

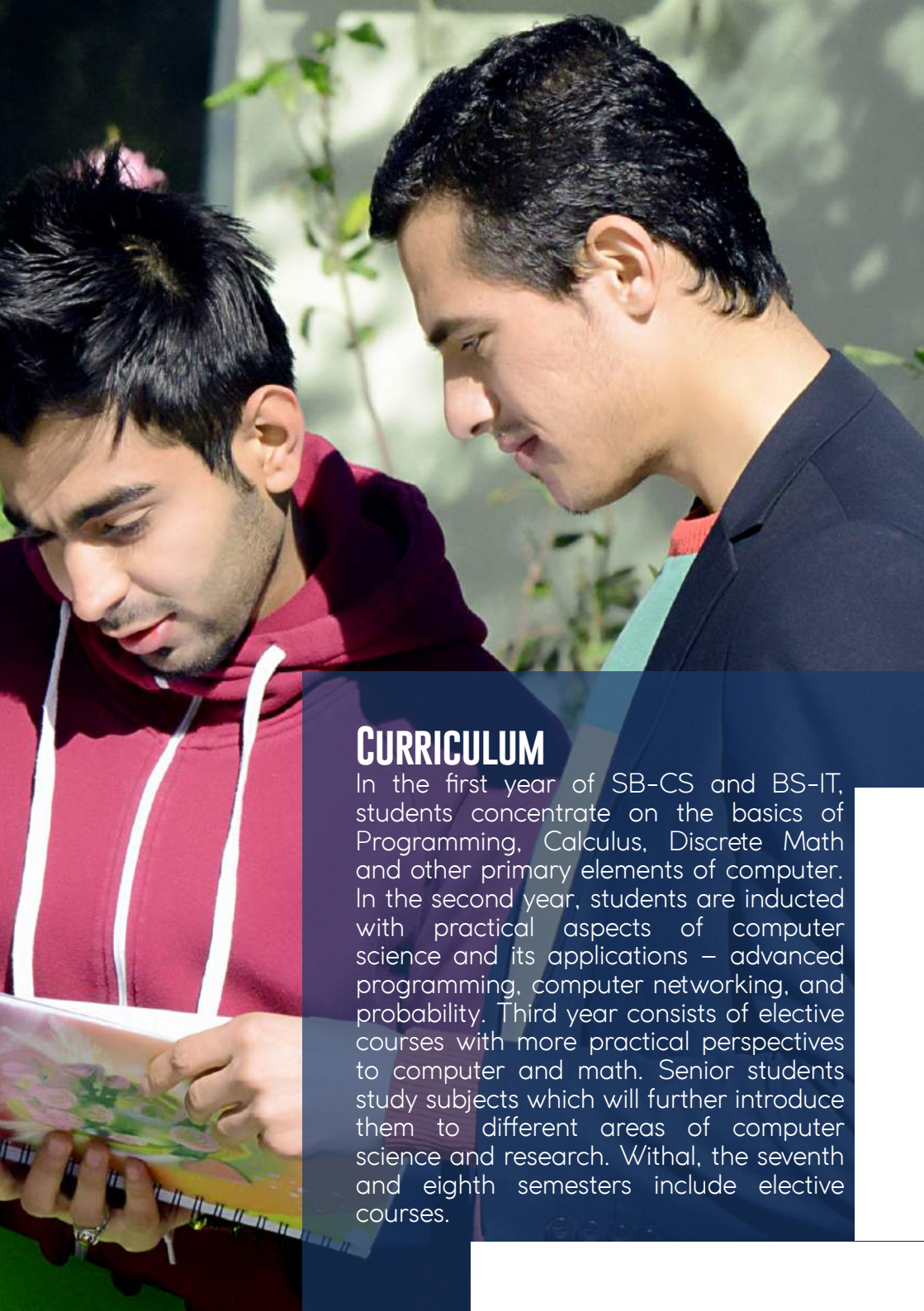
Productivity, efficiency, effectiveness and innovation in business are the most complex problems in Afghanistan. Department of business administration at Kateb University was established to best train human capital in fields of business, management, finance, and marketing, strategic management. It is expected that taking advantage of the knowledge in business and administration, graduates learn how to analyze complex business problems faced by enterprises, companies and organizations. Successful graduates can provide effective solutions in the field of business innovation in Afghanistan.

BBA at Kateb aims to educate experts and skilled personnel to meet the needs of the labor market, institutions, agencies, and banks. Moreover, we prepare the students to study masters in business administration, management, knowledge management and business innovation and entrepreneurship.

EDUCATION SYSTEM

The educational system at Kateb University is defined based on credit system. In this way, the curriculum designed has a total of 140 credit hours that includes the general courses, main courses, specialization courses, electives and final thesis. For the past few years, the course has been extensively improved in order to reach the great expectations of various core based industries that are involved in managerial business as well as the human resource areas. The educational strategies of the department are a mix of student oriented, teacher oriented and curriculum oriented. We provide advanced training, practical and theoretical teaching based on the needs of the job market and research opportunities. Moreover, students can also take part in scientific dialogues and discussions held at the university.





CURRICULUM

In the first year of SB-CS and BS-IT, students concentrate on the basics of Programming, Calculus, Discrete Math and other primary elements of computer. In the second year, students are inducted with practical aspects of computer science and its applications – advanced programming, computer networking, and probability. Third year consists of elective courses with more practical perspectives to computer and math. Senior students study subjects which will further introduce them to different areas of computer science and research. Withal, the seventh and eighth semesters include elective courses.

BBA DEGREE PLAN

CREDITS SUMMARY

COURSE	NO. OF CREDITS	PERCENTAGE COVERED
GENERAL SUBJECTS	16	11.42%
FOUNDATIONS	35	25%
CORE SUBJECTS	71	51%
ELECTIVE SUBJECTS	12	3.8%
THESIS	6	4.28%



FRESHMAN YEAR

FIRST SEMESTER

CODE	TITLE	CREDIT	THEORY	PRACTICE	PRE-REQUISITE	TYPE
78001	INTRODUCTION TO COMPUTER SCIENCE-I	3	2	1	NONE	CORE
78002	INTRODUCTION TO COMPUTER PROGRAMMING USING C	3	2	1	NONE	CORE
78003	BASIC ELECTRONICS	3	3	-	NONE	CORE
78004	CALCULUS-I	3	3	-	NONE	CORE
78005	ISLAMIC STUDY	3	3	-	NONE	GENERAL
78006	ENGLISH	3	3	-	NONE	GENERAL
TOTAL CREDITS		18				

SECOND SEMESTER

CODE	TITLE	CREDIT	THEORY	PRACTICE	PRE-REQUISITE	TYPE
78007	OBJECT ORIENTED PROGRAMMING USING C++	4	2	1	78002	CORE
78008	INTRODUCTION TO COMPUTER SCIENCE-II	4	3	2	78001	CORE
78009	DATA STRUCTURE	4	3	-	78002	SPECIALIST
78010	DISCRETE MATH	3	2	1	NONE	CORE
78011	ENGLISH COMPOSITION	3	2	1	NONE	GENERAL
TOTAL CREDITS		18				

SOPHOMORE YEAR

THIRD SEMESTER

CODE	TITLE	CREDIT	THEORY	PRACTICE	PRE-REQUISITE	TYPE
78012	RDBMS-I	3	2	1	78010	SPECIALIST
78013	INTRODUCTION TO COMPUTER PROGRAMMING USING JAVA	4	2	2	78002	SPECIALIST
78014	CALCULUS-II	4	4	-	78004	CORE
78015	COMPUTER NETWORK-I	3	2	1	78008, 78010	SPECIALIST
78016	ALGORITHMS && GRAPH THEORY	4	3	1	78009	SPECIALIST
TOTAL CREDITS		18				

FOURTH SEMESTER

CODE	TITLE	CREDIT	THEORY	PRACTICE	PRE-REQUISITE	TYPE
78017	SOFTWARE ENGINEERING PRINCIPLE AND TOOLS -I	4	4	-	78013	SPECIALIST
78018	PROBABILITY	4	4	-	78010	CORE
78019	GUI PROGRAMMING USING JAVA	3	1	2	78013	SPECIALIST
78020	COMPUTER NETWORK-II	3	2	1	78015	SPECIALIST
78021	TECHNICAL BUSINESS WRITING	3	3	-	NONE	GENERAL
TOTAL CREDITS		18				

JUNIOR YEAR

FIFTH SEMESTER

CODE	TITLE	CREDIT	THEORY	PRACTICE	PRE-REQUISITE	TYPE
78022	DATABASE DEVELOPMENT USING SQL SERVSR(RDBM-ID)	4	2	2	78012	SPECIALIST
78023	WEB DEVELOPMENT	3	2	1	78008	SPECIALIST
78024	VISUAL PROGRAMMING-I	3	2	1	78019	SPECIALIST
78025	WIRELESS COMMUNICATION	3	2	1	78020	SPECIALIST
78026	LINEAR ALGEBRA WITH APPLICATION	4	4	-	78004	CORE
78027	SOFTWARE ENGINEERING PRINCIPLE AND TOOLS -II	2	2	-	78017	SPECIALIST
TOTAL CREDITS		19				

SIXTH SEMESTER

CODE	TITLE	CREDIT	THEORY	PRACTICE	PRE-REQUISITE	TYPE
78028	STATISTICS	3	3	-	78014	CORE
78029	OPERATING SYSTEM	3	2	-	78016	SPECIALIST
78030	ADVANCE WEB DEVELOPMENT	3	1/5	1/5	78023	SPECIALIST
78031	VISUAL PROGRAMMING –II	3	1/5	1/5	78024	SPECIALIST
78000	ELECTIVE-I	3	1	1	-	ELECTIVE
78032	MULTIMEDIA	3	-	-	78008	SPECIALIST
TOTAL CREDITS		18				

SENIOR YEAR

SEVENTH SEMESTER

CODE	TITLE	CREDIT	THEORY	PRACTICE	PRE-REQUISITE	TYPE
78033	DIGITAL IMAGE PROCESSING	3	2	1	78018, 78026	SPECIALIST
78034	COMPUTER ARCHITECTURE	3	2	1	78016	SPECIALIST
78035	ARTIFICIAL INTELLIGENCE	3	2	2	78018	SPECIALIST
78000	ELECTIVE-II	4	2	2	-	ELECTIVE
78000	ELECTIVE-III	4	2	2	-	ELECTIVE
TOTAL CREDITS		18				

EIGHTH SEMESTER

CODE	TITLE	CREDIT	THEORY	PRACTICE	PRE-REQUISITE	TYPE
78000	ELECTIVE-IV	4	2	2	-	ELECTIVE
78000	ELECTIVE-V	4	2	2	-	ELECTIVE
78036	PROJECT	6	-	-	-	SPECIALIST
TOTAL CREDITS		14				
TOTAL CREDITS		140				

ELECTIVE COURSES

GROUP (A) ELECTIVE COURSES

CODE	COURSE TITLE	CREDIT	SEMESTER
78037	COMPUTER GRAPHICS	3	SIXTH
78038	INTERACTIVE PROGRAMMING IN PYTHON	3	SIXTH

GROUP (B) ELECTIVE COURSES

CODE	COURSE TITLE	CREDIT	SEMESTER
78039	DISTRIBUTED DATABASES	4	SEVENTH
78040	MOBILE COMPUTING	4	SEVENTH
78041	CRYPTOGRAPHY-I	4	SEVENTH
78042	NETWORK PROGRAMMING-I	4	SEVENTH
78043	REQUIREMENT ENGINEERING	4	SEVENTH
78044	NETWORK SECURITY	4	SEVENTH
78053	MOBILE DEVELOPMENT –I	4	SEVENTH

GROUP (C) ELECTIVE COURSES

CODE	COURSE TITLE	CREDIT	SEMESTER
78045	REAL TIME AND EMBEDDED SYSTEMS	4	EIGHTH
78046	MOBILE DEVELOPMENT –II	4	EIGHTH
78047	CRYPTOGRAPHY-II	4	EIGHTH
78048	NETWORK PROGRAMMING-II	4	EIGHTH
78049	DATA MINING	4	EIGHTH
78050	COMPUTATIONAL INTELLIGENCE	4	EIGHTH
78051	PARALLEL COMPUTING	4	EIGHTH
78052	NETWORK SECURITY	4	EIGHTH

FINANCIAL INFORMATION FOR THE YEARS OF 2018 – 2019

Fee structure has been divided into two categories; Barchi campus and main (Darul Aman) campus. Main campus is expected to cost higher because lower discount amount offered. Each student is required to pay a predetermined amount of AFN 12,000 each semester throughout their degree program. Tuition fee of AFN 850 is charged per credit hour. Students may register for a minimum of 14 credit hours and maximum of 22 credit hours each semester.

INDISCRIMINATE DISCOUNT

The undergraduate program offers a discount of 45% and 20% towards the total fees of each enrolled student each semester depending on which campus they study in. This amount applies to students who study full time at KU.

FEE CHART FOR THE YEARS OF 2018 – 2019

Barchi Branch Tuition Fees Structure



Predetermined Fees:

AFN 12,000



Tuition Fees Per Credit Hour:

AFN 850



Discount Amount:

45%

Type of Fee	Amount
Predetermined Fees	12,000 AFN
Tuition Fees Per Credit Hour	850 AFN
Fee for 18 Credits	27,300 AFN
Discount	45%
Fee Per Semester (discount applied)	15,015 AFN
Total Annual Fee (discount applied)	30,030 AFN

Main Branch Tuition Fees Structure



Predetermined Fees:

AFN 12,000



Tuition Fees Per Credit Hour:

AFN 850



Discount Amount:

20%

Type of Fee	Amount
Predetermined Fees	12,000 AFN
Tuition Fees Per Credit Hour	850 AFN
Fee for 18 Credits	27,300 AFN
Discount	20%
Fee Per Semester (discount applied)	21,840 AFN
Total Annual Fee (discount applied)	43,680 AFN

**BARCHI
BRANCH**

**45%
OFF**

**MAIN
BRANCH**

**20%
OFF**

STUDENT DEVELOPMENT OPPORTUNITIES

IT LAB

Kateb University is equipped with advanced and reliable networking system with models by approved topologies such as Cisco. There is both Cable and Wi-Fi networks to provide quick communication and administrative assistance.

To that end, Kateb University has signed a contract with Internet Service Provider (ISP), IO Global (IO) to provide Broadband Internet. The Uplink Mbps 20 / Downlink Mbps 20 band runs through the division in its three branches.

The University's Web-based Disciplines are as follows:



CENTRAL BRANCH

8 Mbps Downlink
8 Mbps Uplink



MAIN BRANCH

8 Mbps Downlink
8 Mbps Uplink



MASTERS BRANCH

4 Mbps Downlink
4 Mbps Uplink



ALL BRANCHES

20 Mbps Downlink
20 Mbps Uplink

For better communication and faster internet services, the IT department has a fully active, well-equipped, and secure internet portal both at the Central and Barchi branches. The Internet Club in the main branch is equipped with 18 computers and the Barchi Branch is equipped with ten computers with models, such as OptiPlex Dell 9010 & 7010.

ACM/ICPC CONTEST

The ACM International Collegiate Programming Contest (ICPC) is a multitier, team-based, programming competition operating under the auspices of ACM headquartered at Baylor University. It is the oldest programming contest in the world.

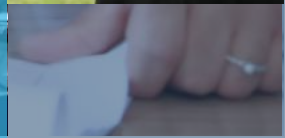
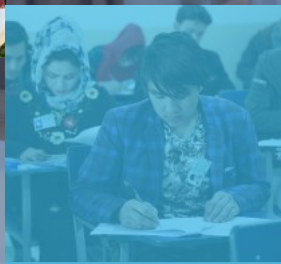
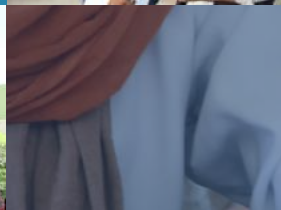
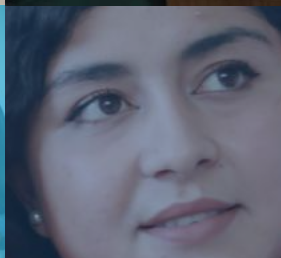
Kateb University hosted the first ACM ICPC National and Regional Contest on August 4, 2017. In the first run of the registration (15 April – 28 July 2017) each team had three members and one coach. The contest was not limited to programming. Participants also had the opportunity to learn many new data structures and algorithms while preparing themselves for the contests. In other words, it was a program for learning, challenge, and fun.

Kateb University also hosted the first ACM ICPC National and Regional Contest between 8th – 10th November 2017. In its first run, the registration for Kabul Regional Programming contest was opened from 10 Jul – 31 Oct 2017. The teams were from Pacific & Indochina Peninsula/Asia consisted of three members and a coach.

This year Kateb University organized 5 sessions of boot camp trainings to prepare students for the National Round of ACM/ICPC 2018 competition. The sessions were held in Kateb University and Charjistan University. The contest, which will be hosted by Kateb University, is going to be held in the coming months.





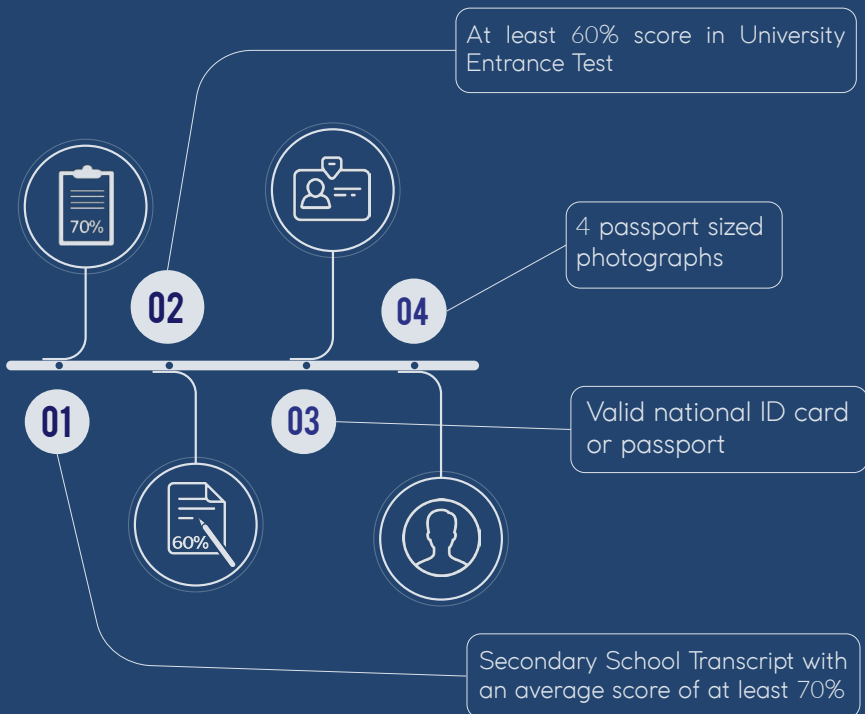


ADMISSION

1. REGISTRATIONS:

Students need to fill the “Kateb Regular Students Registration Form” online <https://kateb.edu.af/admission-bachelor> or get it from Office of Registrar.

Below are the eligibility criteria for enrollment for undergraduate program at the department of economics.



2. ENROLLMENT:

Each enrolling student needs to appear in a mandatory university entrance exam set by university administration. This exam is offered for enrollment twice a year and one at the beginning of each regular semester; fall and spring.



HOUSE OF ELITE



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