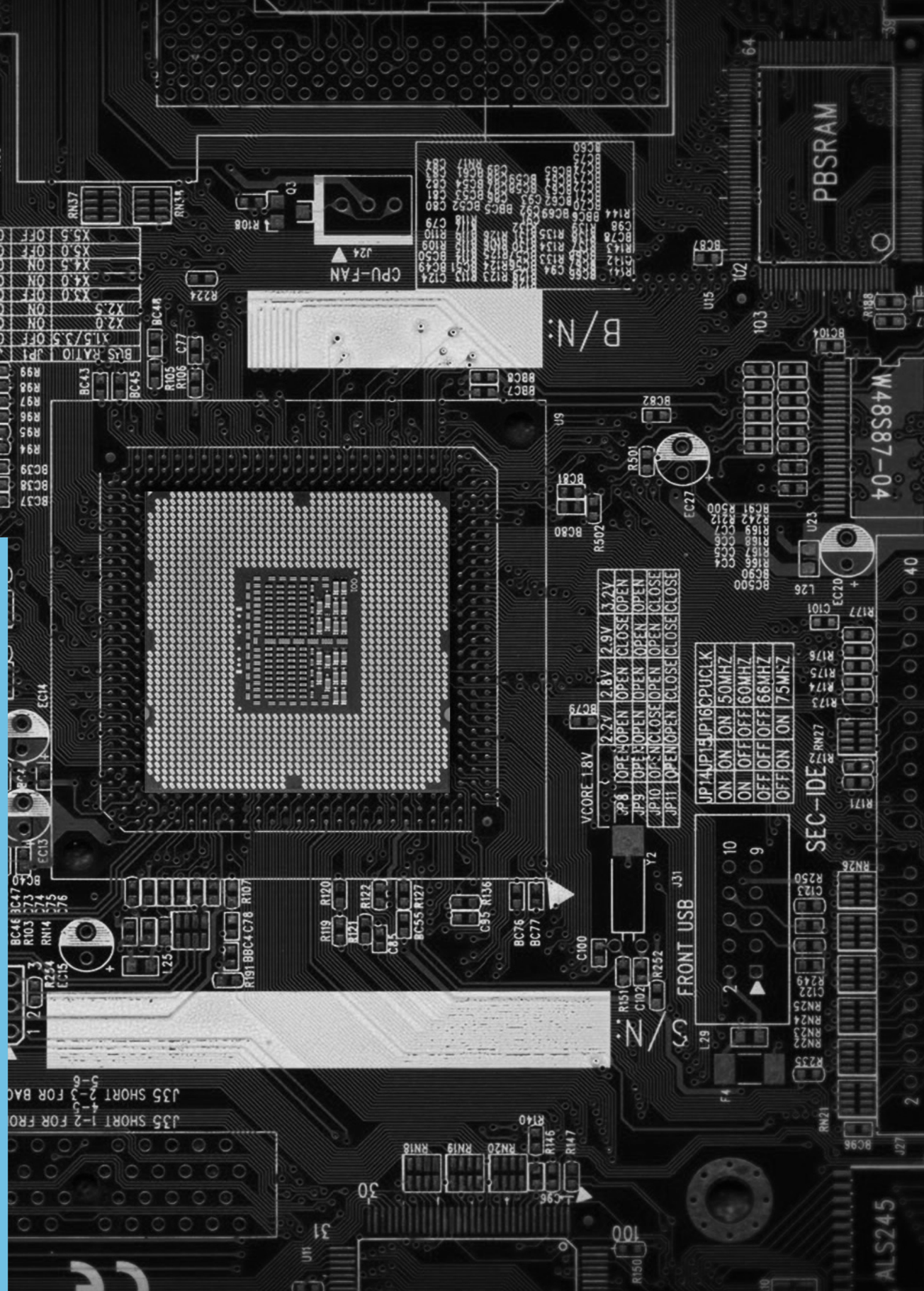
SCHOOL OF
COMPUTER SCIENCE

- BS-Computer Science
- BS-Software Engineering
- BS-Artificial Intelligence
- MS-Computer Science
- MS-Software Engineering
- Ph.D-Computer Science



DEPARTMENT OF COMPUTER SCIENCE

ABOUT

The objective of this school is to produce computer scientists, who form the backbone of the rapidly growing IT industry. The department is focused on developing an in-depth understanding of both the theoretical and practical aspects of computer science through rigorous course work.

Students are given unique opportunities to go beyond traditional learning and get involved in research activities through various research and industrial collaboration programs carried out on campus.

Our courseware is tailored according to the international standards to nurture capacity building and original thinking in our graduates for life-long-learning. Our graduates would be highly sought after by both national and international IT industry.

The Department is accredited by “National Computing Education Accreditation Council” (NCEAC) under Category “X”.

CHAIRMAN'S MESSAGE

Prof. Dr. Atif Ishtiaq

It is an honor and privilege to lead the Faculty of Computing during this technologically transformative era. In today's fast-paced digital world, where innovation drives progress and competitiveness in the global information economy, the role of Computer Science, Software Engineering and Artificial Intelligence has never been more critical. Our faculty is continually evolving — embracing emerging disciplines, incorporating cutting-edge technologies, and expanding its areas of specialization to meet the ever-changing demands of the industry and society.

Recognizing the pivotal role of Information Technology in all aspects of modern life, our programs are thoughtfully designed to cultivate computer scientists and software engineers who are not only technically proficient but also capable of pushing boundaries in innovation and technological advancement. These programs are fully accredited by the Higher Education Commission (HEC) and align strictly with its standardized curriculum, ensuring academic excellence and national recognition.

Our department takes immense pride in its dedicated faculty, whose excellence in teaching, research, and community engagement sets us apart. Their work spans core areas of computing as well as interdisciplinary domains, contributing to advancements that shape the future. We also emphasize diversity in our faculty recruitment and student enrollment, fostering an inclusive academic environment where ideas flourish and innovation thrives.

As we look ahead, the challenges and opportunities are both vast and exciting. The architecture of computing systems is undergoing rapid change — with multi-core processors replacing traditional single-core systems — and high-performance computing now underpins modern entertainment, healthcare, finance, and countless other industries. Software and hardware have become fundamental components of everyday life, powering the devices we use and driving global economic development.

Computer Science, Software Engineering and Artificial Intelligence have become indispensable in addressing the complex technological demands of the modern world. From national infrastructure projects to global scientific research, the need for skilled professionals in these fields continues to grow. Our department is committed to delivering dynamic, relevant, and future-ready education at both undergraduate and graduate levels. We aim to produce graduates who are not only equipped with technical skills but also capable of leading change and creating solutions for tomorrow's challenges. We remain humbled by the achievements of our students, the commitment of our faculty, and the support of our academic and industry partners. Together, we strive to cultivate an environment where curiosity, innovation, and integrity are at the core of everything we do. I warmly invite you to explore our programs, join our learning community, and become a part of a journey that aspires to build a better future through the power of computing.

CHAIRMAN
SCHOOL OF COMPUTER SCIENCE

VISION

To contribute towards highest quality educational needs of students within the core areas of Computer Sciences distinguished by its impact on academia, industry and society.

MISSION

- To provide skilled based quality education in the field of Computer Sciences and Emerging Technologies through rigorous and inclusive academic environment with corporate social responsibility. To establish Industry-Academia linkage programs to develop interpersonal and entrepreneurial skills.

ACCREDITATION COUNCIL CATEGORY

All bachelor programs accredited with NCEAC “X” category.

CURRICULUM DETAILS

DEGREE TITLES

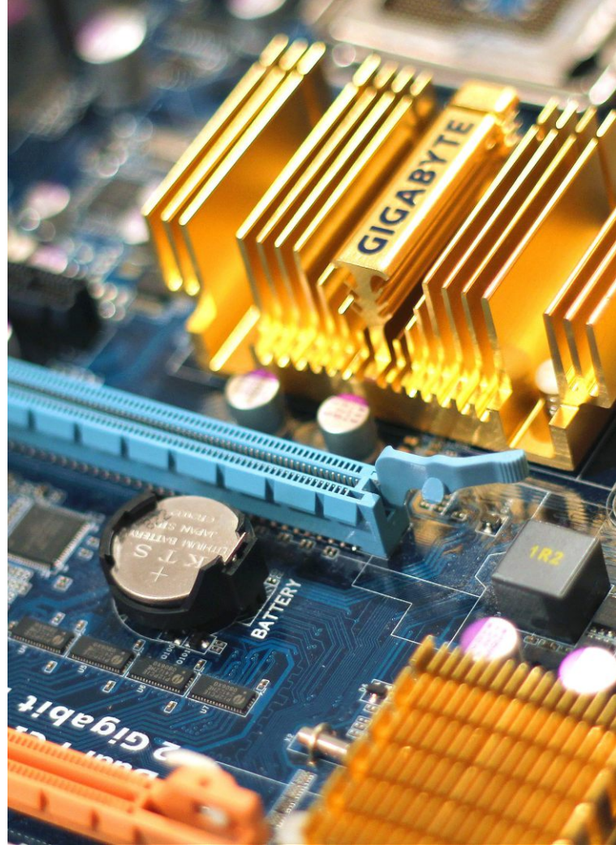
- BS (Computer Science)
- BS (Software Engineering)
- BS (Artificial Intelligence)
- MS (Computer Science)
- MS (Software Engineering)
- Ph.D (Computer Science)

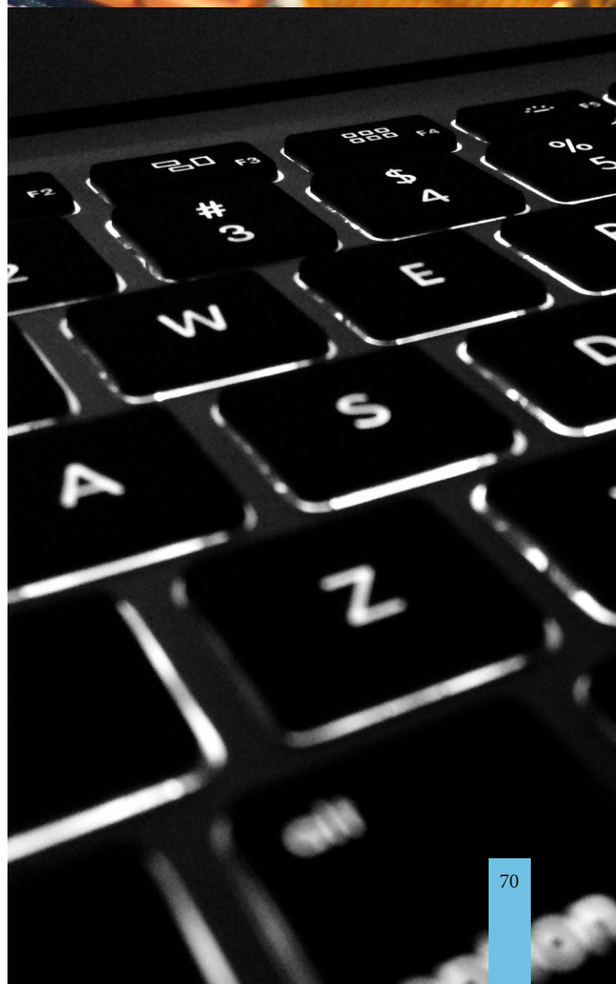
MINIMUM DURATION

- BS (Computer Science) – 4 years
- BS (Software Engineering) – 4 years
- BS (Artificial Intelligence) – 4 years
- MS (Computer Science) – 2 years
- MS (Software Engineering) – 2 years
- Ph.D (Computer Science) – 3 years

CREDIT HOURS

- BS (Computer Science) – 135 CH
- BS (Software Engineering) – 135 CH
- BS (Artificial Intelligence) – 135 CH
- MS (Computer Science) – 32 CH
- MS (Software Engineering) – 32 CH
- Ph.D (Computer Science) – 54 CH





FACULTY MEMBERS

Prof. Dr. Atif Ishtiaq
Chairman
Ph.D Computer Science, Iqra National University

Dr. Fazal-e-Malik
Ph.D Information Technology
UTP Malaysia

Dr. Muhammad Qasim Khan
Ph.D Telematics ICT
NTNU, Norway

Dr. Muhammad Adil
PhD (CS), Iqra National University

Dr. Latif Jan
PhD (Electrical Engineering)
UET Peshawar

Dr. Muhammad Aamir
Ph.D Islamiyat Studies/Arabic
University of Peshawar

Maria Ali
MS IT
University of Agriculture Peshawar

Salman Ali Khan
MS CS
City University Peshawar

Muhammad Khalid Hamid
MS CS
Gandhara Univeristy Peshawar

Engr. Muhammad Shakeel
MS Electrical Engineering
Iqra National University

Daud Khan Khalil
MS (CS)
University of Surrey, UK

Aqib Mehmood
MS (SE)
Abasyn University, Peshawar

Samiullah
MS (CS)
University of Peshawar

Awais Khan
MS (CS)
INU Peshawar

S. M Hamail Raza Zaidi
MS (Computer Science)
UET Peshawar

Tayyaba Riaz
MS CS
City University Peshawar

M. Abrar Khan
MS CS
COMSATS University

Numan Gulzar
MS Linguistics
Air University Islamabad

Muhammad Ayub Khan
M.Phil Computer Science
Preston University Peshawar

Zain Shaukat
MS Software Engineering
City University Peshawar

Irfan Ullah Khan
MS (Software Engineering)
Ripha International University Islamabad

Aasma Khan
MS Software Engineering
Comsats University Islamabad

Akhyar Ali Khan
MS Software Engineering
North University of China

Shehryar Khan
MS CS
City University Peshawar

Hanan Bangash
BS CS
University of Peshawar

Waqas Ahmad
MSCS
INU Peshawar

Abdul Aziz
BS Software Engineering
INU Peshawar

Mubashir Zainoor
MS (Computer Science)
NUCES

Qamar Zaib
BS CS
INU Peshawar

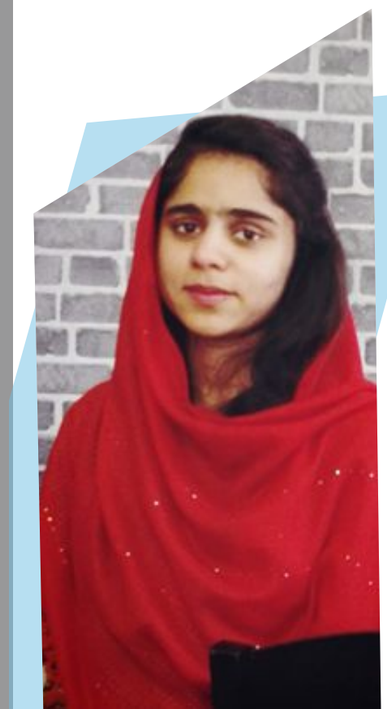
Waseem Gulzar
FA. DIT
BISE Peshawar

Hooria Khan Orakzai
BS (Software Engineering)
IQRA National University Peshawar.

TESTIMONIALS

Irfan Ullah

My four years at INU were great and a memory to cherish for lifetime. It was full of learning and grooming oneself. It gave me an opportunity to meet different kind of people and learned many things. I am thankful to all the my respected teachers and mentors. Overall it was a great experience and lifetime memory at INU. During my graduate degree I worked as a freelancer and developed projects for international clients of different companies. After getting my graduate degree from INU I have been hired as developer in VynxGroup at Dubai and currently working there. I am planning to open a software development company at Canada with my colleagues for which the process is about to complete.



Aqsa Gul:

I got my Bachelors of Computer Sciences degree from IQRA National University, Peshawar in 2019 and was the gold medalist of my batch. I'm Web, Android app and IOT developer. At INU, I learned about professional development in addition to technical advances. I created Android apps during my graduation. Following graduation, I worked as a web developer for the "Accessible Pakistan" project, which was sponsored by the Federal Republic of Germany(GIZ) and Friends of Paraplegics(NGO). I'm currently employed as a Lab Instructor at Institute of Management Sciences Peshawar. I'm also working as an IT officer at Pak Ever Bright Development Organization, responsible for all IT projects.

BS COMPUTER SCIENCE

COURSE OVERVIEW

Recent developments in computer hardware , software and communication technologies have offered new exiting opportunities and challenges for creation of innovative learning environments for Computer Science.

One of the key elements here is to prepare the graduates for the future. The basic intention of an academic program in Computer Science is to develop the student's critical professional thinking and intuition.

The curriculum must be structured to provide a balanced mixture of learning experiences to make the graduate capable of sound professional decisions. As a result the graduate should be able to assume responsible position in business, government, and education at the research, development, and planning levels.

This program also provides an excellent foundation for further formal learning and training in the field of Computer Science.

ELIGIBILITY

- Minimum 50% marks in Intermediate/12 years schooling/A- Level (HSSC) or Equivalent with Mathematics are required for admission in all BS Computing Programs
*Equivalency certificate by IBCC will be required in case of education from some other country or system.
- The students who have not studied Mathematics at intermediate level have to pass deficiency courses of Mathematics (06 credits) in first two semesters.
- The minimum duration for completion of BS Computing degrees is four years. The HEC allows maximum period of seven years to complete BS degree requirements.
- A minimum 2.0 CGPA (Cumulative Grade Point Average) on a scale of 4.0 is required for award of BS Computing Degree.

Key Facts

Degree Title:

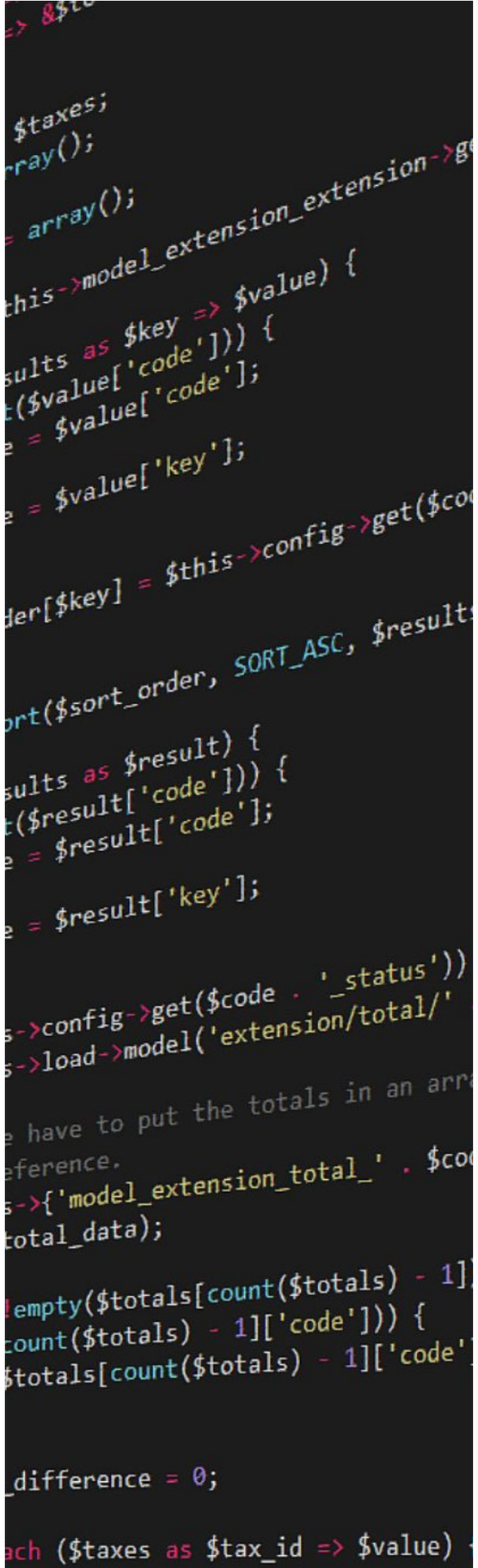
BS - Computer Science

Duration:

Four (4) years, or 8 semesters

Credit Hours:

135 Credit Hours



SCHEME OF STUDIES

Semester 1

Code	Subject Name	Cr. Hours
CSC-101	Programming Fundamentals	4(3-3)
GER-101	Application Of Information & Communication Technologies	3(2-3)
GER-104	QR 1 (Discrete Structures)	3 (3-0)
GER-105	QR 2 (Calculus & Analytic Geomatery)	3 (3-0)
GER-102	Functional English	3 (3-0)
---	Understanding Of Holy Quran/Fehm e Quran	1
	Total	17(16-6)

Semester 2

Code	Subject Name	Cr. Hours
CSC-102	Object Oriented Programming	4 (3-3)
CSC-103	Database System	4 (3-3)
CSC-104	Digital Logic Design	3 (2-3)
MTH-101	Multivariable Calculus	3 (3-0)
GER-206	Islamic Studies	2 (2-0)
GER-407	Ideology & Constitution of Pakistan	2 (2-0)
---	Understanding Of Holy Quran/Fehm e Quran-II	1
	Total	19 (15-9)

Semester 3

Code	Subject Name	Cr. Hours
CSC-205	Data Structures	4(3-3)
MTH-102	Linear Algebra	3 (3-0)
CSC-207	Artificial Intelligence	3 (2-3)
CSC-209	Software Engineering	3 (3-0)
MTH-203	Probability & Statistics	3 (3-0)
	Total	16 (14-6)

Semester 4

Code	Subject Name	Cr. Hours
CSC-210	Computer Organization & Assembly Language	3 (2-3)
CDC-201	Domain Core 1 (Theory Of Automata)	3 (3-0)
CDC-202	Domain Core 2 (Advanced Database Management System)	3 (2-3)
GER-209	Natural Science (Applied Physics)	3 (2-3)
GER-103	Expository Writing	3 (3-0)
CSC-206	Information Security	3 (2-3)
	Total	18 (14-12)

Semester 5

Code	Subject Name	Cr. Hours
CSC-311	Operating System	3 (2-3)
CDC-303	Domain Core 3 (HCI & Computer Graphics)	3 (2-3)
CDC-304	Domain Core 4 (Computer Architecture)	3 (2-3)
CDE-301	Domain Elective 1 (Example: Web technologies)	3 (2-3)
CSC-208	Computer Networks	3 (2-3)
GER-301	Pakistan Studies	2 (2-0)
	Total	17 (12-15)

Semester 6

Code	Subject Name	Cr. Hours
CDC-305	Domain Core 5 (Compiler Construction)	3 (2-3)
CDC-306	Domain Core 6 (Parallel & Distributed Computing)	3 (2-3)
CDE-303	Domain Elective 2 (Example: Advanced Programming-Visual Prog)	3 (2-3)
CDE-304	Domain Elective 3 (Example: Numerical Analysis)	3 (2-3)
CDE-305	Domain Elective 4 (Example: Web Engineering)	3 (2-3)
CDE-306	Domain Elective 5(Example: Cyber Security)	3 (2-3)
	Total	18 (12-18)

Semester 7

Code	Subject Name	Cr. Hours
CSC-413	Final Year Project-I	2 (0-6)
CSC-412	Analysis Of Algorithms	3 (3-0)
CDE-407	Domain Elective 6 (Example: Software Testing & Quality Assurance)	3 (2-3)
CDE-302	Domain Elective 7 (Example: Mobile Application Development1)	3 (2-3)
MTH-404	Technical & Business Writing	3 (3-0)
GER-412	Entrepreneurship	2 (2-0)
	Total	16 (12-12)

Semester 8

Code	Subject Name	Cr. Hours
CSC-414	FYP-II	4 (0-12)
CDS-401	Elective Supporting Course (Example: Introduction to Marketing)	3 (3-0)
GER-410	Arts & Humanities (Professional Practices)	2 (2-0)
GER-411	Civics & Community Engagement	2 (2-0)
CDE-410	Domain Elective (Computer Graphics)	3 (2-3)
	Total	14 (9-15)

BS SOFTWARE ENGINEERING

COURSE OVERVIEW

The objective of this program is to prepare students for professional careers and graduate studies with a balance between computing theory and practical application of software engineering concepts, methodologies, tools and technologies in the modern software development environments.

Graduates of such programs will be able to function as proficient software developers and effective team members. They will have grounding in communication, mathematics and science, and the cultural, historical, and social issues that influence and effect or relate to the development of high quality software systems. They will have knowledge of and experience with software product engineering and engineering management and an understanding of professional issues and practices.

ELIGIBILITY

- Minimum 50% marks in Intermediate/12 years schooling/A- Level (HSSC) or Equivalent with Mathematics are required for admission in all BS Computing Programs
*Equivalency certificate by IBCC will be required in case of education from some other country or system.
- The students who have not studied Mathematics at intermediate level have to pass deficiency courses of Mathematics (06 credits) in first two semesters.
- The minimum duration for completion of BS Computing degrees is four years. The HEC allows maximum period of seven years to complete BS degree requirements.
- A minimum 2.0 CGPA (Cumulative Grade Point Average) on a scale of 4.0 is required for award of BS Computing Degree.

Key Facts

Degree Title:

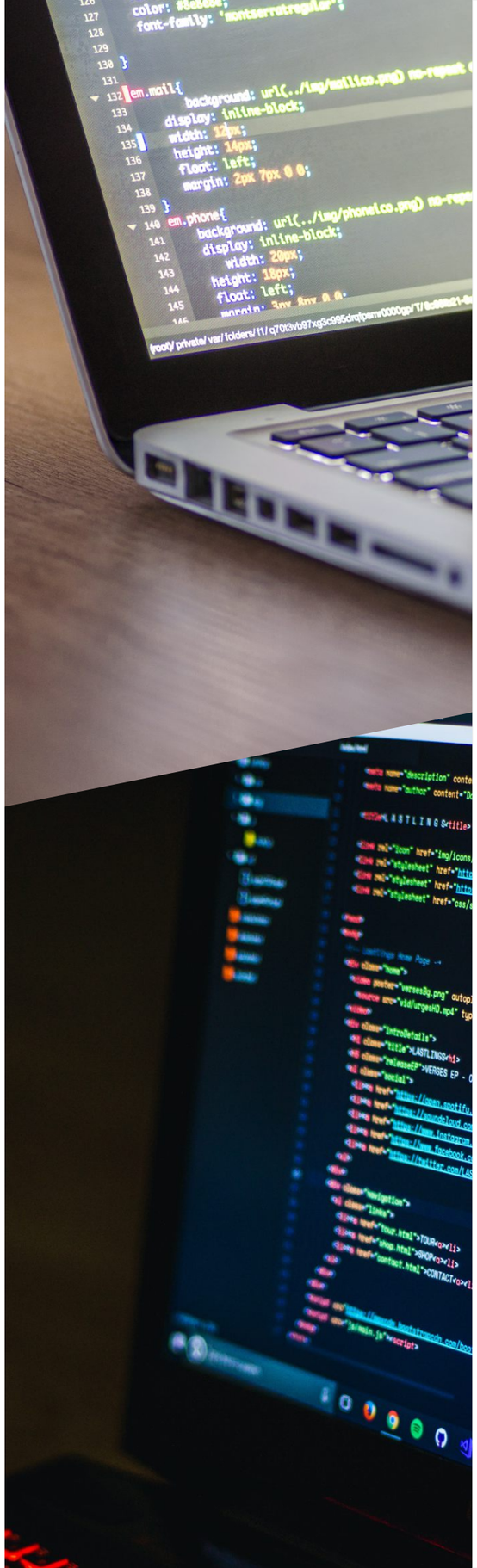
BS - Software Engineering

Duration:

Four (4) years, or 8 semesters

Credit Hours:

135 Credit Hours



SCHEME OF STUDIES

Semester 1

Code	Subject Name	Cr. Hours
CSC-101	Programming Fundamentals	4(3-3)
GER-101	Application Of Information & Communication Technologies	3(2-3)
GER-104	QR 1 (Discrete Structures)	3 (3-0)
GER-105	QR 2 (Calculus & Analytic Geomatery)	3 (3-0)
GER-102	Functional English	3 (3-0)
---	Understanding Of Holy Quran/Fehm e Quran	1
	Total	**17 (14-6)**

Semester 2

Code	Subject Name	Cr. Hours
CSC-102	Object Oriented Programming	4 (3-3)
CSC-103	Database System	4 (3-3)
CSC-104	Digital Logic Design	3 (2-3)
MTH-101	Multivariable Calculus	3 (3-0)
GER-206	Islamic Studies	2 (2-0)
HUM-407	Ideology & Constitution of Pakistan	2 (2-0)
---	Understanding Of Holy Quran/Fehm e Quran-II	1
	Total	**19 (15-9)**

Semester 3

Code	Subject Name	Cr. Hours
CSC-205	Data Structures	4(3-3)
MTH-102	Linear Algebra	3 (3-0)
CSC-207	Artificial Intelligence	3 (2-3)
CSC-209	Software Engineering	3 (3-0)
MTH-203	Probability & Statistics	3 (3-0)
	Total	**16 (14-6)**

Semester 4

Code	Subject Name	Cr. Hours
CSC-210	Computer Organization & Assembly Language	3 (2-3)
SDC-201	Domain Core 1 (Software Design & Architecture)	3 (3-0)
SDC-202	Domain Core 2 (Software Construction & Development)	3 (2-3)
GER-209	Natural Science (Applied Physics)	3 (2-3)
GER-103	Expository Writing	3 (3-0)
CSC-206	Information Security	3 (2-3)
	Total	**18 (14-12)**

Semester 5

Code	Subject Name	Cr. Hours
CSC-311	Operating System	3 (2-3)
SDC-304	Domain Core 3 (Software Quality Engineering)	3 (2-3)
SDC-305	Domain Core 4 (Software Requirement engineering)	3 (2-3)
SEE-301	Domain Elective 1 (Web technologies)	3 (2-3)
CSC-208	Computer Networks	3 (2-3)
GER-301	Pakistan Studies	2 (2-0)
	Total	**17 (12-15)**

Semester 6

Code	Subject Name	Cr. Hours
SDC-303	Domain Core 5 (Software project managemnt)	3 (2-3)
SDC-306	Domain Core 6 (Parallel & Distributed Computing)	3 (2-3)
SEE-303	Domain Elective 2 (Software Verification & Validation)	3 (2-3)
SEE-304	Domain Elective 3 (HCI & Computer Graphics)	3 (2-3)
SEE-305	Domain Elective 4 (Web Engineering)	3 (2-3)
SEE-306	Domain Elective 5 (Software RE-Engineering)	3 (2-3)
	Total	**18 (12-18)**

Semester 7

Code	Subject Name	Cr. Hours
CSC-413	Final Year Project-I	2 (0-6)
CSC-412	Analysis Of Algorithms	3 (3-0)
SEE-407	Domain Elective 6 (Data Science)	3 (2-3)
CES-401	Domain Elective 7 (Mobile Application Development-I)	3 (2-3)
MTH-404	Technical & Business Writing	3 (3-0)
GER-412	Entrepreneurship	2 (2-0)
	Total	**16 (12-12)**

Semester 8

Code	Subject Name	Cr. Hours
CSC-414	FYP-II	4 (0-12)
CES-401	Elective Supporting Course (Example: Introduction to Marketing)	3 (3-0)
HUM-410	Arts & Humanities (Professional Practices)	2 (2-0)
HUM-411	Civics & Community Engagement	2 (2-0)
CDE-410	Computer Graphics	3 (2-3)
	Total	**14 (9-15)**

BS ARTIFICIAL INTELLIGENCE

COURSE OVERVIEW

The objective of the BS in Artificial Intelligence program is to prepare students for professional careers and graduate studies with a strong foundation in both the theoretical and practical aspects of Artificial Intelligence. The program emphasizes a balance between core AI concepts—including machine learning, computer vision, natural language processing, and intelligent systems—and their real-world applications using modern tools, technologies, and development environments.

Graduates of this program will be equipped to function as proficient AI engineers, data scientists, and effective interdisciplinary team members. They will possess a solid grounding in communication, mathematics, and science, as well as an awareness of the ethical, cultural, historical, and societal issues that influence and are influenced by the development and deployment of intelligent systems. Additionally, they will have knowledge of AI system design, project management, and professional practices essential for building responsible, high-quality AI solutions.

ELIGIBILITY

Minimum 50% marks in Intermediate/12 years schooling/A- Level (HSSC) or Equivalent with Mathematics are required for admission in all BS Computing Programs. Equivalency certificate by IBCC will be required in case of education from some other country or system.

- The students who have not studied Mathematics at intermediate level have to pass deficiency courses of Mathematics (06 credits) in first two semesters.

- The minimum duration for completion of BS Computing degrees is four years. The HEC allows maximum period of seven years to complete BS degree requirements.

- A minimum 2.0 CGPA (Cumulative Grade Point Average) on a scale of 4.0 is required for award of BS Computing Degree.

Key Facts

Degree Title:

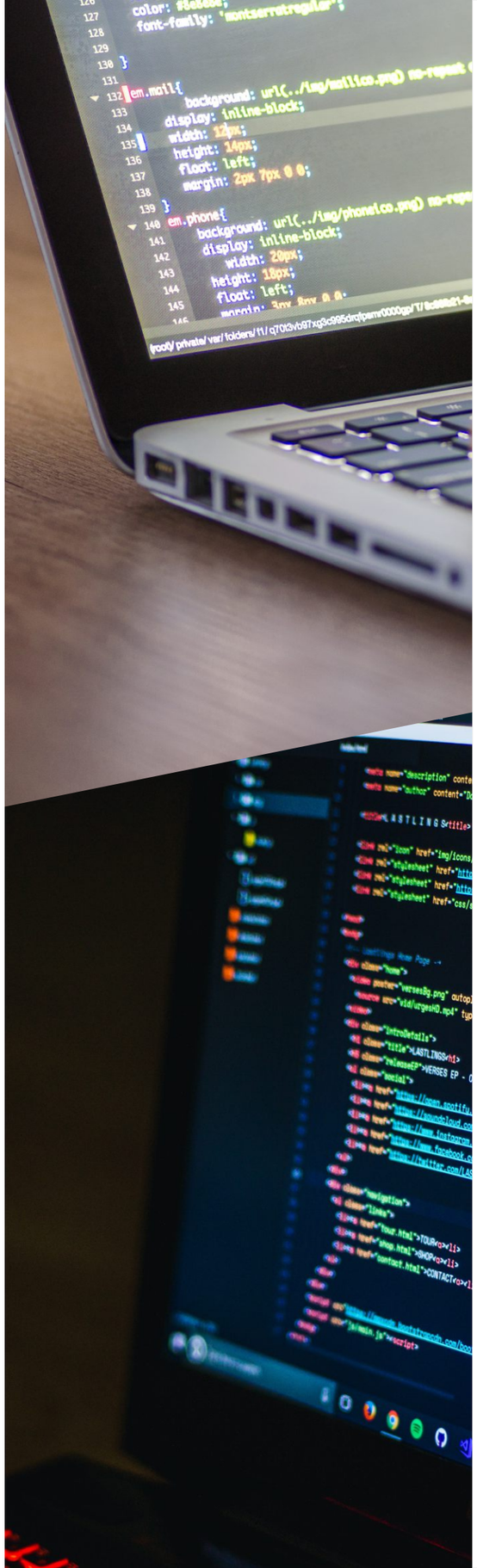
BS - Artificial Intelligence

Duration:

Four (4) years, or 8 semesters

Credit Hours:

135 Credit Hours



SCHEME OF STUDIES

Semester 1

Code	Subject Name	Cr. Hours
CSC-101	Programming Fundamentals	4(3-3)
GER-101	Application Of Information & Communication Technologies	3(2-3)
GER-104	QR 1 (Discrete Structures)	3 (3-0)
GER-105	QR 2 (Calculus & Analytic Geometery)	3 (3-0)
GER-102	Functional English	3 (3-0)
---	Understanding of Holy Quran/Fehm E Quran-I	1
	Total	**17 (14-6)**

Semester 2

Code	Subject Name	Cr. Hours
CSC-102	Object Oriented Programming	4 (3-3)
CSC-103	Database Systems	4 (3-3)
CSC-104	Digital Logic Design	3 (2-3)
MTH-101	Multivariable Calculus	3 (3-0)
GER-407	Ideology & Constitution of Pakistan	2 (2-0)
GER-206	Islamic Studies	2 (2-0)
---	Understanding of Holy Quran/Fehm E Quran-II	1
	Total	**19 (14-9)**

Semester 3

Code	Subject Name	Cr. Hours
CSC-205	Data Structures	4(3-3)
MTH-102	Linear Algebra	3 (3-0)
CSC-207	Artificial Intelligence	3 (2-3)
CSC-209	Software Engineering	3 (3-0)
MTH-203	Probability & Statistics	3 (3-0)
	Total	**16 (14-6)**

Semester 4

Code	Subject Name	Cr. Hours
CSC-210	Computer Organization & Assembly Language	3 (2-3)
ADC-201	Domain Core 1 (Programming for AI)	3 (3-0)
ADC-202	Domain Core 2 (Machine Learning)	3 (2-3)
GER-209	Natural Science (Applied Physics)	3 (2-3)
GER-103	Expository Writing	3 (3-0)
CSC-206	Information Security	3 (2-3)
	Total	**18 (14-12)**

Semester 5

Code	Subject Name	Cr. Hours
CSC-311	Operating System	3 (2-3)
ADC-303	Domain Core 3 (Artificial Neural Networks & Deep Learning)	3 (2-3)
ADC-304	Domain Core 4 (Knowledge representation & reasoning)	3 (2-3)
ADE-301	Domain Elective 1 (Data Mining)	3 (2-3)
CSC-208	Computer Networks	3 (2-3)
	Total	**15 (10-15)**

Semester 6

Code	Subject Name	Cr. Hours
CDC-305	Domain Core 5 (Computer vision)	3 (2-3)
CDC-306	Domain Core 6 (Parallel & Distributed Computing)	3 (2-3)
ADE-303	Domain Elective 3 (HCI & Computer Graphics)	3 (2-3)
ADE-304	Domain Elective 4 (Swarm Intelligence)	3 (2-3)
ADE-305	Domain Elective 5 (Natural Language Processing)	3 (2-3)
ADE-306	Domain Elective 6 (Speech Processing)	3 (2-3)
	Total	**18 (12-18)**

Semester 7

Code	Subject Name	Cr. Hours
CSC-413	Final Year Project-I	2 (0-6)
CSC-412	Analysis Of Algorithms	3 (3-0)
ADE-407	Domain Elective 7 (Reinforcement Learning)	3 (2-3)
ADE-302	Domain elective 2 (Theory of Automata)	3 (2-3)
MTH-404	Technical & Business Writing	3 (3-0)
GER-412	Entrepreneurship	2 (2-0)
	Total	**16 (12-12)**

Semester 8

Code	Subject Name	Cr. Hours
CSC-414	FYP-II	4 (0-12)
CSD-401	Elective Supporting Course (Example: Introduction to Marketing)	3 (3-0)
GER-410	Arts & Humanities (Professional Practices)	2 (2-0)
GER-411	Civics & Community Engagement	2 (2-0)
ADE-410	Domain Elective 8 (fuzzy system)	3 (2-3)
	Total	**14 (9-15)**

MS COMPUTER SCIENCE

COURSE OVERVIEW

The MS (Computer Science) program is generic, covering broader areas through course work and providing concentration through research component. The program is in compatible with international MS programs. It enables computer science graduates to pursue further studies by offering courses in specific fields. University provides substantial support, principally via one-to-one supervision of research students and well-integrated, active research groups.

The University expects its MS graduates to pursue careers either as 'Computer Science Faculty Members' at a University or as 'Software Department Managers' in the industry. Candidates for this program are expected to have a strong inclination towards computing. The MS (Computer Science) program includes four 'core courses' aimed at strengthening the understanding and competence of students in computer science fundamentals. To enable the students to specialize in an area of their choice a set of 'elective courses' are offered.

MS Program Structure

The MS degree program requirement is 32 credit hours, which includes minimum of 26 credit hours of course work and 06 credit hours of Research thesis or two courses (Plan B). student should select Research Thesis or Plan B at the time of admission.

ELIGIBILITY

Degree in relevant subject, earned from a recognized university after 16 years of education with at least 60% marks or CGPA of at least 2.0. Admission test, NTS-GAT General Test with minimum 50% cumulative score or University test with 60% marks should be presented before the Graduate Research Committee of the department of Computer Science for final selection/ interview.

Key Facts

Degree Title:

MS - Computer Science

Duration:

Two (2) years, or 4 semesters

Credit Hours:

32 Credit Hours

SCHEME OF STUDIES

Semester 1

Code	Subject Name	Cr. Hours
CSC-601	Advance Analysis of Algorithms (Core-I)	3
CSC-602	Advance Operating System (Core-II)	3
CSC-604	Theory of Automata – II (Core-III)	3
---	Understanding of Holy Quran/Fehm E Quran-I	1
	Total	**10**

Semester 2

Code	Subject Name	Cr. Hours
CSC-605	Advance Computer Architecture (Core-IV)	3
CSU-611	Research Methodology (Elective I)	3
----	Elective-II	3
----	Understanding of Holy Quran/Fehm E Quran-II	1
	Total	**10**

Semester 3

Code	Subject Name	Cr. Hours
CSC-608	Research Thesis-I	3
	Or Plan B Elective Course	
	Elective-III	3
	Total	**6**

Semester 4

Code	Subject Name	Cr. Hours
CSC-609	Research Thesis - II	3
	Or Plan B Elective Course	
	Elective-IV	3
	Total	**6**

MS SOFTWARE ENGINEERING

COURSE OVERVIEW

This program prepares a graduate to acquire expertise in designing, developing, testing and implementing softwares. In the final year, the student normally undertakes a thesis. This may be undertaken in collaboration with the industry, under the guidance of industry experts and a faculty supervisor from the University.

Key Facts

Degree Title:

MS - Software Engineering

Duration:

Two (2) years, or 4 semesters

Credit Hours:

32 Credit Hours

ELIGIBILITY

Degree in relevant subject, earned from a recognized university after 16 years of education with at least 60% marks or CGPA of at least 2.0. Admission test, NTS-GAT General Test with minimum 50% cumulative score or University test with 60% marks should be presented before the Graduate Research Committee of the department of Computer Science for final selection/ interview.

MS Program Structure

The MS degree program requirement is 32 credit hours, which includes minimum of 24 credit hours of course work and 06 credit hours of Research thesis or two courses (Plan B). student should select Research Thesis or Plan B at the time of admission.

MS SOFTWARE ENGINEERING TENTATIVE STUDY PLAN

Code	Module 1	Cr. Hours
SEC-601	Advance Requirement Engineering (Core-I)	3
SEC-602	Advanced Software System Architecture (Core-II)	3
–	Elective I	3
–	Understanding of Holy Quran/Fehm E Quran-I	1
		10

Code	Module 2	Cr. Hours
SEC-603	Software Testing and Quality Assurance (Core-III)	3
CSU-611	Research Methodology (Elective II)	3
–	Elective-III	3
–	Understanding of Holy Quran/Fehm E Quran-II	1
		10

Code	Module 3	Cr. Hours
CSC-608	Research Thesis-I	3
	Or Plan B Elective Course	
	Elective-IV	3
	Total	**6**

Code	Module 4	Cr. Hours
CSC-609	Research Thesis-II	3
	Or Plan B Elective Course	
	Elective-V	3
	Total	**6**

PH.D - COMPUTER SCIENCE

OBJECTIVE:

The objectives of this program is to impact research training the scholars, and prepare them for a career in independent investigation and original research so as to enable them to make significant contributions to knowledge in their field and profession. The degree program shall ensure that it is not, an end in itself, but a means for a fruitful research career.

To achieve these objectives, this program shall ensure the following:

- Acquisition of fundamental knowledge in the chosen discipline
- Acquisition of in-depth knowledge in the field of research.
- Training in the use of research tools of the field, and develop skill and capability to conduct original research.

ELIGIBILITY

- Degree in relevant subject, earned from a recognized university after 18 years of education with at least 3.0 CGPA or First division in annual system.
- GAT subject test with minimum 60% cumulative score, or university based test passed with 70% marks.
- Tentative research proposal at the time of admission.

CREDIT HOURS

Initially, course work of 18 credit hours prescribed by the Supervisor is required to be completed. After that the scholar must qualify comprehensive examination for granting candidacy as PhD research. Students are required to maintain a minimum CGPA of 3.00 out of 4.00 in order to maintain this CGPA may lead to dismissal from Ph.D program.

Key Facts

Degree Title:

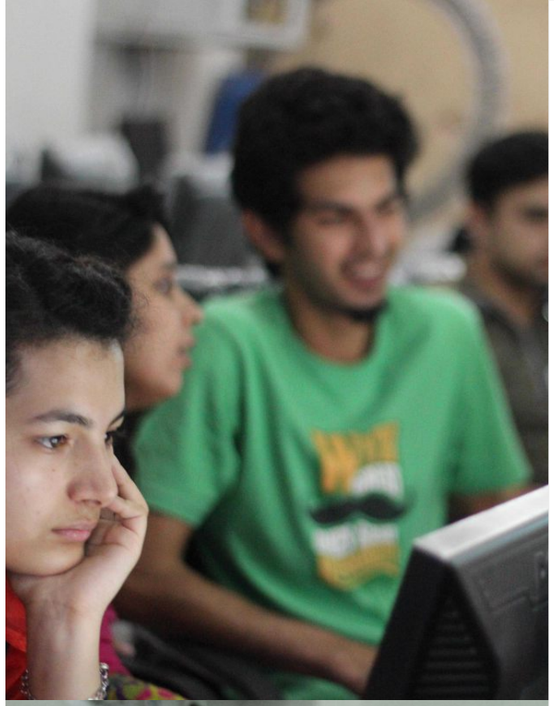
Ph.D in Computer Science

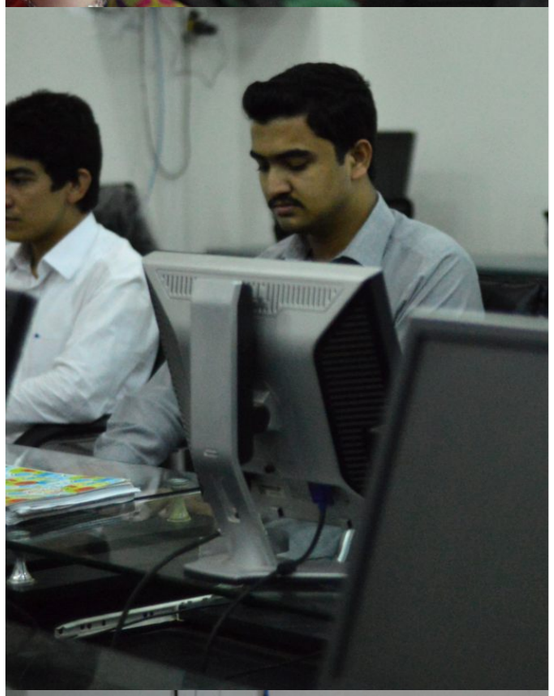
Duration:

Three (3) years or 6 Semesters

Credit Hours:

54 Credit Hours





ROADMAP FOR AWARD OF PH.D DEGREE

Processed and granted by the Departmental Admission Committee	**Admission in PhD**	18 year of qualification with atleast 3.00 CGPA in MS
Prescribed Period Normal period 3 (minimum) to 5 years . Maximum period 7 years (including 2 etensions of one year each in thesis submission) Supervisor must be appointed before the start of course work		
Course Load Normally 9 CH per regular semester, Minimum 6 CH and Maximum 12 CH in exceptional cases	**Course Work (1-2 Year)** 1. First semester course registration 2. Second course registration 3. Third semester course registration (Optional)	Course work of 18 CH must be completed in 1-2 year period with minimum of 3.00 CGPA
Comprehensive Examination To be Conducted within 90 days of completion of PhD course work		
A research scholar has at most two chances to clear the Comprehensive Examination	The written examination shall be of at least one hour duration for each subject studied in course work followed by an oral examination	Minimum 3.00 CGPA is required to pass the comprehensive Examination
Research Work (2-3Years) **Research Synopsis (1year)**		
Identification of research topics and preparation of research synopsis	Submission of research proposal in a seminar to departmental board of research **Routed through Board of Faculty** Approved by the board of Advanced Study and Research (BASAR)	Synopsis shall be approved from BASAR within one year of passing of comprehensive examination
Dissertation (1-2 year)		
Preparation of initial draft of the dissertation	Collection of data Conducting experiments Analysis of results	Dissertation presentation in a series of seminars to departmental board of research
Research Publication		
Publication of original research as principal author in HEC approved category 'X' journal and the research paper should be the part and parcel of the dissertation		
Completion of dissertation and submission for evaluation		
The department shall forward the dissertation to Examination Section only when it is plagiarism free	Plagiarism Check	The accepted level of plagiarism should be less then 20 %
The examination section shall forward the soft copy of dissertation to two foreign evaluations	Submission of dissertaion for foreign evaluation **OR** Getting extension if normal period of 5 year Has been expired	The examination section shall maintain a list of foreign evaluation approved by the BASAR
Extension in Dissertation Submission		
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