

Course Group	Credit Hours
General Education Courses	20
University Electives	18
Mathematics & Science Foundation	13
Computing – Core	39
Domain CS Core	24
Domain CS Electives	15
Domain CS Supporting	8
Total	137

Semester	Course(s) Code (New)	Course(s) Title	Credit Hours	Prerequisite
Semester I	CSC101	Applied Physics	3 + 1	—
	CSC111	Introduction to Information and Communication Technology	3 + 1	—
	CSC102	Calculus and Analytical Geometry	3 + 0	—
	HUM111	Functional English	3 + 0	—
	HMT121	Islamic Studies	2 + 0	—
	HMT122	Pakistan Studies	2 + 0	—
		Total Semester Credit Hours	(16 + 2)	
Semester II	CSC121	Digital Logic Design	3 + 1	CSC101
	HUM231	Communication Skills	3 + 0	—
	CSC131	Programming Fundamentals	3 + 1	CSC111
	CSC103	Multivariate Calculus	3 + 0	CSC102
	HUM112	Personal Development	3 + 0	—
		Total Semester Credit Hours	(15 + 2)	
Semester III	CSC221	Computer Organization & Assembly	3 + 1	CSC131

		Language		
	CSC231	Object Oriented Programming	3 + 1	CSC131
	BUS231	Financial Accounting Principles	3 + 0	—
	HUM233	Philosophy and Critical Thinking	3 + 0	—
	CSC201	Linear Algebra and Differential Equations	3 + 0	CSC102
		Total Semester Credit Hours	(15 + 2)	
Semester IV	CSC222	Operating Systems	3 + 1	CSC231
	CSC232	Data Structures & Algorithms	3 + 1	CSC231
	CSC241	Discrete Structures	3 + 0	—
	CSC202	Probability and Statistics	3 + 0	CSC102
	SSC231	World History	3 + 0	—
	HUM301	Sociology	3 + 0	—
		Total Semester Credit Hours	(18 + 2)	
Semester V	CSC331	Database Management Systems	3 + 1	CSC231
	CSC332	Design and Analysis of Algorithms	3 + 0	CSC232
	CSC341	Theory of Automata	3 + 0	CSC241
	SSC231	World Literature	3 + 0	—
	CSC361	Data Communication and Computer Networks	3 + 1	CSC121
	CSC333	Introduction to Python	0+1	CSC111
		Total Semester Credit Hours	(15 + 3)	
Semester VI	CSC342	Compiler Construction	3 + 0	CSC341
	CSC351	Software Engineering	3 + 0	CSC231

	HUM121	Academic & Professional Writing	3 + 0	—
		Elective I	3 + X	—
		Elective II	3 + X	—
		Total Semester Credit Hours	(15 + X)	
Semester VII	CSC441	Final Year Project – I	0 + 3	CSC351
	CSC471	Artificial Intelligence	3 + 1	CSC332
		Elective III	3 + X	—
	CSC321	Embedded Systems	3 + 1	CSC221
	CSC431	Parallel and Distributed Computing	3 + 0	CSC231, CSC361, CSC222
		Total Semester Credit Hours	(12+5+X)	
Semester VIII		Elective IV	3 + X	—
		Elective V	3 + X	—
	CSC442	Final Year Project – II	0 + 3	CSC441
	CSC412	Information Security	3 + 0	CSC111, CSC361
	HUM232	Ethics & Social Responsibility	3 + 0	—
		Total Semester Credit Hours	(12 + 3+X)	
Minimum Program Credit Hour(s): 137				

Course Code	Course(s) Title	Credit Hours
CSC336	Advanced Database Management Systems	3 + 0
CSC371	Digital Image Manipulation	3 + 0
CSC311	E-Business	3 + 0
CSC337	Web Programming Languages	3 + 1
CSC372	Digital Image Processing + Lab	3 + 1
CSC338	Visual Programming Languages + Lab	3 + 1
CSC443	Simulation & Modelling	3 + 0
SEN358	Software Construction	3 + 0
SEN356	Software Requirement Engineering	3 + 0
CSC322	Robotics Programming + Lab	3 + 1
CSC362	Network Performance Management	3 + 0
CSC363	Network Security	3 + 0
CSC435	Mobile Application Development	3 + 0
SEN357	Software Evolution & Maintenance	3 + 0
CSC373	Computational Intelligence	3 + 0
CSC381	Computer Graphics & Animation + Lab	3 + 1
CSC436	Data Warehousing & Data Mining	3 + 0
CSC454	Enterprise Resource Planning	3 + 0
CSC474	Expert Systems	3 + 0
SEN455	Software Quality Assurance	3 + 0
SEN456	Enterprise Software Architecture	3 + 0
CSC475	Computer Vision	3 + 0
CSC463	Routing & Switching + Lab	3 + 1
CSC464	Wireless Communication + Lab	3 + 1
CSC465	Virtualization & Cloud Computing	3 + 0
CSC482	3D Modelling and Game Development + Lab	3 + 1

Course Area Category:

- 0-Maths & Science.
- 1-Information Technology.
- 2-Systems.
- 3-Programming & Databases.
- 4-Computer Science.
- 5-Software Engineering.
- 6-Networks & Communication.
- 7- Artificial Intelligence.
- 8-Graphics & Animation

Road map for Admission in BS(CS) after 14 years BSc. Degree

Eligibility Criteria: BSc. with Mathematics having minimum 2nd Division

1. For students who have studied Computer Science in their degree(but not Physics), following deficiency courses are recommended:

Course(s) Code	Course Title	Credit Hours
CSC101	Applied Physics	4
CSC121	Digital Logic Design	4
CSC221	Computer Organization & Assembly Language	4
CSC231	Object Oriented Programming	4
CSC222	Operating Systems	4
CSC232	Data Structures	4
	Total	24

2. For students who have studied Physics in their degree (but not Computer Science), following deficiency courses are recommended:

Course(s) Code	Course Title	Credit Hours
CSC111	Introduction to Information and Communication Technology	4
CSC121	Digital Logic Design	4
CSC131	Programming Fundamentals	4

CSC221	Computer Organization & Assembly Language	4
CSC231	Object Oriented Programming	4
CSC222	Operating Systems	4
CSC232	Data Structures	4
	Total	28

3. For students who have studied both Computer Science and Physics in their degree, following deficiency courses are recommended:

Course(s) Code	Course Title	Credit Hours
CSC121	Digital Logic Design	4
CSC221	Computer Organization & Assembly Language	4
CSC231	Object Oriented Programming	4
CSC222	Operating Systems	4
CSC232	Data Structures	4
	Total	20

Following Computer Sciences courses are recommended after completion of deficiency courses:

Course Code	Course Title	Credit Hours
CSC331	Database management Systems	4
CSC332	Design and Analysis of Algorithms	3
CSC341	Theory of Automata	3
CSC361	Data Communication and Networks	4
CSC351	Software Engineering	3
CSC471	Artificial Intelligence	4
CSC342	Compiler Construction	3

CSC431	Parallel and Distributed Computing	3
CSC412	Information Security	3
CSC337	Web Programming Languages	4
	Elective- I	3
	Elective- II	3
	Elective- III	3
	Elective- IV	3
	Elective- V	3
CSC441	Final Year Project-I	3
CSC442	Final Year Project-II	3
	Total	55

OUR DEPARTMENTS

CAMPUS LOCATION

00:00

- [Fashion and Design](#)
- [Media Studies](#)
- [Pharmacy and Allied Health Sciences](#)
- [Social Sciences](#)

- Plot No 5, Khayaban-e-Johar, H-9 Islamabad,
- Pakistan

• **CALL US AT**

051-111-264-264

Copyright © 2023 IQRA University, Plot No. 5, H-9
Campus, Islamabad

Need
help?

- [Student Area](#)
- [Blog](#)
- [Career](#)
- [Contact Us](#)
- [HOME](#)
- [ABOUT IU](#)
- [CAMPUS](#)

l
a
y
e
r

- [OUR PROGRAMS](#)
- [FACULTY](#)
- [ADMISSIONS](#)
- [IQRA ONLINE](#)
- [ALUMNI](#)

BS in Computer Science

Computer Sciences include the study, analyses, designing, implementation and application of what can be automated. It evolved as a result of the vast information revolution, which made it hard to escape computing and computers. Our BS program in Computer Sciences concentrates on programming skills in a variety of paradigms, operating systems, networking and databases. Hands on experience with various software systems, C, C++, JAVA, Visual Programming languages, Unix, Windows and Network tools are an integral part of the program. In addition, the present curriculum covers Mathematics, Basic Sciences, Humanities, Social Sciences, and English language skills. The Computer Science program offers an opportunity for fieldwork outside the university.

PROGRAM EDUCATIONAL OBJECTIVES (PEO)

1. **Fundamental Computing Knowledge:** Our graduates will be proficient in the fundamentals of computing knowledge and will be read to apply that in professional roles in industry, academia, or a startup.
2. **Ethical and Societal Responsibilities:** Our graduates will be able to work professionally with dignity and integrity by taking into account the ethical and social concerns.