Gujrat Institute of Management Sciences

Pir Mehr Ali Shah

Arid Agriculture University, Rawalpindi

Self-Assessment Report

Bachelor of Computer Science

2022- 2024

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Preface

The Gujrat Institute of Management Sciences (GIMS) located in Gujrat, Punjab, is established with the premise of providing affordable quality education to the youth. As an affiliated institute of Pir Mehr Ali Shah Arid Agriculture University Rawalpindi (PMAS-AAUR) ranked at 8th among all Pakistani Universities and 1001+ among the world universities, GIMS aspires to excel in the field of Management Sciences, Computer Sciences, Economics and Statistics. In order to realize our mission, GIMS is committed to providing quality education through highly qualified and motivated faculty, excellent infrastructure and state-of-the-art facilities. This is a young, innovative, and enterprising business school enroots to compete with the foremost management schools of the country as well as to compete with international business schools. The Institute is dedicated to its unique approach (at least in the region) of providing management education based on cutting-edge research and comprehensive training. Unlike conventional academic institutes, GIMS broadens its educational focus in response to new trends in the developing field of management. Based on the social values of integrity, honesty, professional excellence and a broader vision of life, the Institute aims to provide an educational experience that transforms its students into business leaders at par with international managers, executives, and entrepreneurs.

GIMS Vision and Mission

Vision

To become a nationally recognized institute by providing an affordable, high-quality research and sustainable learning environment, while propelling the country's economy forward through professionals.

Mission

Gujrat Institute of Management Sciences aims to inspire, prepare and empower students by providing advanced educational experience to foster critical thinking and promote modern technology to transform individuals into competent professionals with compassionate minds and moral values.

Organizational Structure

The Department of Computer science is a part of the Department of Computer and Software Engineering whereas, GIMS is one of the affiliated institutes of Arid Agricultural University Rawalpindi. The overall organizational structure is shown in Figure 1.

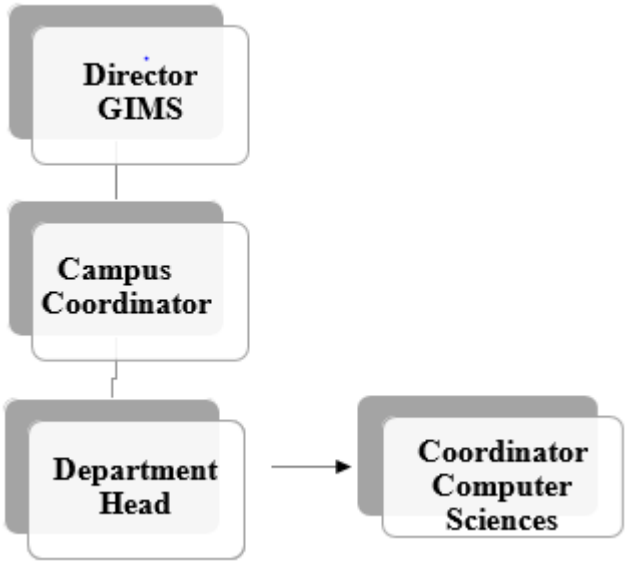

Figure 1: Organization Overall Flow

Program Delivery Mode and Location

The Department of Computer Science offers the BSCS program courses during the weekdays between the hours of 08:30 am and 04:30 pm at the campus, Gujrat. Courses are generally offered in the fall and spring semesters. Selected courses are offered during the summer semester. Most of the courses are delivered in the lecture format and there is a computing component to some core courses. In addition to the lectures, project work is also part of many courses, allowing students to solve complex and open-ended computing problems. A dedicated, six credit hour final year project, is carried out by students during the seventh and eighth semesters.

Quality Enhancement Department (QED)

GIMS, as an affiliated institute, believes in high quality of education and has a stringent system of quality management in place. Several layers of quality enhancement are part of this overall system. The authorities and responsibilities of all layers of the quality enhancement department are covered in GIMS statutes and policies. A Quality Assurance (QA) directorate is functioning at the AAUR level and is responsible for overlooking and ensuring the quality of all programs offered at GIMS. GIMS has established the internal Quality Enhancement Department (QED) in 2015 to carry out periodic audits of degree programs to ensure that they meet the highest standards of quality. The Institute Curriculum Review Committee (ICRC) also function at the institute level and send their reports to AAUR respective Department Board of Studies (DBS) who are responsible for discussing and finalising matters regarding a program's quality, necessary support and data is provided by Academics Branch of the department as well as by the Examination Cell.

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CRITERION 1 PROGRAM MISSION, OBJECTIVES AND OUTCOMES

Criterion 1 Program Mission, Objectives and Outcomes

1.1 Program's Vision and Mission

BSCS Program's Vision

We strive for excellence in teaching and research in the essential and applied aspects of computer science to address a wide range of challenging scientific and societal problems.

BSCS Program's Mission

To foster a culture that invites, develops, and sustains the best existing scientific and technological thinkers by providing them with a world-class education that takes advantage of available resources to inculcate advanced technical knowledge. The department also strives to improve students' verbal and written communication abilities in order to prepare them for successful careers in industry and academia.

Standard 1-1: The program must have documented measurable objectives that support faculty and institution vision mission statements.

1.2 BSCS Program Educational Objectives (PEOs)

Department's main focus of is to develop potential workers to cope with any challenging environment, to develop field values and skillset in our students which is the core demand of the computing market and to take innovative initiatives that lead towards growth of the market as well. Mastering in any discipline requires the ability to think critically, analyze data, make recommendations, and communicate effectively. It demands not only knowledge but also the ability to apply it and idea generation to grow differently with an upward table trend.

The Computer Science program aims at developing the student's intellectual ability, analytical thinking and managerial skills through an appropriate blend of theory and practice. The program assists the students in understanding and developing unique leadership qualities required for a changing and dynamic business environment. The four program educational objectives (PEOs), as given below, form the basis of the Department of the BSCS at GIMS. Within few years of graduation, the students with a bachelor's in computer science are expected to attain the following.

1. To develop critical thinking, problem-solving abilities and competence in computer science resulting in a successful career.
    - To demonstrate an understanding of the core areas of algorithms, theory of computation, operating systems, linguistics of programming languages, and architecture.
    - To demonstrate proficiency in software development, including computational analysis, software designing and the use of tools to apply programming language routines.
    - To apply practical basis theories and practices to a variety of problem-centered solutions, both standard and some unconventional.
2. To develop written and oral communication skills participating in efforts to address societal and technical / business challenges.
3. To develop global awareness and appreciation for cultural diversity and decision-making skills.
4. To enhance their professional development and technical knowledge through continuing education.

Strategic Plan to Achieve Program Objectives

- Develop and deliver a much broader and up-to-date teaching material that is interactive, understandable and reasonable for the award of the degree.
- Formulation and consistent revision of curriculum involving core subjects, elective subjects, specialized areas, technical labs and study tours.
- The conductance of general and specialized lab-work for achieving competence with industrial experience.
- Faculty development programs to affect the learning process of students as well as faculty itself and quality of education.
- Industry and academia collaborate to introduce our students to the practical implementation of various technologies.

1.3 Consistency of Program Educational Objectives with Vision and Mission of GIMS, Vision and Mission of BSCS Program

The Program Educational Objectives (PEOs) of the BS computer science are consistent with the vision and mission of GIMS and the mission of the BS Program.

Table 1: Consistency of PEOs with Vision and Mission of GIMS, Mission of BSCS

PEO	GIMS Vision	GIMS Mission	Program Vision	Program Mission
1 (Computer Science knowledge and competence)	✓	✓	✓	✓
2 (Interpersonal and technical competence)	✓	✓	✓	✓
3 (Environment, society, individual and teamwork)	✓	✓	✓	✓
4 (Research and continuous learning)	✓	✓	✓	✓

1.4 Assessment of Program Educational Objectives (PEO)

A minimum attainment level for each PEO has been defined along with its method of measurement. The measurement of PEO is carried out using indirect assessment tools. A single PEO has multiple performance indicators. The details of performance indicators and their measurement methods are listed in Annexure A and B. In case, multiple survey questions are attributed to the calculation of a single KPI, equal weightage is given to each question. All KPIs related to a PEO must be attained to achieve the relevant PEO.

Table 2: Assessment of Program Educational Objectives

Program Educational Objective		How Measured	When to Measured	Key Performance Indicators (KPI)	Improvement Needed
PEO 1	Develop critical thinking, problem-solving abilities and competence in computer science resulting in a successful career.	Alumni Survey (Q1) Employers Survey (Q1)	End of every academic session After 2 year of student graduation	65% or more of the graduates are employed within one year of graduation. 35% of students are self-employed or seeking higher education within one year of graduation. 60% or more of the employers are in agreement with PEO 1	Industrial linkage and career placement office should be established to increase students' employment ratio.
PEO 2	Develop written and oral communication skills participating in efforts to address societal and technical / business challenges.	Alumni Survey (Q1, Q2, Q8) Employers Survey (Q1)	End of every academic session After 1 year of student graduation	25% or more of the graduates are at middle-level management a few years after graduation 40% or more of the graduates are involved in a project related to societal, technical / business issues. 60% or more employers in agreement with PEO 2.	Quantifiable steps needed to enhance the student's technical and critical writing skills.
PEO 3	Develop global awareness and appreciation for cultural diversity and	Alumni Survey (Q3, Q6) Employers Survey (Q3)	End of every academic session	30% or more graduates are working with international companies and clients within a few years of graduation.	Collaboration with international institutes for semester exchange is needed to

	decision-making skills.		After 1 year of student graduation	70% or more employers agreed students are good team players in decision makers in their work field.	enhance student's international exposure and working in diverse team.
PEO 4	Enhancing their professional development and technical knowledge through continuing education.	Alumni Survey (Q2, Q3, Q4) Employers Survey (Q3, Q4)	End of every academic session After 1 year of student graduation	50% or more graduates are pursuing higher education in local and international universities. 70% or more of the employers are in agreement with PEO 4	Expect the regular semester and courses, competition, conferences and seminars are needed for students learning outside the classroom.

Standard 1-2: The program must have documented outcomes for graduating students. It must be Demonstrated that the outcomes support the program objectives and that graduating students are Capable of performing these outcomes.

1.5 Review Process of PEOs Identifying Strengths and weakness

Measurement of the defined PEOs will be carried out by indirect assessment methods after 1-3 years of graduation. Surveys from employers/industry and alumni will be conducted periodically. Graduating student surveys and faculty feedback are being collected. However, the alumni and employers survey will be conducted after 1-3 years of graduation from a computer science class. Since the first class of students passed out in the year 2018, this data will be compiled in the year 2017. Once this process starts, it will be carried out every year as a class of students is graduating every year.

The surveys will be carried out and their results will be compiled by the QED and program's coordinator. An analysis report will be presented by the Director and Director Academics to the review committee comprising the Head of Department, Faculty, QED member and program coordinators. The review committee will recommend improvements/modifications/enhancements (if required) and

implementation will be carried out by the department. Figure 2 depicts this process in the form of a flow chart.

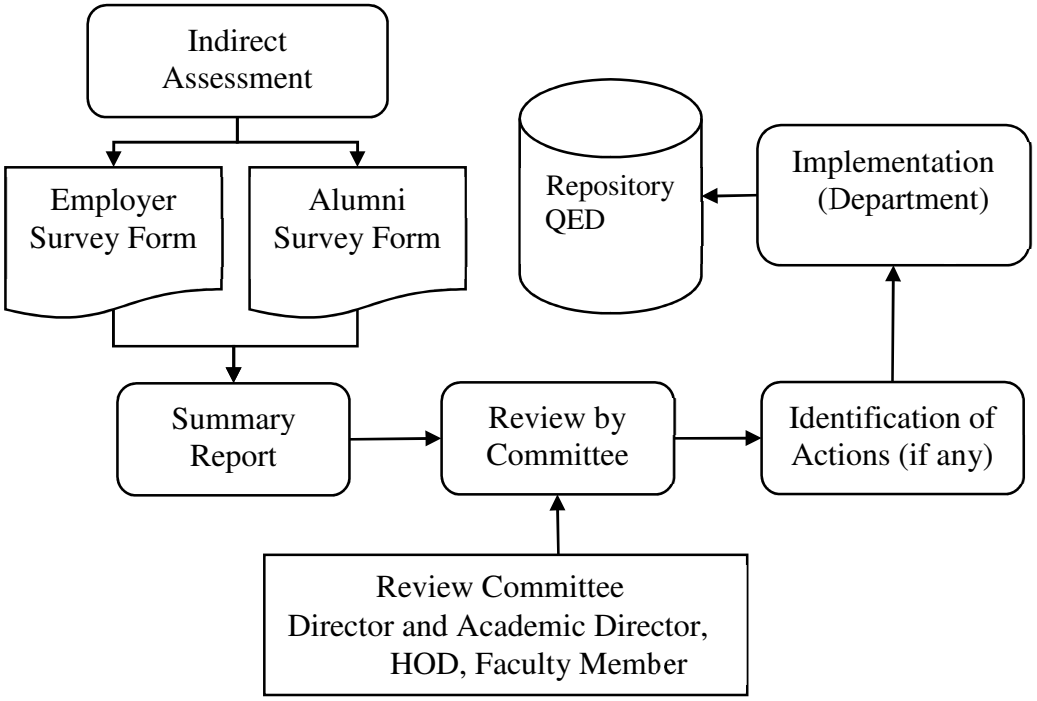


Figure 2: Flowchart of Processes Involved in Establishing and Reviewing PEOs

Table 3: Relationship of Program Outcomes and Objectives

Program Objectives	**Program Outcomes**					
	1	**2**	**3**	**4**	**5**	**6**
1	+++	+++	+++	+++	++	+++
2	++	++	++	+	++	+
3	++	++	++	+++	+++	++
4	+++	++	++	+++	+++	+++

Rating Scale

+ = Moderately Satisfactory

++= Satisfactory

+++= Highly Satisfactory

1.5.1 Graduating Survey

The program's coordinator surveys graduating students about the quality of the program. A survey is also conducted by the department to obtain feedback from the graduates regarding the adequacy of the computer science program. The graduating student's survey results are given in Annexure C. The results of alumni survey shows that the 45.42% are very satisfied,41.11% are satisfied 8.16% are uncertain and 3.81% Very Dissatisfied regarding the learning objective and Outcomes.

1.5.2 Alumni Survey

An Alumni survey is also conducted by the department to obtain feedback from the graduates regarding the adequacy of the computer science program. The alumni feedback form is given at Annexure A.

The results of alumni survey shows that the 75 to 85 percent of alumni are fully satisfied with their learning Outcomes. 55 to 60% percent alumni of doing their jobs in various software Tech organizations and 25% of alumni are pursing higher education in local and international universities. 10 to 15 percent alumni are looking for employment and doing unpaid internships.

1.5.3 Employer Survey

The program's coordinator conducts a survey of employers for GIMS graduates and to get knowledge about their performance in the field. The employer survey helps to reevaluate the redevelop the program learning objectives. The employer's feedback form is given in Annexure B.

Standard 1-3: The results of program's assessment and the extent to which they are used to improve the program must be documented

1.5.4 Strength of the Program

computer science is such a big and diversified industry, there are numerous career paths and responsibilities to choose from, and the institution supports students in recognizing talents that can help

them thrive in areas that match with their interests and objectives. We've established state-of-the-Art Facilities, well-equipped labs, computer clusters, and infrastructure. Active Student Organizations: are also working to run students' affairs clubs. Hackathons, and coding competitions can create a vibrant community and provide opportunities for students to apply their skills in real-world contexts

1.5.5 Weakness of the Program

Computer science program could include limitations or problems. One of the most prevalent issues with our computer science program is an out-of-date curriculum. Resources for computer science program may be scarce in smaller or less wealthy institutions. Networking and contacts are crucial in the technology sector. Institutions that forbid students from attending conferences, networking with business leaders, or taking part in internships may harm their graduates.

1.5.6 Future Development of the Program

Current trends in education and technology, as well as the institution's particular objectives and resources, will all be taken into consideration while developing a Computer Science Program for our institute. Industry Collaborations, a Global Perspective, and Lifelong Learning will be featured.

1.5.7 Implementation Plan of the Program

Engaging alumni entails keeping strong links with them and providing opportunities for ongoing learning through alumni networks and continuing education initiatives. It is necessary to introduce and involve the students in the term paper. Encourage the professors to submit the work for publication under the GIMS banner.

1.6 Define and Publish Program Learning Outcomes (PLOs)

The bachelor's program in computer science has extended ten Program Learning Outcomes (PLOs) to align with the Program Educational Objectives (PEOs).

1.6.1 Program Learning Outcomes

Upon completion of a BSCS degree, students will have gained the subsequent essential skills and knowledge:

1. **Proficiency in Computer Science Theoretical and Mathematical Foundations**
   Learners will be capable of:
   a) To effectively model computational problems, and apply fundamental ideas in discrete mathematics, such as logic, proofs, set theory, relations, functions, and combinatory.
   b) To solve difficult computer science problems, make use of abstract structures like graphs, finite state machines, and recurrence relations.
   c) Scrutinize and evaluate data structures and algorithms' effectiveness to find the best answers to a range of computational problems.
   d) To design and optimize algorithms, put advanced data structure concepts—such as lists, stacks, queues, arrays, graphs, trees, heaps, and hashing—to use.
   e) Demonstrate a deep understanding of computing and mathematical principles in addressing and solving real-world problems relevant to the discipline.

2. **Proficiency in problem analysis.**
   Students will be able to:
   a) Analyze complex computing problems and identify the computing requirements necessary for their resolution.
   b) Apply systematic approaches to problem-solving and develop effective solutions that meet specified needs.

3. **Ability to Design and Develop Effective Solutions**
   Graduates are expected to:
   a) Design, implement, and rigorously evaluate computer-based systems, processes, components, or programs that meet specific objectives and constraints.
   b) To create computing solutions that are scalable, resilient, and efficient and make well-informed design decisions while taking trade-offs and limitations into account.

4. **Demonstrate Proficiency in Programming Languages**
   Graduates will:
   a) Develop and implement efficient, high-quality software solutions using object-oriented programming languages, adhering to industry best practices.
   b) Write, debug, and optimize programs in assembly language, demonstrating an in-depth understanding of low-level machine operations.
   c) Assemble procedural programs that use the distinct advantages of various procedural programming languages to solve complex problems.
   d) Utilize and integrate modern development tools, techniques, and environments to enhance software productivity and quality.

5. **Graduates Possess a Comprehensive Understanding of Computer Systems Architecture**
   Graduates will:
   a) Exhibit a thorough understanding of the roles and interactions of key computer components, including central processing units, memory systems, and input/output devices.
   b) Articulate and analyze the principles of operating systems, encompassing memory management, process scheduling, synchronization, and device interaction.
   c) Distinguish and evaluate network components, demonstrating a comprehensive understanding of computer security and data integrity.

6. **Graduates Excel in Investigation and Research**
   Graduates will:
   a) Apply mathematical foundations, algorithmic principles, and computer science theory to the modeling and design of complex computer-based systems.
   b) Conduct research to explore and innovate new methodologies, technologies, and solutions within the field of computer science.

7. **Competence in Software Engineering Practices**
   Graduates will:
   a) Elicit, negotiate, and accurately document customer requirements, ensuring clarity and alignment with project goals.
   b) Create and execute reliable, scalable software systems by utilizing the basic ideas of algorithms, programming languages, and design patterns.

c) Execute comprehensive testing of software systems, ensuring they meet rigorous specifications and perform reliably under diverse conditions.
d) Plan, manage, and oversee software projects, ensuring the timely delivery of high-quality solutions while effectively balancing scope, time, and resources.
e) Apply state-of-the-art project management principles in the design and development of software systems of varying complexity.

8. Communicate Effectively in Computer Science
Graduates will:

a) Deliver precise and well-organized technical presentations tailored to the audience, effectively conveying complex concepts.
b) Compose detailed and coherent technical documents that meet the expectations of the intended audience.
c) Collaborate efficiently within multidisciplinary teams, contributing meaningfully to developing complex software-based systems.
d) Communicates intricate technical concepts with clarity to various stakeholders, ensuring mutual understanding and successful outcomes.

9. Exhibit Ethical and Responsible Practice in Computing
Graduates will:

a) Exhibit a strong awareness of the ethical implications of computing technologies, recognizing and addressing new and evolving moral dilemmas in the field.
b) Identify, assess, and resolve ethical issues related to the computing profession, adhering to the highest industry practice standards and societal expectations.
c) Demonstrate a thorough understanding of professional, ethical, legal, security, and social responsibilities, integrating these considerations into their professional conduct.

10. Scrutinize the Societal and Global Impact of Computing
Graduates will:

a) Critically analyze the impact of computing technologies on individuals, organizations, and society, both locally and globally.

b) Evaluate and address the societal implications of technological advancements, contributing to the discourse on ethical, legal, and social issues in computing.

1.7 Mapping of PLOs to PEOs

The Ten *Program Learning Outcomes (PLOs)* for the Computer Science program are mapped with the four *Program Educational Objectives (PEOs).* The mapping is shown in Table 4.

Table 4: Mapping of Program Learning Objectives and Program Educational Objectives

PLO No	Program Learning Outcome	PEO 1	PEO 2	PEO 3	PEO 4
1	Proficiency in Computer Science Theoretical and Mathematical Foundations	✓			
2	Excel in Problem Analysis	✓			
3	Ability to Design and Develop Effective Solutions	✓		✓	
4	Demonstrate Proficiency in Programming Languages	✓			✓
5	Graduates Possess a Comprehensive Understanding of Computer Systems Architecture		✓		✓
6	Graduates Excel in Investigation and Research		✓	✓	
7	Competence in Software Engineering Practices				✓
8	Communicate Effectively in Computer Science		✓		
9	Exhibit Ethical and Responsible Practice in Computing		✓		✓
10	Scrutinize the Societal and Global Impact of Computing			✓	✓

1.8 Process of Data Gathering and Results of Assessment of PLOs

PLOs of the mechanical engineering program are evaluated for two purposes.

1. Each student has to pass all ten PLOs during the four-year degree program. This requirement is in addition to the GPA requirements of the program. This assessment is referred to as the Student PLO assessment.
2. Each PLO is also assessed to ensure the quality of the computer science program. This assessment is referred to as Program PLO assessment.

1.8.1 Direct Assessment

Direct assessment of PLOs is carried out from the assessment of Course Learning Objectives (CLOs) pertaining to a particular PLO.

1.8.2 Indirect Assessment

Indirect assessment is carried out using graduating student survey, which is collected at the time of graduation. Detail of Annexure C. The graduating student survey results are only used in Program PLO assessments. KPIs for student and program PLO assessment are given in Table 5.

Table 5: Key Performance Indicators for Program Learning Objective Assessment

Program Learning Outcomes 1 to 6	**Measurement Tool**	**Key Performance Indicator**	**Measurement time**
Program PLO assessment	Graduating student survey form *(Indirect)*	Obtained at least 60% of the average score in the graduating student survey based on a score of 3 and greater on the scale of 1 to 5	At the time of graduation
	Attainment via course assessments (CLOs, FYP) *(Direct)*	60% of every cohort attains at least 50% in each PLO	At the end of each academic year and semester
Student PLO assessment	Attainment via course assessments, projects, assignments, etc. *(Direct)*	At least obtain 50% in each PLO upon graduation	At the end of each Semester

1.9 Application of Assessment Results to Develop and Improve the Program Learning Objectives (PLO)

1.9.1 Results of PLO Attainment Obtained Through Direct Assessment

1.9.1.1 PLO 1: Proficiency in Computer Science Theoretical and Mathematical Foundations

PLO 1: Proficiency in Computer Science Theoretical and Mathematical Foundations	
Assessment Method	**Minimum Level of Achievement**
Attainment via direct assessments	60% of the students attain at least 50% of marks
Graduating student survey	Obtained at least 60% of the average score in the PO assessment survey based on a score of 3 and greater on the scale of 1 to 5

Table 6: Courses in Which Student Performance on PLO 1 is Assessed

S No	Semester No.	Course Code	Course Title
1	1	MTH-101	Calculus & Analytical Geometry
2	1	CSC-110	Discrete structures
3	2	MTH-102	Multivariable Calculus
4	2	STT-101	Probability & Statistics
5	3	MTH-103	Linear Algebra
6	5	CS-572	Numerical Analysis

Table 7: Summary of Assessment Results for PLO1.

S No	Cohort	Fall 2022 (%age attainment)	Spring 2023 (%age attainment)	Fall 2023 (%age attainment)	Spring 2024 (%age attainment)	Overall Average (%age attainment)
1	MTH-101	98	96	76.92	100	92.73

2	MTH-102	95	98.5	84.21	98	93.92
3	MTH-103	96.67	100	92.31	85.71	93.67

1.9.1.2 PLO 2: Proficiency in problem analysis.

PLO 2: Proficiency in problem analysis.	
Assessment Method	**Minimum Level of Achievement**
Attainment via direct assessments	60% of the students attain at least 50% of marks
Graduating student survey	Obtained at least 60% of the average score in the PO assessment survey based on a score of 3 and greater on the scale of 1 to 5

Table 8: Courses in Which Student Performance on PLO 2 is Assessed.

S No	Semester No.	Course Code	Course Title
1	2	CSC-111	Digital Logic Design
2	3	CSC-201	Data Structures
3	3	CSC-203	Artificial Intelligence
4	4	CSC-401	Analysis of Algorithms
5	4	PHY-201	Applied Physics
6	5	CSC-302	Theory of Automata & Formal Languages
7	6	CSC-312	Compiler Construction

Table 9: Summary of Assessment Results for PLO 2

S No	Cohort	Fall 2022 (%age attainment)	Spring 2023 (%age attainment)	Fall 2023 (%age attainment)	Spring 2024 (%age attainment)	Overall Average (%age attainment)

1	CSC-111	84.21	100	63.64	40.91	72.19
2	CSC-401	100	94.44	38.46	64.1	74.25
3	CSC-312	91.18	100	65.71	66.67	80.89

1.9.1.3 PLO 3: Ability to Design and Develop Effective Solutions

PLO 3: Ability to Design and Develop Effective Solutions	
Assessment Method	**Minimum Level of Achievement**
Attainment via direct assessments	60% of the students attain at least 50% of marks
Graduating student survey	Obtained at least 60% of the average score in the PO assessment survey based on a score of 3 and greater on the scale of 1 to 5

Table 10:Courses in Which Student Performance on PLO 3 is Assessed.

S No	Semester No.	Course Code	Course Title
1	2	CSC-103	Database Systems
2	3	CSC-205	Software Engineering
3	3	CSC-204	Computer Networks

Table 11: Summary of Assessment Results for PLO 3

S No	Cohort	Fall 2022 (%age attainment)	Spring 2023 (%age attainment)	Fall 2023 (%age attainment)	Spring 2024 (%age attainment)	Overall Average (%age attainment)
1	CSC-103	84.21	100	63.64	40.91	72.19
2	CSC-205	100	94.44	38.46	64.1	74.25
3	CSC-204	91.18	100	65.71	66.67	80.89

1.9.1.4 PLO 4: Demonstrate Proficiency in Programming Languages

PLO 4: Demonstrate Proficiency in Programming Languages	
Assessment Method	**Minimum Level of Achievement**
Attainment via direct assessments	60% of the students attain at least 50% of marks
Graduating student survey	Obtained at least 60% of the average score in the PO assessment survey based on a score of 3 and greater on the scale of 1 to 5

Table 12:Courses in Which Student Performance on PLO 4 is Assessed.

S No	Semester No.	Course Code	Course Title
1	1	CSC-101	Programming Fundamentals
2	2	CSC-102	Object Oriented Programming
3	4	CSC-252	Advanced Programming
4	4	CSC-251	Web Technologies
5	5	CS-692	Visual Programming
6	6	CSC-351	Web Engineering
7	7	CSC-353	Mobile Application Development

Table 13: Summary of Assessment Results for PLO 4

S No	Cohort	Fall 2022 (%age attainment)	Spring 2023 (%age attainment)	Fall 2023 (%age attainment)	Spring 2024 (%age attainment)	Overall Average (%age attainment)
1	CSC-101	84.21	100	63.64	40.91	72.19
2	CSC-102	100	94.44	38.46	64.1	74.25
3	CSC-353	91.18	100	65.71	66.67	80.89

1.9.1.5 PLO 5: Graduates Possess a Comprehensive Understanding of Computer Systems Architecture

PLO 5: Graduates Possess a Comprehensive Understanding of Computer Systems Architecture	
Assessment Method	**Minimum Level of Achievement**
Attainment via direct assessments	60% of the students attain at least 50% of marks
Graduating student survey	Obtained at least 60% of the average score in the PO assessment survey based on a score of 3 and greater on the scale of 1 to 5

Table 14: Courses in Which Student Performance on PLO 5 is Assessed.

S No	Semester No.	Course Code	Course Title
1	4	CSC-211	Computer Organization & Assembly Language
2	4	CSC-100	Application of Information & Communication Technologies
3	4	CSC-301	Operating System
4	7	CSC-314	Parallel & Distributed Computing
5	6	CSC-311	Computer Architecture

Table 15: Summary of Assessment Results for PLO 5

S No	Cohort	Fall 2022 (%age attainment)	Spring 2023 (%age attainment)	Fall 2023 (%age attainment)	Spring 2024 (%age attainment)	Overall Average (%age attainment)
1	CSC-211	84.21	100	63.64	40.91	72.19
2	CSC-100	100	94.44	38.46	64.1	74.25
3	CSC-314	91.18	100	65.71	66.67	80.89

1.9.1.6 PLO 6: Graduates Excel in Investigation and Research

PLO 6: Graduates Excel in Investigation and Research	
Assessment Method	**Minimum Level of Achievement**
Attainment via direct assessments	60% of the students attain at least 50% of marks
Graduating student survey	Obtained at least 60% of the average score in the PO assessment survey based on a score of 3 and greater on the scale of 1 to 5

Table 16: Courses in Which Student Performance on PLO 6 is Assesse.

S No	Semester No.	Course Code	Course Title
1	5	AI-403	Data Mining
2	5	AI-402	Machine Learning
3	6	AI-404	Deep Learning
4	7	CSC-498	Final Year Project-I
5	8	CSC-499	Final Year Project-II

Table 17: Summary of Assessment Results for PLO 6

S No	Cohort	Fall 2022 (%age attainment)	Spring 2023 (%age attainment)	Fall 2023 (%age attainment)	Spring 2024 (%age attainment)	Overall Average (%age attainment)
1	AI-403	98	100	98	100	99
2	AI-402	95	100	91	95	95.25
3	AI-404	100	92	98	100	97.5

1.9.1.7 PLO 7: Competence in Software Engineering Practices

PLO 7: Competence in Software Engineering Practices	
Assessment Method	**Minimum Level of Achievement**
Attainment via direct assessments	60% of the students attain at least 50% of marks
Graduating student survey	Obtained at least 60% of the average score in the PO assessment survey based on a score of 3 and greater on the scale of 1 to 5

Table 18: Courses in Which Student Performance on PLO 7 is Assessed

S No	Semester No.	Course Code	Course Title
1	3	CSC-205	Software Engineering
2	7	CSC-314	Parallel & Distributed Computing
3	7	CSC-498	Final Year Project-I
4	8	CSC-499	Final Year Project-II

Table 19: Summary of Assessment Results for PLO 7

S No	Cohort	Fall 2022 (%age attainment)	Spring 2023 (%age attainment)	Fall 2023 (%age attainment)	Spring 2024 (%age attainment)	Overall Average (%age attainment)
1	CSC-205	98	90	93.33	94.11	93.86
2	CSC-314	95	100	91	95	95.25

1.9.1.8 PLO 8: Be Able to Communicate Effectively About Computer Science-related Topics

PLO 8: Be Able to Communicate Effectively About Computer Science-related Topics.	
Assessment Method	**Minimum Level of Achievement**

Attainment via direct assessments	60% of the students attain at least 50% of marks
Graduating student survey	Obtained at least 60% of the average score in the PO assessment survey based on a score of 3 and greater on the scale of 1 to 5

Table 20: Courses in Which Student Performance on PLO 8 is Assessed

S No	Semester No.	Course Code	Course Title
1	4	CSC-301	Operating System
2	2	CSC-103	Database Systems
3	3	CSC-204	Computer Networks
4	7	CSC-202	Information Security
5	6	CSC-203	Artificial Intelligence

Table 21: Summary of Assessment Results for PLO 8.

S No	Cohort	Fall 2022 (%age attainment)	Spring 2023 (%age attainment)	Fall 2023 (%age attainment)	Spring 2024 (%age attainment)	Overall Average (%age attainment)
1	CSC-204	97	95	93	77	90.5
2	CSC-103	97	95	85	98	93.75
3	CSC-203	98	84	97	94	93.25

1.9.1.9 PLO 9: Exhibit Ethical and Responsible Practice in Computing

PLO 9: Exhibit Ethical and Responsible Practice in Computing	
Assessment Method	**Minimum Level of Achievement**
Attainment via direct assessments	60% of the students attain at least 50% of marks
Graduating student survey	Obtained at least 60% of the average score in the PO assessment survey based on a score of 3 and greater on the scale of 1 to 5

Table 22: Courses in Which Student Performance on PLO 9 is Assessed

S No	Semester No.	Course Code	Course Title
1	5	MGT-322	Financial Accounting
2	5	ENG-401	Technical & Business Writing
3	6	MGT-351	Introduction to Marketing
4	7	CSC-202	Information Security

Table 23: Summary of Assessment Results for PLO 9

S No	Cohort	Fall 2020 (%age attainment)	Spring 2021 (%age attainment)	Fall 2021 (%age attainment)	Spring 2022 (%age attainment)	Overall Average (%age attainment)
1	MGT-322	98	100	98	100	99
2	MGT-351	95	100	91	95	95.25
3	ENG-401	100	92	98	100	97.5

1.9.1.10 PLO 10: Scrutinize the Societal and Global Impact of Computing

PLO 10: Scrutinize the Societal and Global Impact of Computing	
Assessment Method	**Minimum Level of Achievement**
Attainment via direct assessments	60% of the students attain at least 50% of marks
Graduating student survey	Obtained at least 60% of the average score in the PO assessment survey based on a score of 3 and greater on the scale of 1 to 5

Table 24: Courses in Which Student Performance on PLO 10 is Assessed

S No	Semester No.	Course Code	Course Title
1	1	CSC-100	Application of Information & Communication Technologies
2	7	CSC-202	Information Security

Table 25: Summary of Assessment Results for PLO 9

S No	Cohort	Fall 2022 (%age attainment)	Spring 2023 (%age attainment)	Fall 2023 (%age attainment)	Spring 2024 (%age attainment)	Overall Average (%age attainment)
1	CSC-100	98	100	98	100	99
2	CSC-202	95	100	91	95	95.25

Standard 1-4: The department must access its overall performance periodically using quantifiable measures.

1.10 Admission Response and Percentage Admitted

Student's response towards Computer science at GIMS has been encouraging as can be seen from the final merit list is given in Table 26.

Table 26: Student Admissions and Enrolments

Sr. No.	Intake Batch	Total Admissions offered	Total Students Admitted	Present Strength	No. of Section(s)
1	Fall 2022	200	55	49	1
2	Spring 2023	200	--	--	No Intake
3	Fall 2023	200	83	77	2
4	Spring 2024	200	21	17	1

1.10.1 Intake

The student intake for the mechanical engineering program is shown in Table 27.

Table 27: Student Intake for Computer Science Program

Batch	Sections	No. of Students
Fall 2022	Section A	49
Spring 2023	Section A	--
Fall 2023	Section A	55
	Section B	24
Spring 2024	Section A	17
Total		145

Table 28: Number of Students Enrolled in BSCS in Last 5 Years

Year	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Students	113	104	122	73	55	105

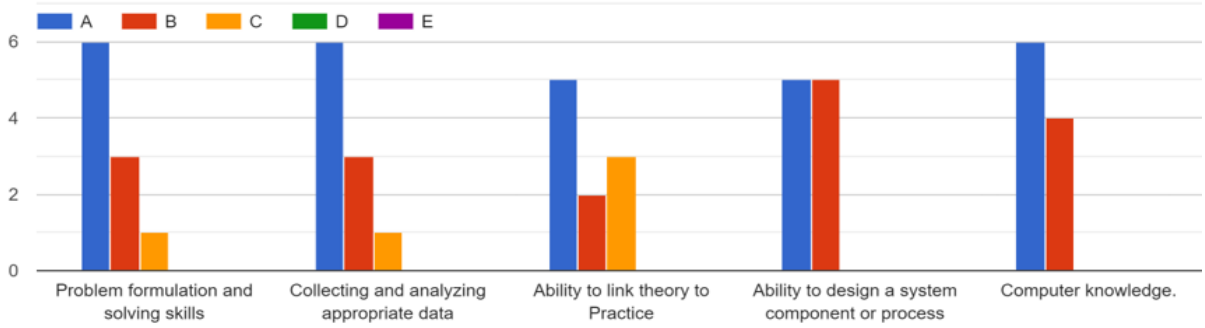
1.11 Alumni Survey

A survey has been conducted and feedback has been collected on Performa 8 from the employees where students have BSCS from GIMS are working. The results are summarized in figure given below

Performa: 8 Employer Survey
(Batch: 2020-2024)

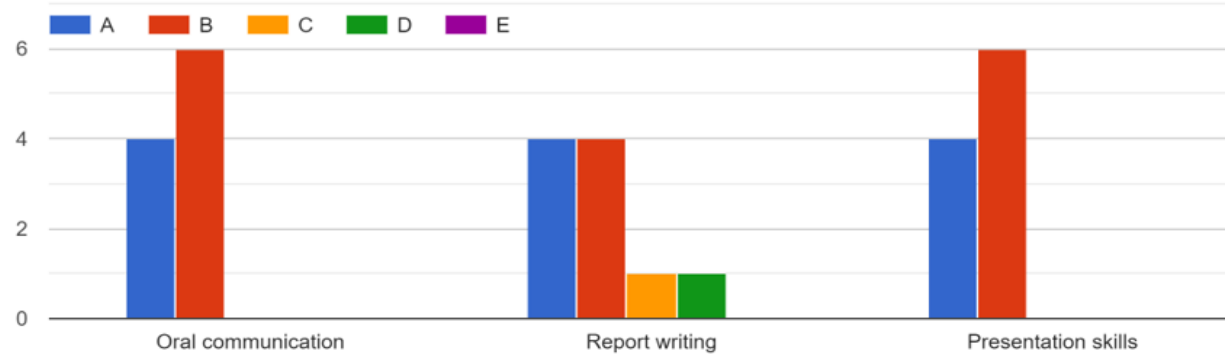
1. Rank Employee's Knowledge

   A: Excellent B: Very good C: Good D: Fair E: Poor



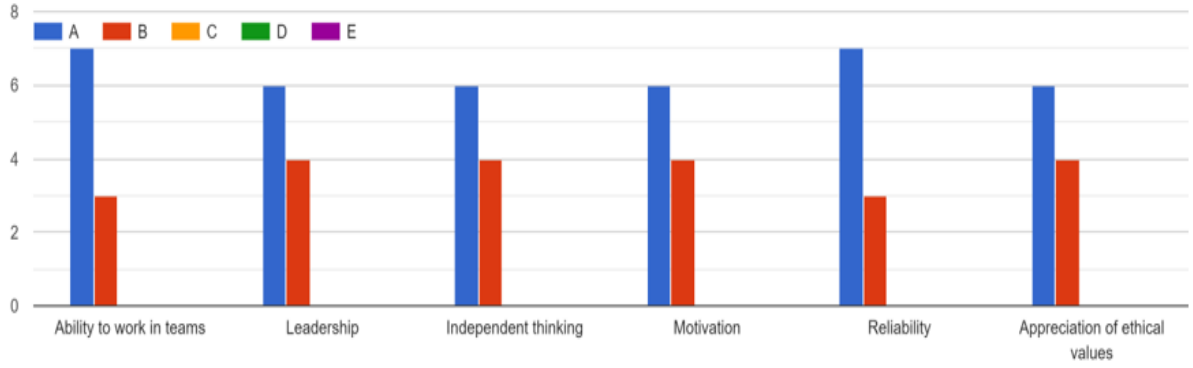
2. **Rank Employee's Communication Skills**

   A: Excellent B: Very good C: Good D: Fair E: Poor



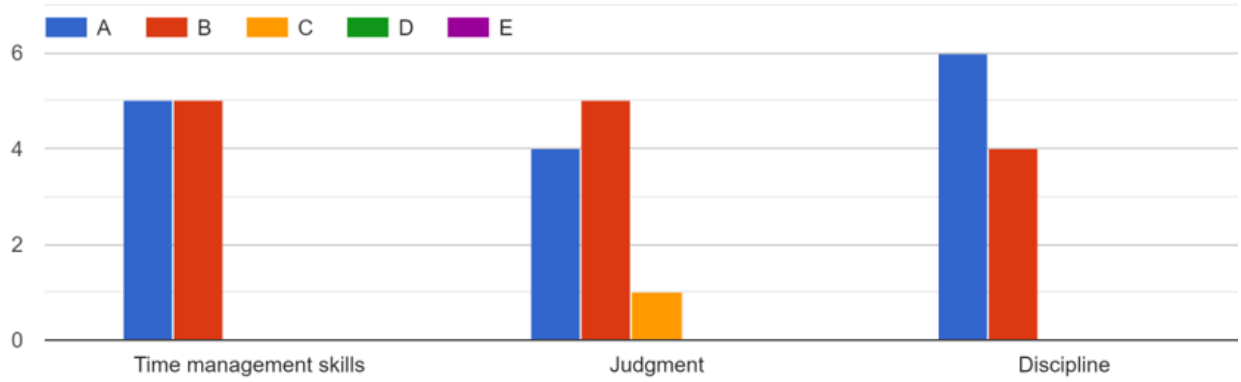
3. **Rank Employee's Interpersonal Skills**

   A: Excellent B: Very good C: Good D: Fair E: Poor



4. Rank Employee's Work skills

A: Excellent B: Very good C: Good D: Fair E: Poor



1.12 Teacher and Course Assessment

1.12.1 Teacher Evaluation

At the end of every semester teacher evaluation is conducted from the students to assess the teacher/ instructor performance and instructor attitude towards the student and classroom learning from students' perspective. Some of the teacher evaluation results are presented here. The results of teacher evaluation are shared with teacher and get feedback from teachers. In some case where QED and Department found unusual result and significant comment that shows the teacher and student had serious conflict regarding the fair assessment, classroom learning and teacher attitude towards students. QED had meeting with concerned teacher to address the issues.

1.12.2 Course Evaluation

At the end of every semester course evaluation is conducted from the students to assess the learning outcomes of course. Some of the course evaluation results are presented here. The results of course evaluation is shared with teacher and get feedback from teachers. The results of course evaluations help to identify how much the course learning objectives were achieved.

Instructor Name: Mr. Bilal Mazhar
Course: CSC-252 Advanced Programming

The student shows the positive response towards instructor which showcase the student's satisfaction towards teacher. The 100% students were strongly agreed instructor was prepared for class. The 100% were strongly agreed and agreed respectively that instructor was available during the specified office hours and for after class consultations

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The Instructor is prepared for each class.	100%	0%	0%	0%	0%
The Instructor demonstrates knowledge of the subject.	100%	0%	0%	0%	0%
The Instructor has completed the whole course.	100%	0%	0%	0%	0%
The Instructor provides additional material apart from the textbook.	100%	0%	0%	0%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	100%	0%	0%	0%	0%
The Instructor communicates the subject matter effectively.	100%	0%	0%	0%	0%
The Instructor shows respect towards students and encourages class participation	100%	0%	0%	0%	0%
The Instructor maintains an environment that is conducive to learning.	100%	0%	0%	0%	0%
The Instructor arrives on time.	100%	0%	0%	0%	0%
The Instructor leaves on time.	100%	0%	0%	0%	0%
The instructor has completed all classes regularly.	100%	0%	0%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	100%	0%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	100%	0%	0%	0%	0%
The Instructor was available during the specified hours on office and after class for consultations.	100%	0%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	100%	0%	0%	0%	0%
The assignments and exams covered the materials presented in the course.	100%	0%	0%	0%	0%

The course material is modern and updated	100%	0%	0%	0%	0%
The teacher is fair in exams.	100%	0%	0%	0%	0%

Instructor Name: Mr. Muhammad Sami Ullah
Course: CSC-102 Object Oriented Programming

The student shows the positive response towards instructor which showcase the student's satisfaction towards teacher. The 96% students were agreed instructor was prepared for class. The 96% were strongly agreed and 4% agreed respectively that instructor was available during the specified office hours and for after class consultations.

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The Instructor is prepared for each class.	96%	4%	0%	0%	0%
The Instructor demonstrates knowledge of the subject.	96%	4%	0%	0%	0%
The Instructor has completed the whole course.	96%	4%	0%	0%	0%
The Instructor provides additional material apart from the textbook.	96%	4%	0%	0%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	96%	4%	0%	0%	0%
The Instructor communicates the subject matter effectively.	96%	4%	0%	0%	0%
The Instructor shows respect towards students and encourages class participation	96%	4%	0%	0%	0%
The Instructor maintains an environment that is conducive to learning.	96%	4%	0%	0%	0%
The Instructor arrives on time.	96%	4%	0%	0%	0%
The Instructor leaves on time.	96%	4%	0%	0%	0%
The instructor has completed all classes regularly.	96%	4%	0%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	96%	4%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	96%	4%	0%	0%	0%
The Instructor was available during the specified hours on office and after class for consultations.	96%	4%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	96%	4%	0%	0%	0%

The assignments and exams covered the materials presented in the course.	96%	4%	0%	0%	0%
The course material is modern and updated	96%	4%	0%	0%	0%
The teacher is fair in exams.	96%	4%	0%	0%	0%

Instructor Name: Mr. Ashar Javed
Course: CSC-251 Web Technologies
The student's response has been observed satisfactory about the completion of course, demonstration and about the provision of additional course material. The 100% students were strongly agreed instructor was prepared for class. The 100% were strongly agreed and agreed respectively that instructor was available during the specified office hours and for after class consultations

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The Instructor is prepared for each class.	100%	0%	0%	0%	0%
The Instructor demonstrates knowledge of the subject.	100%	0%	0%	0%	0%
The Instructor has completed the whole course.	100%	0%	0%	0%	0%
The Instructor provides additional material apart from the textbook.	100%	0%	0%	0%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	100%	0%	0%	0%	0%
The Instructor communicates the subject matter effectively.	100%	0%	0%	0%	0%
The Instructor shows respect towards students and encourages class participation	100%	0%	0%	0%	0%
The Instructor maintains an environment that is conducive to learning.	100%	0%	0%	0%	0%
The Instructor arrives on time.	100%	0%	0%	0%	0%
The Instructor leaves on time.	100%	0%	0%	0%	0%
The instructor has completed all classes regularly.	100%	0%	0%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	100%	0%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	100%	0%	0%	0%	0%
The Instructor was available during the specified hours on office and after class for consultations.	100%	0%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	100%	0%	0%	0%	0%

The assignments and exams covered the materials presented in the course.	100%	0%	0%	0%	0%
The course material is modern and updated	100%	0%	0%	0%	0%
The teacher is fair in exams.	100%	0%	0%	0%	0%

Instructor Name: Ms. Rabia Butt
Course: CS-636 Compiler Construction

The student's response has been observed satisfactory towards the statement the instructor is prepared for each class and demonstrate the knowledge of the subject effectively. The 100% response were strongly agreed and strongly disagreed respectively. The survey results indicate that the instructor has completed the course outline. All students were agreed instructor has communicated the subject matter effectively.

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The Instructor is prepared for each class.	100%	0%	0%	0%	0%
The Instructor demonstrates knowledge of the subject.	80%	20%	0%	0%	0%
The Instructor has completed the whole course.	80%	20%	0%	0%	0%
The Instructor provides additional material apart from the textbook.	80%	20%	0%	0%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	100%	0%	0%	0%	0%
The Instructor communicates the subject matter effectively.	100%	0%	0%	0%	0%
The Instructor shows respect towards students and encourages class participation	100%	0%	0%	0%	0%
The Instructor maintains an environment that is conducive to learning.	100%	0%	0%	0%	0%
The Instructor arrives on time.	80%	20%	0%	0%	0%
The Instructor leaves on time.	80%	20%	0%	0%	0%
The instructor has completed all classes regularly.	80%	20%	0%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	100%	0%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	80%	20%	0%	0%	0%
The Instructor was available during the specified hours on office and after class for consultations.	80%	20%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	80%	20%	0%	0%	0%

The assignments and exams covered the materials presented in the course.	80%	20%	0%	0%	0%
The course material is modern and updated	100%	0%	0%	0%	0%
The teacher is fair in exams.	100%	0%	0%	0%	0%

Instructor Name: Mr. Awais Ilyas Baig
Course: CSC-311 Computer Architecture

The majority of student shows the positive response towards instructor which showcase the student's satisfaction towards teacher. However, a small ratio of students was uncertain. The survey results indicate that the instructor communicates the subject matter effectively. The 95% were strongly agreed that the assignments and exams covered the materials presented in the course.

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S.A**	**A**	**UC**	**D**	**S.D**
The Instructor is prepared for each class.	84%	5%	5%	0%	5%
The Instructor demonstrates knowledge of the subject.	84%	5%	5%	5%	0%
The Instructor has completed the whole course.	89%	11%	0%	0%	0%
The Instructor provides additional material apart from the textbook.	89%	5%	5%	0%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	95%	5%	0%	0%	0%
The Instructor communicates the subject matter effectively.	100%	0%	0%	0%	0%
The Instructor shows respect towards students and encourages class participation	95%	5%	0%	0%	0%
The Instructor maintains an environment that is conducive to learning.	100%	0%	0%	0%	0%
The Instructor arrives on time.	95%	5%	0%	0%	0%
The Instructor leaves on time.	100%	0%	0%	0%	0%
The instructor has completed all classes regularly.	95%	5%	0%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	95%	0%	0%	5%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	89%	5%	0%	0%	5%
The Instructor was available during the specified hours on office and after class for consultations.	95%	5%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	89%	0%	5%	0%	5%

The assignments and exams covered the materials presented in the course.	100%	0%	0%	0%	0%
The course material is modern and updated	95%	0%	5%	0%	0%
The teacher is fair in exams.	95%	0%	0%	0%	5%

Instructor Name: Ms. Maha Ijaz
Course: CSC-202 Information Security
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class and demonstrate the knowledge of the subject effectively. The 100% response were strongly agreed. The survey results indicate that the instructor has completed the course outline. All students were agreed instructor has communicated the subject matter effectively.

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The Instructor is prepared for each class.	100%	0%	0%	0%	0%
The Instructor demonstrates knowledge of the subject.	100%	0%	0%	0%	0%
The Instructor has completed the whole course.	100%	0%	0%	0%	0%
The Instructor provides additional material apart from the textbook.	100%	0%	0%	0%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	100%	0%	0%	0%	0%
The Instructor communicates the subject matter effectively.	100%	0%	0%	0%	0%
The Instructor shows respect towards students and encourages class participation	100%	0%	0%	0%	0%
The Instructor maintains an environment that is conducive to learning.	100%	0%	0%	0%	0%
The Instructor arrives on time.	100%	0%	0%	0%	0%
The Instructor leaves on time.	100%	0%	0%	0%	0%
The instructor has completed all classes regularly.	100%	0%	0%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	100%	0%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	100%	0%	0%	0%	0%
The Instructor was available during the specified hours on office and after class for consultations.	100%	0%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	100%	0%	0%	0%	0%

The assignments and exams covered the materials presented in the course.	100%	0%	0%	0%	0%
The course material is modern and updated	100%	0%	0%	0%	0%
The teacher is fair in exams.	100%	0%	0%	0%	0%

Instructor Name: Ms. Iqra Saleem

Course: CSC-111 Digital Logic Design

The student's response has been observed satisfactory towards the statement the instructor is prepared for each class and demonstrate the knowledge of the subject effectively. The 82% were strongly agreed and 9% agreed that the assignments and exams covered the materials presented in the course. The survey results indicate that the instructor has completed the course outline. 91% students are strongly agreeing in most of respects.

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S.A**	**A**	**UC**	**D**	**S.D**
The Instructor is prepared for each class.	91%	0%	0%	0%	9%
The Instructor demonstrates knowledge of the subject.	91%	0%	0%	0%	9%
The Instructor has completed the whole course.	82%	9%	0%	9%	0%
The Instructor provides additional material apart from the textbook.	82%	9%	9%	0%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	91%	0%	0%	0%	9%
The Instructor communicates the subject matter effectively.	82%	9%	0%	0%	9%
The Instructor shows respect towards students and encourages class participation	91%	0%	9%	0%	0%
The Instructor maintains an environment that is conducive to learning.	82%	9%	9%	0%	0%
The Instructor arrives on time.	91%	0%	9%	0%	0%
The Instructor leaves on time.	91%	0%	9%	0%	0%
The instructor has completed all classes regularly.	91%	0%	9%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	91%	0%	9%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	82%	9%	9%	0%	0%
The Instructor was available during the specified hours on office and after class for consultations.	91%	0%	0%	0%	9%
The course integrates theoretical course concepts with real-world applications.	91%	0%	9%	0%	0%

The assignments and exams covered the materials presented in the course.	82%	9%	9%	0%	0%
The course material is modern and updated	91%	0%	9%	0%	0%
The teacher is fair in exams.	82%	9%	9%	0%	0%

Instructor Name: Ms. Maria Ashraf

Course: MTH-102 Multivariable Calculus

The majority of student shows the positive response towards instructor which showcase the student's satisfaction towards teacher. However, a small ratio of students was disagreed. The survey results indicate that the instructor communicates the subject matter effectively. The 92% were strongly agreed that Instructor demonstrates knowledge of the subject. 89% student Strongly Agreed and 8% agreed that the assignments and exams covered the materials presented in the course.

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S.A**	**A**	**UC**	**D**	**S.D**
The Instructor is prepared for each class.	89%	8%	0%	0%	3%
The Instructor demonstrates knowledge of the subject.	92%	6%	0%	0%	3%
The Instructor has completed the whole course.	89%	8%	0%	0%	3%
The Instructor provides additional material apart from the textbook.	89%	8%	0%	0%	3%
The Instructor gives citations regarding current situations with reference to Pakistani context.	92%	6%	0%	0%	3%
The Instructor communicates the subject matter effectively.	92%	6%	0%	0%	3%
The Instructor shows respect towards students and encourages class participation	92%	6%	0%	0%	3%
The Instructor maintains an environment that is conducive to learning.	89%	8%	0%	0%	3%
The Instructor arrives on time.	92%	6%	0%	0%	3%
The Instructor leaves on time.	94%	3%	0%	0%	3%
The instructor has completed all classes regularly.	92%	6%	0%	0%	3%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	89%	8%	0%	0%	3%
The Subject matter presented in the course has increased your knowledge of the subject.	94%	3%	0%	0%	3%
The Instructor was available during the specified hours on office and after class for consultations.	92%	6%	0%	0%	3%
The course integrates theoretical course concepts with real-world applications.	94%	3%	0%	0%	3%

The assignments and exams covered the materials presented in the course.	89%	8%	0%	0%	3%
The course material is modern and updated	92%	6%	0%	0%	3%
The teacher is fair in exams.	86%	11%	0%	0%	3%

Instructor Name: Ms. Mishal Fatima
Course: CSC-203 Artificial Intelligence
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. However, a small ratio of students was uncertain. The 95% students are strongly agreeing in most of respects.

Course Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S.A**	**A**	**UC**	**D**	**S.D**
The Instructor is prepared for each class.	95%	0%	5%	0%	0%
The Instructor demonstrates knowledge of the subject.	95%	0%	5%	0%	0%
The Instructor has completed the whole course.	95%	0%	5%	0%	0%
The Instructor provides additional material apart from the textbook.	95%	0%	5%	0%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	95%	0%	5%	0%	0%
The Instructor communicates the subject matter effectively.	95%	0%	5%	0%	0%
The Instructor shows respect towards students and encourages class participation	95%	0%	5%	0%	0%
The Instructor maintains an environment that is conducive to learning.	95%	0%	5%	0%	0%
The Instructor arrives on time.	95%	0%	5%	0%	0%
The Instructor leaves on time.	89%	5%	5%	0%	0%
The instructor has completed all classes regularly.	95%	0%	5%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	95%	0%	5%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	95%	0%	5%	0%	0%
The Instructor was available during the specified hours on office and after class for consultations.	95%	0%	5%	0%	0%

The course integrates theoretical course concepts with real-world applications.	95%	0%	5%	0%	0%
The assignments and exams covered the materials presented in the course.	95%	0%	5%	0%	0%
The course material is modern and updated	95%	0%	5%	0%	0%
The teacher is fair in exams.	95%	0%	5%	0%	0%

Instructor Name: Ms. Aliza Falak
Course: CSC-211 Computer Organization & Assembly Language
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 100% were strongly agree respectively. The survey results indicate that the instructor has completed the course outline. The 100% were strongly agreed that the course workload was manageable.

Course Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The Instructor is prepared for each class.	100%	0%	0%	0%	0%
The Instructor demonstrates knowledge of the subject.	100%	0%	0%	0%	0%
The Instructor has completed the whole course.	100%	0%	0%	0%	0%
The Instructor provides additional material apart from the textbook.	100%	0%	0%	0%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	100%	0%	0%	0%	0%
The Instructor communicates the subject matter effectively.	100%	0%	0%	0%	0%
The Instructor shows respect towards students and encourages class participation	100%	0%	0%	0%	0%
The Instructor maintains an environment that is conducive to learning.	100%	0%	0%	0%	0%
The Instructor arrives on time.	100%	0%	0%	0%	0%
The Instructor leaves on time.	100%	0%	0%	0%	0%
The instructor has completed all classes regularly.	100%	0%	0%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	100%	0%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	100%	0%	0%	0%	0%
The Instructor was available during the specified hours on office and after class for consultations.	100%	0%	0%	0%	0%

The course integrates theoretical course concepts with real-world applications.	100%	0%	0%	0%	0%
The assignments and exams covered the materials presented in the course.	100%	0%	0%	0%	0%
The course material is modern and updated	100%	0%	0%	0%	0%
The teacher is fair in exams.	100%	0%	0%	0%	0%

Instructor Name: Ms. Marriam Ijaz
Course: CSC-103 Database Systems

The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 91% were strongly agree and 9% agree respectively. The survey results indicate that the instructor communicates the subject matter effectively. The 91% and 9% were strongly agreed and agreed respectively that they understood the lectures.

Course Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S.A**	**A**	**UC**	**D**	**S.D**
The Instructor is prepared for each class.	91%	9%	0%	0%	0%
The Instructor demonstrates knowledge of the subject.	91%	9%	0%	0%	0%
The Instructor has completed the whole course.	91%	9%	0%	0%	0%
The Instructor provides additional material apart from the textbook.	91%	9%	0%	0%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	91%	9%	0%	0%	0%
The Instructor communicates the subject matter effectively.	91%	0%	9%	0%	0%
The Instructor shows respect towards students and encourages class participation	91%	9%	0%	0%	0%
The Instructor maintains an environment that is conducive to learning.	91%	9%	0%	0%	0%
The Instructor arrives on time.	91%	9%	0%	0%	0%
The Instructor leaves on time.	91%	9%	0%	0%	0%
The instructor has completed all classes regularly.	91%	9%	0%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	91%	9%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	91%	9%	0%	0%	0%

The Instructor was available during the specified hours on office and after class for consultations.	91%	9%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	91%	9%	0%	0%	0%
The assignments and exams covered the materials presented in the course.	91%	9%	0%	0%	0%
The course material is modern and updated	91%	9%	0%	0%	0%
The teacher is fair in exams.	91%	9%	0%	0%	0%

Instructor Name: Mr. Usman Ahmad
Course: STT-101 Probability & Statistics
The mixed response has been observed against the statement, the instructor is prepared for each class. The 94% and 6% were strongly agree and agreed respectively to the statement. The survey results indicate that the instructor been regular throughout the course. The 94% were strongly agreed and 6% disagreed respectively that the assignments and exams covered the materials presented in the course.

Course Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S.A**	**A**	**UC**	**D**	**S.D**
The Instructor is prepared for each class.	94%	6%	0%	0%	0%
The Instructor demonstrates knowledge of the subject.	94%	6%	0%	0%	0%
The Instructor has completed the whole course.	88%	6%	0%	6%	0%
The Instructor provides additional material apart from the textbook.	94%	0%	6%	0%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	94%	0%	0%	6%	0%
The Instructor communicates the subject matter effectively.	94%	6%	0%	0%	0%
The Instructor shows respect towards students and encourages class participation	94%	6%	0%	0%	0%
The Instructor maintains an environment that is conducive to learning.	100%	0%	0%	0%	0%
The Instructor arrives on time.	100%	0%	0%	0%	0%
The Instructor leaves on time.	88%	12%	0%	0%	0%
The instructor has completed all classes regularly.	88%	6%	0%	6%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	94%	0%	0%	6%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	100%	0%	0%	0%	0%

The Instructor was available during the specified hours on office and after class for consultations.	94%	6%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	100%	0%	0%	0%	0%
The assignments and exams covered the materials presented in the course.	94%	0%	6%	0%	0%
The course material is modern and updated	94%	6%	0%	0%	0%
The teacher is fair in exams.	100%	0%	0%	0%	0%

Instructor Name: Mr. Bilal Mazhar
Course: CS-692 Visual Programming

The student shows the positive response towards instructor which showcase the student's satisfaction towards teacher. The 97% students were agreed instructor was prepared for class. The 97% were strongly agreed and 3% agreed respectively that instructor was available during the specified office hours and for after class consultations and the subject matter presented in the course has increased your knowledge of the subject.

Course Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S.A**	**A**	**UC**	**D**	**S.D**
The Instructor is prepared for each class.	97%	3%	0%	0%	0%
The Instructor demonstrates knowledge of the subject.	97%	3%	0%	0%	0%
The Instructor has completed the whole course.	97%	3%	0%	0%	0%
The Instructor provides additional material apart from the textbook.	97%	3%	0%	0%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	93%	7%	0%	0%	0%
The Instructor communicates the subject matter effectively.	93%	7%	0%	0%	0%
The Instructor shows respect towards students and encourages class participation	93%	7%	0%	0%	0%
The Instructor maintains an environment that is conducive to learning.	97%	3%	0%	0%	0%
The Instructor arrives on time.	93%	7%	0%	0%	0%
The Instructor leaves on time.	97%	3%	0%	0%	0%
The instructor has completed all classes regularly.	97%	3%	0%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	97%	3%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	97%	3%	0%	0%	0%
The Instructor was available during the specified hours on office and after class for consultations.	97%	3%	0%	0%	0%

The course integrates theoretical course concepts with real-world applications.	93%	7%	0%	0%	0%
The assignments and exams covered the materials presented in the course.	93%	7%	0%	0%	0%
The course material is modern and updated	100%	0%	0%	0%	0%
The teacher is fair in exams.	100%	0%	0%	0%	0%

Instructor Name: Mr. Muhammad Sami Ullah
Course: CSC-101 Programming Fundamentals

The mixed response has been observed against the statement, the instructor is prepared for each class. The 86% and 14% were strongly agree and agreed respectively to the statement. The survey results indicate The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes. The 86% and 13% were strongly agreed and agreed and 2% showed uncertainty respectively.

Course Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The Instructor is prepared for each class.	86%	14%	0%	0%	0%
The Instructor demonstrates knowledge of the subject.	83%	17%	0%	0%	0%
The Instructor has completed the whole course.	86%	14%	0%	0%	0%
The Instructor provides additional material apart from the textbook.	81%	14%	3%	2%	0%
The Instructor gives citations regarding current situations with reference to Pakistani context.	81%	17%	2%	0%	0%
The Instructor communicates the subject matter effectively.	89%	11%	0%	0%	0%
The Instructor shows respect towards students and encourages class participation	84%	16%	0%	0%	0%
The Instructor maintains an environment that is conducive to learning.	86%	14%	0%	0%	0%
The Instructor arrives on time.	90%	10%	0%	0%	0%
The Instructor leaves on time.	90%	10%	0%	0%	0%
The instructor has completed all classes regularly.	89%	11%	0%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	86%	13%	2%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	84%	16%	0%	0%	0%
The Instructor was available during the specified hours on office and after class for consultations.	87%	13%	0%	0%	0%

The course integrates theoretical course concepts with real-world applications.	87%	11%	2%	0%	0%
The assignments and exams covered the materials presented in the course.	87%	13%	0%	0%	0%
The course material is modern and updated	89%	11%	0%	0%	0%
The teacher is fair in exams.	87%	13%	0%	0%	0%

CRITERION 2 CURRICULUM DESIGN AND ORGANIZATION

Criterion 2 Curriculum Design and Organization

2.1 Consistency of Program Structure and Course Content

The computer sciences program curriculum is designed to fulfill the program learning outcomes and course learning outcomes. Each semester is of approximately 18 weeks duration. The computer science program duration is four years and is offered on a full-time basis in the morning session. The minimum duration for completing the course of the degree is 8 semesters (4 years) and maximum of 12 semesters (7 years). The course requirements for 134 credit hours. A fulltime student is required to take courses not less than 13 credit hours if he/she qualifies the prerequisite of offered course.

2.2 Curriculum Design

The curriculum of the BS Computer Science program was devised based on the needs of all stakeholders. The curriculum is broadly divided into computer science and social science courses. The computer science domain includes programming fundamentals, computer architecture, modern programming languages, digital design and logics, analysis of algorithms. A comprehensive final year project is also part of the curriculum. The contents of breadth and depth courses are selected to provide students with knowledge of overall as well as specialised areas of computer science. A number of courses include artificial intelligence, web engineering that allows the students to apply their knowledge and critical thinking and gain an in depth understanding of theory. The social science domain contains courses are related to humanities, natural sciences, and management sciences. These courses develop skills of project management, teamwork, communication, entrepreneurship, ethical and moral responsibilities, and sustainable development. The mix of computer science and social science courses is in accordance with the national guidelines provided by the HEC.

A summary of the curriculum of computer science is given in Table 33. The comparison shows that the engineering fundamentals and computing credit hours are in line with the benchmarked universities, whereas the credit hours of breadth and depth engineering courses are on the higher side.

Table 29: Curriculum Design

Domain	Knowledge Area	HEC Guidelines		BS Computer Sciecne Program	
		Total Credits	Overall %	Total Credits	Overall %
Non-Computing	General Education	30	34.6%	43	31.6%
	University Electives	3			
	Math & Science Foundation	12			
	Sub Total	45			
Computing courses	Computing-core	46	65.4%	46	68.4%
	Domain Core	18		24	
	Domain Elective	21		21	
	Sub Total	85		93	
Total		**130**	**100**	**136**	**100**

Standard 2-1:The curriculum must be consistent and support the program's documented objectives.

2.3 Mapping of Courses to Program Learning Objectives (PLO)

Program. Semester-wise mapping of courses to PLOs is given in Table 21. The course to PLO mapping is only shown for the courses that are used for assessing a particular PLO.

Table 30: Mapping of Semester-wise Courses to Program Learning Objectives

Semester No	Course Code	Course Title	Proficiency in Computer Science Theoretical and Mathematical	Able to apply mathematical methods effectively to analyze and resolve	Ability to Design and Develop Effective Solutions	Demonstrate Proficiency in Programming Languages	Graduates Possess a Comprehensive Understanding of Computer Systems	Graduates Excel in Investigation and Research	Competence in Software Engineering Practices	Communicate Effectively in Computer Science	Exhibit Ethical and Responsible Practice in Computing	Scrutinize the Societal and Global Impact of Computing
			1	2	3	4	5	6	7	8	9	10
1	CSC-101	Programming Fundamentals				✓						

	CSC-110	Discrete structures	✓	✓								
	MTH-101	Calculus and Analytical Geometry	✓	✓								
	CSC-100	Application of Information & Communication Technologies					✓				✓	✓
	ENG-102	Functional English									✓	
	MTH-001	Pre-Calculus-1	✓	✓								
		Translation of Quran 1									✓	
2	CSC-102	Object Oriented Programming			✓	✓						
	CSC-103	Database Systems			✓	✓						
	CSC-111	Digital Logic Design			✓							
	MTH-102	Multivariable Calculus	✓	✓								
	STT-101	Probability & Statistics	✓	✓								
	MTH-002	Pre-Calculus-2	✓	✓								
		Translation of Quran									✓	
3	CSC-201	Data Structures		✓	✓	✓						
	CSC-203	Artificial Intelligence		✓						✓		
	CSC-204	Computer Networks			✓							
	CSC-205	Software Engineering			✓				✓			
	MTH-103	Linear Algebra	✓	✓								
	MTH-101	Calculus and Analytical Geometry	✓	✓								
	TOQ-301	Translation of Quran									✓	
4	CSC-211	Computer Organization & Assembly Language				✓	✓					
	ENG-201	Expository Writing									✓	
	IS-201	Islamic Studies									✓	
	CSC-251	Web Technologies				✓	✓					
	CSC-252	Advanced Programming				✓						

	CSC-301	Operating Systems					✓					
5	CSC-302	Theory of Automata & Formal Languages		✓							✓	
	CSC-352	Numerical Analysis			✓							
	CSC-252	Advance Programming				✓						
	MGT-322	Financial Accounting	✓									
	TOQ-301	Translation of Quran									✓	
6	MGT-351	Introduction to Marketing									✓	
	CAI-363	Computing Vision					✓					
	CAI-364	Natural Language Processing						✓				
	CAI-361	Deep Learning						✓				
	CSC-312	Compiler Construction		✓								
	CSC-351	Web Engineering				✓						
	CSC-311	Computer Architecture					✓					
	TOQ-301	Translation of Quran II									✓	
7	CSC-498	Final Year Project-1						✓	✓			
	CSC-314	Parallel & Distributed Computing					✓		✓			
	CSC-353	Mobile Application Development				✓	✓					
8	CSC-202	Information Security								✓		✓
	CSC-499	Final Year Project II								✓	✓	✓

Standard 2-2: Theoretical backgrounds, problem analysis and solution design must be stressed within the program's core material.

Table 31: Computing Core Course

Computing Core Courses (38/136)				
S#	**Code**	**Pre-req**	**Course Title**	**Cr. Hrs**
1	CSC-101		Programming Fundamentals	4 (3-3)
2	CSC-102	CSC-101	Object Oriented Programming	4 (3-3)
3	CSC-201	CSC-102	Data Structures	4 (3-3)

4	CSC-111		Digital logic design	3(3-0)
5	CSC-301		Operating System	3(2-3)
6	CSC-103		Database Systems	4(3-3)
7	CSC-205		Software Engineering	3 (3-0)
8	CSC-204		Computer Networks	3(2-3)
9	CSC-202		Information Security	3(2-3)
10	CSC-203		Artificial Intelligence	3(2-3)
11	CSC-211	CSC-111	Computer Organization & Assembly Language	3(2-3)
12	CSC_401	CSC_201	Analysis of Algorithms	3(3-0)
13	CSC-498		Final Year Project-I	2(0-6)
14	CSC-499	CS-698	Final Year Project-II	4(0-12)
			Total	**46**

Standard 2-3: The curriculum must satisfy the major requirements for the program as specified by the accreditation body.

Program	Math and Science	Engineering Topics	General Education	Others
BSCS	12	87	30	12

Standard 2-4: The curriculum must satisfy the core requirements for the program as specified by the HEC.

Table 32: Domain Core Course

Domain Courses for BS-CS				
Computer Science -CORE (Compulsory) Courses (24/136)				
S#	**Code**	**Pre-req**	**Course Title**	**Cr. Hrs**
15	CSC-303	CSC-103	Advance Database Management System	3(2-3)
16	CSC-302		Theory of Automata & Formal Languages	3(3-0)
17	CSC-311	CSC-211	Computer Architecture	3(2-3)
18	CSC-313		HCI & Computer Graphics	3(2-3)
19	CSC-312	CSC-302	Compiler Construction	3(2-3)
20	CSC-314		Parallel & Distributed Computing	3(2-3)
			Total	**18**

Standard 2-5: The curriculum must satisfy general education, arts, professional and other discipline requirements of program.

Table 33: University Elective Course

University Elective Courses (12/136)				
S#	**Code**	**Pre-req**	**Course Title**	**Cr. Hrs**
21	MGT-322		Financial Accounting	3 (3-0)
22	MGT-351		Introduction to Marketing	3 (3-0)
23	MGT-411		Introduction to Management	3(3-0)
24	MGT-515		Introduction to Human Resource Management	3(3-0)
25	ECON-301		Introduction to Economics	3(3-0)
26	SSH-305		Foreign Languages	3(3-0)
27	PSY-600		Psychology	3(3-0)
28	SSH-304		International Relations	3(3-0)
29	SSH-308		Personal Grooming & Character Development	2(2-0)
30	SSH-309		Social Service	1(1-0)
			Total (Any Four of the above)	**12**

Standard 2-6: The information technology component of the curriculum must be integrated throughout the degree program.

Table 34: Domain Elective Course

Computer Science Elective Courses (21/136)				
S#	**Code**	**Pre-req**	**Course Title**	**Cr. Hrs**
31	CSC-251		Advance Programming	3 (2-3)
32	CSC-355		Cloud Computing	3 (2-3)
33	CSC-352		Numerical Analysis	3 (2-3)
34	CS-251		Web Technologies	3 (2-3)
35	CSC-356		Computer Graphics	3 (2-3)
36	CSC-354	CSC_202	Cyber Security	3 (2-3)

37	CSE-325		Object Oriented Analysis & Design	3(2-3)
38	CSC-351	CSC-251	Web Engineering	3 (2-3)
39	CSE-422		Software Testing and Quality Assurance	3(2-3)
40	CSC-353		Mobile Application Development I	3(2-3)
41	CSC-451		Mobile Application Development II	3(2-3)
			Total (Any Seven of the Above)	**21**

Standard 2-7: Oral and written communication skills of the student must be developed and applied in a program.

Table 35: General Education Course

General Education Courses (19/136)				
S#	**Code**	**Pre-req**	**Course Title**	**Cr. Hrs**
42	CSC-100		Introduction to Information & Communication Technologies	3(2-3)
43	CSC-110		Discrete Structure	3 (3-0)
44	MTH_101		Calculus and Analytical Geometry	3 (3-0)
45	ENG-102		Functional English	3 (3-0)
46	ENG-201	ENG-102	Expository Writing	3 (3-0)
47	PHY 201		Applied Physics	3 (2-3)
48	SSH-301		Introduction to Management	2 (2-0)
49	SSH-403		Civics and Community Engagement	2 (2-0)
50	SSH-401		Entrepreneurship	2 (2-0)
51	SSH-402		Professional Practices	3 (3-0)
52	SSH-404		Ideology and Constitution of Pakistan	2(2-0)
53	IS-201		Islamic Studies/ Ethics	2(2-0)
54			**Total**	**30**

Table 36: Mathematics and Science Foundation Course

Mathematics and Science Foundation Courses (12/136)				
S#	**Code**	**Pre-req**	**Course Title**	**Cr. Hrs**
55	MTH-102	MTH-101	Multivariable Calculus	3 (3-0)
56	MTH-435	MTH-101	Linear Algebra	3 (3-0)
57	STT-101		Statistics & Probability	3 (3-0)
58	ENE-401	ENG-201	Technical and Business Writing	3 (3-0)
			Total	**12**

2.4 Course Offerings

The offered courses belong to various domains of knowledge. The details of offered courses are provided in Table 37.

Table 37: Course Offering

Sem No.	Sr. No.	Course Code	Course Title	Credit Hours	Knowledge Area	Pre-requisite Courses
1	1	CSC-101	Programming Fundamentals	4(3-3)	Computing Core	Nil **(if any)**
	2	CSC-110	Discrete structures	3(3-0)	Mathematics and Science Foundation	Nil
	3	MTH-101	Calculus and Analytical Geometry	3(3-0)	Mathematics and Science Foundation	Nil
	4	CSC-100	Application of Information & Communication Technologies	3(2-3)	General Education	Nil
	5	ENG-102	Functional English	3(3-0)	General Education	Nil
	6	MTH-001	Pre-Calculus-1	3(3-0)	Mathematics and Science Foundation	Nil
			Total Credit Hours	**19(17-6)**		
	1	CSC102	Object Oriented Programming	4(3-3)	Computing Core	CSC-101
	2	CSC-111	Digital Logic Design	3(2-3)	Computing Core	Nil

2	3	STT-101	Statistics & Probability	3(3-0)	Mathematics and Science Foundation	Nil
	4	PSY-600	Database Systems	4(3-3)	Computing Core	Nil
	5	MTH-102	Multivariable Calculus	3(3-0)	Computing Science Supporting	MTH-101
	6	MTH-002	Pre- Calculus-II		Mathematics and Science Foundation	MTH-001
			Total Credit Hours	**17(14-9)**		
3	1	CSC-201	Data Structures	4(3-3)	Computing Core	CSC-102
	2	CSC-203	Artificial Intelligence	3(3-0)	Computing Core	Nil
	3	CSC-204	Computer Networks	3(2-3)	Computing Core	Nil
	4	CSC-205	Software Engineering	4(2-3)	Computing Core	Nil
	5	MTH-103	Linear Algebra	3(3-0)	Mathematics and Science Foundation	MTH-101
	6	MTH-101	Calculus and Analytical Geometry	3(3-0)	Mathematics and Science Foundation	Nil
			Total Credit Hours	**20(16-9)**		
4	1	CSC-211	Computer Organization & Assembly Language	4(2-3)	Computer Science Core	CSC-111
	2	ENG-201	Expository Writing	3(3-0)	General Education	ENG-1-2
	3	IS-201	Islamic Studies	2(2-0)	General Education	Nil
	4	CSC-251	Web Technologies	3(2-3)	Domain Elective	Nil
	5	CSC-252	Advanced Programming	3(2-3)	Domain Elective	CSC-102
	6	CSC-301	Operating Systems	3(2-3)	Computing Core	Nil
			Total Credit Hours	**18(13-12)**		
	1	ENG-315	Technical & Business Writing	3(3-0)	Supporting Course	ENG-201
	2	CSC-302	Theory of Automata & Formal Languages	3(3-0)	Domain Core	Nil
	3	CSC-352	Numerical Analysis	3(2-3)	Computer Science Core	Nil

5	4	CSC-252	Advance Programming	3(2-3)	Domain Elective	CSC-102
	5	MGT-322	Financial Accounting	3(3-0)	Elective Supporting	Nil
			Total Credit Hours	**15(13-6)**		
6	1	MGT-351	Introduction to Marketing	3(3-0)	Elective Supporting	Nil
	2	CAI-363	Computing Vision	4(2-3)	Domain Elective	CAI-361
	3	CAI-364	Natural Language Processing	3(2-3)	Domain Elective	CAI-361
	4	CAI-361	Deep Learning	3(2-3)	Domain Elective	CAI-261
	5	CSC-312	Compiler Construction	3(2-3)	Domain Core	CSC-302
	6	CSC-351	Web Engineering	3(2-3)	Domain Elective	CSC-251
			Total Credit Hours	**19 (13-15)**		
7	1	CSC-498	Final Year Project-1	2(0-6)	Computer Science Core	Nil
	2	CSC-314	Parallel & Distributed Computing	3(2-3)	Computer Science Core	CSC-301
	3	CS-553	Modern Programming Language	3(2-3)	Computer Science Elective	Nil
	4	CSC-353	Mobile Application Development	3(2-3)	Domain Elective	Nil
			Total Credit Hours	**11(6-15)**		
8	1	CSC-202	Information Security	3(3-0)	Computer Science Core	Nil
	2	CSC-499	Final Year Project-II	4(0-8)	Computer Science Core	CSC-498
			Total Credit Hours	**7(3-8)**		

2.5 Course Contents

Course contents are defined in teaching/lesson plans. Lesson plans contain detailed course contents, CLOs, teaching and assessment methods and other necessary details. Lesson plans of CSC-201 Data

Structure, CSC-252 Advance Programming, CSC-302 Theory of Automata & Formal Language and CSC-211 Computer organization and Assembly Language are provided as samples in Annexure D

2.6 Consistency of Program Delivery and Assessment Methods and their Support in PLO Attainment

The academic calendar is prepared by the Academics Branch AAUR at the start of the semester and is forwarded to all concerned. Concerned faculty prepares the teaching/lesson plans, which are forwarded to the Academics Branch and are uploaded on the Learning Management System (LMS) before the start of the semester. A course folder is maintained during the semester for each course. Updating the course folder is the responsibility of the concerned faculty member.

2.6.1 Teaching Methods

Teaching methods are made an integral part of the teaching/lesson plan. Faculty members select an appropriate teaching method according to the learning level and desired outcomes. The teaching methods include presentations, lectures, videos, assignments, term projects. Sample lesson plans are attached as Annexure 'D'. To access the effectiveness of the teaching method we QED conduct the number of surveys to access the quality of education. The sample survey is attached in Annexure E.

2.6.2 Assessment Methods

In theory paper, students' evaluation is done by mid-term examination, assignments/ quizzes and final examination. Both the mid-term and final examinations are compulsory. A student who misses the mid-term examination is not allowed a make-up examination and is awarded zero marks in that examination. In case a student does not appear in the final examination of a course, he/she will be deemed to have failed in that course. In theory, weightage to each component of the examination is as prescribed hereunder:

Table 38: Examination Weight

Credit Hours	Quiz-Assignment	Mid-Examination	Final Examination	Practical
3(3-0)	20%	30%	50%	N/A
3(2-3)	13.33%	20%	33.33%	33.33%
4(3-3)	15%	22.5%	37.50%	25.0%

The student must pass the practical final examination separately. A student is eligible to sit for the examination provided that he/she has attended not less than 75% of the classes in theory and practical, separately. The minimum pass marks for each course are 40% for undergraduates.

2.6.3 Final Year Project

The final year project is assigned to provide computing solutions for social issues/ business issues based on the knowledge and skills achieved while studying the computer science program. A comprehensive policy has been prepared to assign, track, evaluate and assess the final. The purpose of the policy is to provide a uniform system of guidelines to students and supervising faculty to realize their Bachelor of Science (BS) Final Year Projects (FYP). The FYP aims to allow each student to experience the software engineering design process in the context of a topic related to any social issue and independently experience engineering software from initial idea to requirement process and software development to software testing. The projects can be undertaken individually or in small teams of three members. In the latter case, the student must still fulfill the requirements laid out by the departmental policy. The Academic Supervisor is a faculty member of the Department of Computer Science and Information Technology.

CLOs for the final year project are defined as part of the FYP policy. The progress of FYP is monitored in various steps throughout the project duration by Project Management Office (PMO). The FYP is offered in the seventh semester and continues in the eighth semesters. PMO is responsible for schedule and monitors all FYP activities. Each group is required to prepare a project proposal report and deliver a presentation to the department evaluation team for approval towards the mid/end of the seventh semester. In the eight-semester department conduct the midterm evaluation, each group is also required

to make a presentation of their project and submit it to the project management office for evaluation. At the end of the eight-semester the final project evaluation is conducted and the evaluation committee accepts either the project or rejects it. The students are required to submit four hardbound copies of the FYP report. A standardized template has been prepared for the FYP report and shared with respective students and supervisors. A project CD is also required which must contain the following items:

- FYP report
- Software developed (if any, along with the code)
- Final defense Presentation
- All other material consulted/utilized
- Project submission certification (Annex F)

The assessment criteria is given in Table 39.

Table 39: Assessment Criteria for Final Year Project

Criteria	Weightage	Assessment Method
Project proposal	Total Credit 2 40 Marks	Rubric
Semester – VII Presentation		
Semester – VIII Mid Evaluation Report		Rubric
Semester – II Final Presentation/Defense	Total Credit 4 60 Marks	
Semester – II Final Report		Rubric
Semester – II Outcome Evaluation		Rubric

Rubrics required for FYP assessment were developed and are included in the FYP policy are given in Annexure F.

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CRITERION 3 LABORATORIES AND COMPUTING FACILITIES

Criterion 3 Laboratories and Facilities

Standard 3-1: Laboratory manuals/documentation/instructions for experiments must be available and daily accessible to faculty and students

Computing Lab

The details of the computing lab including staff, related course work, type of workstations, are provided in Table 40.

- Number of total core/elective/Supporting computing Courses= 32
- Number of Lab courses = 23
- Number of Lab = 2

Standard 3-2: There must be support personal for instruction and marinating the laboratories

.

Name	Designation	Highest Degree	Date of Joining	Type of Job
Muhammad Waqas	Lab Engineer	BSCS (Hons)	October 2017	Permanent
Muhamad Awais	Lab Engineer	BSCS	January 2022	Permanent

Standard 3-3: The university computing infrastructure and facilities must be adequate to support the program's objectives.

Table 40: Computing Labs Detail

Sr. No.	Name of Laboratory (Staff Names--Qualifications)	Lab(s) of Course(s) Conducted in the Lab.	Type(s) of Workstations (No. of each type)	Nature of Experiments	No. of Students per Workstation
2	Lab A (Muhamad Waqas BSCS, Lab Admin)	CS-572 Numerical Analysis,CS-693 Mobile Application Development CS-323 Programming Fundamental, CS-577 Computer Networks CS-530 Computer Org. & Assembly Lang. CS-423 Object Oriented Programming, CS-632 Artificial Intelligence, CS-583 Operating Systems	Number of PCs-50 Multimedia-1 White Board-1 Internet Access	Hands-on / Demonstrat ion	1:1
1	Lab B (Muhamad Awais, BSCS, Lab Tech	CS-687 Parallel & Distributed Computing, CS-CS-553 Object Oriented Analysis & Design, CS566 Web Technologies, CS-692 Visual Programming CS-363 Compiler Construction, CS-400 Database System, CS-666 Web Engineering, CS-685 Human-Computer Interaction, CS-443 Data Structures & Algorithm	Number of PCs-50 Multimedia-1 White Board-1 Internet Access	Hands-on / Demonstration	1:1

CRITERION 4 STUDENTS SUPPORT AND ADVISING

Criterion 4 Students Support and Advising

University administration has formulated centralized support and advising statues. These statues provide information regarding admission, scholarships, financial matters etc. GIMS arranges orientation to the newly admitted student in its capacity that is in addition to the central orientation session held for all students of the university. GIMS arranges curricular and extracurricular activities/events such as sports week, technical workshops and annual dinner.

Standard 4-1: Courses must be offered with sufficient frequency and number for students to complete the program in a timely manner.

Courses are taught as per HEC criteria.

- At the undergraduate level subjects/courses are offered as per the scheme of study provided by the HEC and approved by the Academic Council.
- Elective courses are offered as per the policy of HEC and the University.
- No course is offered consecutively in any two semesters.

Standard 4-2: Courses in the major area of study must be structured to ensure effective interaction between students, faculty teaching assistants.

Contents of all major courses at BS (CS) contain an application development part. This part is assigned in the early weeks of the course. Students keep close interaction throughout the course with course instructor to accomplish the development of the said application. Assignments also increase interaction between student and teacher. The teaching methodology followed for BS (CS) is both instructional and constructive, where students are taught and concepts and also guided to explore additional concepts of the course domain. This exploration binds students with the teacher for assistance and progression. Meetings of the Institutional Board of Studies design and improves the BS (CS) courses. Course instructors of any major course normally invites other sibling faculty members for evaluation of student's presentation or software applications at the end of the course. This provides interaction of students to other faculty members as well. Institute always encourages the interaction between each section of BS (CS) classes through software competitions held during student’s week.

Standard 4-3: Guidance on how to complete the program must be available to all students and access to qualified advising must be available to make course decisions and career choices.

Several steps have been taken to guide students by different ways such as:

- Students are informed about the program requirement through the director's office.
- Through the personal communication of the teachers with the students.
- Meetings are organized by the director of the Institute for counseling of the students. Besides, students can also contact with the relevant teachers whenever they face any problem.
- Students can meet the director of the institute whenever they feel the need to meet on any serious issue.
- Realizing the need for exploring job opportunities for university graduates, the Directorate of Placement Bureau has been established.

4.1 The Mechanism for Providing Guidance to Students on Academic, Career and Aspects Pertaining to Wellness

4.1.1 Academic Counselling

Several steps have been taken to guide students in different ways such as:

- Students are informed about the program requirement through the director's office.
- Through the personal communication of the teachers with the students.
- Meetings are organized by the director of the Institute for counseling of the students. In addition, students can also contact the relevant teachers whenever they face any problem.
- Students can meet the director of the institute whenever they feel the need to meet on any serious issue.
- Realizing the need for exploring job opportunities for university graduates, the Directorate of Placement Bureau has been established.

Table 41: Student Teacher Ratio

2016-2017	2017-2018
1:32-1:34	1:28

2018-2019	2020-2021	2022-2023	2023-2024
1:26-1:29	1:32	1:21-1:22	1:25-1:19

4.2 Students Workload, Class Sizes for Theory as well as Laboratory Sessions and Completion of Courses

4.2.1 Class Size

There are 45-45 students on average per section in each batch of 90-100 students. During lab work each, students have a separate system to perform tasks effectively.

4.2.2 Semester Academic Load

Academic load in a semester is in the range of 17-19 credit hours except for the final semester where 12 credit hours are taught. This has been done intentionally to provide students with maximum free time, as they have to move in the market for completion of their final year projects. Students also have to appear for the interviews conducted by the employers.

4.2.3 Completion of Course and Student Feedback

Course files are prepared for each course and are available with the academic department. Instructors are required to submit a course teaching/lesson plan. HOD ensures completion and conduct of the course as per schedule. Student feedback is taken twice every semester on the learning management system (LMS). Sample teacher and Course evaluation are provided in Annexure G. Faculty is consulted and corrective actions are taken where required see Annexure H.

4.3 Student Activities and Involvement in Activities Providing Experience in Management and Governance, Representation in Education and Social Activities

4.3.1 Participation in Competitions

Students are encouraged to participate in extracurricular activities. Such activities are held within GIMS as well as outside GIMS. Students are facilitated by providing them transportation. Competitions held/participated in the recent past are given in the following sections.

4.3.2 Competitions/Events Held

Details of recent completions held in SMME are given in Table 35.

Table 42: Recent Events Held in GIMS

List of Events- Fall 2022		
Sr. No	**Event**	**Date**
1	Orientation	14-Nov-22
2	Mehfil-e- Milaad	14-0ct-2022
6	Project Display	20-jan-23

List of Events- Spring 2023		
Sr. No	**Event**	**Date**
1	Sports Gala-23	09-Mar-23
2	Egg Day	11-Mar-22
3	GFAST (Speed Programming)	01-Jun-23
4	Annual Prize Distribution	01-Nov-23

List of Events- Fall 2023		
Sr. No	**Event**	**Date**
1	Mehfil-e- Milaad	05-Oct-23

2	Orientation	14-Oct-23
3	Quiz Competition	13-Nov-23
4	Human Rights Day	11-Dec-23
5	Annual Prize Distribution	10-Jan-24

List of Events- Spring 2024		
Sr. No	**Event**	**Date**
1	Talent Hunt Scholarship Test	18-Feb-24
2	Orientation Spring-24	19-Feb-24
3	Sports Gala-24	28,29-Feb-24
4	Prize Distribution for Talent Hunt Scholarship Test	10-Mar-24
5	Seminar on the significance of Lailat-ul-Qadar	04-Apr-24
6	Culture Day Celebration	23-May-24

4.3.3 Internships

Internships are an integral part of the computer science curriculum and are mandatory for all students. GIMS provides opportunities for internships to learn in industrial environments and expose students to the pressure of professional life.

4.3.4 Awards

Student encouragement through awards is also a big part of the Computer Science department's philosophy. Several types of awards are offered for competitions. The department also awards medals during the convocation ceremony. Department also has need-based scholarships which are offered to several students each year. The student who scored top position in respective batch consecutive four semesters will be awarded a laptop.

IIB Technologies

TO WHOME IT MAY CONCERN

Its certified that Mr. **Asad Ali** son of Iftikhar Ahmed **(CNIC#34201-4800320-3)** resident of Kashmir pura Gosia Colony Gujrat City.His Date Of Birth is **03-Sep-2001**. He is the student of Gujrat Institute of Management Sciences PMAS Arid Agriculture University Rawalpindi (Gujrat Campus) , 7th Semester. **His registeration # 21-Arid-90**.

He is in internship program at **IIB Tech Software House** as a software developer (Andriod) till now **03-Jun-2024**. During his stay in our company as an intern, he displays enthusiasm, leadership, self-discipline, and self-motivation. We would like to wish him all the best.

Best of Luck.

Regards,

03/06/2024

S. Anwar.

CEO

IIB Technologies

IIB Tech Software House

info@libtech.com

0319-7372279

2nd, Floor,

Kashmir Plaza, Ramtalai Chowk, Gujrat.

Dated; 03-JUN-2024

INTOUCH

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intouchecom@gmail.com

Social
facebook.com/intouchecom
instagram.com/intouchecom

DATE: 28/05/2024

To Whom It May Concern,

I hereby certify that Najam Kashif having CNIC 34202-3770455-9 S/O Kashif Hussain is working as an Franchise Manager with Intouch Ecom's from 20-Apr-2023 to Till now.

Najam's core responsibilities include Supporting and Assisting in development, maintaining, updating of Intouch Ecom's Franchise and creating and designing of new web-based tools.

We found him pretty active in whatever task we have provided him. He has the motivation to take initiative tasks and we are gratified that he had been helpful in the advancement of our organization.

We wish him success in his future efforts.

Regards,

Intouch e Com C.E.O

Syed Akrash Hamdani
Managing Director
Intouch Ecom

Limpid
SOL

Ref: CB17K
Date: March 14th, 2024

Dear Sofia Hameed

We are pleased to confirm your successful completion of an internship with LimpidSol from March 1st to March 14th, 2024. During this period, you made significant contributions to our web development projects, showcasing your skills in HTML, CSS, and JavaScript. Your ability to quickly learn and adapt was impressive, and your work ethic was commendable. We greatly appreciate your efforts and believe you have a promising future in web development

LimpidSol
Proprietor

52A/B, Sector C, Chambelli Block Bahria Town, Lahore Punjab

+92 325 9669151
info@webifysoft.com

WEBIFYSOFT

Top floor of faisal bank near Allama Iqbal international hospital Main G.T Road Kharian Pakistan.

Subject:Internship letter **Dated: 4 April 2024**

TO WHOM IT MAY CONCERN

This is to certify that **Mr. Anwar Ahmad** S/O **Mr. Mukhtar Ahmad** did internship as a **front end developer** at **WEBIFYSOFT** from Ocotber 2023 to March 2024.

As a front end Developer, **Anwar Ahmad** expertise spanned both front-end and back-end development. He demonstrated proficiency in various programming languages, framework, and technologies, enabling him to build dynamic and interactive user interfaces. His ability to understand the entire software development lifecycle and contribute to various stages of a project made him an asset to the team.

Anwar Ahmad is an exceptional employee with a strong work ethic and a keen attention to detail. They have consistently produced high -quality work, exceeded targets, and contributed to the success of our projects. Their ability to develop projects and to work with team to solve complex problems which provide great customer service and satisfaction has been a significant asset to our organization.

One of the most admirable traits of **Anwar Ahmad** is their leadership skill and ability to work under pressure, which has never wavered throughout their tenure with our company. Anwar Ahmad consistently goes above and beyond in their role and is always willing to lend a hand or provide guidance to colleagues.

In addition to their professional skills, **Anwar Ahmad** is a pleasure to work with. Their positive attitude, strong interpersonal skills, and ability to communicate effectively have made them a respected and well-liked team member.

I have no doubt that **Anwar Ahmad** will excel in any future endeavors they choose to pursue. They have my highest recommendation, and I am confident that they will be an asset to any organization fortunate enough to have them on their team.

If you have any further questions or require additional information, please do not hesitate to contact me at [webifysofts@gmail.com] or **[+92 325 9669151].**

Sonware Company
Top Floor of Faysal Bank,
Near Allama Iqbal Hospital
G.T.Road Kharian

Muhammad ASAD ULLAH [CEO WebifySoft]

Codexier
WE CODE YOUR DESIRE

Date: 19-04-2024 Ref# 00321

Internship Certificate

This is to certify that Mr. **Hussnain Munir** ,CNIC:**34201-1187245-1** was working at Codexier Pvt. Ltd. as Junior Web Developer. It was a two month internship program from **1st March 2024** to **03 May 2024.**

During this internship, Mr Hussain Munir has worked on:

- HTML, CSS
- Laravel
- Php
- Bootstrap

We have found him a worthy resource and wish them all the best for his future and endeavors

Codexier
WE CODE YOUR DESIRE

Authorized Signature & Stamp

Ahsan Sultan
People M&D Professional
Ahsansultan@codexier.com

+92 300 9826547 +92 333 3204848 info@codexier.com www.codexier.com
Pakistan Town Block C Police Foundation, Rawalpindi, Islamabad, Islamabad Capital Territory

CRITERION 5 PROCESS CONTROL

Criterion 5 Process Control

Standard 5-1: The process by which students are admitted to the program must be based on quantitative and qualitative criteria and clearly documented. This process must be periodically evaluated to ensure that it is meeting its objectives.

5.1 Requirements and Processes for Admission of Students to the Program, Response and Annual Intake

5.1.1 Admission Criteria

i A person holding an Higher Secondary Certificate, A-level, or an equivalent certificate from any recognized institute with at least second division or overall 45% marks, or any other marks specified shall be eligible to apply for admission.

ii Admission will be on open merit basis, with the following weightage for merit (Entrance test 40%, Intermediate 50%, Matric 10%).

iii Students with F.Sc. Pre-Engineering will be eligible to transfer to the BCE degree program from the BS (CS) degree program.

The admission criteria are laid out by the Arid Agriculture University and are part of GIMS statues. Admissions are handled by the Admission Office of GIMS for all programs of the GIMS.

5.1.2 Academic Standing

i Grade Point average

a) Maximum grade point average 4.00

b) Minimum grade point average for obtaining the Degree 2.50

ii To remain on the roll of the university, a student shall be required to maintain the following minimum CGPA in each semester:

Semester	CGPA
1st Semester	0.75
2nd Semester	1.00
3rd Semester	1.25

4th Semester	1.50
5th Semester	1.75
6th Semester	2.00
7th Semester	2.25
8th Semester	2.50

- A student who does not meet the above requirement for promotion shall cease to be on the university roll. However, he/she may repeat the whole semester only once.
- The course grades that a student earns in the repeated semester shall replace the previously earned course grades.
- In the 8th semester, if a student fails to achieve the 2.5 CGPA, he/she shall have to repeat the course/courses with the lowest grades, to make CGPA of 2.5 within the maximum time period allowed for the degree.
- Migration from other universities and institutes to universities will be entertained as per University migration rules.

Standard 5-2: The process by which students are registered in the program and monitoring of students' progress to ensure timely completion of the program must be documented. This process must be periodically evaluated to ensure that it is meeting its objectives.

5.2 Examination and Weightage

Theory

In theory paper, students' evaluation is done by mid-term examination, assignments/ quizzes and final examination. Both the mid-term and final examinations are compulsory. A student who misses the mid-term examination is not allowed a make-up examination and is awarded zero marks in that examination. In case a student does not appear in the final examination of a course, he/she will be deemed to have failed in that course. In theory, weightage to each component of the examination is as prescribed hereunder:

Table 43: Examination Weights

Credit Hours	Quiz-Assignment	Mid-Examination	Final Examination	Practical
3(3-0)	20%	30%	50%	N/A

3(2-2)	13.33%	20%	33.33%	33.33%
4(3-2)	15%	22.5%	37.50%	25.0%

Practical

The student must pass the practical final examination separately.

5.2.1 Eligibility for Examination

A student is eligible to sit for the examination provided that he/she has attended not less than 75% of the classes in theory and practical, separately. The minimum pass marks for each course are 40% for undergraduates.

Standard 5-3: The process of recruiting and retaining highly qualified faculty must be in place and clearly documented. Also processes and procedure for faculty evaluation, promotion must be consistent with institution mission statement.

5.3 Faculty Development, Training and Retention

5.3.1 Faculty Training and Mentoring

Following opportunities and facilities are available for faculty training and mentoring.

- The new faculty attends orientation training and methods of instruction workshop.
- GIMS sometimes conducts faculty training to enhance the educational experience.

5.3.2 Faculty Retention and Career Planning

Faculty is one of the most important parts of the SMME and hiring and retention of best-in-class faculty is the topmost priority of the school. For this purpose, the following are being offered.

- GIMS offers a competitive pay package.
- Full funding for attending National/ International conferences/ seminars/ Workshops.
- Financial support for carrying out Masters & Doctoral studies.
- Funding through government and non-profit national and international organizations is facilitated.
- Promotions are based on experience and research work.
- The teaching load is based on the guidelines provided by the HEC so faculty can spend most of their time in research.

Standard 5-4: The process and procedures used to ensure that teaching and delivery of course material to the students emphasizes active learning and that course learning outcomes are met. The process must be periodically evaluated to ensure it is meeting objective.

5.4 Strength and Competencies of Academics Staff Covering all Areas of the Program

GIMS has a mix of qualified and experienced faculty members for teaching and research. Most of the faculty members have qualifications from leading universities in the world. The pyramid of the academic architecture of GIMS is shown in the figure below.

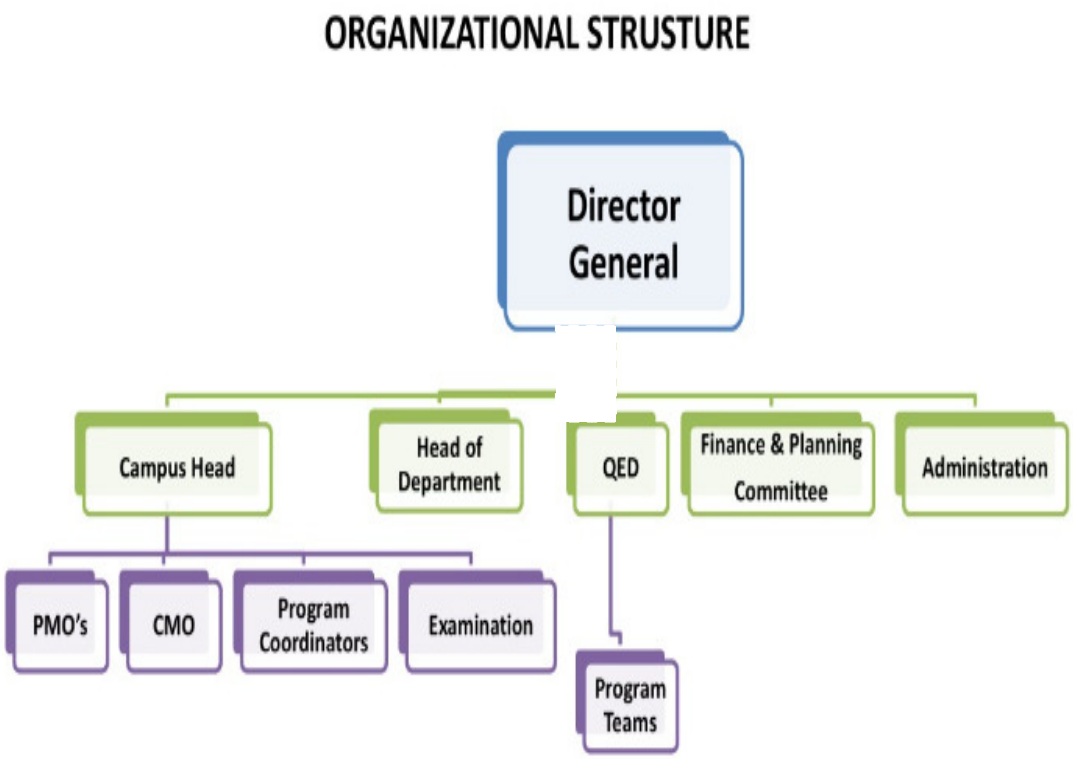


Figure 3: Academic Pyramid

CRITERION 6 FACULTY

Criterion 6 Faculty

6.1.1 Faculty

Detail of faculty at GIMS is given below.

Present Scenario

Full-Time Faculty Size	Number of faculty members with PhD MS	Full Professors	Associate Professors	Assistant Professors	Lecturers	Teaching Assistants/Fellows
	12				12	

Standard 6-1: There must be enough full-time faculty who are committed to the program to provide adequate coverage of the program. The interests and qualifications of all faculty members must be sufficient to teach all courses, plan, modify and update courses and curricula. All faculty members must have a level of competence that would normally be obtained through graduate work in the discipline. The majority of the faculty must hold a Ph.D. in the discipline.

6.2 Faculty Distribution by Program Area

Table 44: Faculty Distribution by Program Areas

Program Area of Specialization	Course in Area	Average Number of Section per Year	Number of Faculty Members in Each Area
Networks	2	6	2
Artificial Intelligence	2	4	1
Web/Mobile Development	3	5	4

6.2.1 Full Time Dedicated Faculty

The details of faculty members are stated in Table 45, and sample faculty resume is attached in Annexure K.

Table 45: Full Time Dedicated Faculty

Name	Designation	Highest Degree	Subject Discipline	Faculty Type	Data of Joining	Experience	Status
Mr. Bilal Mazhar	Lecturer	MS	Computer Science	Full Time	26.09.2016	8	Continue
Ms. Zainab Mehmood	Lecturer	MS	Computer Science	Full Time	21.09.2017	6	Quit 1/8/2023
Ms. Maria Ashraf	Lecturer	MS	Mathematics	Full Time	02.10.2019	5	Continue
Dr. Ramzan	Assistant Professor	PHD	Computer Science	Full Time	02.01.2024	1	Continue
Mr. Muhammad Sami Ullah	Lecturer	MS	IT	Full Time	22.09.2021	3	Continue
Mr. Ashar Javed	Lecturer	MS	SE	Full Time	22.09.2021	3	Continue
Mr. Shahan Arif	Lecturer	MS	Computer Science	Full Time	06.02.2019	5	Continue
Ms. Mishal Fatima	Lecturer	MS	Computer Science	Full Time	9/26/2022	2	Continue
Mr. Muhammad Asim	Lecturer	MS	IT	Full Time	10/10/2022	1	Quit
Mr. Waqas Yousaf	Lecturer	MS	Computer Science	Full Time	9/26/2022	3	Continue
Mr. Shahzar Younas	Lecturer	MS	Computer Science	Full Time	9/26/2022	2	Continue
Ms. Aliza Falak	Lecturer	MS	Computer Science	Full Time	02/19/2023	1	Continue
Ms. Iqra Saleem	Lecturer	MS	Computer Science	Full Time	02/19/2023	1	Continue
Ms. Maryam Ijaz	Lecturer	MS	Computer Science	Full Time	02/19/2023	1	Continue
Ms. Maha Ijaz	Lecturer	MS	Computer Science	Full Time	02/19/2023	1	Continue
Mr. Fahad	Lecturer	MS	Computer Science	Full Time	02/19/2023	1	Continue
Ms. Rabia Butt	Lecturer	MS	Computer Science	Full Time	08/26/2023	1	Continue
Mr. Hassan Raza	Lecturer	MS	Computer Science	Full Time	2/10/2023	3	Continue

6.2.2 Time Lab Engineers

Table 46: Full Time Lab Engineers

Name	Designation	Highest Degree	Date of Joining	Type of Job
Muhammad Waqas	Lab Engineer	BSCS (Hons)	October 2017	Permanent
Muhamad Awais	Lab Engineer	BSCS	January 2022	Permanent

6.2.3 Faculty Members at GIMS and their Distribution

Table 47: Part Time Faculty Members at GIMS

Part-Time Faculty Size	Number of Full Time Faculty Members with		Total Number of Courses Offered by the Institute	Number of Part-Time Faculty Members with		Average Teaching Load Full Time Faculty
	PhD	MS		PhD	MS	
(Fall-2022)	**1**	14	68	1	16	12-16 Credit hour
(Spring-2023)		13	64		18	12-16 Credit hour
(Fall-2023)	**1**	16	61	2	14	12-16 Credit hour
(Spring-2024)		13	58		12	12-16 Credit hour

Standard 6-2: All faculty members must remain current in the discipline and sufficient time must be provided for scholarly activities and professional development. Also, effective programs for faculty development must be in place.

6.3 Overall Staff Workload

6.3.1 Faculty Workload

Teaching load based on 2020-2022	
Lecturer	12-16 Cr. Hr

6.3.2 Student Teacher Ratio

Table 48: Student Teacher Ratio

2017-2018	2018-2019	2020-2021	2022-2023	2023-2024
1:28	1:26-1:29	1:32	1:21-1:22	1:25-1:19

6.4 Faculty Development, Training and Retention

6.4.1 Faculty Training and Mentoring

Following opportunities and facilities are available for faculty training and mentoring.

- The new faculty attends orientation training and methods of instruction workshop.
- GIMS sometimes conducts faculty training to enhance the educational experience.

6.4.2 Faculty Retention and Career Planning

Faculty is one of the most important parts of the GIMS and hiring and retention of best-in-class faculty is the topmost priority of the school. For this purpose, the following are being offered.

- GIMS offers a competitive pay package.
- Full funding for attending National/ International conferences/ seminars/ Workshops.
- Financial support for carrying out Masters & Doctoral studies.
- Funding through government and non-profit national and international organizations is facilitated.
- Promotions are based on experience and research work.
- The teaching load is based on the guidelines provided by the HEC so faculty can spend most of their time in research.

6.5 Sufficiency and Competency of Technical and Administrative Staff in Providing Adequate Support to the Educational Program

6.5.1 Sufficiency and Competency of Technical Staff

The lab technicians and lab engineers are well qualified and meet the qualification requirements of their respective jobs. Lab engineers have B.Sc / M. Sc. Degrees in computer science while the lab technicians are technical diploma holders.

6.5.2 Sufficiency and Competency of Administrative Staff

GIMS has an adequate number of administrative staff for office and administration jobs. The administrative staff of the department is headed by Admin Manager. The staff is responsible for the general upkeep of the GIMS building and offices. In case of a medical emergency, several staff members are trained to provide first aid. They are also responsible in case of a fire emergency and have been designated as fire marshals. The administrative staff is also responsible for office work.

Standard 6-3: All faculty members should be motivated and have job satisfaction to excel in their profession.

6.6 Faculty Survey

To measure the faculty satisfaction and identifying their experience at GIMS, QED conducted a faculty Survey at end of each semester. Faculty surveys help to identify faculty member level satisfaction and their experience with administrative staff and faculty members. Faculty member suggestions and feedback help to improve the department working. The faculty survey results are available in Annexure H.

6.7 Annual Faculty Review

The yearly survey is a necessary part of any institute to self-evaluate its execution and to assess the performance/contribution of its employees. The academic year 2019-2020 has been ended, QED and Departments have decided to take an initiative to do yearly evaluation this year and continue to do so. Some sample examples of annual faculty reviews are available in Annexure I.

Standard 6-4: There must be an adequate number of high-quality graduate students, research assistants and Ph.D. students.

The BS Graduate student's information is provided in criteria 2 GIMS is not accredited for a Masters and PhD Degree. Teaching Assistants positions are not available for GIMS.

CRITERION 7 INSTITUTIONAL FACILITIES

Criterion 7 Institutional Facilities

Standard 7-1: The institution must have the infrastructure to support new trends in learning such as e-learning.

7.1 Adequacy of Teaching and Learning Facilities

The adequacy of teaching and learning facilities that include classrooms, learning-support facilities, study areas, information resources, library, computing and information technology, etc. is described in the following sections.

Standard 7-2: The library must possess an up-to-date technical collection relevant to the program and must be adequately staffed with professional personnel.

7.1.1 Library

The GIMS Library has the following facilities.

- Institute has its library which has a 246 title of computer science-related books. New books are regularly bought, but currently, library contains low-cost editions. Expensive books are unavailable. A book bank is also required which provides effective support to students.
- Access to intuitional and HEC Online Library via HEC.
- Reproduction facility is also available in the form of the printing press in GIMS where computing and other subject books like mathematics are being printed after necessary permission.

Standard 7-3: Classrooms must be adequately equipped, and offices must be adequate to enable faculty to carry out their responsibilities.

7.1.2 Lecture Facilities

The GIMS building is situated within the premises of Kalra Khas Gujrat. GIMS has its building. Construction of an additional wing is also in progress. The building has the following facilities:

- Classrooms: 15
- Seating capacity of each classroom: 50
- 7 LCDs Audio-Video facilities: Computer, 3 multimedia projector,

- Seminar Hall with a seating capacity of 100 shared with other departments

7.1.3 Computer Laboratories

Following dedicated computer laboratories are available.

- Computational Lab A
- Computational Lab B

The computing facilities have the latest computing software including visual studio, NASAM, Dreamweaver Matlab, etc.

7.1.4 Sports

At GIMS the implementation of a wholesome policy helps shape student's personalities and careers in a more efficient manner. Students are, therefore, encouraged to participate in various sports competitions held as a regular feature of campus life. The following facilities are available in the campus.

- Badminton Court 12
- Table Tennis Total 4, 3 x Girls, 1 x Boys

7.1.5 Transport

GIMS maintains an organized transportation network within the campus for the students and staff. Vans provide transport from Gate 1 from 8:30 to 9:30 am. GIMS provides transportation within Gujrat city and outside Gujrat. Transportation facilities provided to students of Kharrian, Jalapur Jattan, Lalmusa.

7.1.6 Other On-Campus Facilities

The campus has the following facilities available for students.

- Cafeteria
- PhotoShop
- Stationery Shop

CRITERION 8 INSTITUTIONAL SUPPORT

Criterion 8 Institutional Support

8.1 Institutional Financial Commitment and Support

Standard 8-1: There must be sufficient support and financial resources to attract and retain high quality faculty and provide the means for them to maintain competence as teachers and scholars.

8.1.1 Income and Expenditure Details

Table 49: Income and Expenditure Details

S No	Source of Income	Financial Year 2017-18 (July 2017 to August 2018)			Financial Year 2018-19 (July 2018 to August 2019)			Financial Year 2019-20 (July 2019 to June 20)		
		Budget	Income	Expenditure	Budget	Income	Expenditure	Budget	Income	Expenditure
1		25000000	246747735	23644527	4000000	39281610	37119271	60500000	54182899	51139207

Standard 8-2: There must be an adequate number of high-quality graduate students, research assistants and Ph.D. Students.

8.1.2 Student Teacher Ratio

2014-2015	2015-2016	2016-2017	2017-2018
1:11-1:14	1:16-1:17	1:32-1:34	1:28

2018-2019	2020-2021	2022-2023	2023-2024
1:26-1:29	1:32	1:21-1:22	1:25-1:19

Standard 8-3: Financial resources must be provided to acquire and maintain library holdings, laboratories and computing facilities.

Total endowment fund of the institution		Rs. 1000000/-	**0.435 (In Millions)**	**15.72 (In Millions)**
Yearly budget for the past five years		**2021-2022**	**2022-2023**	**2023-2024**
	62453788	60130000	14.29	0.315
Institution's yearly budget for research and faculty development for the past five years		**-**	0.435**-**	0.479
Institution's yearly budget for library	**199000**	659740	0.559	0.615
Institution's yearly budget for computing facilities	**125000**	225000	1.429	1.572
Department/school/ college's yearly budget for research and faculty development for the past five years		150000	0.435	0.479
Total endowment fund of the institution		Rs. 1000000/-	**0.435 (In Millions)**	**15.72 (In Millions)**
Yearly budget for the past five years		**2021-2022**	**2022-2023**	**2023-2024**
	62453788	60130000	14.29	0.315

Institution's yearly budget for research and faculty development for the past five years		**-**	0.435**-**	0.479
Institution's yearly budget for library	**199000**	659740	0.559	0.615
Institution's yearly budget for computing facilities	**125000**	225000	1.429	1.572
Department/school/ college's yearly budget for research and faculty development for the past five years		150000	0.435	0.479
Fee Structure	Subsidized Fee: Rs.20450	Subsidized Fee: Rs.19250	Subsidized Fee: Rs.20450	Subsidized Fee: Rs.20450
	Regular Fee: Rs.36400	Regular Fee: Rs.34850	Regular Fee: Rs.36200	Regular Fee: Rs.36200
What are sources of income	Semester/ Tuition Fee	Semester/ Tuition Fee	Semester/ Tuition Fee	Semester/ Tuition Fee

Summary

The computer science program at AAUR and affiliated institutes was developed in line with the Higher Education Commission (HEC) requirements. Extensive collaboration among stakeholders ensured the creation of a unified curriculum. The curriculum is continually reviewed, taking into account HEC revisions and feedback from stakeholders. Students can choose from elective courses to enhance their knowledge.

Faculty members are responsible for creating lesson plans based on approved course content, with the flexibility to make minor adjustments. Feedback from faculty and students is regularly collected through the Learning Management System (LMS), and the QED, Academic Directors, and HODs monitor the process.

The curriculum's assessment methods include quizzes, assignments, presentations, and exams, with each course learning outcome linked to specific questions. Feedback from various sources is addressed during faculty meetings, fostering continuous improvement. The program's focus on learning outcomes ensures students acquire relevant skills and knowledge

Observations, Implementation Plan and Actions Taken Since Last SAR

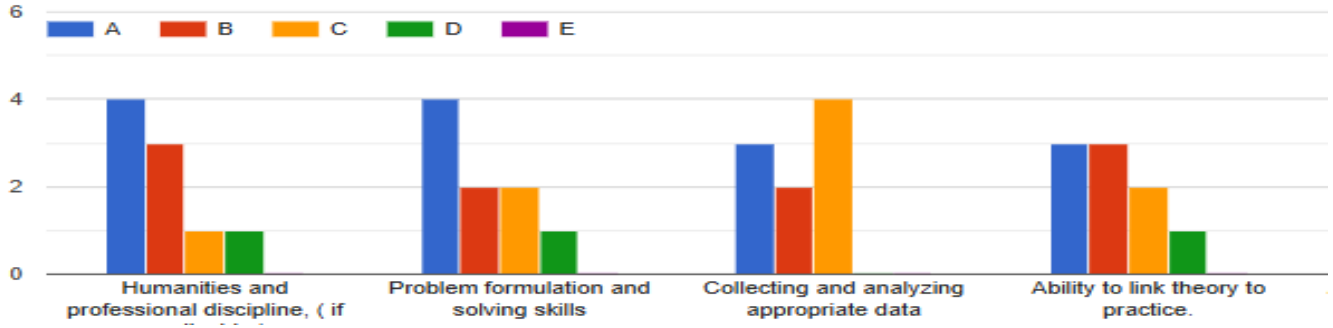
Sr. No	Observations	Action Take by Department	Status
1	The rubric was not designed for BSCS Final year project evaluation that would be used to measure program educational objectives.	The department directed the Project Management office to design a rubric with the consultancy of faculty members. The rubric was implemented in the final year project evaluation.	Achieved
2	Employer Survey was not designed in compliance to measure the program educational objectives.	QED and department coordinator set together and redesign the survey which includes the statement that would help out the measuring the program educational objective.	Achieved
3	Department has not initiated the research cultural among undergraduate students.	Institute recruit Ph.D. faculty member as HoD with aims to flourish the research among the faculty members and take initiative among students for a	Partially Achieved

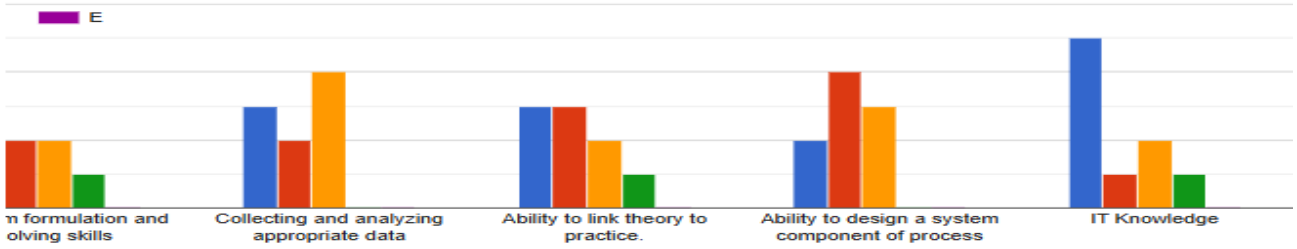
		review paper and research paper.	
4	Scheme of Study for BSCS program not adequately state which course will help to achieve program educational objective and outcomes.	The course has been mapped with program learning and educational objective are stated in Table 6 and Tables 7-17 in this SAR.	Achieved
5	Institute has not dedicated any career counseling and job placement office students.	Job placement and career counseling office establishment are under discussion of Director GIMS and Academic Director.	In process
6	Department has no dedicated meeting and conference room.	The infrastructure of the institute has been improved as dedicated campus construction is completed in Spring 2020. Meeting rooms, discussion rooms, and conference rooms are available for faculty and students.	Achieved
7	Institute has not had its student and teacher portal where students and teachers can communicate subject matter effectively.	The GIMS has launched Learning Management System in Spring 2020 for instructor and faculty members, and it is accessible for all stakeholders.	Achieved
8	Proper teacher training and faculty development programs, particularly for the newly inducted young faculty members, need to be established on a priority basis.	Department had planned a number of the training program but due to COVID'19 no physical training was possible for a year, Meanwhile, the faculty members have attended a few virtual seminars and talks.	In process

Annexure A: Alumni Survey

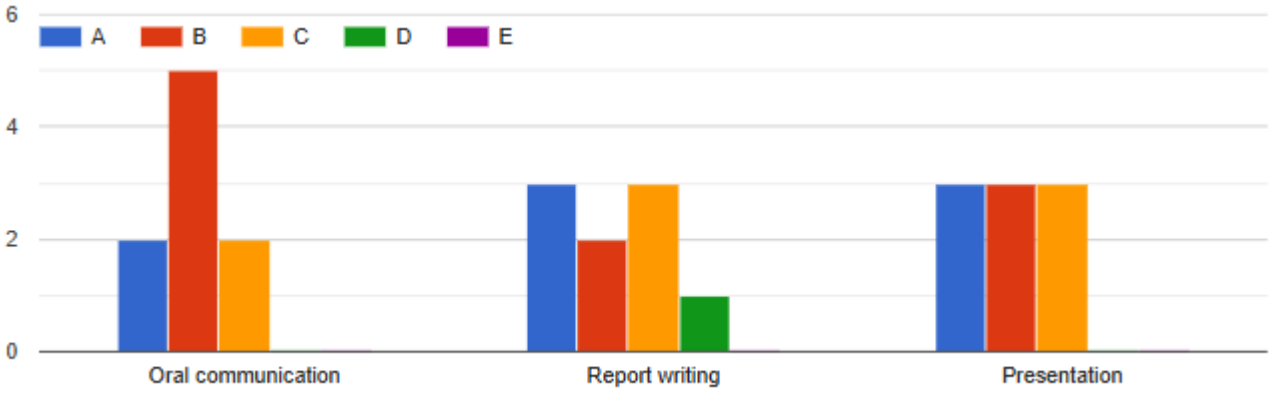
Performa: 7 Alumni Survey
Department of Computer Science
(Batch: 2020-2024)

1. Knowledge

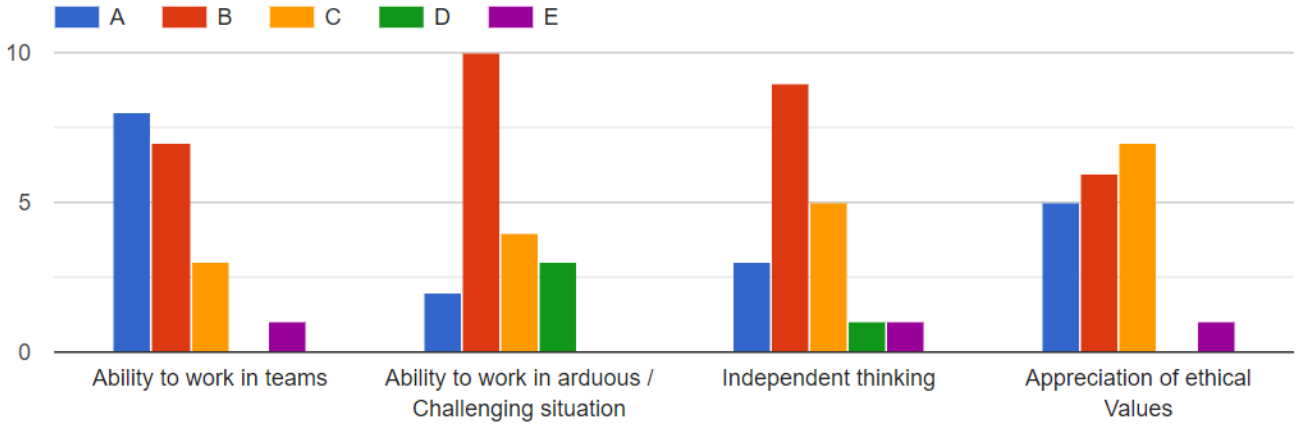




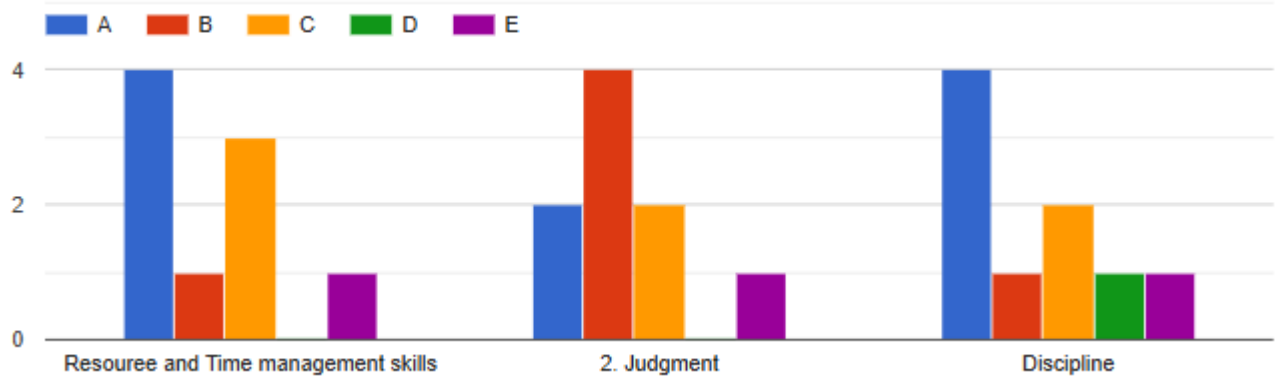
2. Communication Skills



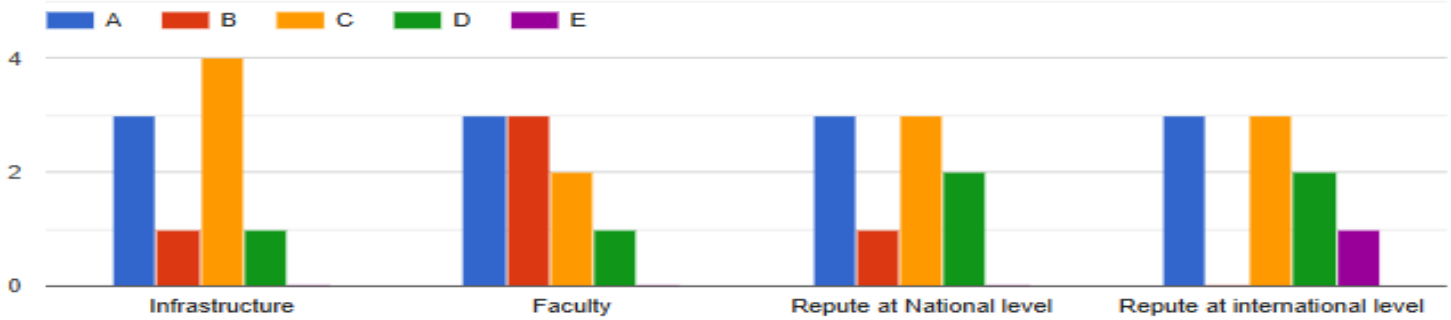
3. Interpersonal Skills



4. Management and Leadership Skills



5. Departmental Status



Gujrat Institute of Management Science
PMAS-Arid Agriculture University, RWP

Alumni Survey Questions Summery

S. No	General Comments Please make any additional comments or suggestions, which you think would help strengthen our programs. (New courses that you would recommend and courses that you did not gain much from)	Career Opportunities	Name of organization (In which you are currently working)	Position in organization
1	Recorded lectures at LMS	Good	IIB TECH	Developer
2	Add AI courses	Fair	- Knowledge Streams	GIMS Institute
3	no need of new courses just improves courses which are already being studied make course outlines according to the current market desires.	Anything in which u have interest. Business or job anything	Arid Agriculture	Internee
4	Android development web engineer computer architecture technical and business writing.	Very few	Own business	lecturer

Prepared by:

MaaRia Ashraf

QED Head| Maria Ashraf

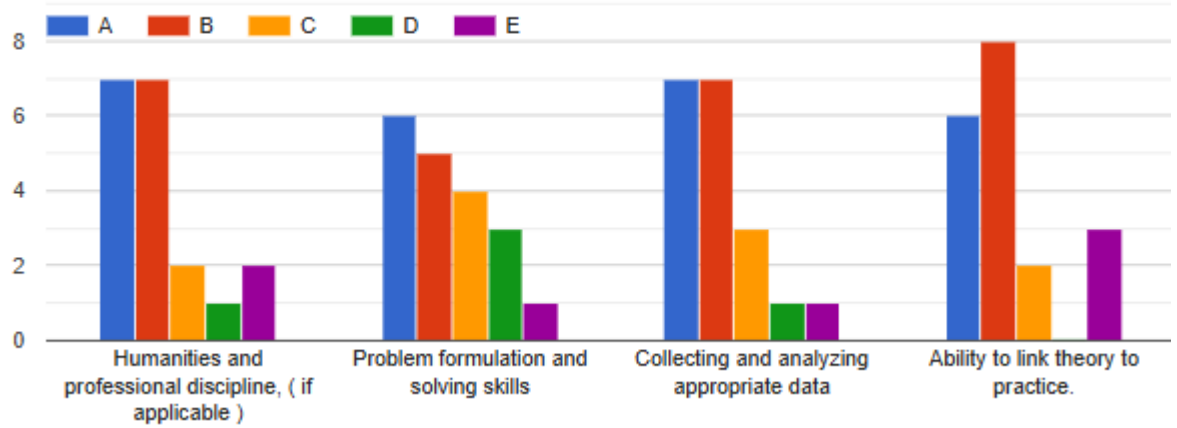
Date:December 18th , 2024.

Performa: 7 Alumni Survey

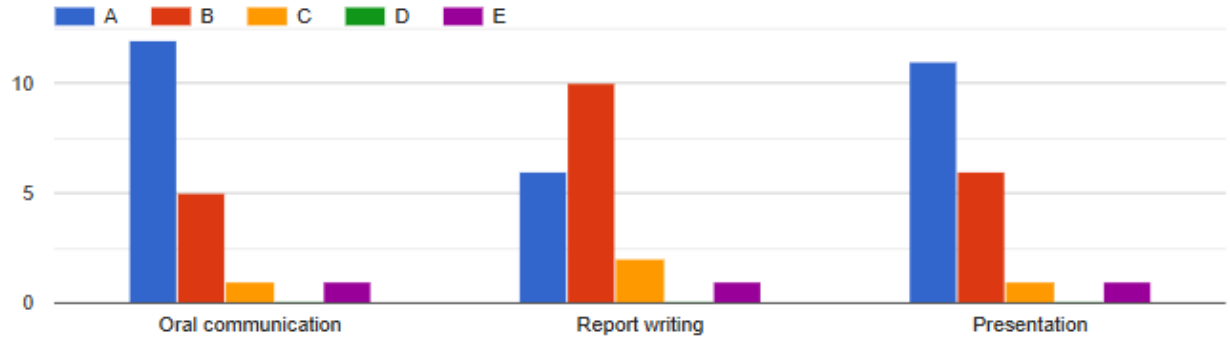
Department of Computer Science & IT

BSCS Programs Batch 2019-2023

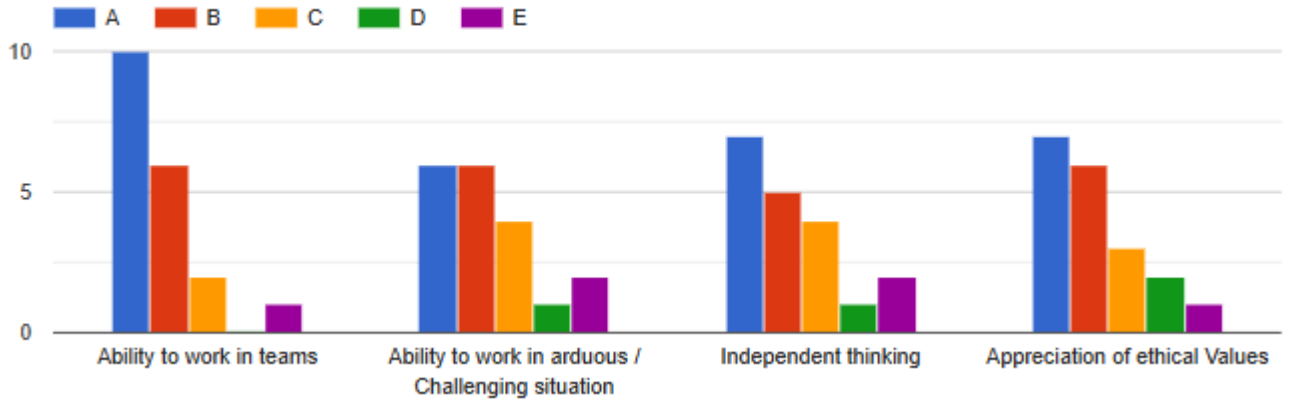
1. Knowledge



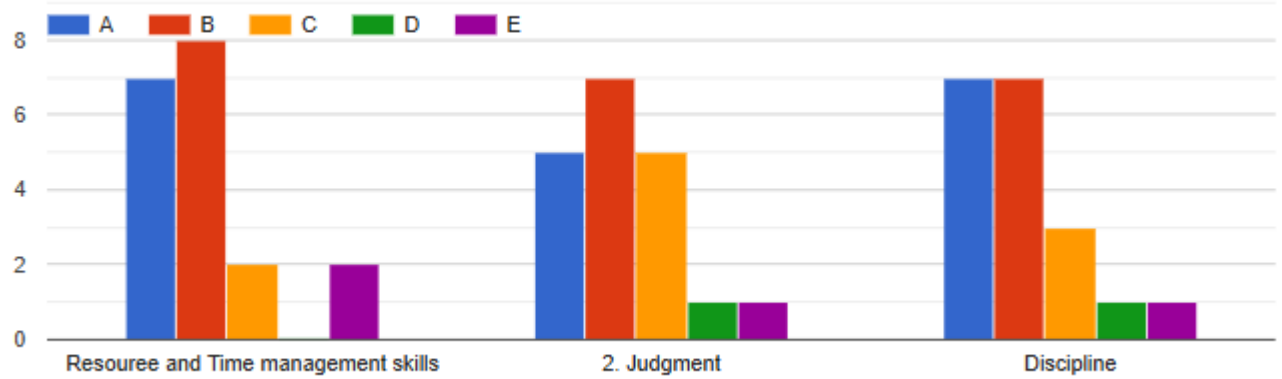
2. Communication Skills



3. Interpersonal Skills



4. Management and Leadership Skills



Alumni Survey Questions Summery

S. No	General Comments Please make any additional comments or suggestions, which you think would help strengthen our programs. (New courses that you would recommend and courses that you did not gain much from)	Career Opportunities	Name of organization (In which you are currently working)	Position in organization
1	Institute should must work on more practical skills.	Career opportunities were also provided. Some of the seminars were held during my degree and they also guided us about importance of computing and coding and offer us to join their software house for job.	Comsats University Islamabad	Resources coordinator
2	Everything was great. Teachers were cooperative during my degree.	Wide range of opportunities after graduation	The Smart School	Junior Flutter Developer
3	Make sure students get enough practical work rather than theory courses	A lot of career opportunities in it	Tech Swivel Private Ltd. Lahore	MERN stack developer
4	I think arid university bring updated software for their youth. They have to use updated technologies.	Internships	Arid Agriculture University Rawalpindi	Full stack developer
5	Need to teach the theoretical study with real world examples specifically math and tech related subjects	good	Middlesex university london	Frontend developer

6	Give advance level language skills and remove marketing courses	Good but with practical experience	Gujrat Institute of Management Sciences	Developer
7	In S field there were some unnecessary courses like multi variable calculus and other mathematical courses etc, there should be courses like Graphic designing.	Very good	IIUI school ,Gujrat	Internee
8	Do some practical work in students that they need..	None	Contrive solution	Lecturer
9	There should be more courses like arts and mass communication	Mostly available	GIMS	full stack web developer and Associate Develops Engineer
10	More focus on practical programming then theory and real time working platforms.	More job opportunities to alumni	Adan IT center/Webevis Technologies	Software Engineer
11	Python			

Prepared by:

MaaRia Ashraf

QED Head| Maria Ashraf

Date:November 15th , 2023.

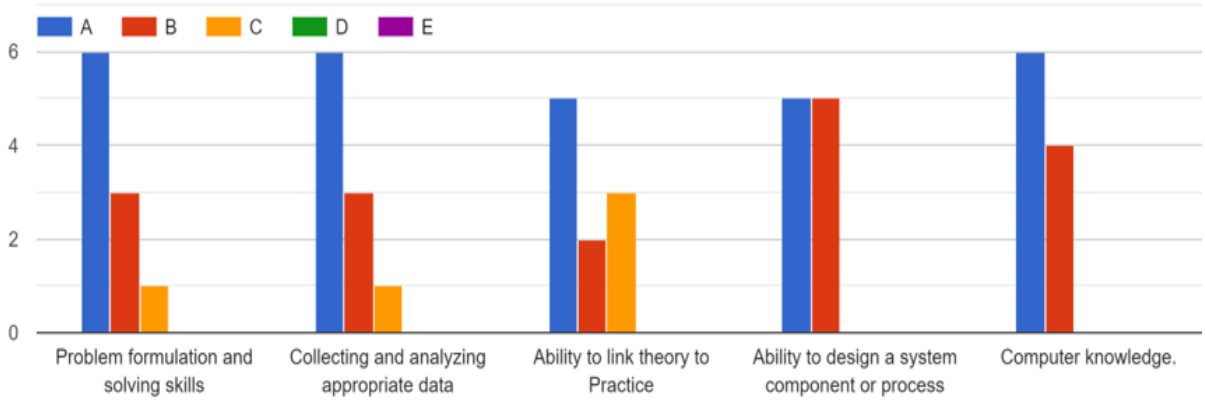
Annexure B: Employer Survey

A survey has been conducted and feedback has been collected on Performa 8 from the employees where students have BSCS from GIMS are working. The results are summarized in figure given below.

Performa: 8 Employer Survey
Department of Computer Science
(Batch: 2020-2024)

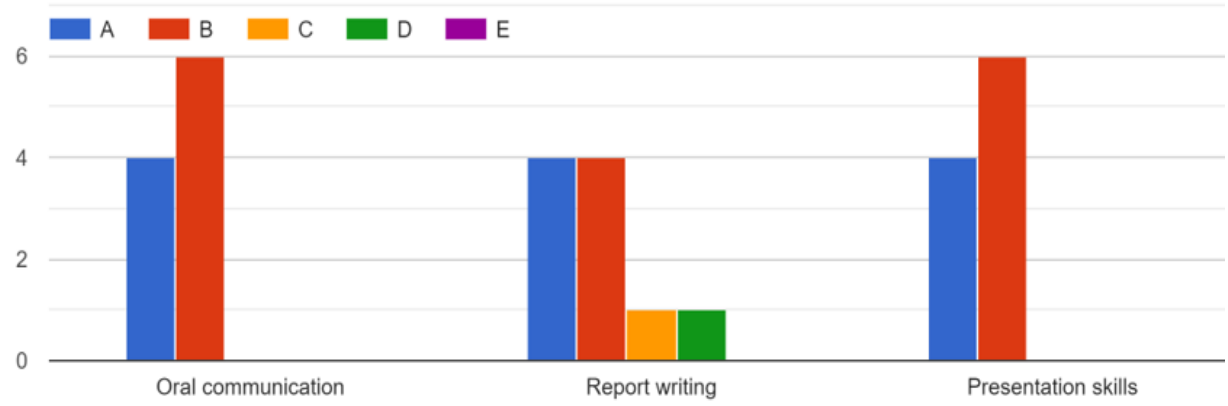
5. Rank Employee's Knowledge

A: Excellent B: Very good C: Good D: Fair E: Poor



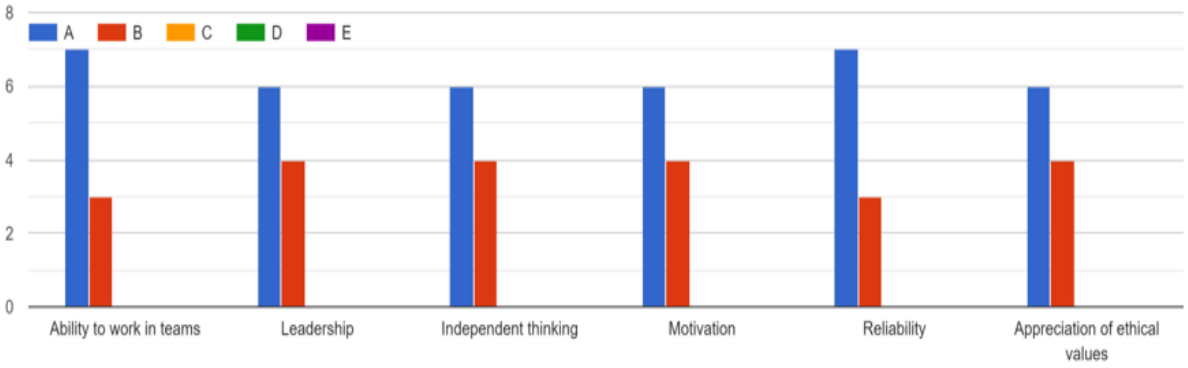
6. Rank Employee's Communication Skills

A: Excellent B: Very good C: Good D: Fair E: Poor



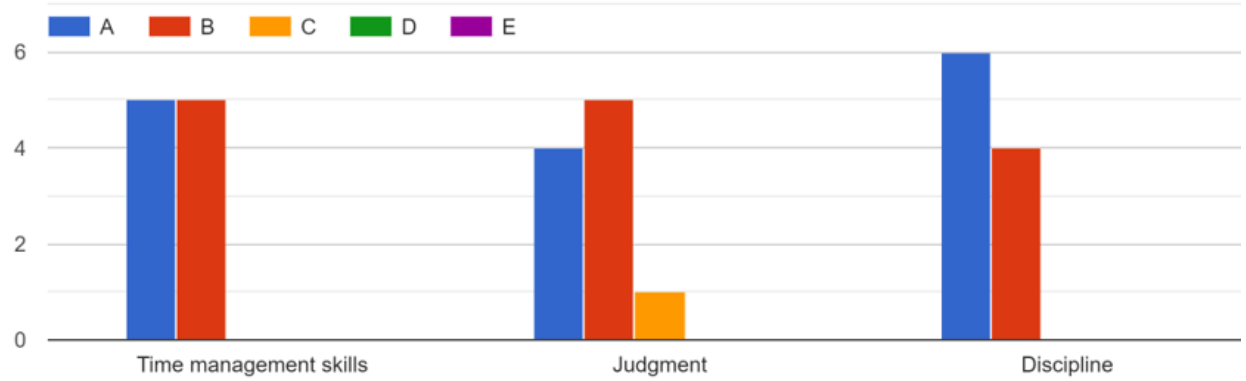
7. Rank Employee's Interpersonal Skills

A: Excellent B: Very good C: Good D: Fair E: Poor



8. Rank Employee's Work skills

A: Excellent B: Very good C: Good D: Fair E: Poor



Annexure C: Graduating Survey

Performa: 3 Survey of Graduating Students
Department of Computer Science & SE
BSCS- Batch (2019-2023)

S.no	Statements	VS	SA	UC	DS	VD
1	The work in the program is educative	20%	80%	0%	0%	0%
2	The program is effective in enhancing team-working abilities.	20%	80%	0%	0%	0%
3	The program administration is effective in supporting learning.	20%	80%	0%	0%	0%
4	The program is effective in developing analytical and problem solving skills.	20%	70%	10%	0%	0%
5	The program is effective in developing independent thinking.	30%	60%	10%	0%	8.3%
6	The program is effective in developing written communication skills.	30%	70%	0%	0%	8.3%
7	The program is effective in developing planning abilities	20%	80%	0%	8.3%	8.3%
8	The objectives of the program have been fully achieved	20%	70%	10%	4.2%	8.3%
9	Whether the contents of curriculum are advanced and meet program objectives	10%	70%	0%	0%	0%
10	Faculty was able to meet the program objectives	30%	70%	0%	0%	0%
11	Environment was conducive for learning	30%	50%	20%	0%	0%
12	Whether the Infrastructure of the department was good	20%	60%	20%	0%	0%
13	Whether the program was comprised of Co-curricular and extra-curricular activities	20%	80%	0%	0%	0%
14	Whether scholarships/ grants were available to students in case of hardship	10%	80%	10%	0%	0%

VS: Very Satisfied SA: Satisfied UC: Uncertain DS: Dissatisfied VD: Very Dissatisfied

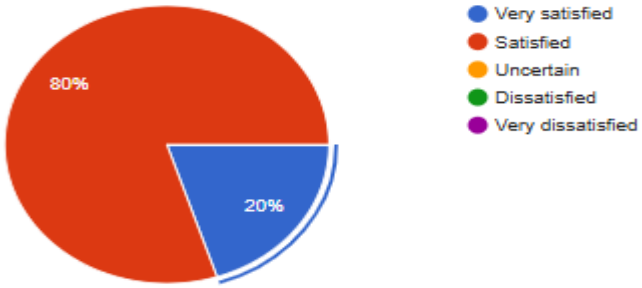
Prepared by:
MaaRia Ashraf
QED Head| Maria Ashraf

Performa: 3 Survey of Graduating Students

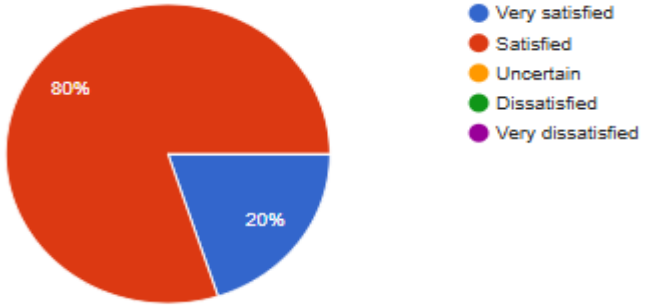
Department of Computer Science & SE

BSCS Batch (2019-2023)

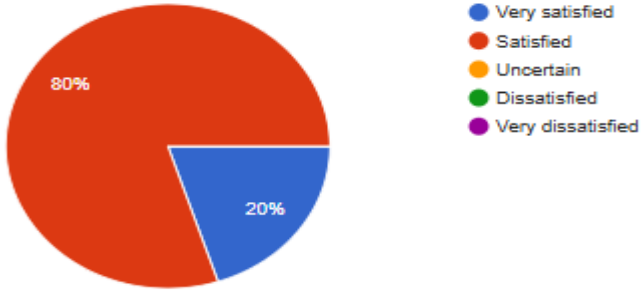
1. The work in the program is educative.



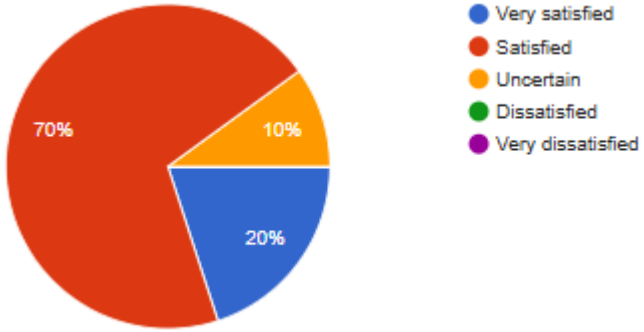
2. The program is effective in enhancing team-working abilities.



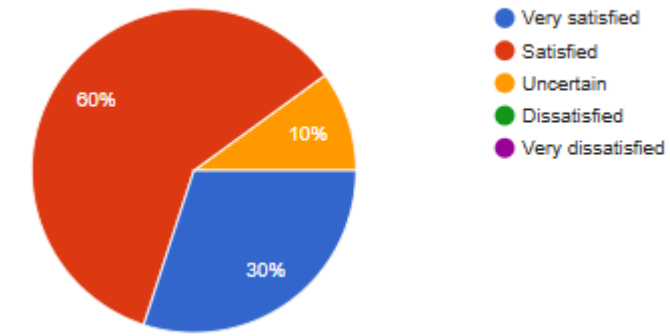
3. The program administration is effective in supporting learning.



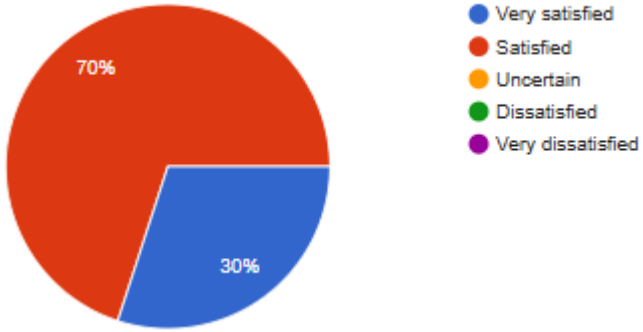
4. The program is effective in developing analytical and problem-solving skills.



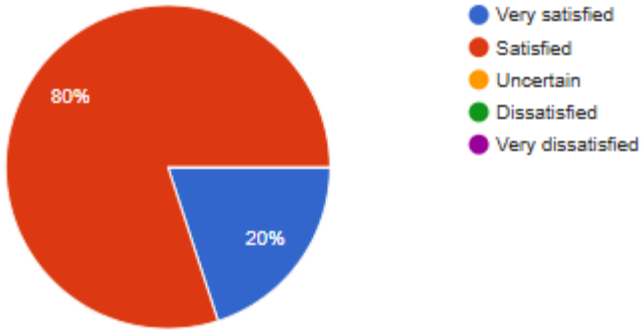
5. The program is effective in developing independent thinking.



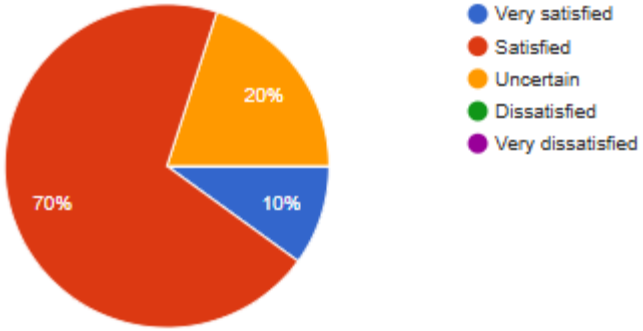
6. The program is effective in developing written communication skills.



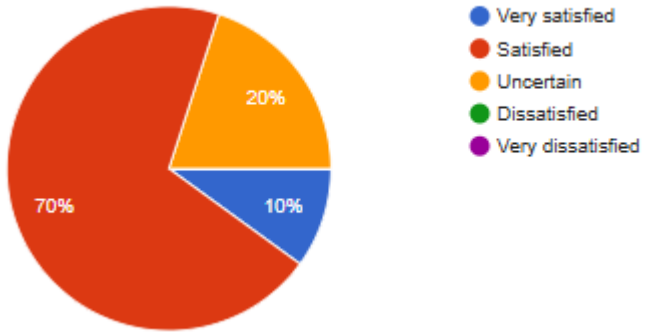
7. The program is effective in developing planning abilities



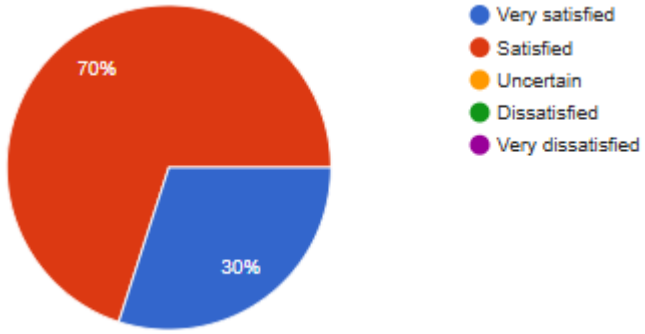
8. The objectives of the program have been fully achieved



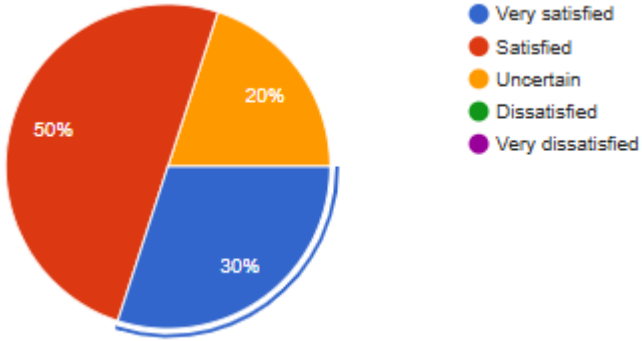
9. Whether the contents of curriculum are advanced and meet program objectives



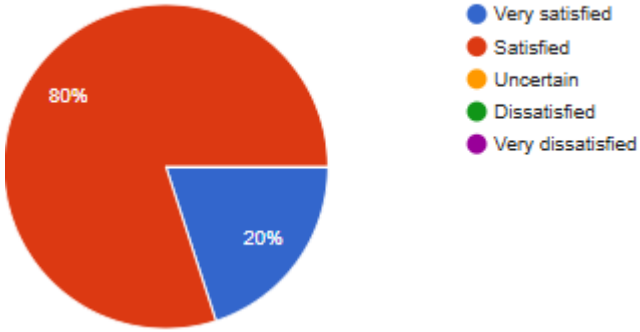
10. Faculty was able to meet the program objectives.



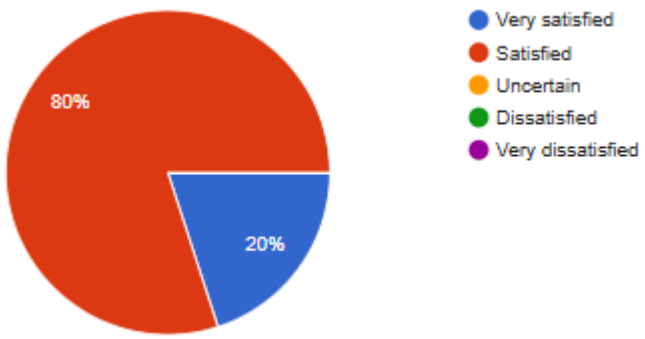
11. Environment was conducive for learning.



12. Whether the Infrastructure of the department was good.

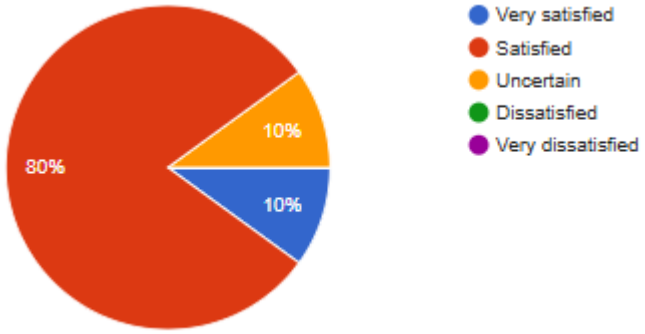


13. Whether the program was comprised of Co-curricular and extra-curricular activities.

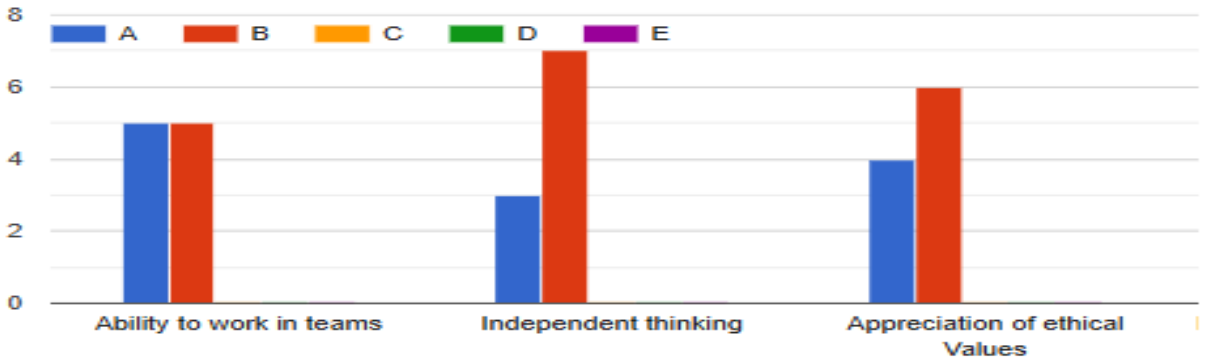


14. Whether scholarships/ grants were available to students

In case of hardship.



15. The internship experience is effective in enhancing.



Prepared by:

MaaRia Ashraf

QED Head | Maria Ashraf

Date: August 11th, 2024.

Performa: 3 Survey of Graduating Students

Department of Computer Science & SE

BSCS- Batch (2020-2024)

S.no	Statements	VS	SA	UC	DS	VD
1	The work in the program is educative	16.7%	62.5%	16.7%	0%	16.7%
2	The program is effective in enhancing team-working abilities.	16.7%	62.5%	4.2%	12.5%	4.2%
3	The program administration is effective in supporting learning.	20.8%	62.5%	0%	8.3%	8.3%
4	The program is effective in developing analytical and problem solving skills.	20.8%	50%	25%	0%	4.2%
5	The program is effective in developing independent thinking.	25%	54.2%	12.5%	0%	8.3%
6	The program is effective in developing written communication skills.	29.2%	50%	12.5%	0%	8.3%
7	The program is effective in developing planning abilities	25%	58.3%	0%	8.3%	8.3%
8	The objectives of the program have been fully achieved	16.7%	54.2%	16.7%	4.2%	8.3%
9	Whether the contents of curriculum are advanced and meet program objectives	8.3%	45.8%	25%	12.5%	8.3%
10	Faculty was able to meet the program objectives	12.5%	58.3%	4.2%	12.5%	12.5%
11	Environment was conducive for learning	25%	45.8%	16.7%	8.3%	4.2%
12	Whether the Infrastructure of the department was good	25%	50%	12.5%	4.2%	8.3%
13	Whether the program was comprised of Co-curricular and extra-curricular activities	25%	45.8%	12.5%	12.5%	4.2%
14	Whether scholarships/ grants were available to students in case of hardship	16.7%	45.8%	25%	0%	12.5%

VS: Very Satisfied SA: Satisfied UC: Uncertain DS: Dissatisfied VD: Very Dissatisfied

Prepared by:

MaaRia Ashraf

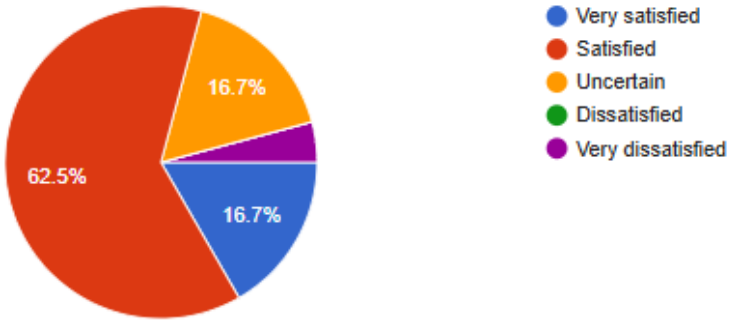
QED Head |Maria Ashraf

Performa: 3 Survey of Graduating Students

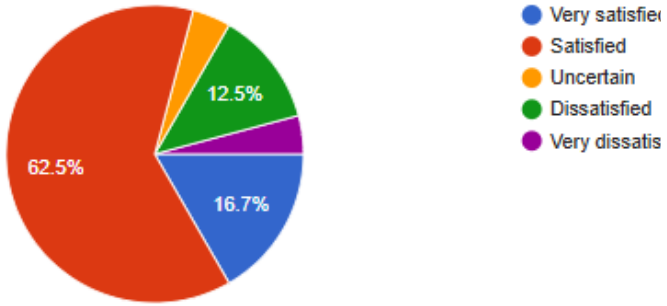
Department of Computer Science & SE

BSCS Batch (2020-2024)

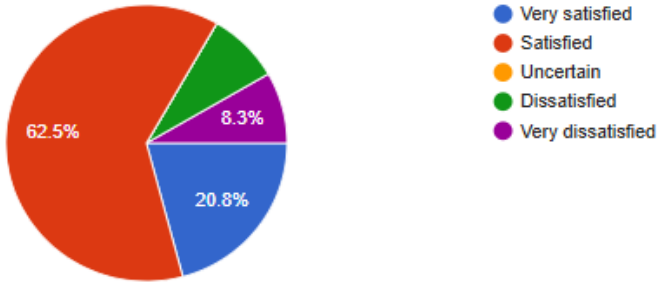
1. The work in the program is educative.



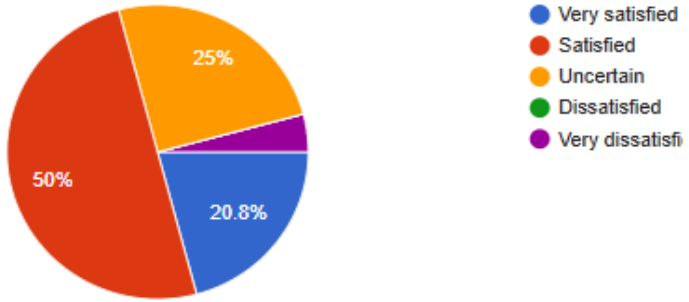
2. The program is effective in enhancing team-working abilities.



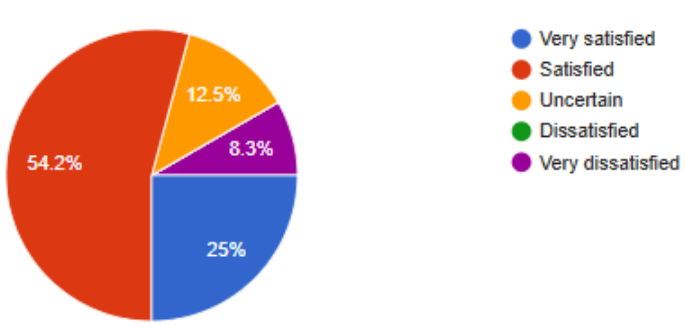
3. The program administration is effective in supporting learning.



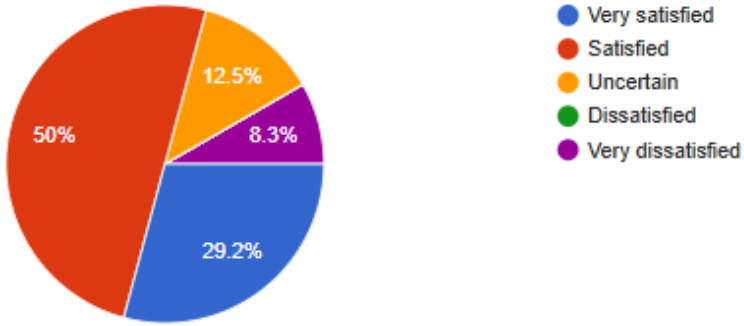
4. The program is effective in developing analytical and problem-solving skills.



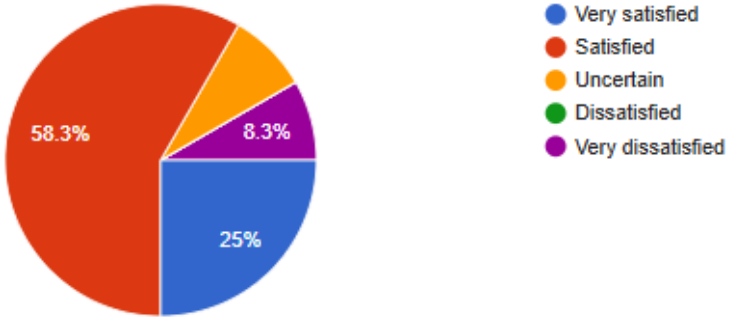
5. The program is effective in developing independent thinking.



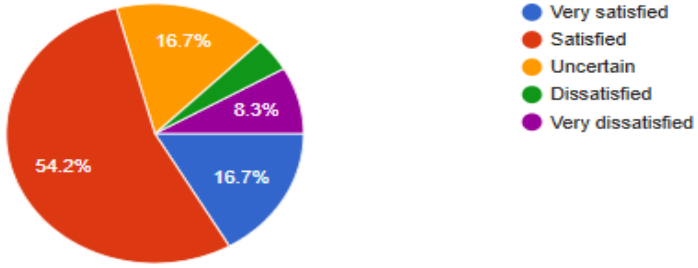
6. The program is effective in developing written communication skills.



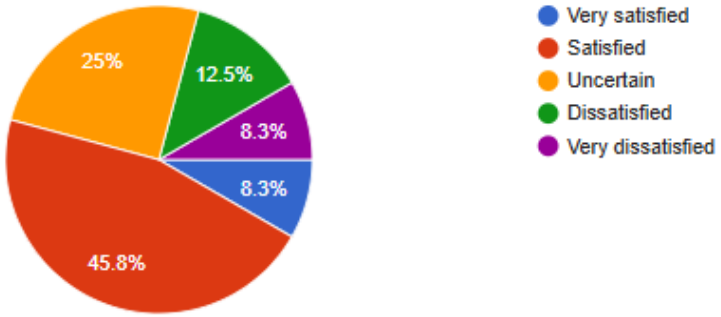
7. The program is effective in developing planning abilities



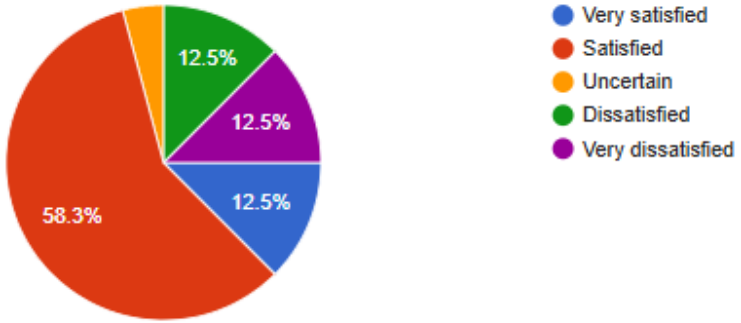
8. The objectives of the program have been fully achieved



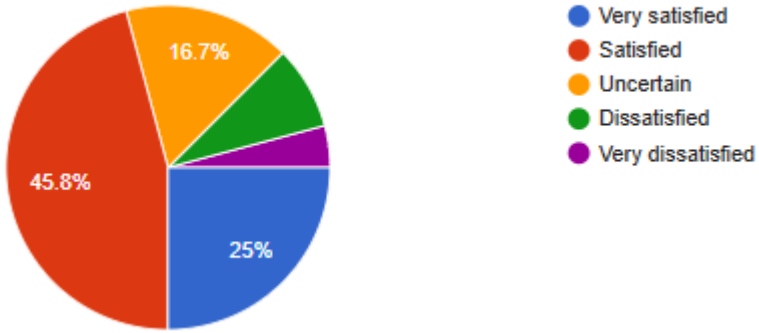
9. Whether the contents of curriculum are advanced and meet program objectives



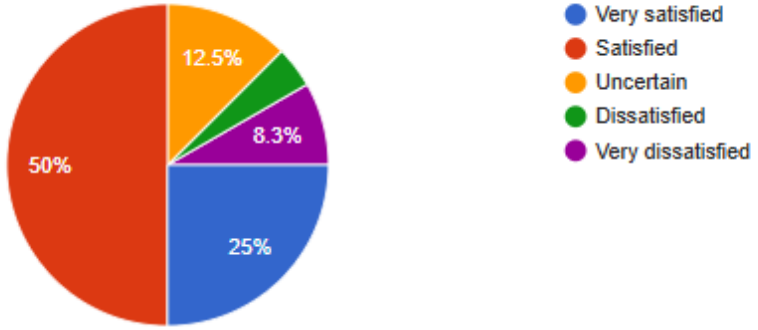
10. Faculty was able to meet the program objectives.



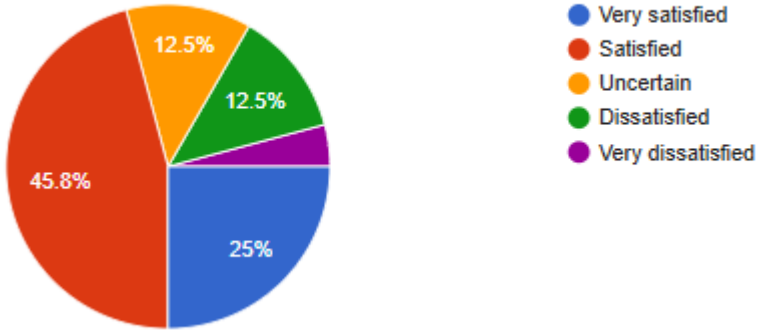
11. Environment was conducive for learning.



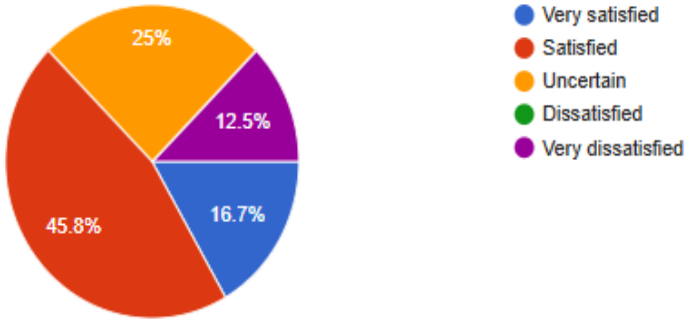
12. Whether the Infrastructure of the department was good.



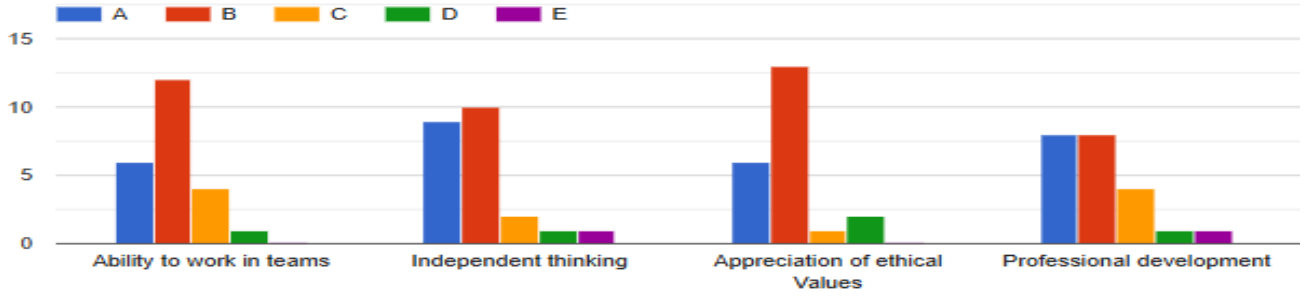
13. Whether the program was comprised of Co-curricular and extra-curricular activities.



14. Whether scholarships/ grants were available to students in case of hardship.



15. The internship experience is effective in enhancing.



Annexure D: Lesson Plan

COURSE READINESS			
Subject Title:	Data Structure	**Course code**	CSC-201
Semester	BSCS 3rd	**Department**	Computer Science

Course Introduction	Any software design problem ultimately boils down to a question of appropriate organization of the Associated data, so that it can be accessed and manipulated easily, thus making data structure a fundamentalfactor in the overall correctness and efficiency of an application. It is imperative that the data for any Application be organized in such a way that it can be retrieved, modified and grow efficiently. (Data Structures and Algorithms) teaches necessary skills to achieve the said target.					
Learning Objective	This course aims at teaching the students to write programs that not only are correct but also computation and space efficient and optimized for the intended use through appropriate structuring/organization of the related data. Students will learn the standard data structures such as linked lists, stacks, queues, trees, graphs and hash tables and the algorithms that manipulate them. Students will also be introduced to the concept of Algorithm complexity analysis in order to make them realize the cost of the operations they perform on their data structures. Various algorithm design Techniques such as greedy, divide and conquer; back tracking etc. Will also be discussed.					
Recommended Textbook	Introduction to Algorithms, Thomas H. Cormen et al, Prentice-Hall.					
Grading System (Weighted Percentages)	**Assignments**	10	**Practical**	25	**Midterm Exam**	30
	Quizzes	5	**Presentations**		**Final Term Exam**	30
Other Rules	•					
Logistics	**Class Time**		**Consulting Hours**	Mon: 1:00 - 3:00		
	Venue		**Contact Information**	numan.nasir@gim.edu.pk		

Lesson Plan

WEEK-1				
Lecture	**TOPICS**	**Content delivered**	**Reference source**	**Assignments/Quiz/Class Activity)**
1	Intro to datastructures	Need of DS in Computers, Why and how to improve data storage	Lecture note and slides	
2	**Algorithms and structures**	**Algorithms and programs**	**Book: chap 1**	

WEEK – 2

Lecture	**TOPICS**	**Content delivered**	**Reference source**	**Comments**
3	OOP Concepts	Abstraction, Concrete and Abstract Data Types, Class invariants and pre-and post conditions, Structures	C++ How to program 10th edition deitel and deitel Chapter 3	
4	**Arrays**	**Arrays (basic and Object types)**	C++ How to program 10th edition deitel and deitel Chapter 7 section 7.3, 7.4	**Assignment**

WEEK – 3

Lecture	TOPICS	Content delivered	Reference source	Comments
5	Arrays	Algorithms on arrays. Multi-dimensional Arrays – applications and algorithms	C++ How to program 10th edition deitel and deitel Chapter 7 section 7.8	
6		**Multidimensional array storage, row-major order, column-major order**	C++ How to program 10th edition Chapter 7 section 7.8	

WEEK – 4

Lecture	TOPICS	Content delivered	Reference source	Comments
7	Complexity	Complexity Analysis, Algorithm time and space complexity trade offs	chap 3 section 3.1	Quiz
8		**Asymptotic Analysis**	chap 3 section 3.2	

WEEK – 5

Lecture	TOPICS	Content delivered	Reference source	Comments
9	Link list	Deletion, Insertion, Searching, Sorting	C++ How to program 10th edition Chapter 8 section 8.1-8.4 Lecture note and slides	Assignment
10	**Doubly link list**	**Deletion, Insertion,** **Searching, Sorting**	C++ How to program 10th edition Chapter 8 section 8.1-8.4 Lecture note and slides	

WEEK – 6

Lecture	TOPICS	Content delivered	Reference source	Comments
11	Stacks	Static Stacks	Lecture note and slides	
12		**Dynamic Stacks**	Lecture note and slides	

WEEK – 7

Lecture	TOPICS	Content delivered	Reference source	Comments
13	Queues	Static Queue	Lecture note and slides	

14		**Dynamic Queue**	Lecture note and slides	

WEEK – 8

Lecture	**TOPICS**	**Content delivered**	**Reference source**	**Comments**
15	Recursion	Applications of Recursion – Fibonacci	**Chap 4 section 4.1**	Quiz
16		**Complexity of recursive algorithms**		

WEEK – 9

Lecture	**TOPICS**	**Content delivered**	**Reference source**	**Comments**
17	Sorting	Merge Sort	**Chap 7**	
18		**Analysis of Merge Sort**	**chap7**	

WEEK – 10

Lecture	**TOPICS**	**Content delivered**	**Reference source**	**Comments**
19	Sorting	Quick Sort	**Chap 7**	
20		**Analysis of Quick Sort**	**chap7**	

WEEK – 11

Lecture	TOPICS	Content delivered	Reference source	Comments
21	Linear Sorting	Counting Sort	**chap 8 section 8.1, 8.2**	Assignment
22	Linear Sorting	Radix Sort, bucket Sort	**chap 8 section 8.3, 8.4**	

WEEK – 12

Lecture	TOPICS	Content delivered	Reference source	Comments
23	Heaps	Heap types	**Chap 6 sec 6.1**	
24		**Heap building**	**Chap 6 sec 6.2, 6.3**	

WEEK – 13

Lecture	TOPICS	Content delivered	Reference source	Comments
25	Trees	Introduction and terminology,	**chap 12 section 12.1**	
26		**Binary trees**	**Chap 12 section 12.2**	**Quiz**

WEEK – 14

Lecture	TOPICS	Content delivered	Reference source	Comments
27		Add, delete node from tree	**Chap 12 section 12.3**	
28		**Tree traversal**	**Chap 12 section 12.4**	

WEEK – 14

Lecture	TOPICS	Content delivered	Reference source	Comments
29	Graph	Graph terminology	**Chap 22 section 22.1**	
30		**Usage and implementation**	**Chap 22 section 22.1**	

WEEK – 15

Lecture	TOPICS	Content delivered	Reference source	Comments
31	Graph traversal	Breadth First Search	Chap 22 section 22.2	
332		**Depth First Search**	**Chap 22 section 22.3**	

<table>
<tr><th colspan="7">COURSE READINESS</th></tr>
<tr><td>Subject Title:</td><td colspan="2">Object Oriented Programming</td><td>Course code</td><td colspan="3">CSC-102</td></tr>
<tr><td>Semester</td><td colspan="2">BSCS (2nd)</td><td>Department</td><td colspan="3">Computer Science</td></tr>
<tr><td>Course Introduction</td><td colspan="6">This unit introduces C++ as an object-oriented programming language, building on existing knowledge of C and Java. The unit covers the C++ language with a focus on its object-oriented features, and how these can be implemented as part of program designs and implementation. You will also study and gain practical experience with the implementation issues related to object-oriented techniques, be able to build good quality software using object-oriented techniques and understand the role of patterns in object-oriented design.</td></tr>
<tr><td>Learning Objective</td><td colspan="6">At the completion of this unit students will be able to:
• Understand object-oriented programming features in C++
• Apply these features to program design and implementation
• Understand object-oriented concepts and how they are supported by C++
• Gain some practical experience of C++
• Understand implementation issues related to object-oriented techniques
• Build good quality software using object-oriented techniques Understand the role of patterns in object-oriented design.</td></tr>
<tr><td>Recommended Textbook</td><td colspan="6">▪ C++ How to Program, Harvey M. Deitel, Paul J. Deitel, Prentice Hall; 7th Edition, 1997, ISBN: 013528910-6.
▪ IT Series Object Oriented Programming with C++</td></tr>
<tr><td rowspan="2">Grading System (Weighted Percentages)</td><td>Assignments</td><td>5%</td><td>Projects</td><td>05%</td><td>Midterm Exam</td><td>22.5%</td></tr>
<tr><td>Quizzes</td><td>5%</td><td>Presentations</td><td>Nil</td><td>Final Term Exam</td><td>Theory: 37.5%
Practical: 25%</td></tr>
<tr><td>Other Rules</td><td colspan="6"></td></tr>
</table>

Logistics	Class Time	Friday: 10am-12:00pm	Consulting Hours	Mon-Fri 03:00pm-04:30pm
	Venue	Zoom App/ Google Classroom	Contact Information	bilalmazhar88@gmail.com 0345-6931085

Lesson Plan

WEEK-1

Lecture	TOPICS	Content delivered	Reference source	Assignments/Quiz/Class Activity)
1	**Structures** • Defining Structures • Declaring Structure Variables	**Structures** Defining Structures Declaring Structure Variables	**Recommended Book/other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, Prentice Hall **book edition: 2nd chapter no: 02 page no:**	
2	• Initializing and Accessing Members of Structures Using Nested Structures • Initializing Nested Structures • Passing structure as Function Parameter	• Initializing and Accessing Members of Structures Using Nested Structures • Initializing Nested Structures • Passing structure as Function Parameter	**Recommended Book/other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, Prentice Hall **book edition: 2nd chapter no: 02 page no:**	**Assignment 01:** Structures **Due Date:** March 12, 2020

LAB	*Writing programs that input data into members of structure and then print data from the members of structure.* *Writing programs that copy one structure variable to another variable.* *Writing programs that swap two structure type variables, Print the results before and after swapping.*	*Writing programs that input data into members of structure and then print data from the members of structure.* *Writing programs that copy one structure variable to another variable.* *Writing programs that swap two structure type variables, Print the results before and after swapping.*		

WEEK – 2

Lecture	TOPICS	Content delivered	Reference source	Comments

3	**Functions** • Introduction to Functions • Declaration, Calling and Definition of Functions • Passing Arguments(constants & variables) to Functions • Returning Values from Functions	**Functions** • Introduction to Functions • Declaration, Calling and Definition of Functions • Passing Arguments(constants & variables) to Functions • Returning Values from Functions	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, Prentice Hall **book edition: 7th chapter no: 06 page no:**	
4	• Passing Structure as Argument to Functions • Returning structure from functions • Passing Pointers as Arguments to Function	• Passing Structure as Argument to Functions • Returning structure from functions • Passing Pointers as Arguments to Function	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, Prentice Hall **book edition: 7th chapter no: 06**	**Assignment 02:** Functions
			page no:	**Due Date:** March 25th, 2020

LAB	*Writing programs that input data into an array and then print data using pointer notation.* *Writing programs that find out the maximum/minimum value in an array through pointer notation* *Writing program that return structure from a function.* *Writing program to swap two values by passing pointers to function.* *Writing program to copy one string to another string using pointers.*	*Writing programs that input data into an array and then print data using pointer notation.* *Writing programs that find out the maximum/minimum value in an array through pointer notation* *Writing program that return structure from a function.* *Writing program to swap two values by passing pointers to function. Writing program to copy one string to another string using pointers.*		

WEEK – 3

Lecture	TOPICS	Content delivered	Reference source	Comments
5	**Object Oriented Programming Concepts** • Object Oriented Approach • Objects and Classes	**Object Oriented Programming Concepts** • Object Oriented Approach • Objects and Classes	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition:** **7th**	

			chapter no: 03 page no:	
6	Characteristics of OO Languages (Inheritance, Polymorphism, Reusability, Overloading), Advantages of OOP.	Characteristics of OO Languages (Inheritance, Polymorphism, Reusability, Overloading), Advantages of OOP.	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 03 page no:**	
LAB	Programming Exercise	Programming Exercise		

WEEK – 4

Lecture	TOPICS	Content delivered	Reference source	Comments
7	**Classes and Objects** • Class Encapsulation • Abstraction • Information Hiding • Access Specifier	**Classes and Objects** • Class Encapsulation • Abstraction • Information Hiding • Access Specifier	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 09 page no:**	

8	• Constructors • Default Copy Constructor • Objects as Function Arguments • Functions returning Objects	• Constructors • Default Copy Constructor • Objects as Function Arguments • Functions returning Objects	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 09 page no:**	**Assignment 03:** Classes **Due Date:**April 09th, 2020
LAB	Programming Exercise	Programming Exercise		

WEEK – 5

Lecture	TOPICS	Content delivered	Reference source	Comments
9	**Classes and Objects** • Array of Objects • Passing/Returning objects • Destructor	**Classes and Objects** • Array of Objects • Passing/Returning objects • Destructor	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 10 page no:**	
10	• Static Class Data • Constant and Classes • Constant Member Function • Constant Objects	• Static Class Data • Constant and Classes • Constant Member Function • Constant Objects	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th**	**Quiz 01: Classes** **Date: April 13, 2020**

			chapter no: 10 **page no:**	
LAB	Programming Exercise	Programming Exercise		

WEEK – 6

Lecture	TOPICS	Content delivered	Reference source	Comments
11	**Inheritance** • Derived and Base Classes. • Derived Class Constructors • Protected Specifier • Overriding	**Inheritance** • Derived and Base Classes. • Derived Class Constructors • Protected Specifier • Overriding	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 12**	
			page no:	
12	• Overriding with • Scope Resolution overridden function	• Overriding • Scope Resolution with overridden function	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 12** **page no:**	**Assignment 04:** Inheritance **Dead Line:** April 22, 2020
LAB	Programming Exercise	Programming Exercise		

WEEK – 7

Lecture	TOPICS	Content delivered	Reference source	Comments
13	**Levels of Inheritance** • Single Inheritance • Multilevel Inheritance	**Levels of Inheritance** • Single Inheritance • Multilevel Inheritance	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 12 page no:**	
14	• Multiple Inheritance • Containership	• Multiple Inheritance • Containership	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 12 page no:**	**Assignment 05:** Inheritance **Due Date:** May 06, 2020
LAB	Programming Exercise	Programming Exercise		

WEEK – 8

Lecture	TOPICS	Content delivered	Reference source	Comments
15	Object Oriented Designing/Modeling	Object Oriented Designing/Modeling	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book**	

			edition: 7th chapter no: 18 page no:	
16	String Classes	String Classes	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 18 page no:**	
LAB	Programming Challenge	Programming Challenge		

WEEK – 9

Lecture	TOPICS	Content delivered	Reference source	Comments
17	**Operator Overloading** Unary Operator	**Operator Overloading** Unary Operator	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 11 page no:**	
18	Binary Operator	Binary Operator	**Recommended Book /other:**	**Assignment 06:**

			C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 11 page no:**	Operator Overloading **Due Date:** May 18, 2020
LAB	Programming Exercise	Programming Exercise		

WEEK – 10

Lecture	TOPICS	Content delivered	Reference source	Comments
19	**Polymorphism** • Virtual Function • Inline Function • Static Function	**Polymorphism** • Virtual Function • Inline Function • Static Function	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 13 page no:**	
20	• Late and Early binding • Friend Function • Abstract Classes	• Late and Early binding • Friend Function • Abstract Classes	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 13 page no:**	**Assignment 07:** Polymorphism **Due Date:** May 27, 2020
LAB	Programming Exercise	Programming Exercise		

WEEK – 11

Lecture	TOPICS	Content delivered	Reference source	Comments
21	**Memory Management** • Use of New and Delete Keyword. • Pointer to Object	**Memory Management** • Use of New and Delete Keyword. • Pointer to Object	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 08 page no:**	
22	• Pointer to pointer • Array of Pointer to string	• Pointer to pointer • Array of Pointer to string	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 08 page no:**	**Assignment 08:** Memory Management **Due Date:** June 04, 2020
LAB	Programming Exercise	Programming Exercise		

WEEK – 12

Lecture	TOPICS	Content delivered	Reference source	Comments

23	**Templates** Template Functions	**Templates** Template Functions	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 14 page no:**	
24	Class Templates	Class Templates	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 14 page no:**	**Assignment 09:** Templates **Due Date:** June 10, 2020
LAB	Programming Exercise	Programming Exercise		

WEEK – 13

Lecture	TOPICS	Content delivered	Reference source	Comments
25	**Exception Handling** • Exceptions syntax • Simple and Multiple Exceptions	**Exception Handling** • Exceptions syntax • Simple and Multiple Exceptions	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 16 page no:**	

26	Exceptions with arguments, Programming Exercise	Exceptions with arguments, Programming Exercise	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 16 page no:**	
LAB	Programming Exercise	Programming Exercise		

WEEK – 14

Lecture	TOPICS	Content delivered	Reference source	Comments
27	**Standard Template Library** Function Templates	**Standard Template Library** Function Templates	**Recommended Book /other:**	
	Class templates Vector Least De-queue	Class templates Vector Least De-queue	C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 07 page no:**	
28	Iterator Function Objects	Iterator Function Objects	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 07 page no:**	

LAB	Programming Exercise	Programming Exercise		

WEEK – 15

Lecture	TOPICS	Content delivered	Reference source	Comments
29	**Files and Streams** • Streams, String I/O • Character I/O • Object I/O • I/O With Multiple Objects • File Pointers	**Files and Streams** • Streams, String I/O • Character I/O • Object I/O • I/O With Multiple Objects • File Pointers	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 15 page no:**	
30	• File Pointers • Disk I/O With Member Functions • Error Handling • Redirection of Input & Output • Command Line Arguments • Printer Output	• File Pointers • Disk I/O With Member Functions • Error Handling • Redirection of Input and Output • Command Line Arguments	**Recommended Book /other:** C++ How to Program, Harvey M. Deitel, Paul J. Deitel, **book edition: 7th chapter no: 15 page no:**	**Assignment 10:** File Handling **Due Date:** June 19th, 2020
		Printer Output		
LAB	Programming Exercise	Programming Exercise		

WEEK – 16

Lecture	TOPICS	Content delivered	Reference source	Comments
29-30	**Project Demos and Viva**	**Project Demos and Viva**	**Recommended Book /other: book edition: chapter**	

			no: **page** **no:**	

Annexure E: Survey for Teaching Method Evaluation

Online Class Report

instructor Name:			**Department/Course:**			**Class:**		
Week	**Date**	**Lecture**	**Arrival Time**			**Leave Time**		
3			On time ☐	Late ☐	Specify time:	On time ☐	Before ☐	Specify time:
Day 02			On time ☐	Late ☐	Specify time:	On time ☐	Before ☐	Specify time:
Day 03			On time ☐	Late ☐	Specify time:	On time ☐	Before ☐	Specify time:

Day: 01	**Date:**	**Class:**

instructor Attitude/Behavior				
Mobile Use	Once ☐	Thrice ☐	Number of times ☐	Comments:
Sitting on chair	Once ☐	Thrice ☐	Number of times ☐	Comments:
Eating	Once ☐	Thrice ☐	Number of times ☐	Comments:
Class Environment				
Students are desciplined	Never ☐	Some time ☐	All the time ☐	Comments:
Student's Group activity	Never ☐	Some time ☐	All the time ☐	Comments:
instructor maintained formal attiude	Never ☐	Some time ☐	All the time ☐	Comments:

Day: 02	**Date:**	**Class:**

instructor Attitude/Behavior				
Mobile Use	Once ☐	Thrice ☐	Number of times ☐	Comments:
Sitting on chair	Once ☐	Thrice ☐	Number of times ☐	Comments:
Eating	Once ☐	Thrice ☐	Number of times ☐	Comments:
Class Environment				
Students are desciplined	Never ☐	Some time ☐	All the time ☐	Comments:

Student's Group activity	Never ☐	Some time ☐	All the time ☐	Comments:
instructor maintained formal attiude	Never ☐	Some time ☐	All the time ☐	Comments:

Day: 03		**Date:**		**Class:**
instructor Attitude/Behavior				
Mobile Use	Once ☐	Thrice ☐	Number of times ☐	Comments:
Sitting on chair	Once ☐	Thrice ☐	Number of times ☐	Comments:
Eating	Once ☐	Thrice ☐	Number of times ☐	Comments:
Class Environment				
Students are desciplined	Never ☐	Some time ☐	All the time ☐	Comments:
Student's Group activity	Never ☐	Some time ☐	All the time ☐	Comments:
instructor maintained formal attiude	Never ☐	Some time ☐	All the time ☐	Comments:

CMO Signature

Verified by
Quality Enhancement Department (QED)

Performa for Teacher's Work Evaluation

Start Date: _____ **End Date:** _____

instructor's Name: _____ **Course No:** _____

Class/Section: _____ **Name of Subject:** _____

Sr. No.	Percentage of Course Executed	instructor Feedback	Reason (if not taken)	Cross Observation
1	Number of Assignments taken			
2	Number of Assignments taken			
3	Number of Presentation taken			
4	Number of Assignments marked			
5	Number of Assignments marked			
6	Number of Presentation marked			
7	Percentage of marks uploaded on sessional sheets/portal			
8	Any other activity done in the class			
9	Number of classes/labs taken			
10	Percentage of Content covered/highlighted			

Date: _____ **Verified by:** _____

Instructor Feedback:

Observer Feedback:

QED Feedback:

Date: _____ **Verified by:** _____

Survey for Enhancing Quality of Education

instructor Name		**Department**	
subjects currently teaching			
1.	Subject in nature	€ Theoretical	€ Practical
Practical application:			
Does this subject meet the needs and expectations of industry?			
2.	Subject in nature	€ Theoretical	€ Practical
Practical application:			
Is this subject meets the need and expectations of industry?			
3.	Subject in nature	€ Theoretical	€ Practical
Practical application:			
Is this subject meets the need and expectations of industry?			
4.	Subject in nature	€ Theoretical	€ Practical
Practical application:			
Is this subject meets the need and expectations of industry?			
How quality graduates can be produced who would meet the expectations of employer in terms of the knowledge, skills, and competencies?			
Do you think, you are delivering updated knowledge?			
What mechanism do you suggest towards achieving learning outcomes of a given study program			
How do you define a good quality teacher			

What strategies do you generally use in class while teaching as how you clarify the concepts that you teach to your students?
How do you relate disciplinary knowledge to other subject areas?
Is this way working for students to make them clear?
How do you apply theoretical knowledge from discipline to practical situation?
What have you done to keep yourself up to date with developments in your subject area?
Do you plan your teaching in accordance to achieve the desire objectives?
What do you consider to be the key elements of teaching a successful lesson?
How many steps do you follow for planning a lesson? Can you give me an example of a lesson to which you consider good, and you are asked to repeat that lesson then what would you do to make that different?
What is your opinion about the use of modern instructional techniques in teaching relevant to your subject area?
Are these techniques beneficial for students?
Do you know the specific uses of technology in your discipline?
How you find technological resources specific to discipline?

Like is there any subject which you consider incomplete in teaching or learning if you do not use them?
Enlist technological tools use in your subject area
Suggestions..?

Annexure F: FYP Policy and Rubric

Pir Mehr Ali Shah

Arid Agriculture University Rawalpindi

Gujrat Institute of Management Sciences

FYP I – IDEA EVALUATION FORM

Project Title: _____

Supervisor: _____ Project No: _____

Sr. No.	Registration No.	Student Name
1		
2		
3		

a. Project Features:

Proposed Features	
i.	vi.
ii.	vii.
iii.	viii.
iv.	ix.
v.	x.

b. Project Evaluation:

Criteria	Good	Normal	Inferior
Project Complexity			
Technological Aspect			
Potential Impact on Society			
Benchmarking			
Project Features			

c. Add/Remove Features:

Add	Remove

Examiner Decision: Approved ☐ Approved with changes ☐

Remarks: _____

_____

_____

_____

_____

_____	_____	_____
Name of Supervisor	Date	Signature

_____

Definition of Terms:

i. **Project Complexity:** The project complexity is referred to as the degree of significant contribution that a group of students will put in the design and development of project, spanning over two academic semesters. Secondly, determine if the domain of the project marks the standard of complexity required from a bachelor's student degree, as thisproject will determine the skills they learnt throughout the degree.

ii. **Technological Aspects:** Technological aspects of the project means tools/technologies and language(s) used to develop it.

iii. **Potential Impact on Society:** Determine how much impact the product could have in its stated strategy for a society or community/focused group.

iv. **Benchmarking:** The proposed project should be compared with existing similar type of works. A comparison table is more helpful for comparative view, listing features of existing works and proposed project.

v. **Project Features:** Verify that the features mentioned are complete and significant enough for an FYP project.

Gujrat Institute of Management Sciences
Pir Mehr Ali Shah
Arid Agriculture University Rawalpindi

FINAL YEAR PROJECT (FYP)
(FYP-I REGISTRATION FORM)

Project Team

Arid Number	Full Name	Program	Contact Number	Email Address

Supervisor Name
(Designation)

Gujrat Institute of Management Sciences

¶
¶

Project Description:

(please enter your project description here)

Salient features of the proposed project are:

Desktop / Web	Mobile App
Future Expansions (if any):	

INSTRUCTIONS FOR STUDENTS

1. Project Title and Description should be filled by the supervisor and students.
2. This form should be filled electronically and submitted in print form.
3. Submit duly filled form to PMO.
4. Project once selected cannot be changed without the consent of the supervisor, PMO and permission of the Campus Head.

FOR OFFICE ONLY

Project ID:

Signature and Date: _____ PMO

Signature and Date: _____ Campus Head

Gujrat Institute of Management Sciences
PMAS -Arid Agriculture University RWP
Department of Computer Science & IT
FYP-1 Final Evaluation Form

Project ID:		**Date:**	
Time:		**Venue:**	

Project Title:			
Supervisor:		**Evaluators:**	

Instructions: -Please give minimum 20 minutes to each group.
-Evaluate each student individually.
-Use back sheet if you need to write more comments

Things to Evaluate: -UML as per accepted proposal, Presentation, Chapter 3 (UML Diagrams: Visual representation of system's flow using various diagrams), Complete front end (Designing 100% of functional requirements), * means revised mid marks (at the discretion of the evaluation committee)

Sr. #	Student Reg.#	Student Name	Ch. 3	Front End	Presentation	Supervisor	Mid Marks* 20	Final Marks 40(7+7+3+3+20)
			7 marks	7 marks	3 marks	3 marks		
Evaluator 1								

Evaluator 2								
Aggregated Results by PMO								

Evaluator Name	Comments	Signature

PMO C% SE GIMS

GIMS

Gujrat Institute of Management Sciences
PMAS -Arid Agriculture University RWP
Department of Computer Science & IT
FYP-1 Mid Evaluation Form

☐ BSCS ☐ BSSE

Project ID:		**Date:**	
Time:		**Venue:**	

Project Title:			
Supervisor:		**Evaluators:**	

Instructions: -Please give minimum 20 minutes to each group.
-Evaluate each student individually.
-Use back sheet if need to write more comments

Things to Evaluate: - Presentation, Chapter 1 (Introduction, Problem Background, Project Features, Stakeholders, Constraints), Chapter 2 (Req Analysis), Front End 40 % (Designing 40% of functional requirements with front end in working state)

Sr. #	Student Reg.#	Student Name	Ch. 1	Ch. 2	Presentation	Front End	Supervisor	Total 20
			3 marks	6 marks	3 marks	4 marks	4 marks	
Evaluator 1								
Evaluator 2								
Aggregated Results by PMO								

Evaluator Name	Comments	Signature

PMO CS/SE GDAS

GDAS

Annexure G: Teacher and Course Evaluation

Instructor Name: Mr. Bilal Mazhar
Course: CS-692 Visual Programming

The student shows the positive response towards instructor which showcase the student's satisfaction towards teacher. The 97% students were agreed instructor was prepared for class. The survey results indicate that the instructor has completed whole course and also provide the additional material apart from the course textbook. The 93% and 7% were strongly agreed and agreed respectively that instructor maintains an environment that is conducive to learning

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The instructor is prepared for each class.	97%	3%	0%	0%	0%
The instructor demonstrates knowledge of the subject.	97%	3%	0%	0%	0%
The instructor has completed the whole course.	100%	0%	0%	0%	0%
The instructor provides additional material apart from the textbook.	100%	0%	0%	0%	0%
The instructor gives citations regarding current situations with reference to Pakistan's context.	97%	3%	0%	0%	0%
The instructor communicates the subject matter effectively.	97%	3%	0%	0%	0%
The instructor shows respect toward students and encourages class participation.	97%	0%	3%	0%	0%
The instructor maintains an environment that is conducive to learning.	93%	7%	0%	0%	0%
The instructor arrives on time in class.	93%	7%	0%	0%	0%
The instructor leaves on time.	90%	10%	0%	0%	0%
The instructor returns the graded scripts in a reasonable amount of time.	97%	3%	0%	0%	0%
The instructor was available during the specified office hours after class for consultations.	97%	3%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	97%	3%	0%	0%	0%
The syllabus clearly states course objectives requirements, procedures and grading criteria.	93%	7%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	93%	7%	0%	0%	0%

The assignments and exams covered the materials presented in the course.	93%	7%	0%	0%	0%
The course material is modern and updated.	90%	10%	0%	0%	0%

Instructor Name: Ms. Rabia Butt

Course: CS-536 Theory of Automata and Formal Languages

The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 76% and 18% were strongly agree and agreed respectively. The survey results indicate that the instructor communicates the subject matter effectively. The 88% and 12% were strongly agreed and agreed respectively that the instructor communicates the subject matter effectively.

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The instructor is prepared for each class.	76%	18%	6%	0%	0%
The instructor demonstrates knowledge of the subject.	76%	18%	6%	0%	0%
The instructor has completed the whole course.	82%	18%	0%	0%	0%
The instructor provides additional material apart from the textbook.	82%	18%	0%	0%	0%
The instructor gives citations regarding current situations with reference to Pakistan's context.	76%	18%	6%	0%	0%
The instructor communicates the subject matter effectively.	88%	12%	0%	0%	0%
The instructor shows respect toward students and encourages class participation.	82%	18%	0%	0%	0%
The instructor maintains an environment that is conducive to learning.	76%	18%	6%	0%	0%
The instructor arrives on time in class.	88%	6%	0%	6%	0%
The instructor returns the graded scripts in a reasonable amount of time.	76%	18%	6%	0%	0%
The instructor was available during the specified office hours after class for consultations.	82%	18%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	88%	12%	0%	0%	0%
The syllabus clearly states course objectives requirements, procedures and grading criteria.	82%	18%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	82%	18%	0%	0%	0%
The assignments and exams covered the materials presented in the course.	88%	12%	0%	0%	0%
The course material is modern and updated.	82%	18%	0%	0%	0%

Instructor Name: Ms. Rabia Butt
Course: CS-582 Operating System Concepts
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 100% were strongly agree. The survey results indicate that the instructor has completed the course outline..

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The instructor is prepared for each class.	100%	0%	0%	0%	0%
The instructor demonstrates knowledge of the subject.	100%	0%	0%	0%	0%
The instructor has completed the whole course.	100%	0%	0%	0%	0%
The instructor provides additional material apart from the textbook.	100%	0%	0%	0%	0%
The instructor gives citations regarding current situations with reference to Pakistan's context.	97%	3%	0%	0%	0%
The instructor communicates the subject matter effectively.	97%	3%	0%	0%	0%
The instructor shows respect toward students and encourages class participation.	97%	3%	0%	0%	0%
The instructor maintains an environment that is conducive to learning.	97%	3%	0%	0%	0%
The instructor arrives on time in class.	97%	3%	0%	0%	0%
The instructor leaves on time.	100%	0%	0%	0%	0%
The instructor returns the graded scripts in a reasonable amount of time.	94%	6%	0%	0%	0%
The instructor was available during the specified office hours after class for consultations.	91%	9%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	97%	3%	0%	0%	0%
The syllabus clearly states course objectives requirements, procedures and grading criteria.	94%	6%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	97%	3%	0%	0%	0%
The assignments and exams covered the materials presented in the course.	100%	0%	0%	0%	0%
The course material is modern and updated.	94%	6%	0%	0%	0%

Instructor Name: Mr. Bilal Mazhar
Course: CS-432 Modern Programming Languages
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 75% and 18% were strongly agree and agreed respectively.

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The instructor is prepared for each class.	75%	18%	0%	0%	8%
The instructor demonstrates knowledge of the subject.	70%	13%	10%	0%	8%
The instructor has completed the whole course.	78%	15%	0%	0%	8%
The instructor provides additional material apart from the textbook.	70%	18%	5%	0%	8%
The instructor gives citations regarding current situations with reference to Pakistan's context.	68%	10%	13%	0%	10%
The instructor communicates the subject matter effectively.	75%	15%	3%	0%	8%
The instructor shows respect toward students and encourages class participation.	65%	15%	5%	5%	10%
The instructor maintains an environment that is conducive to learning.	70%	15%	5%	3%	8%
The instructor arrives on time in class.	75%	15%	0%	3%	8%
The instructor leaves on time.	78%	13%	0%	0%	10%
The instructor returns the graded scripts in a reasonable amount of time.	70%	15%	5%	3%	8%
The instructor was available during the specified office hours after class for consultations.	73%	15%	3%	0%	10%
The Subject matter presented in the course has increased your knowledge of the subject.	68%	13%	5%	5%	10%
The syllabus clearly states course objectives requirements, procedures and grading criteria.	73%	13%	3%	3%	10%
The course integrates theoretical course concepts with real-world applications.	75%	10%	8%	0%	8%
The assignments and exams covered the materials presented in the course.	75%	10%	5%	3%	8%
The course material is modern and updated.	70%	15%	5%	0%	10%

Instructor Name: Mr. Awais Ilyas Baig
Course: CS-542 Analysis of Algorithms
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 87% and 10% were strongly agree and agreed respectively. The survey results indicate that the instructor has completed the course outline. The 84% and 16% were strongly agreed and agreed respectively instructor returns the graded scripts in a reasonable amount of time.

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The instructor is prepared for each class.	87%	10%	0%	0%	3%
The instructor demonstrates knowledge of the subject.	81%	16%	0%	3%	0%
The instructor has completed the whole course.	84%	10%	3%	3%	0%
The instructor provides additional material apart from the textbook.	74%	16%	3%	3%	3%
The instructor gives citations regarding current situations with reference to Pakistan's context.	87%	10%	0%	3%	0%
The instructor communicates the subject matter effectively.	81%	13%	3%	3%	0%
The instructor shows respect toward students and encourages class participation.	94%	6%	0%	0%	0%
The instructor maintains an environment that is conducive to learning.	81%	13%	0%	3%	3%
The instructor arrives on time in class.	90%	3%	3%	0%	3%
The instructor leaves on time.	87%	10%	0%	0%	3%
The instructor returns the graded scripts in a reasonable amount of time.	84%	16%	0%	0%	0%
The instructor was available during the specified office hours after class for consultations.	90%	6%	0%	3%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	84%	10%	3%	0%	3%
The syllabus clearly states course objectives requirements, procedures and grading criteria.	81%	13%	3%	3%	0%
The course integrates theoretical course concepts with real-world applications.	87%	10%	0%	3%	0%

The assignments and exams covered the materials presented in the course.	84%	13%	3%	0%	0%
The course material is modern and updated.	81%	16%	0%	3%	0%

Instructor Name: Ms. Mishal Fatima
Course: CS-632 Artificial Intelligence
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 73%, 18% and 9% were strongly agree, agreed and disagree respectively. The survey results indicate that the instructor has completed the course outline.

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The instructor is prepared for each class.	73%	18%	0%	9%	0%
The instructor demonstrates knowledge of the subject.	73%	18%	0%	9%	0%
The instructor has completed the whole course.	73%	9%	9%	9%	0%
The instructor provides additional material apart from the textbook.	73%	9%	0%	9%	9%
The instructor gives citations regarding current situations with reference to Pakistani context.	73%	9%	0%	9%	9%
The instructor communicates the subject matter effectively.	73%	18%	0%	9%	0%
The instructor shows respect towards students and encourages class participation.	73%	18%	0%	9%	0%
The instructor maintains an environment that is conducive to learning.	73%	18%	0%	9%	0%
The instructor start zoom lecture/class on time.	73%	18%	0%	9%	0%
The instructor ends the zoom lecture/class on time.	73%	18%	0%	9%	0%
The instructor has completed all classes regularly.	73%	9%	9%	9%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	73%	9%	9%	9%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	73%	18%	0%	9%	0%
The instructor was available during the specified hours on WhatsApp/Zoom/LMS/Google classroom for consultation.	73%	18%	0%	9%	0%
The course integrates theoretical course concepts with real-world applications.	73%	9%	0%	9%	9%
The assignments and exams covered the materials presented in the course.	73%	9%	9%	9%	0%
The course material is modern and updated	73%	18%	0%	9%	0%

Instructor Name: Mr. Bilal Mazhar
Course: CS-323 Programming Fundamentals

The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 88% and 12% were strongly agree and agreed respectively. The survey results indicate that the instructor has completed the course outline.

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The instructor is prepared for each class.	88%	12%	0%	0%	0%
The instructor demonstrates knowledge of the subject.	96%	4%	0%	0%	0%
The instructor has completed the whole course.	96%	4%	0%	0%	0%
The instructor provides additional material apart from the textbook.	88%	8%	4%	0%	0%
The instructor gives citations regarding current situations with reference to Pakistani context.	84%	16%	0%	0%	0%
The instructor communicates the subject matter effectively.	92%	8%	0%	0%	0%
The instructor shows respect towards students and encourages class participation.	100%	0%	0%	0%	0%
The instructor maintains an environment that is conducive to learning.	92%	8%	0%	0%	0%
The instructor start zoom lecture/class on time.	88%	4%	8%	0%	0%
The instructor ends the zoom lecture/class on time.	88%	8%	4%	0%	0%
The instructor has completed all classes regularly.	92%	8%	0%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	88%	12%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	92%	8%	0%	0%	0%
The instructor was available during the specified hours on WhatsApp/Zoom/LMS/Google classroom for consultation.	88%	12%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	92%	8%	0%	0%	0%

The assignments and exams covered the materials presented in the course.	92%	8%	0%	0%	0%
The course material is modern and updated	92%	8%	0%	0%	0%

Instructor Name: Mr. Ashar Javed
Course: CSC-251 Web Technologies
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 100% were strongly agree.. The survey results indicate that the instructor has completed the course outline.

Teacher Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The instructor is prepared for each class.	100%	0%	0%	0%	0%
The instructor demonstrates knowledge of the subject.	100%	0%	0%	0%	0%
The instructor has completed the whole course.	100%	0%	0%	0%	0%
The instructor provides additional material apart from the textbook.	100%	0%	0%	0%	0%
The instructor gives citations regarding current situations with reference to Pakistani context.	100%	0%	0%	0%	0%
The instructor communicates the subject matter effectively.	100%	0%	0%	0%	0%
The instructor shows respect towards students and encourages class participation.	100%	0%	0%	0%	0%
The instructor maintains an environment that is conducive to learning.	100%	0%	0%	0%	0%
The instructor start zoom lecture/class on time.	100%	0%	0%	0%	0%
The instructor ends the zoom lecture/class on time.	100%	0%	0%	0%	0%
The instructor has completed all classes regularly.	100%	0%	0%	0%	0%
The instructor posts the assignments/quizzes on time and give reasonable time to complete the assigned assignments/quizzes.	88%	0%	0%	0%	0%
The Subject matter presented in the course has increased your knowledge of the subject.	100%	0%	0%	0%	0%
The instructor was available during the specified hours on WhatsApp/Zoom/LMS/Google classroom for consultation.	100%	0%	0%	0%	0%
The course integrates theoretical course concepts with real-world applications.	100%	0%	0%	0%	0%

The assignments and exams covered the materials presented in the course.	100%	0%	0%	0%	0%
The course material is modern and updated	100%	0%	0%	0%	0%

Instructor Name: Ms. Maha Ijaz
Course: CS-577 Computer Networks
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 94% and 6% were strongly agree and agreed respectively. The survey results indicate that the instructor has completed the course outline.

Course Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The course objectives were clear.	94%	6%	0%	0%	0%
The course workload was manageable.	94%	6%	0%	0%	0%
The course was well organized (e.g. timely access to materials, notification of changes, etc.)	94%	6%	0%	0%	0%
The approximate level of your attendance during the whole course.	94%	6%	0%	0%	0%
I participated actively in the course.	94%	6%	0%	0%	0%
I think I have made progress in this course	94%	6%	0%	0%	0%
I think the Course was well structured to achieve the learning outcomes (there was a good balance of lectures, tutorials, practical, etc.)	94%	6%	0%	0%	0%
The learning and teaching methods encouraged participation.	94%	6%	0%	0%	0%
The overall environment in the class was conducive to learning.	94%	6%	0%	0%	0%
The classrooms were satisfactory.	94%	6%	0%	0%	0%
Learning materials (Lesson Plans, Course Notes, etc.) were relevant and useful.	94%	3%	3%	0%	0%
Recommended reading Books etc. were relevant and appropriate.	94%	3%	3%	0%	0%
The provision of learning resources in the library was adequate and appropriate.	94%	6%	0%	0%	0%
The provision of learning resources on the Web was adequate and appropriate (if relevant).	94%	6%	0%	0%	0%
The course stimulated my interest and thought about the subject area.	94%	6%	0%	0%	0%
The course was appropriate with reference to current technologies.	94%	6%	0%	0%	0%

Ideas and concepts were presented clearly.	94%	6%	0%	0%	0%
The method of assessment were reasonable.	97%	3%	0%	0%	0%
Feedback on assessment was timely.	94%	3%	3%	0%	0%
Feedback on assessment was helpful	94%	3%	3%	0%	0%
I understood the lectures.	97%	3%	0%	0%	0%
The material was well organized and presented.	97%	3%	0%	0%	0%
The instructor was responsive to student needs and problems.	94%	6%	0%	0%	0%
Had The instructor been regular throughout the course?	94%	6%	0%	0%	0%
The material in the tutorials was useful.	97%	3%	0%	0%	0%
I was happy with the amount of work needed for assignments and projects.	97%	3%	0%	0%	0%

Instructor Name: Ms. Iqra Saleem
Course: CSC-211 Computer Organization & Assembly Language
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 94% and 6% were strongly agree and agreed respectively. The survey results indicate that the instructor has completed the course outline.

Course Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The course objectives were clear.	94%	6%	0%	0%	0%
The course workload was manageable.	84%	10%	6%	0%	0%
The course was well organized (e.g. timely access to materials, notification of changes, etc.)	94%	6%	0%	0%	0%
The approximate level of your attendance during the whole course.	87%	10%	3%	0%	0%
I participated actively in the course.	87%	10%	3%	0%	0%
I think I have made progress in this course	87%	10%	3%	0%	0%
I think the Course was well structured to achieve the learning outcomes (there was a good balance of lectures, tutorials, practical, etc.)	84%	16%	0%	0%	0%
The learning and teaching methods encouraged participation.	94%	6%	0%	0%	0%
The overall environment in the class was conducive to learning.	90%	10%	0%	0%	0%
The classrooms were satisfactory.	90%	10%	0%	0%	0%
Learning materials (Lesson Plans, Course Notes, etc.) were relevant and useful.	94%	6%	0%	0%	0%
Recommended reading Books etc. were relevant and appropriate.	90%	10%	0%	0%	0%
The provision of learning resources in the library was adequate and appropriate.	94%	6%	0%	0%	0%
The provision of learning resources on the Web was adequate and appropriate (if relevant).	90%	10%	0%	0%	0%
The course stimulated my interest and thought about the subject area.	97%	3%	0%	0%	0%
The course was appropriate with reference to current technologies.	90%	10%	0%	0%	0%

Ideas and concepts were presented clearly.	90%	6%	3%	0%	0%
The method of assessment were reasonable.	87%	10%	3%	0%	0%
Feedback on assessment was timely.	90%	10%	0%	0%	0%
Feedback on assessment was helpful	87%	13%	0%	0%	0%
I understood the lectures.	87%	13%	0%	0%	0%
The material was well organized and presented.	87%	13%	0%	0%	0%
The instructor was responsive to student needs and problems.	90%	10%	0%	0%	0%
Had The instructor been regular throughout the course?	90%	10%	0%	0%	0%
The material in the tutorials was useful.	90%	10%	0%	0%	0%
I was happy with the amount of work needed for assignments and projects.	87%	10%	3%	0%	0%

Instructor Name: Ms. Rabia Butt
Course: CS-636 Compiler Construction
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 89% and 11% were strongly agree and agreed respectively. The survey results indicate that the instructor has completed the course outline. The 78% and 17% were strongly agreed and agreed respectively that the course workload was manageable

Course Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The course objectives were clear.	89%	11%	0%	0%	0%
The course workload was manageable.	78%	17%	6%	0%	0%
The course was well organized (e.g. timely access to materials, notification of changes, etc.)	83%	11%	6%	0%	0%
The approximate level of your attendance during the whole course.	78%	17%	6%	0%	0%
I participated actively in the course.	89%	11%	0%	0%	0%
I think I have made progress in this course	83%	11%	6%	0%	0%
I think the Course was well structured to achieve the learning outcomes (there was a good balance of lectures, tutorials, practical, etc.)	78%	22%	0%	0%	0%
The learning and teaching methods encouraged participation.	78%	11%	11%	0%	0%
The overall environment in the class was conducive to learning.	89%	11%	0%	0%	0%
The classrooms were satisfactory.	78%	22%	0%	0%	0%
Learning materials (Lesson Plans, Course Notes, etc.) were relevant and useful.	89%	11%	0%	0%	0%
Recommended reading Books etc. were relevant and appropriate.	83%	11%	6%	0%	0%
The provision of learning resources in the library was adequate and appropriate.	83%	11%	6%	0%	0%
The provision of learning resources on the Web was adequate and appropriate (if relevant).	78%	17%	6%	0%	0%
The course stimulated my interest and thought about the subject area.	89%	11%	0%	0%	0%
The course was appropriate with reference to current technologies.	83%	11%	6%	0%	0%

Ideas and concepts were presented clearly.	89%	6%	6%	0%	0%
The method of assessment were reasonable.	83%	17%	0%	0%	0%
Feedback on assessment was timely.	78%	11%	11%	0%	0%
Feedback on assessment was helpful	83%	17%	0%	0%	0%
I understood the lectures.	89%	11%	0%	0%	0%
The material was well organized and presented.	83%	17%	0%	0%	0%
The instructor was responsive to student needs and problems.	89%	6%	6%	0%	0%
Had The instructor been regular throughout the course?	83%	11%	6%	0%	0%
The material in the tutorials was useful.	89%	11%	0%	0%	0%
I was happy with the amount of work needed for assignments and projects.	72%	28%	0%	0%	0%

Instructor Name: Mr. Bilal Mazhar
Course: CS-666 Web Engineering
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 80% and 10% were strongly agree and agreed respectively. The survey results indicate that the instructor has completed the course outline.

Course Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The course objectives were clear.	80%	10%	7%	3%	0%
The course workload was manageable.	77%	10%	3%	10%	0%
The course was well organized (e.g. timely access to materials, notification of changes, etc.)	87%	10%	0%	3%	0%
The approximate level of your attendance during the whole course.	87%	10%	3%	0%	0%
I participated actively in the course.	80%	10%	10%	0%	0%
I think I have made progress in this course	77%	10%	10%	3%	0%
I think the Course was well structured to achieve the learning outcomes (there was a good balance of lectures, tutorials, practical, etc.)	70%	13%	13%	3%	0%
The learning and teaching methods encouraged participation.	77%	13%	7%	3%	0%
The overall environment in the class was conducive to learning.	77%	10%	13%	0%	0%
The classrooms were satisfactory.	80%	10%	10%	0%	0%
Learning materials (Lesson Plans, Course Notes, etc.) were relevant and useful.	83%	7%	10%	0%	0%
Recommended reading Books etc. were relevant and appropriate.	77%	13%	7%	3%	0%
The provision of learning resources in the library was adequate and appropriate.	80%	7%	10%	3%	0%
The provision of learning resources on the Web was adequate and appropriate (if relevant).	80%	10%	7%	3%	0%
The course stimulated my interest and thought about the subject area.	77%	10%	10%	3%	0%
The course was appropriate with reference to current technologies.	80%	10%	10%	0%	0%

Ideas and concepts were presented clearly.	80%	10%	10%	0%	0%
The method of assessment were reasonable.	77%	13%	7%	0%	3%
Feedback on assessment was timely.	73%	17%	7%	0%	3%
Feedback on assessment was helpful	77%	13%	10%	0%	0%
I understood the lectures.	83%	7%	10%	0%	0%
The material was well organized and presented.	80%	13%	7%	0%	0%
The instructor was responsive to student needs and problems.	73%	20%	7%	0%	0%
Had The instructor been regular throughout the course?	87%	7%	7%	0%	0%
The material in the tutorials was useful.	77%	13%	10%	0%	0%
I was happy with the amount of work needed for assignments and projects.	80%	7%	13%	0%	0%

Instructor Name: Mr. Awais Ilyas Baig
Course: CS-532 Computer Architecture
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 100% were strongly agree the survey results indicate that the instructor has completed the course outline.

Course Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The course objectives were clear.	100%	0%	0%	0%	0%
The course workload was manageable.	77%	0%	0%	0%	0%
The course was well organized (e.g. timely access to materials, notification of changes, etc.)	100%	0%	0%	0%	0%
The approximate level of your attendance during the whole course.	100%	0%	0%	0%	0%
I participated actively in the course.	96%	4%	0%	0%	0%
I think I have made progress in this course	96%	4%	0%	0%	0%
I think the Course was well structured to achieve the learning outcomes (there was a good balance of lectures, tutorials, practical, etc.)	100%	0%	0%	0%	0%
The learning and teaching methods encouraged participation.	100%	0%	0%	0%	0%
The overall environment in the class was conducive to learning.	100%	0%	0%	0%	0%
The classrooms were satisfactory.	100%	0%	0%	0%	0%
Learning materials (Lesson Plans, Course Notes, etc.) were relevant and useful.	100%	0%	0%	0%	0%
Recommended reading Books etc. were relevant and appropriate.	100%	0%	0%	0%	0%
The provision of learning resources in the library was adequate and appropriate.	100%	0%	0%	0%	0%
The provision of learning resources on the Web was adequate and appropriate (if relevant).	100%	0%	0%	0%	0%
The course stimulated my interest and thought about the subject area.	100%	0%	0%	0%	0%
The course was appropriate with reference to current technologies.	100%	0%	0%	0%	0%

Ideas and concepts were presented clearly.	80%	0%	0%	0%	0%
The method of assessment were reasonable.	77%	0%	0%	0%	0%
Feedback on assessment was timely.	73%	0%	0%	0%	0%
Feedback on assessment was helpful	77%	0%	0%	0%	0%
I understood the lectures.	83%	0%	0%	0%	0%
The material was well organized and presented.	80%	0%	0%	0%	0%
The instructor was responsive to student needs and problems.	100%	0%	0%	0%	0%
Had The instructor been regular throughout the course?	100%	0%	0%	0%	0%
The material in the tutorials was useful.	100%	0%	0%	0%	0%
I was happy with the amount of work needed for assignments and projects.	100%	0%	0%	0%	0%

Instructor Name: Ms. Iqra Saleem
Course: CSC-111 Digital Logic Design
The student's response has been observed satisfactory towards the statement the instructor is prepared for each class. The 96% and 4% were strongly agree and uncertain respectively. The survey results indicate that the instructor has completed the course outline.

Course Evaluation Summary					
S. A:(Strongly Agree) A:(Agree) UC:(Uncertain) D:(Disagree) S. D:(Strongly Disagree)					
Questions	**S. A**	**A**	**UC**	**D**	**S. D**
The course objectives were clear.	96%	0%	4%	0%	0%
The course workload was manageable.	91%	4%	4%	0%	0%
The course was well organized (e.g. timely access to materials, notification of changes, etc.)	96%	0%	4%	0%	0%
The approximate level of your attendance during the whole course.	96%	0%	4%	0%	0%
I participated actively in the course.	91%	4%	4%	0%	0%
I think I have made progress in this course	91%	4%	4%	0%	0%
I think the Course was well structured to achieve the learning outcomes (there was a good balance of lectures, tutorials, practical, etc.)	91%	4%	4%	0%	0%
The learning and teaching methods encouraged participation.	96%	0%	4%	0%	0%
The overall environment in the class was conducive to learning.	96%	0%	4%	0%	0%
The classrooms were satisfactory.	96%	0%	4%	0%	0%
Learning materials (Lesson Plans, Course Notes, etc.) were relevant and useful.	96%	0%	4%	0%	0%
Recommended reading Books etc. were relevant and appropriate.	96%	0%	4%	0%	0%
The provision of learning resources in the library was adequate and appropriate.	91%	4%	4%	0%	0%
The provision of learning resources on the Web was adequate and appropriate (if relevant).	96%	0%	4%	0%	0%
The course stimulated my interest and thought about the subject area.	87%	9%	4%	0%	0%

The course was appropriate with reference to current technologies.	91%	4%	4%	0%	0%
Ideas and concepts were presented clearly.	96%	0%	4%	0%	0%
The method of assessment were reasonable.	91%	4%	4%	0%	0%
Feedback on assessment was timely.	96%	0%	4%	0%	0%
Feedback on assessment was helpful	96%	0%	4%	0%	0%
I understood the lectures.	96%	0%	4%	0%	0%
The material was well organized and presented.	96%	0%	4%	0%	0%
The instructor was responsive to student needs and problems.	91%	4%	4%	0%	0%
Had The instructor been regular throughout the course?	96%	0%	4%	0%	0%
The material in the tutorials was useful.	96%	0%	4%	0%	0%
I was happy with the amount of work needed for assignments and projects.	91%	4%	4%	0%	0%

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Annexure H: Teacher Feedback on Teacher and Course Evaluation

Performa 10/1: Teacher & Course Evaluation Feedback

Fall- 2023

S. no	Instructor Name	Courses	Class	Remarks
1	Ms Maria Ashraf	MATH-101 Calculus & Analytical Geometry	BS-CS 1st	A
		MATH-101 Calculus & Analytical Geometry	BS-SE 1st	A
		MATH-103 Linear Algebra	BS-SE 3rd	A
		MATH-103 Linear Algebra	BS-CS 3rd	A

Note: write your remarks as per the instructions i.e.

S.A:(Strongly Agree) **A**:(Agree) **UC**:(Uncertain) **D**:(Disagree) **S.D**:(Strongly Disagree)

Feedback:

Mention area of improvement:

Institute should provide resources for activities.

Please give your suggestions for academic improvements:

Maaria Ashraf

Head QED | Maria Ashraf

Maaria Ch

Signature

Date:-Feb 29th,2024.

Performa 10/1: Teacher & Course Evaluation Feedback
Fall-2023

S. no	Instructor Name	Courses	Class	Remarks
6	Ms. Rabia Butt	CS-583 Operating System	BS -SE(4th)	A
		S-536 Theory of Automata and Formal Languages	BSCS(5th(AI)) BS-CS(5th)	A
		CS-687 Parallel & Distributed Computing	BS-CS(7th)	A

Note: write your remarks as per the instructions i.e.

S.A:(Strongly Agree) **A**:(Agree) **UC**:(Uncertain) **D**:(Disagree) **S.D**:(Strongly Disagree)

Feedback:

Mention area of improvement:

Lack of student practice was observed in final exam. I will try t make sure that we will overcome next.

Please give your suggestions for academic improvements:

Coordination of lab In charge is required to set up lab timidly. Otherwise a formal procedure should circulate instructing how to request or lab setup.

Maaria Ashraf

Head QED | Maria Ashraf

Rabia Butt
Signature

Date:-Feb 29th,2024.

Performa 10/1: Teacher & Course Evaluation Feedback
Fall-2023

S. no	Instructor Name	Courses	Class	Remarks
13	Mr. Bilal Mazhar	AI-401 Programming for Artificial Intelligence	BS-CS(5th(AI))	A
		CS-692 Visual Programming	BS-CS(5th) BS SE(5)	A
		CS-666 Web Engineering	BS-CS(6th)	A
		CS-692 Visual Programming	BS-IT(9th)	A

Note: write your remarks as per the instructions i.e.

S.A:(Strongly Agree) **A**:(Agree) **UC**:(Uncertain) **D**:(Disagree) **S.D**:(Strongly Disagree)

Feedback:

Mention area of improvement:

We need to conduct workshops related to subjects engage students in practical.

Please give your suggestions for academic improvements:

Need to update few curriculum also seminars related to trends.

Maaria Ashraf

Head QED | Maria Ashraf

Bilal Mazhar
Signature

Date: March,7th 2024.

Performa 10/1: Teacher & Course Evaluation Feedback
Fall-2023

S. no	Instructor Name	Courses	Class	Remarks
15	Mr. Muhammad Sami Ullah	CS-685 Human Computer Interaction	BS-IT(6th)	A
		CSC-101 Programming Fundamentals Class:	BS-CS(1st) BS SE(1st)	A
		SE-440 Software Design and Architecture Class:	BS SE(4th)	A
		CSC-204 Computer Networks	BS SE(3rd) BS-CS(3rd)	A

Note: write your remarks as per the instructions i.e.

S.A:(Strongly Agree) **A**:(Agree) **UC**:(Uncertain) **D**:(Disagree) **S.D**:(Strongly Disagree)

Feedback:

Mention area of improvement:

N/A

Please give your suggestions for academic improvements:

Maaria Ashraf
Head QED | Maria Ashraf

_Sami Ullah
Signature

Date: March,7th 2024.

Performa 10/1: Teacher & Course Evaluation Feedback
Spring-2024

S. no	Instructor Name	Courses	Class	Remarks
6	Ms. Rabia Butt	CS-636 Compiler Construction	BS-CS(6th)	A
		CS-687 Parallel & Distributed Computing	BS-CS(7th)	A
		CS-597 Cyber Security	BS-IT(8th)	A

Note: write your remarks as per the instructions i.e.

S.A:(Strongly Agree) **A**:(Agree) **UC**:(Uncertain) **D**:(Disagree) **S.D**:(Strongly Disagree)

Feedback:

Mention area of improvement:

N/A

Please give your suggestions for academic improvements:

Maaria Ashraf

Head QED | Maria Ashraf

Rabia Butt
Signature

Date-July 29th,2024.

Performa 10/1: Teacher & Course Evaluation Feedback
Spring -2024

S. no	Instructor Name	Courses	Class	Remarks
20	Ms. Iqra Saleem	CSC-111 Digital Logic Design	BS-CS(2nd)	SA
		CSC-211 Computer Organization & Assembly Language	BS SE(4)	SA

Note: write your remarks as per the instructions i.e.

S.A:(Strongly Agree) **A**:(Agree) **UC**:(Uncertain) **D**:(Disagree) **S.D**:(Strongly Disagree)

Feedback:

Mention area of improvement:

Update software and more workspace for students.

Please give your suggestions for academic improvements:

Provide training on soft skills like communication teamwork and leadership.

Maaria Ashraf
Head QED | Maria Ashraf

Iqra Saleem
Signature

Date: July 29th 2024.

Performa 10/1: Teacher & Course Evaluation Feedback
Spring-2024

S. no	Instructor Name	Courses	Class	Remarks
16	Mr. Awais Ilyas Baig	SE-540 Software Construction & Development	BS SE(5)	A
		CS-497 Information Security	BS-CS(8th)	A

Note: write your remarks as per the instructions i.e.

S.A:(Strongly Agree) **A**:(Agree) **UC**:(Uncertain) **D**:(Disagree) **S.D**:(Strongly Disagree)

Feedback:

Mention area of improvement:

The subjects should involve guest speakers and industry practitioners.

Please give your suggestions for academic improvements:

Overall the academic environment is satisfactory. The campus should focus on hiring more junior lecturers who are skilled in the related subjects areas.

Maaria Ashraf
Head QED | Maria Ashraf

Awais Ilyas Baig
Signature

Date: July,29th 2024.

Performa 10/1: Teacher & Course Evaluation Feedback
Spring-2024

S. no	Instructor Name	Courses	Class	Remarks
18	Ms. Maryam Mushtaq	MGT-405 Technical & Academic Writing	BBA(3rd)	A
		ENG-102 Functional English	BS-CS(1st)	A
		ENG-315 Technical and Business Writing	BS SE(5)	A
		ENG-325 Communication and Presentation Skills	BS-CS(3rd)	A

Note: write your remarks as per the instructions i.e.

S.A:(Strongly Agree) **A**:(Agree) **UC**:(Uncertain) **D**:(Disagree) **S.D**:(Strongly Disagree)

Feedback:

Mention area of improvement:

N/A

Please give your suggestions for academic improvements:

N/A

Maaria Ashraf

Head QED | Maria Ashraf

Mariam Mushtaq

Signature

Date: July,29th 2024.

Annexure I: Faculty Survey

Performa: 5 Faculty Survey Report-Fall 2020
Department of CS

S.no	Statements	VS	SA	UC	DS	VD
1	Your mix of research teaching and community service	0%	100%	0%	0%	0%
2	The intellectual stimulation of your work	16.7%	83.3%	0%	0%	0%
3	Type of teaching / research you currently do	%	100%	0%	0%	0%
4	Your interaction with students	50%	50%	0%	0%	0%
5	Cooperation you receive form colleagues	33.3%	66.7%	0%	0%	0%
6	The mentoring (guidance) available to you	33.3%	66.7%	10%	0%	0%
7	Administrative support from the department	33.3%	50%	16.7%	20%	0%
8	Providing clarity about the faculty promotion process	0%	33.3%	50%	16.7%	0%
9	Your prospects for advancement and progress through ranks	0%	50%	50%	0%	0%
10	Salary and compensation package	0%	33.3%	50%	16.7%	0%
11	Job security and stability at the department	0%	83.3%	16.7%	0%	0%
12	Amount of time you have for yourself and family	0%	66.7%	33.3%	0%	0%
13	The overall climate at the department	33.3%	66.7%	0%	0%	0%
14	Whether the department is utilizing your experience and knowledge	33.3%	66.7%	0%	0%	0%

VS: Very Satisfied SA: Satisfied UC: Uncertain DS: Dissatisfied VD: Very Dissatisfied

Prepared by:

Zainab Mahmood

QED Head |Zainab Mahmood

Performa: 5 Faculty Survey Report Spring 2023

Department of CS

S.no	Statements	VS	SA	UC	DS	VD
1	Your mix of research teaching and community service	8.3%	83.3%	8.3%	0%	0%
2	The intellectual stimulation of your work	16.7%	75%	8.3%	0%	0%
3	Type of teaching / research you currently do	33.3%	58.3%	8.3%	0%	0%
4	Your interaction with students	58.3%	41.7%	0%	0%	0%
5	Cooperation you receive form colleagues	41.7%	58.3%	0%	0%	0%
6	The mentoring (guidance) available to you	25%	66.7%	8.3%	0%	0%
7	Administrative support from the department	33.3%	50%	8.3%	0%	8.3%
8	Providing clarity about the faculty promotion process	8.3%	33.3%	41.7%	8.3%	8.3%
9	Your prospects for advancement and progress through ranks	8.3%	41.7%	50%	0%	0%
10	Salary and compensation package	8.3%	16.7%	16.7%	41.7%	16.7%
11	Job security and stability at the department	8.3%	58.3%	25%	8.3%	8.3%
12	Amount of time you have for yourself and family	16.7%	50%	25%	8.3%	0%
13	The overall climate at the department	25%	66.7%	0%	0%	8.3%
14	Whether the department is utilizing your experience and knowledge	8.3%	66.7%	16.7%	0%	8.3%

VS: Very Satisfied SA: Satisfied UC: Uncertain DS: Dissatisfied VD: Very Dissatisfied

Prepared by:

MaaRia Ashraf

QED Head |Maria Ashraf

Performa: 5 Faculty Survey Report-Fall 2023

Department of CS

S.no	Statements	VS	SA	UC	DS	VD
1	Your mix of research teaching and community service	25%	50%	25%	0%	0%
2	The intellectual stimulation of your work	25%	75%	0%	0%	0%
3	Type of teaching / research you currently do	25%	75%	0%	0%	0%
4	Your interaction with students	50%	50%	0%	0%	0%
5	Cooperation you receive form colleagues	75%	25%	0%	0%	0%
6	The mentoring (guidance) available to you	75%	25%	0%	0%	0%
7	Administrative support from the department	50%	50%	0%	0%	0%
8	Providing clarity about the faculty promotion process	25%	50%	25%	0%	0%
9	Your prospects for advancement and progress through ranks	25%	75%	0%	0%	0%
10	Salary and compensation package	0%	75%	25%	0%	0%
11	Job security and stability at the department	100%	0%	0%	0%	0%
12	Amount of time you have for yourself and family	25%	75%	0%	0%	0%
13	The overall climate at the department	50%	50%	0%	0%	0%
14	Whether the department is utilizing your experience and knowledge	25%	75%	0%	0%	0%

VS: Very Satisfied SA: Satisfied UC: Uncertain DS: Dissatisfied VD: Very Dissatisfied

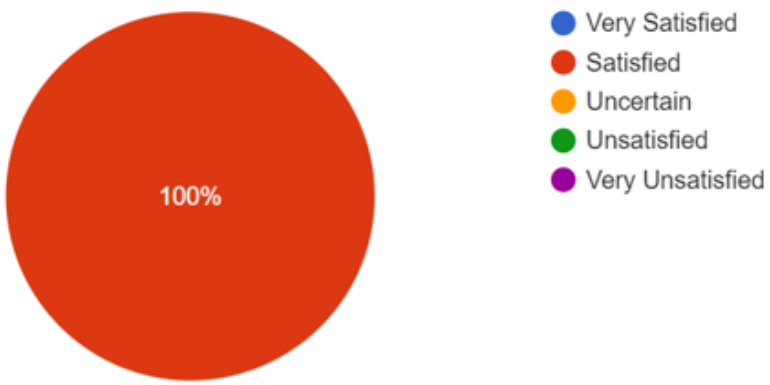
Prepared by:

MaaRia Ashraf

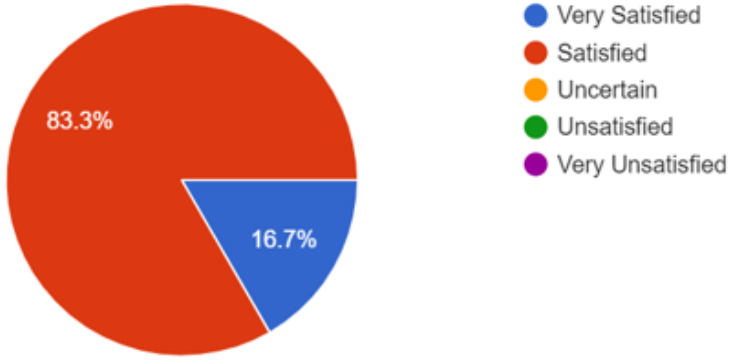
QED Head |Maria Ashraf

Performa: 5 Faculty Survey Report-Fall 2022
Department of CS

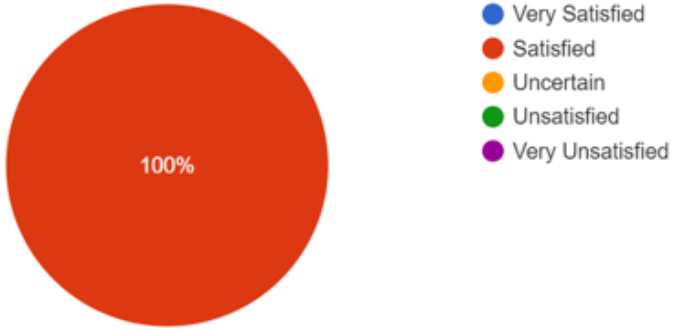
1. Your mix of research teaching and community service.



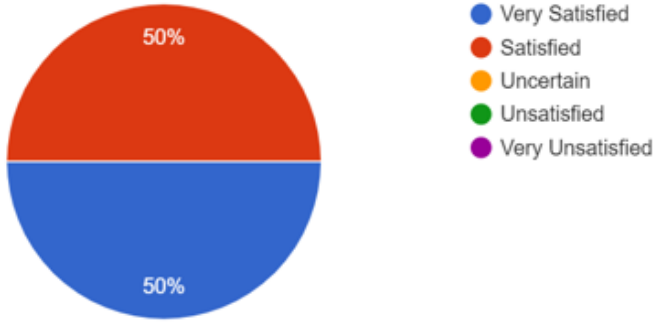
2. The intellectual stimulation of your work.



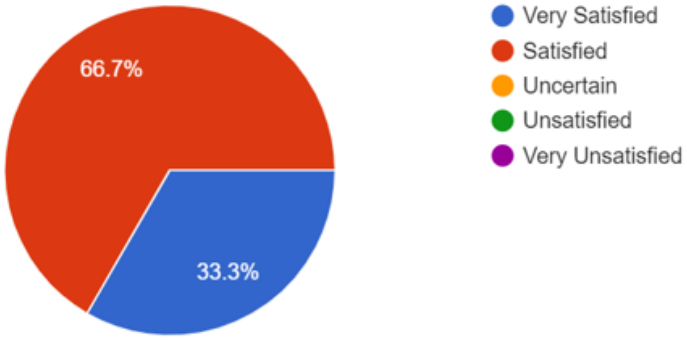
3. Type of teaching / research you currently doing.



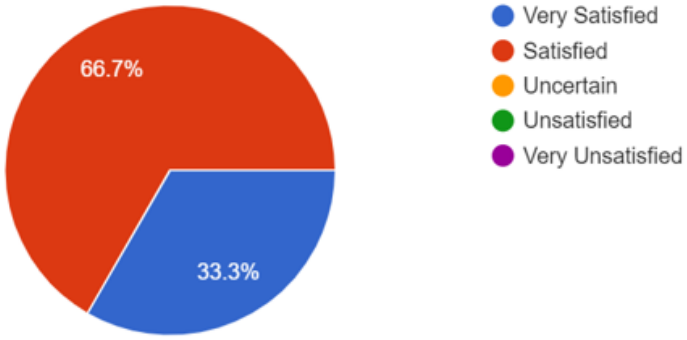
4. Your interaction with students.



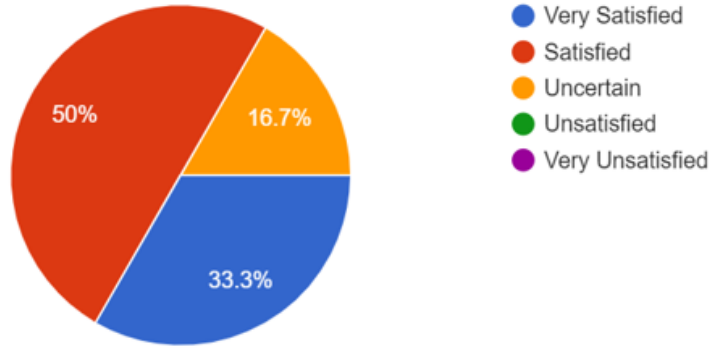
5. Cooperation you receive form colleagues.



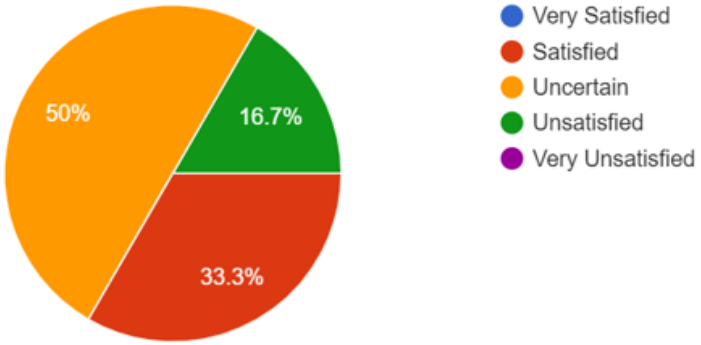
6. The mentoring (guidance) available to you.



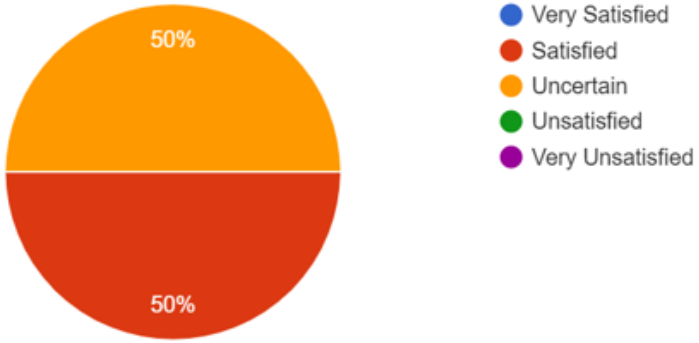
7. Administrative support from the department.



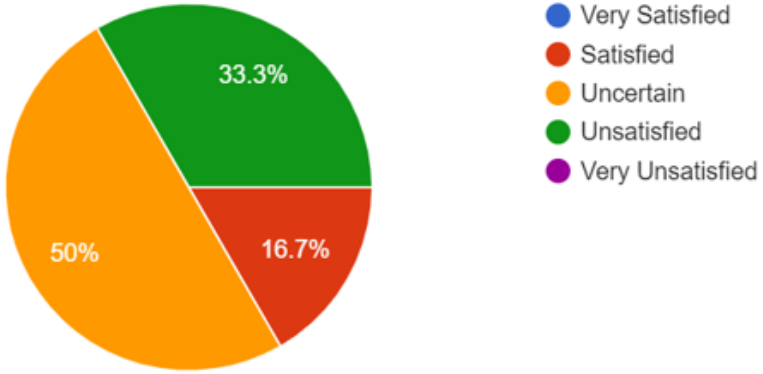
8. Providing clarity about the faculty promotion process.



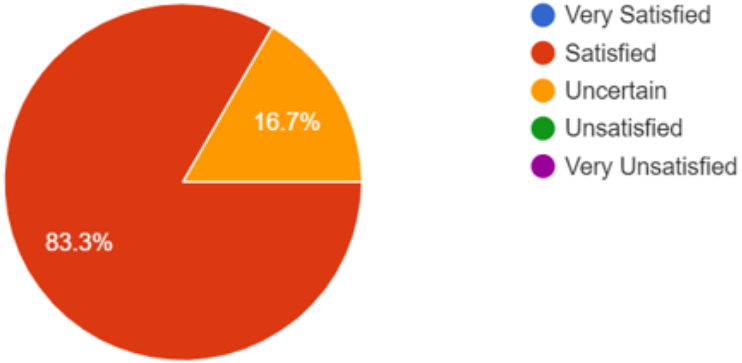
9. Your prospects for advancement and progress through ranks.



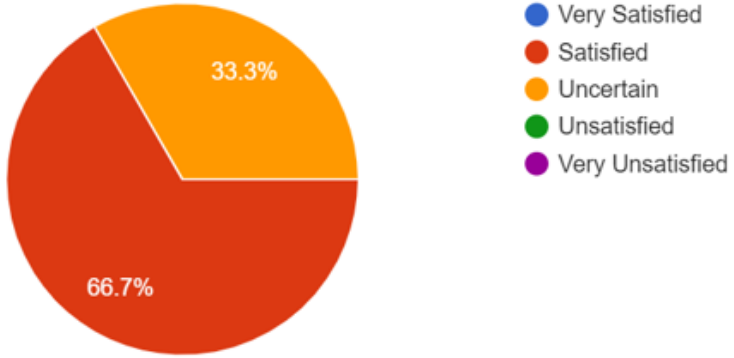
10. Salary and compensation package.



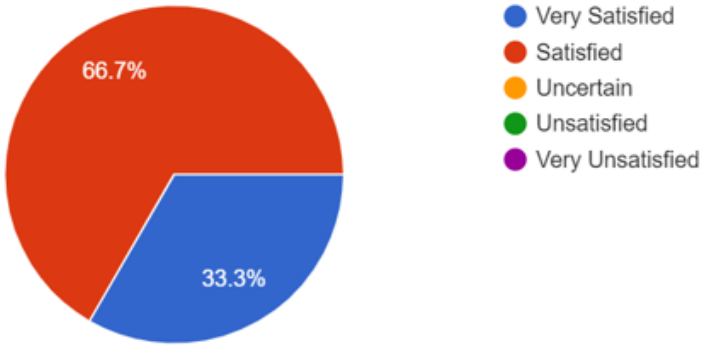
11. Job security and stability at the department.



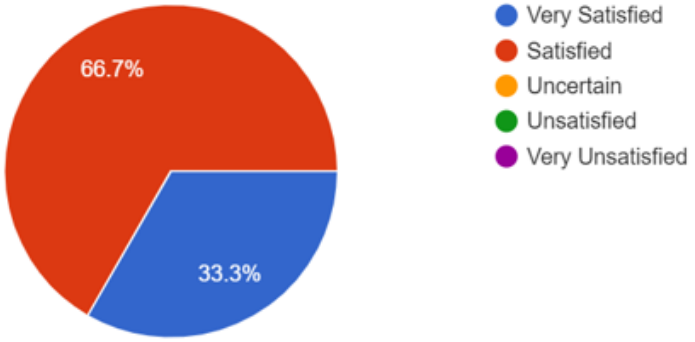
12. Amount of time you have for yourself and family.



13. The overall environment at the department.

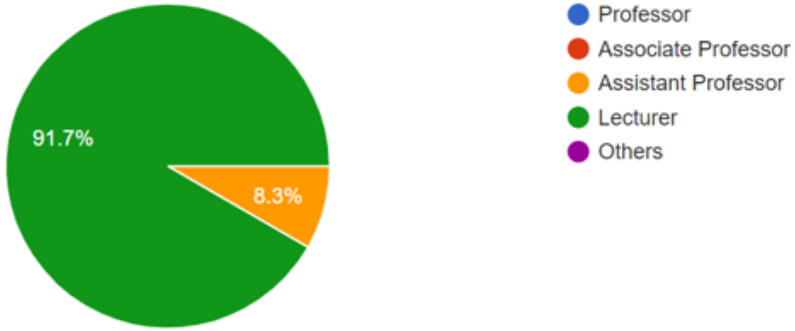


14. Whether the department is utilizing your experience and knowledge.

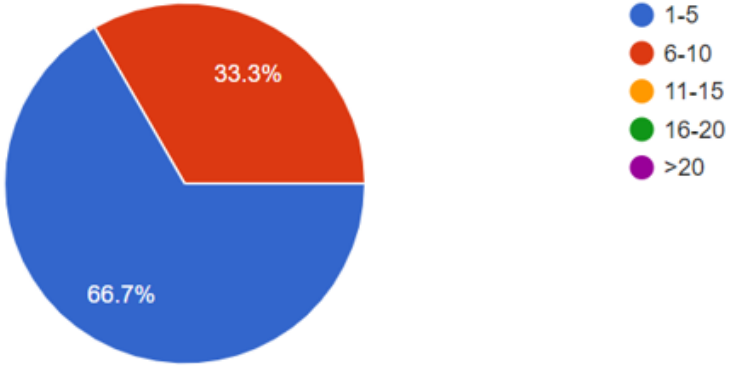


Information About Faculty

i. Academic Rank



ii. Years of Service

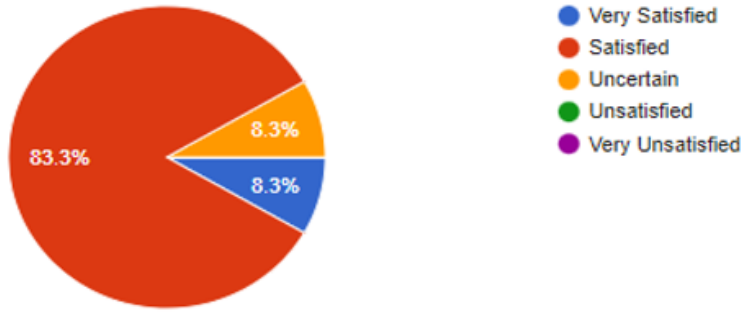


Prepared by:

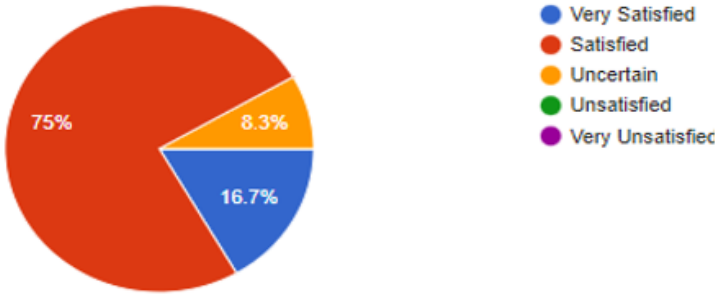
QED Head |Zainab Mahmood

Performa: 5 Faculty Survey Report-Spring 2023
Department of CS

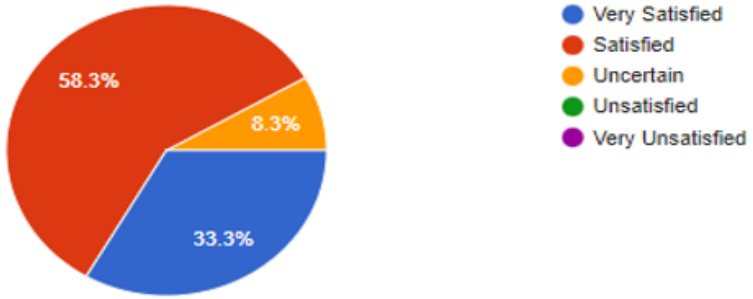
1. Your mix of research teaching and community service.



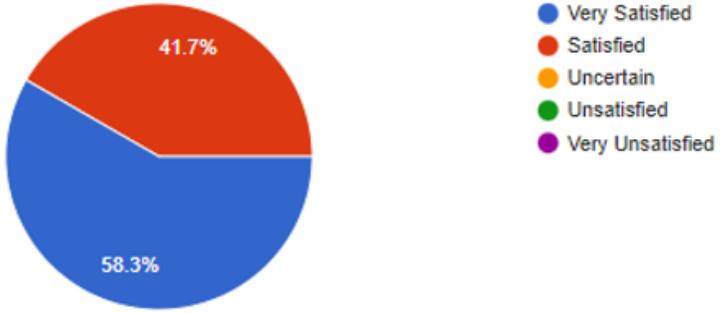
2. The intellectual stimulation of your work.



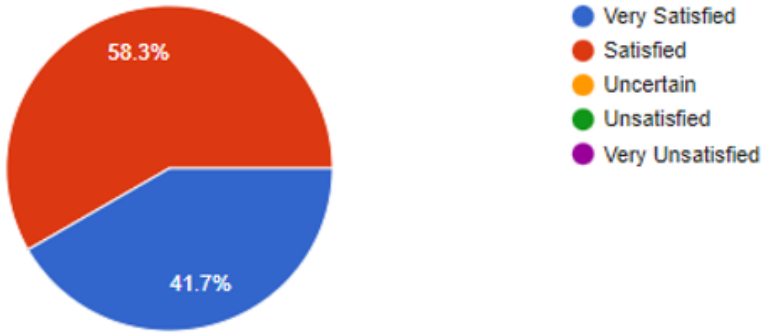
3. Type of teaching / research you currently doing.



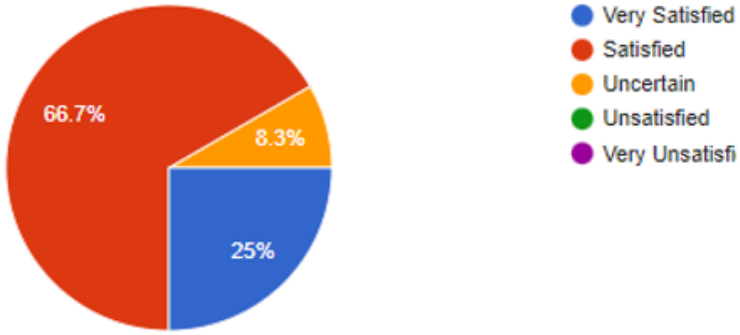
3. Your interaction with students.



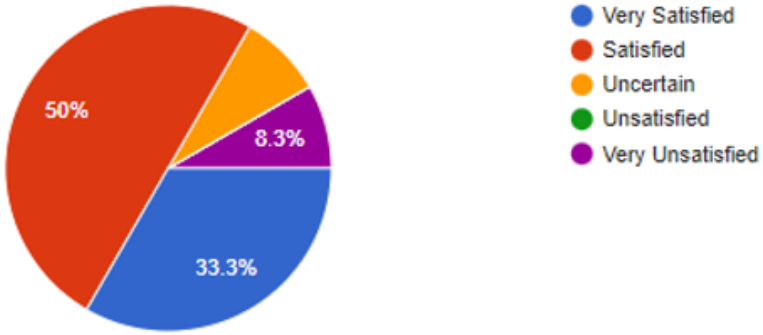
Cooperation you receive form colleagues.



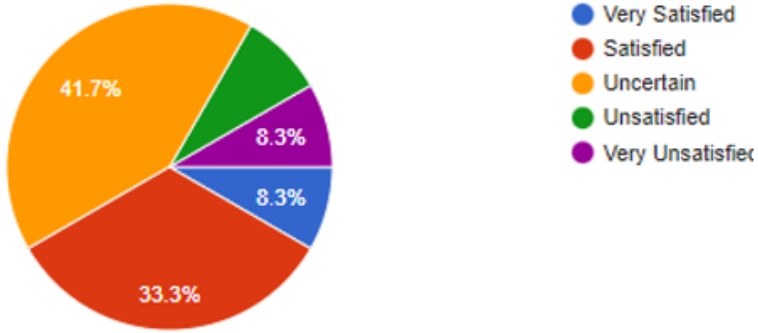
The mentoring (guidance) available to you.



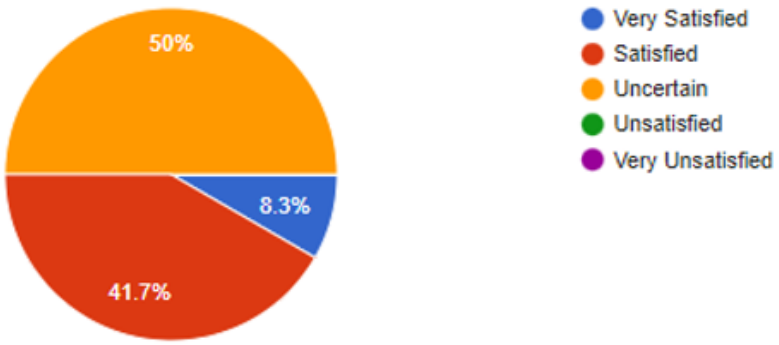
7. Administrative support from the department.



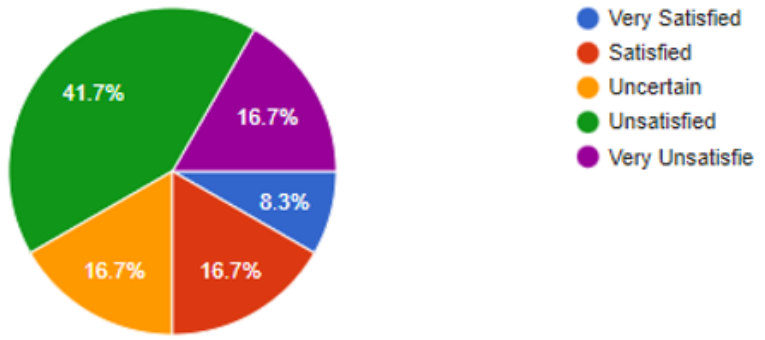
8. Providing clarity about the faculty promotion process.



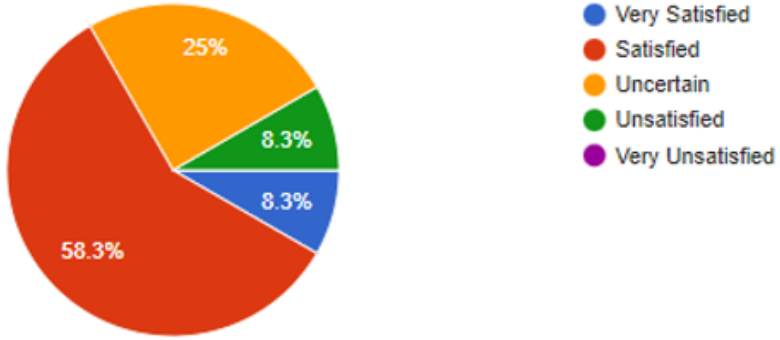
9. Your prospects for advancement and progress through ranks.



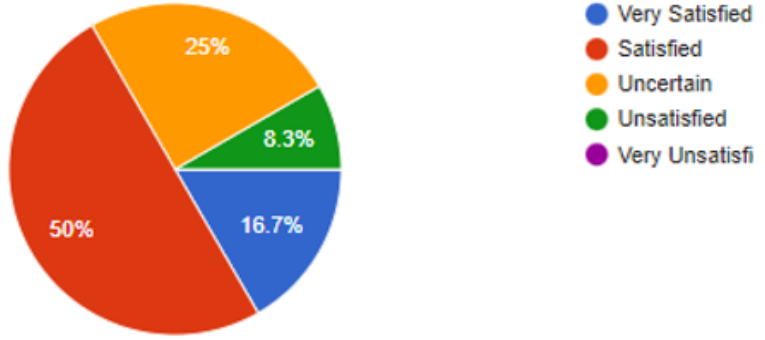
10. Salary and compensation package.



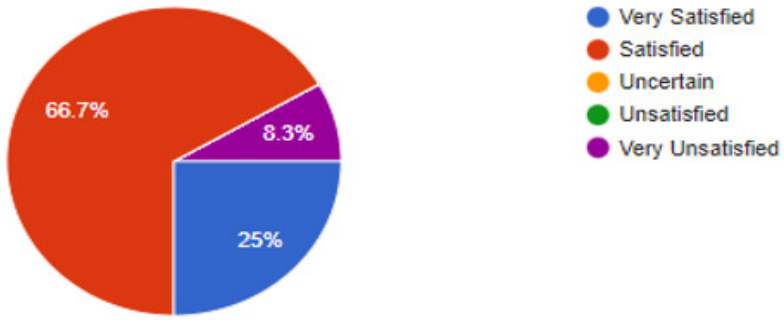
11. Job security and stability at the department.



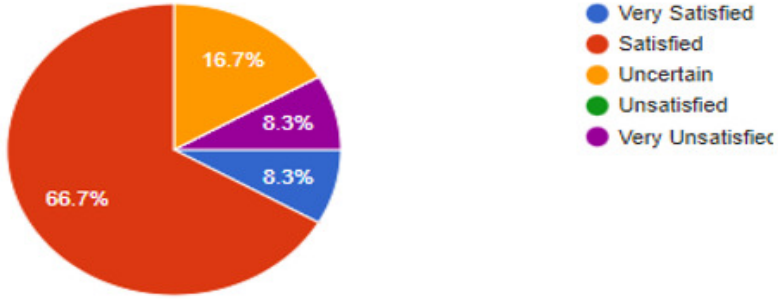
12. Amount of time you have for yourself and family.



13. The overall environment at the department.

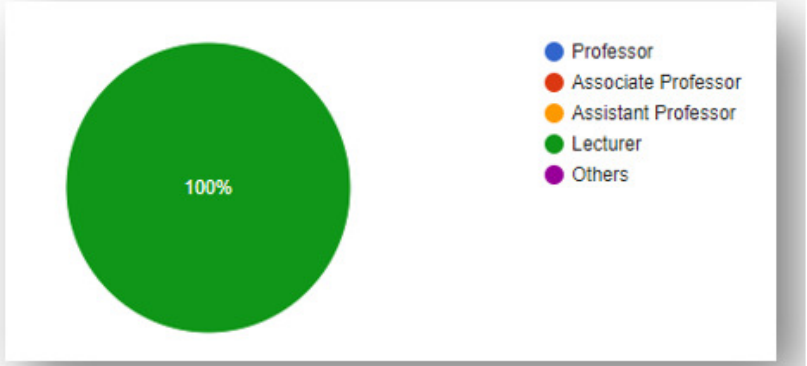


14. Whether the department is utilizing your experience and knowledge.

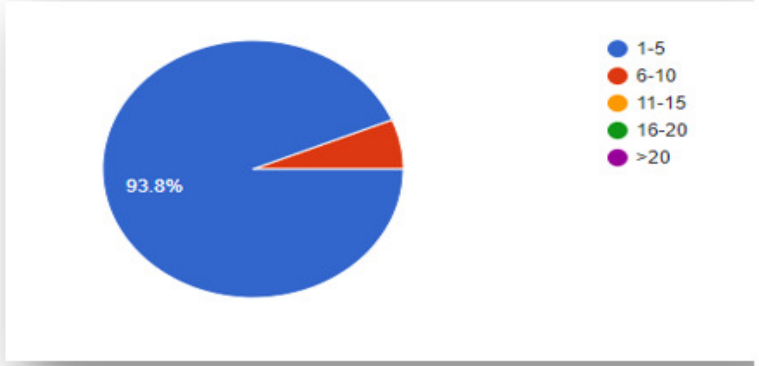


Information About Faculty

iii. Academic Rank



iv. Years of Service

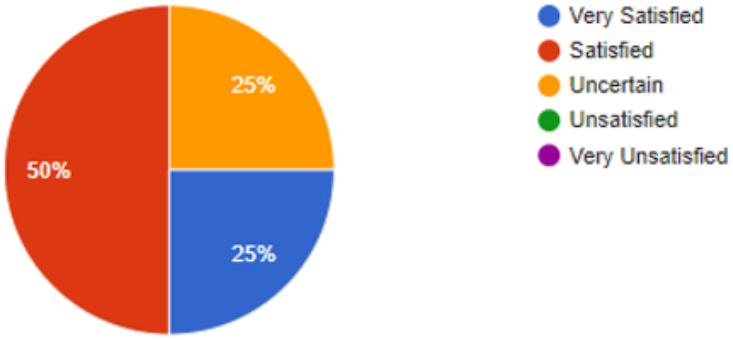


Prepared by:

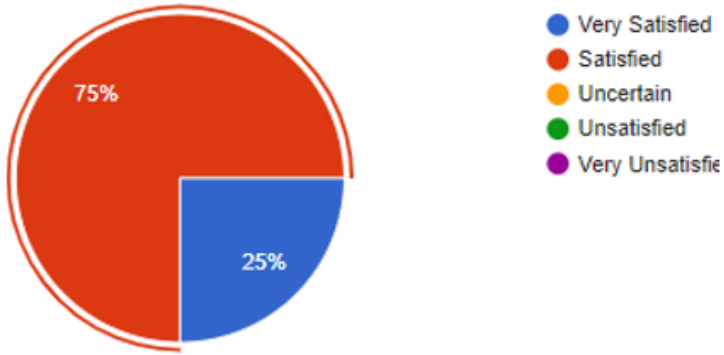
QED Head |Maria Ashraf

Performa: 5 Faculty Survey Report-Fall 2023
Department of CS

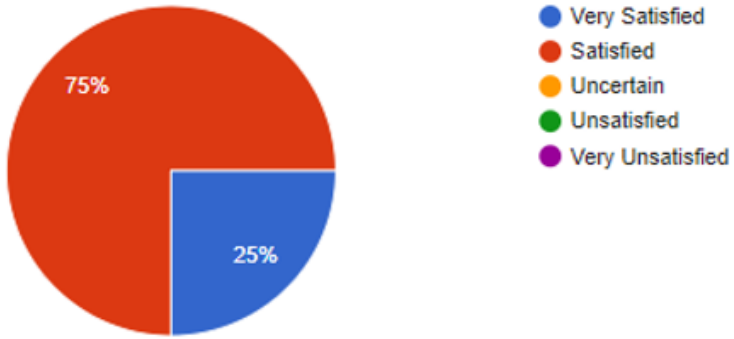
1. Your mix of research teaching and community service.



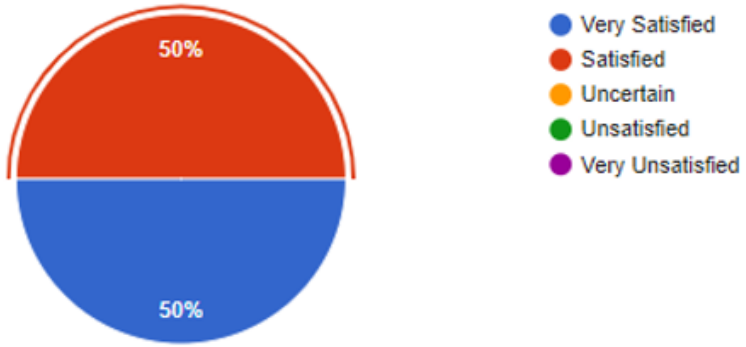
2. The intellectual stimulation of your work.



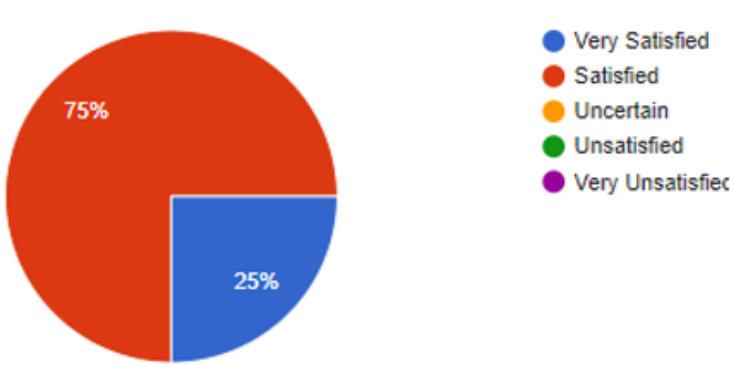
3. Type of teaching / research you currently doing.



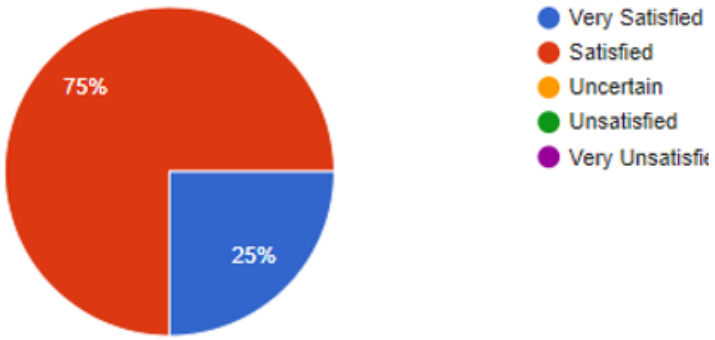
4. Your interaction with students.



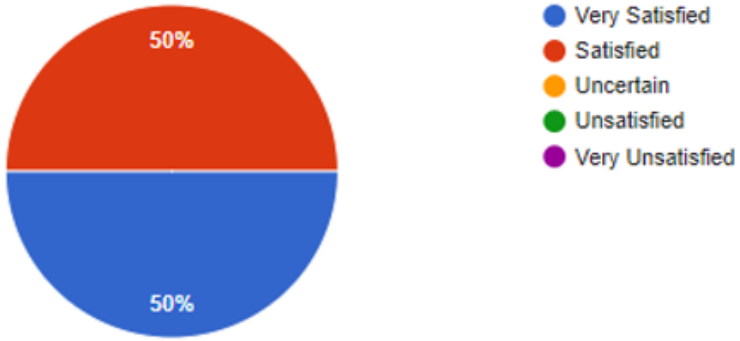
Cooperation you receive form colleagues.



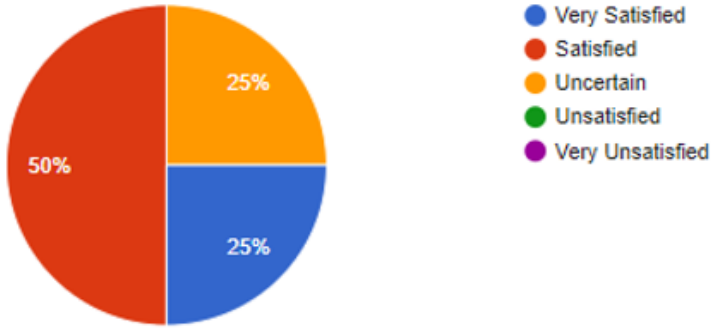
The mentoring (guidance) available to you.



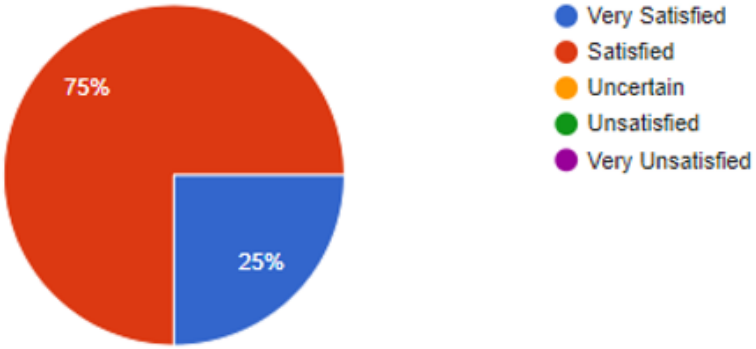
7. Administrative support from the department.



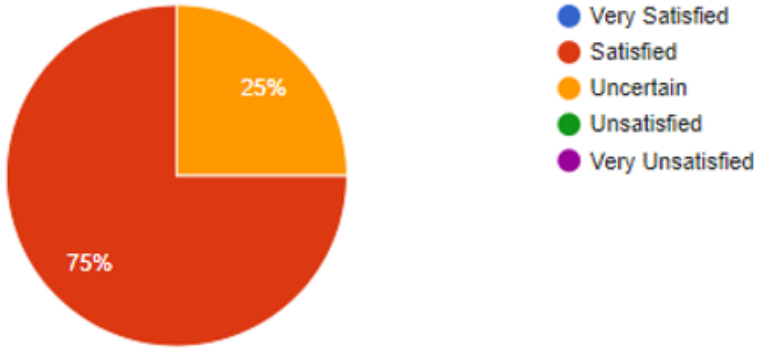
8. Providing clarity about the faculty promotion process.



9. Your prospects for advancement and progress through ranks.

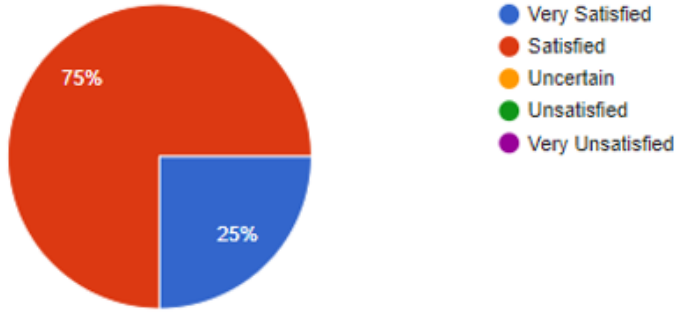


10. Salary and compensation package.

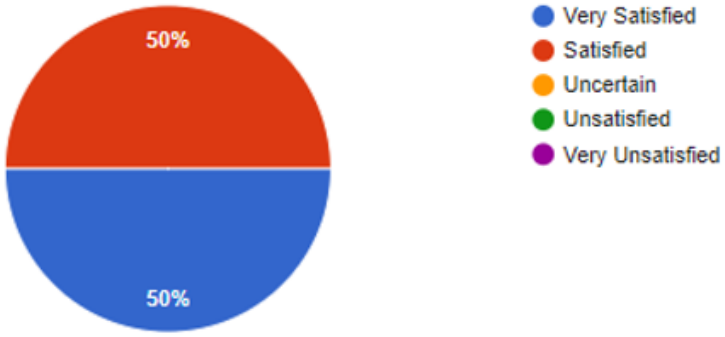


11. Job security and stability at the department.

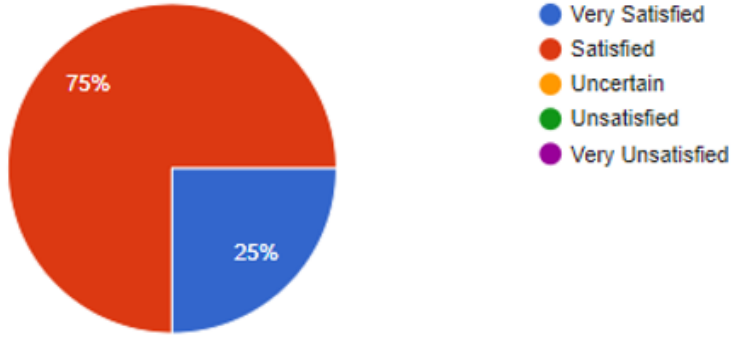
12. Amount of time you have for yourself and family.



13. The overall environment at the department.

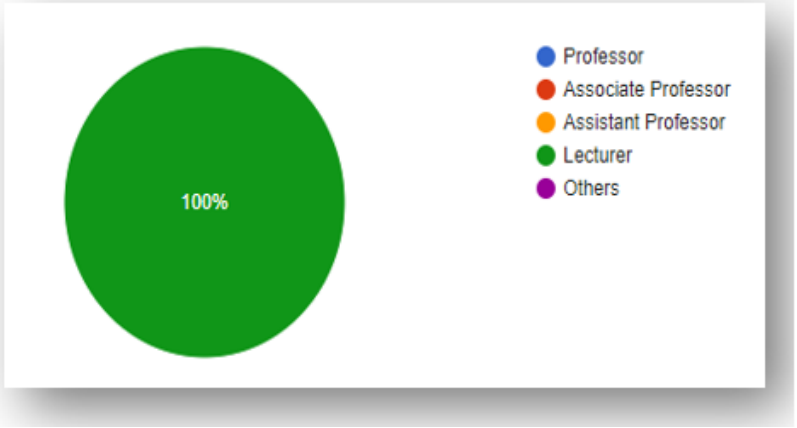


14. Whether the department is utilizing your experience and knowledge.

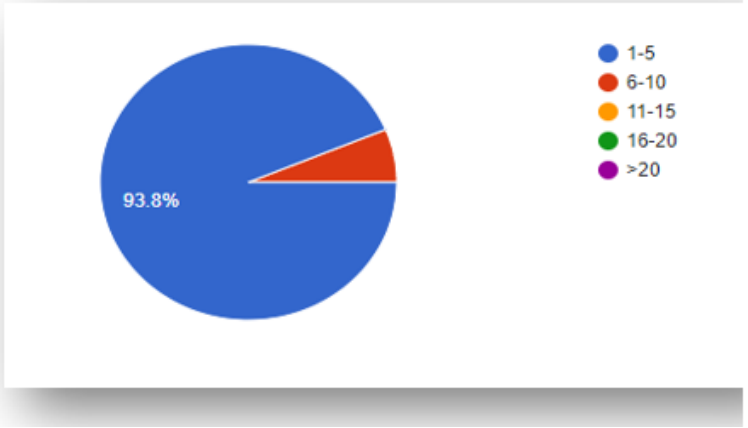


Information About Faculty

v. Academic Rank



vi. Years of Service



Prepared by:

QED Head |Maria Ashraf

Annexure J: Faculty Resume

Performa No-09 Faculty Resume			
Name	Muhammad Sami Ullah		
Personal	Department: computer science Date of Appointment: 01-Oct-2021 Email Address:maliksami961@gmail.com Contact No: 03321861267		
Experience	Designation	Institute	No. of Years
	Assistant lecturer	University of Gujrat	2
	Lecturer	University of Sargodha(Mandi campus	1semester
Honor and Awards	Awarded with PEEF scholarship		
Memberships			
Post Graduate Students			
Undergraduate Students			
Honour Students			
Service Activity	Examination coordinator University of Gujrat G.T road campus		

<table>
<tr><th colspan="4">Performa No. 09
Faculty Resume</th></tr>
<tr><td></td><td colspan="3">Iqra Saleem</td></tr>
<tr><td>Personal</td><td colspan="3">Department: Computer Sciences
Date of Appointment: 24 Apr, 224
Email Address: iqrasaleem403@gmail.com
Contact No: 0344-6122786</td></tr>
<tr><td rowspan="4">Experience</td><td>Designation</td><td>Institute</td><td>No. of Years</td></tr>
<tr><td>Lecturer</td><td>Gujrat Institute of Management Sciences</td><td>Current</td></tr>
<tr><td>Lecturer</td><td>Aspire College WZD</td><td>1.5</td></tr>
<tr><td>Lecturer</td><td>Superior College WZD</td><td>-1</td></tr>
<tr><td>Honor and Awards</td><td colspan="3">Awarded with PEEF Scholarship</td></tr>
<tr><td>Memberships</td><td colspan="3">N/A</td></tr>
<tr><td>Post Graduate Students</td><td colspan="3">N/A</td></tr>
<tr><td>Undergraduate Students</td><td colspan="3">N/A</td></tr>
<tr><td>Honour Students</td><td colspan="3">N/A</td></tr>
<tr><td>Service Activity</td><td colspan="3">N/A</td></tr>
<tr><td>Brief Statement of Research Interest</td><td colspan="3">My research interests lie in the field of global optimization, with a particular focus on metaheuristic algorithms. Specifically, I am intrigued by the Particle Swarm Optimization (PSO) algorithm and its potential to solve complex optimization problems across various domains. My current research centers on analyzing and enhancing the initialization techniques used within the PSO algorithm. I aim to explore how different initialization strategies can impact the convergence speed, accuracy, and overall performance of PSO in finding global optima. By investigating these aspects, I seek to contribute to the development of more robust and efficient optimization methods, thereby advancing the capabilities of PSO in tackling intricate global optimization challenges.</td></tr>
</table>

Publications	N/A
Research grants and Contracts.	N/A
Other Research or Creative Accomplishments	N/A
Selected Professional Presentations	N/A

Performa No. 09 **Faculty Resume**			
Name	Mishal Fatima		
Personal	Department: CS Date of Appointment: 03-10-2022 Email Address: mishalfatima1144@gmail.com Contact No 03030603535		
Experience	Designation	Institute	No. of Years
	Lecturer	Govt Degree College Kotla	1
	Lecturer	University of Gujrat	1
	Lecturer	GIMS Arid Agriculture	2.5
Honor and Awards			
Memberships			
Post Graduate Students			
Undergraduate Students			
Honour Students			
Service Activity			

Performa 9
Faculty Resume

Name	Naumana Kanwal		
Personal	Department: English Lecturer Date of Appointment: October 4, 2021 Email Address: numanakanwal11@gmail.com Contact No : 0300-9623380		
Experience	Designation	Institute	No. of Years
	Translator	University of Gujrat	3
	Lecturer	University of Gujrat	2
Honor and Awards			
Memberships			
Post Graduate Students			
Undergraduate Students			
Honour Students			
Service Activity			
Brief Statement of Research Interest	Application of Minimalist Theory on Legal Translated Document		
Publications	1. Adjustment for transitivity in Translation: An Analysis of Punjab Laws in English and Urdu 2. Minimalist Perspective on legal Communication: A Case Study of English to Urdu Translation of Punjab Laws (in press)		
Research grants and Contracts.			
Other Research or Creative Accomplishments			

Performa 9
Faculty Resume

Name	Zainab Mahmood		
Personal	Department: Computer Science Date of Appointment: October 2, 2017 Email Address: Zainab.cheema01@hotmail.com Contact No : 03016243297		
Experience	Designation	Institute	No. of Years
	College Teaching Internship	Government College for Women	8 month
	Lecturer	Gujrat Institute of Management Science	October 2, 2017 -Current
Honor and Awards	N/A		
Undergraduate Students	Supervised 12 Final Year Projects from Fall 2016 to Spring 2019		
Honour Students			
Service Activity	Student Service and Affair		
Brief Statement of Research Interest	May be as brief as a sentence or contain additional details up to one page in length.		
Publications	Zainab Mahmood, Javed Anjum, “Heuristic Evaluation Of E-Shopping Websites to Reach the Women in Pakistan" accepted for publication in Journal of Social Sciences and Interdisciplinary Research (JSSIR) Volume 6, No. 1, 2017 ZainabMahmood, Javed Anjum, Aneela Abbas "Design Consideration of Online Shopping Website to Reach Women in Pakistan" Published in Journal Procedia Manufacturing, Volume III, page 3582 to 3588, Published by Elsevier B.V., 2015. Amna Noor Elahi, Zainab Mahmood, Iqra Ilyas, "Digital Storytelling as Powerful Educational Tool for primary schools" published in International Conference of Information CommunicationTechnology (ICICT) 2015 Zainab Mahmood, Sana Shahzadi, Sahar Tariq “Content Management & user interface for uneducated users” Published in HCI International 2014” held in Greece (June 2014). Marcus (Ed.): DUXU 2014, Part III, LNCS 8519, pp. 432–441, 2014.		
Other Research or Creative Accomplishments	List patents, software, new products developed, etc.		

Annexure K: Faculty Course Review

Faculty Course Review Report

(To be filled by each teacher at the time of Course Completion)
For completion by the course instructor and transmission to Head of Department of his/her nominee (Dept. Quality Officer) together with copies of the Course Syllabus outline

Department:	SE			Faculty:	Computing
Course Code:	CS-453	Title:		Software Engineering	
Session:	Fall 2022	Semester:	5th		
Credit Value:	3(3-0)	Level:	Bs(hons)	Prerequisites:	
Name of Course Instructor:	Mishal Fatima	No. of Students Contact Hours		Lectures	32
		3 Hr		Seminars	Nil
Assessment Methods: give precise details (no & length of assignments, exams, weightings etc.)		Quiz (3),assignments(2),presentations(1),project(1)(10%)midterm (40%), final term(50%) ,Practical, viva, copy ,semester performance (2%)			

Undergraduate	Originally Registered	%Grade A	%Grade B	%Grade C	D	F	F	With drawl	Total
No. of Students	22	4.5 %	18 %	18%	45%	- %	13 %	0	22

Course Instructor: Mishal Fatima Date: 17/02/2023

Faculty Course Review Report

(To be filled by each teacher at the time of Course Completion)
For completion by the course instructor and transmission to Head of Department of his/her nominee (Dept. Quality Officer) together with copies of the Course Syllabus outline

Department:	CS			Faculty:	Computing
Course Code:	CS-536	Title:		Theory of Automata	
Session:	Fall-2023	Semester:	5th		
Credit Value:	3(3-0)	Level:	Bs(hons)	Prerequisites:	
Name of Course Instructor:	Rabia Butt	No. of Students Contact Hours		Lectures	32
		3 Hr		Seminars	Nil
Assessment Methods: give precise details (no & length of assignments, exams, weightings etc.)		Quiz (3),assignments(2),presentations(1),project(1)(10%)midterm (40%), final term(50%) ,Practical, viva, copy ,semester performance (2%)			

Undergraduate	Originally Registered	%Grade A	%Grade B	%Grade C	D	F	F	With drawl	Total
No. of Students	42	5	11	11	12	-	3	0	42

Course Instructor: Rabia Butt Date: 17/02/2024

Faculty Course Review Report

(To be filled by each teacher at the time of Course Completion)
For completion by the course instructor and transmission to Head of Department of his/her nominee (Dept. Quality Officer) together with copies of the Course Syllabus outline

Department:	CS			Faculty:	Computing
Course Code:	CS-583	Title:		Operating Systems	
Session:	Fall-2023	Semester:	5th		
Credit Value:	4(3-3)	Level:	Bs(hons)	Prerequisites:	
Name of Course Instructor:	Rabia Butt	No. of Students Contact Hours		Lectures	32
		3 Hr.		Seminars	Nil
Assessment Methods: give precise details (no & length of assignments, exams, weightings etc.)	Quiz (3),assignments(2),presentations(1),project(1)(10%)midterm (40%), final term(50%) ,Practical, viva, copy ,semester performance (2%)				

Undergraduate	Originally Registered	%Grade A	%Grade B	%Grade C	D	E	F	With drawl	Total
No. of Students	20	4	6	5	2	-	3	0	20

Course Instructor: Rabia Butt Date: 17/02/2024

Faculty Course Review Report

(To be filled by each teacher at the time of Course Completion)
For completion by the course instructor and transmission to Head of Department of his/her nominee (Dept. Quality Officer) together with copies of the Course Syllabus outline

Department:	CS			Faculty:	Computing
Course Code:	CS-583	Title:		Operating Systems	
Session:	Fall-2023	Semester:	5th		
Credit Value:	4(3-3)	Level:	Bs(hons)	Prerequisites:	
Name of Course Instructor:	Rabia Butt	No. of Students Contact Hours		Lectures	32
		3 Hr.		Seminars	Nil
Assessment Methods: give precise details (no & length of assignments, exams, weightings etc.)		Quiz (3),assignments(2),presentations(1),project(1)(10%)midterm (40%), final term(50%) ,Practical, viva, copy ,semester performance (2%)			

Undergraduate	Originally Registered	%Grade A	%Grade B	%Grade C	D	E	F	With drawl	Total
No. of Students	20	4	6	5	2	-	3	0	20

Course Instructor: Rabia Butt Date: 17/02/2024

Faculty Course Review Report

(To be filled by each teacher at the time of Course Completion)
For completion by the course instructor and transmission to Head of Department of his/her nominee (Dept. Quality Officer) together with copies of the Course Syllabus outline

Department:	CS			Faculty:	Computing
Course Code:	CSC-103	Title:		Database Systems	
Session:	Spring-24	Semester:	2nd		
Credit Value:	4(3-3)	Level:	Bs(hons)	Prerequisites:	
Name of Course Instructor:	Marriam Ijaz	No. of Students Contact Hours		Lectures	32
		3 Hr.		Seminars	Nil
Assessment Methods: give precise details (no & length of assignments, exams, weightings etc.)	Quiz (3),assignments(2),presentations(1),project(1)(10%)midterm (40%), final term(50%) ,Practical, viva, copy ,semester performance (2%)				

Undergraduate	Originally Registered	%Grade A	%Grade B	%Grade C	D	E	F	With drawl	Total
No. of Students	55	29 %	49 %	14.5%	1.8%	-	5%	0	55

Course Instructor: Marriam Ijaz Date: 04/08/2024

Faculty Course Review Report

(To be filled by each teacher at the time of Course Completion)
For completion by the course instructor and transmission to Head of Department of his/her nominee (Dept. Quality Officer) together with copies of the Course Syllabus outline

Department:	SE			Faculty:	Computing
Course Code:	CS-577	Title:		Computer Networks	
Session:	Spring-24	Semester:	5th		
Credit Value:	4(3-3)	Level:	Bs(hons)	Prerequisites:	
Name of Course Instructor:	Maha Ijaz	No. of Students Contact Hours		Lectures	32
		3 Hr		Seminars	Nil
Assessment Methods: give precise details (no & length of assignments, exams, weightings etc.)	Quiz (3),assignments(2),presentations(1),project(1)(10%)midterm (40%), final term(50%) ,Practical, viva, copy ,semester performance (2%)				

Undergraduate	Originally Registered	%Grade A	%Grade B	%Grade C	D	F	F	With drawl	Total
No. of Students	20	4	15	1	-	-	-	0	20

Course Instructor: Maha Ijaz Date: 04/08/2024

Faculty Course Review Report

(To be filled by each teacher at the time of Course Completion)
For completion by the course instructor and transmission to Head of Department of his/her nominee (Dept. Quality Officer) together with copies of the Course Syllabus outline

Department:	CS		Faculty:	Computing	
Course Code:	CS-693	Title:	Mobile Application development		
Session:	Spring-24	Semester:	7th		
Credit Value:	3(2-2)	Level:	Bs(hons)	Prerequisites:	OOP
Name of Course Instructor:	Aliza Falak	No. of Students Contact Hours	Lectures	32	
		3 Hr	Labs	3 Hr	
Assessment Methods: give precise details (no & length of assignments, exams, weightings etc.)	Quiz (3),assignments(2),presentations(1),project(1)(10%)midterm (40%), final term(50%) ,Practical, viva, copy ,semester performance (2%)				

Undergraduate	Originally Registered	%Grade A	%Grade B	%Grade C	D	E	F	With drawl	Total
No. of Students	25	16 %	36 %	36%			12 %	0	25

Course Instructor: Aliza Falak Date: 04/08/2024