

SHAH ABDUL LATIF UNIVERSITY, KHAIRPUR
INSTITUTE OF COMPUTER SCIENCE



SELF-ASSESSMENT REPORT (SAR)

For the year 2021-2022
Date-03-15-2022

Submitted to Quality Enhancement Cell (QEC)

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Introduction:

The Institute of Computer Science started working as a Computer Science section of Mathematics department. Initially short courses in Computer Science were offered for the people of Upper Sindh. The first degree course M.Sc. Computer Science was announced in 1994. In 1999 the department established independently as Department of Computer Science. Since its beginning department has made sound growth in presenting as excellent Computer Science and Information Technology curriculum suited to the practice of the profession. In fact the Department of Computer Science programs run by its renovate faculty are equivalent to similar degree programs offered at other Universities with respect to their curriculum structure and implementation. The current enrollment figure of over five hundred students demonstrates that department have gained momentum and established a credible reputation in academic community.

With experienced faculty and state-of-the art teaching methods, student gets the best there to prepare for a start in their new career. At the department, apart from learning the craft of Computer Science and information technology.

Criterion 1: PROGRAM MISSION, OBJECTIVE AND OUTCOMES.

Standards 1.1: The program must have documented measurable objectives that support Faculty / Institution Mission Statements.

Mission Statement of the University:

- ✓ To provide affordable and accessible quality Under-Graduate, Graduate and Post-Graduate degree Programs, national and international in scope.
- ✓ To impart learner-centered teaching through qualified faculty using modern teaching aids and methodologies.
- ✓ To create and promote quality research environment, provide consulting faculties to Industrial/business and services sector with a realization of needs of community and National responsibility towards economic growth and welfare.
- ✓ To build national character and put focus on production of quality graduates to contribute in the economic, industrial and social development of the country.
- ✓ To promote a campus environment that welcomes and honor women and men and an atmosphere that values intellectual curiosity, pursuit of knowledge, and academic freedom and integrity.

Slogan: “Learn how to learn”

Mission of the University:

- ✓ To build national character and put focus on production of quality graduates to contribute in the economic, industrial and social development of the country.

Vision of the University:

- ✓ To develop human resources & capabilities to meet national development needs through quality teaching, learning & research. “Youth Empowerment” is one of the main objectives of the University.

Mission Statement of the Department:

The Computer Science Department strives for excellence in creating, applying, and imparting knowledge in computer science through comprehensive educational programs, research in collaboration with industry and government, dissemination through scholarly publications, and service to professional societies, the community, the state, and the nation.

Program Objectives:

1. Make valuable contributions to design, development, and production in the practice of computer science and related engineering or application areas, particularly in software systems and algorithmic methods.
2. Demonstrate strong communication skills and the ability to function effectively as part of a team.
3. Demonstrate a sense of societal and ethical responsibility in all professional endeavors.
4. Engage in professional development.

Table 1. Shows how Objectives are measured and Improvements have been identified			
Program Objectives Assessment			
Objectives	How Measured	When Measured	Improvement Identified
To make valuable contributions to design, development, and production in the practice of computer science and related engineering or application areas, particularly in software systems and algorithmic methods.	After completion of the degree	At the end of each semester	1) Equipped classrooms and labs 2) Multi-media & computer facility 3) Air conditioners in the labs during summer

To demonstrate strong communication skills and the ability to function effectively as part of a team.	Lecturing and Mentoring	In meetings with different Professionals from inside and outside the University	Multimedia and Video Conference facility.
Demonstrate a sense of societal and ethical responsibility in all professional endeavors	By Lectures and Supervision.		
Engage in professional development.	By assigning the different projects.	During the semester and at end of each	Computer Labs, Network Labs and Internet

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.

Program Objectives	Program Outcomes		
	1	2	3
To make valuable contributions to design, development, and production in the practice of computer science and related engineering or application areas, particularly in software systems and algorithmic methods.	Knowledge about Computer Science/ Information Technology as Local and International perspectives	Employment in	To make valuable contributions to design, development, and production in the practice of computer science and related engineering or application areas, particularly in software systems and algorithmic methods.
Helping students benefit from The ongoing business and employment opportunities through informal career counseling activities.	Working knowledge about the job sector	Positive approach	Helping students benefit from The ongoing business and employment opportunities through informal career counseling activities.
Training and grooming of	Commitment to	Self-confidence	The graduates are

Students through continuous student-teacher relationship.	impart knowledge and skill to other students when joining faculty in colleges, universities and other research as well educational institutes.	based on the knowledge about effective communication and inter personal skills	employed in public and private-sector commercial & business Organizations in Regional, Divisional, and Provincial & Federal organizations.
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Standard 1.3: The result of program’s assessment and the extent to which they are used to improve the program must be documented.

Major Future Improvement Plans:

- ❖ To impart quality education in the department using Audio Visual Aids and modern tools along with provision of latest literature, journals, books, reviews and access to internet.
- ❖ To emphasize problem oriented research work on specific areas related to plants.
- ❖ Overall enhancement of knowledge and skills of faculty members in relation to the latest global advancements in various discipline through exchange programs, short trainings and collaborative research projects within and outside country.

Criterion 2: CURRICULUM DESIGN AND ORGANIZATION

The program follows the Higher Education Commission (HEC) approved curriculum revised in 2017. The details of courses taught in BS Computer Science Program are given as under:

Title of the Degree

BS Computer Science

Definition of the Credit Hour

One credit hour means one Contact hour a week in a class.

Semester wise breakup of courses of BS (CS) 4-Years Program

BS(CS) 1 st Semester			BS(CS) 2nd Semester		
S.No.	Subject	Credit Hours	S.No.	Subject	Credit Hours
1	Elementary Math	3+0	1	Object Oriented Programming	3+1
2	Introduction to Computing	3+1	2	Discrete Structure	3+0
3	English	3+0	3	Calculus & Analytical	3+0

				Geometry	
4	Islamic Studies	3+0	4	Technical & Report Writing	3+0
5	Programming Fundamentals	3+1	5	Basic Electronics	3+0
			6	Pakistan Studies	3+0

BS(CS) 3 rd Semester			BS(CS) 4 th Semester		
S.No.	Subject	Credit Hours	S.No.	Subject	Credit Hours
1	Data Structures & Algorithm	3+1	1	Operating Systems	3+1
2	Digital Logic Design	3+1	2	Introduction to Database Systems	3+1
3	Linear Algebra	3+0	3	Computer Communication and Network	3+1
4	Communication Skills	3+0	4	Statistics & Probability	3+0
5	Fundamentals of IT	3+0	5	Information System	3+0
6	Organizational Behavior	3+0	6	Differential Equation	3+0

BS(CS) 5 th Semester			BS(CS) 6 th Semester		
S.No.	Subject	Credit Hours	S.No.	Subject	Credit Hours
1	Introduction to Software Development	3+0	1	Compiler Construction	3+0
2	Professional Practices	3+0	2	Computer Architecture	3+0
3	COAL	3+1	3	Design and Analysis of Algorithm	3+0
4	Theory of Automata & Formal Languages	3+0	4	Mathematical Tools for Computing	3+0
5	Data Warehousing	3+0	5	Human Computer Interaction	3+0
6	Multimedia System & Design	3+1			

BS(CS) 7 th Semester			BS(CS) 8 th Semester		
S.No.	Subject	Credit Hours	S.No.	Subject	Credit Hours
1	Computer Graphics	3+1	1	Communication & System Design	3+0
2	Network Security	3+0	2	Operation Research	3+0
3	Artificial Intelligence	3+1	3	Digital Image Processing	3+1
	Final Year Project – I	3		Final Year Project – II	3

Curriculum Course Requirements

Semester	Course Code	Category (Credit Hours)				
		Math and Basic Science		Core Courses	Humanities and Social Sciences	Technical Electives
		Math	Basic Science			
I	CS-101			4		
	CS-102			4		
	MT-101	3				
	PK-101				3	
	EG-101				3	
II	CS-103			3		
	CS-104			4		
	PK-102				3	
	MT-102	3				
	EL-101		3			
	EG-102				3	
III	IT-201			3		
	MNG-201				3	
	CS-201			3		
	MT-201	3				
	EG-201				3	
	CS-202			3		
IV	MT-202	3				
	IT- 212			3		
	CMP-201			3		
	MT-203	3				

	CMP-202			4		
	CMP-203			4		
V	SE-301			3		
	SS-301			3		
	CS-301			3		
	CS302			3		
	CS-303			3		
	IT-301			3		
VI	CS-304			3		
	CS-305			3		
	CS-306			3		
	CE-301			3		
	CS-307			3		
VII	CS-401			3		
	CS-402			3		
	CS-403			3		
	CS-404			3		
VIII	CS-405			3		
	CS-406			3		
	MT-401	3				
	CS-407			3		
Total Courses	42	6	1	29	6	
Total Credits	131	18	3	92	18	
Minimum Requirements						

Standard 2.1: The curriculum is consistent and supports the program’s documented objectives

The scheme of studies for the BS (CS) program has been carefully designed to attain the above-mentioned objectives. The courses that construct theoretical background, problem analysis and solution design are as follows:

Elements	Courses/Course codes	
Theoretical background	CS-101	Introduction to Computing
	MT-101	Elementary Mathematics
	CS-102	Programming Fundamentals
	MT-102	Calculus & Analytical Geometry
	EL-101	Basic Electronics
	EG-102	Technical & Report Writing
Problem analysis	CS-104	Object Oriented Programming
	CS-201	Data Structures & Algorithms
	CS-202	Digital Logic Design
	MT-202	Probably & Statistics
	CMP-201	Computer Communications & Networks
	MT-203	Differential Equations
	CMP-203	Operating Systems
	SE-301	Introduction to Software Development
	SS-301	Professional Practices
	CS-305	Computer Architecture
Solution design	CS-301	Computer Organization & Assembly Language
	CS302	Theory of Automata & Formal Languages
	IT-301	Multimedia Systems & Design
	CS-304	Compiler Construction
	CS-306	Design and Analysis of Algorithms
	CE-301	Mathematical Tools for Computing
	CS-402	Computer Graphics
	CS-404	Artificial Intelligence
	CS-406	Digital Image Processing
	MT-401	Operation Research
	CS-407	Communication Systems & Design

Standard 2.3: The curriculum satisfies the core requirements for the program, as specified by HEC

The program has been carefully designed to meet the HEC requirements for BS Computer Science.

Standard 2.4: The curriculum satisfies the major requirements for the program

The core material of the program has been designed according to the HEC requirements.

Standard 2.5: The curriculum satisfies general education, arts and professional and other discipline requirements for its programs

Following courses do cover the general education and non-computing discipline requirements:-

MT-101	Elementary Mathematics
PK-101	Islamic Studies
EG-101	English Composition & Comprehension
PK-102	Pakistan Studies
MT-102	Calculus & Analytical Geometry
EL-101	Basic Electronics

Standard 2.6: Information technology component of the curriculum is integrated throughout the programs

As BS(CS) program is of Computer Science and IT, all core components of IT are integrated.

Standard 2.7: Oral and written communication skills of the student are developed and applied in the program

The computer science students are taught following courses related to the communication skills:-

EG-102	Technical & Report Writing
EG-201	Communication Skills

The senior students of 7th and 8th semester are also asked to present and demonstrate their lab-based projects. The department has strong emphasis on the quality of final-year projects and carefully monitors its progress through well-defined process flow.

Final Year Project - I
Final Year Project - II

During their final-year projects, the computer science students are given plenty of opportunities to practice their verbal and written communication skills.

3. LABORATORIES AND COMPUTING FACILITIES

There are six computer labs are available in the institute of computer science.

Laboratory Title: Lab-1
Location and Area: Institute of Computer Science

Objectives: General Computing Lab
Adequacy for instruction: Adequate for 40 students
Courses taught: Core computing courses
Software available if applicable: Necessary core computing courses software are available
Major Equipment: Computers, Multimedia Projector
Safety regulations: Fire extinguishers required (not available)

Laboratory Title: Lab-2
Location and Area: Institute of Computer Science
Objectives: General Computing Lab
Adequacy for instruction: Adequate for 40 students
Courses taught: Core computing courses
Software available if applicable: Necessary core computing courses software are available
Major Equipment: Computers, Multimedia Projector
Safety regulations: Fire extinguishers required (not available)

Laboratory Title: Lab-3
Location and Area: Institute of Computer Science
Objectives: General Computing Lab
Adequacy for instruction: Adequate for 40 students
Courses taught: Core computing courses
Software available if applicable: Necessary core computing courses software are available
Major Equipment: Computers, Multimedia Projector
Safety regulations: Fire extinguishers required (not available)

Laboratory Title: Lab-3
Location and Area: Institute of Computer Science
Objectives: General Computing Lab
Adequacy for instruction: Adequate for 40 students
Courses taught: Core computing courses
Software available if applicable: Necessary core computing courses software are available
Major Equipment: Computers, Multimedia Projector
Safety regulations: Fire extinguishers required (not available)

Laboratory Title: DLD-Lab
Location and Area: Institute of Computer Science

Objectives: To perform digital logic designs practical and hardware programming
Adequacy for instruction: Adequate for 40 students
Courses taught: DLD, COAL
Software available if applicable: DLD software is available;
Major Equipment: DLD related hardware
Safety regulations: Fire extinguishers required (not available)

Laboratory Title: FYP-Lab
Location and Area: Institute of Computer Science
Objectives: To perform final year projects
Adequacy for instruction: Adequate for 40 students
Courses taught: FYP
Major Equipment: Multimedia Projector
Safety regulations: Fire extinguishers required (not available)

Standard 3.1: Laboratory manuals/documentation/instructions for experiments must be available and readily accessible to faculty and students

Laboratory manuals and instructions are available and readily accessible to faculty and students. Handouts are also provided by instructors during lab exercises.

Standard 3.2: There must be adequate support personnel for instruction and maintaining the laboratories

There exists a need to hire more lab assistants. Computers are not fully utilized due to lab staff not having proper training on the computers.

Standard 3.3: The University computing infrastructure and facilities must be adequate to support program's objectives.

There exists a need to provide more updated computers in the Computing Labs and Projects Lab. More multimedia projectors are also needed. However, quantity needs to be increased for future intake.

Criterion 4: STUDENT SUPPORT AND ADVISING

In the institute of computer science, the culture here is very interactive in term of teacher student interaction even after the classes and apart from academics counseling, like seeking advices in extracurricular activities, going abroad for higher education or for jobs etc.

Standard: 4.1 Courses must be offered with sufficient frequency and number for students to complete the program in a timely manner.

In order to obtain the program's defined objectives and outcomes, electives courses are offered in a logical manner that grooms the students.

Standard: 4:2. Courses in the major are must be structured to ensure effective interaction between students and faculty and teaching and teaching assistance?

Instructors are bound to follow standardized course outlines that are regularly updated by the Board of Studies (BoS). Teachers of the CS department consult each other to improve the quality of course contents. Teaching methodology consists of lecturing, discussion seminars, practical exercises, quizzes and case studies that enhance the interaction between teachers and students.

The faculty members who teach core courses are specially instructed to ensure effective interaction between students and faculty. Faculty members are available for the students counseling.

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

Basic requirements are communicated through program prospectus that contains information about the degree requirements in details. Students have gone through induction week (very first week of each semester), in which they are informed about the courses, procedures, requirements of the courses by their faculty members and by program coordinator. Director Institute of Computer Science provides guidance to students on different issues and share some experience of the old students.

Coordinator of CS program provides full support for making career related choices through arranges seminars, workshops and career counseling activities, so that student improve their vision about their career. Learned academicians can also be invited for interactive session with the students for advice on future career planning.

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.

There is central policy for getting admission in any program in the university. The directorate of admissions advertises the admissions in the month of September and the admission forms of the students are being scrutinized on the basis of their related academic background.

After that, in the month of November the Entry test has been conducted by the directorate of admissions final merit lists were uploaded on the university website. Three consecutive admission lists were being issued by the directorate of admission and the students were enrolled on the basis of result of entry test and the by adding previous academic percentage.

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:

Students are evaluated through assignments, sectional, presentation, mid-term and final exam at the end of each semester. The assessment criterion for a course is as follows:-

Assessment	Weight
Midterm Test	30%
Assignments, quizzes, projects	20%
Final Examination	50%
Total	100%

Each course must bear the assignments and quizzes before the final examination. The final marks for each course are then graded according to the following scheme:-

Marks	Grade
87-100	A
72-86	B
60-71	C
Below 60	Fail

Standard 5.3: The process of recruiting and retaining highly qualified faculty members must be in place and clearly documented. Also processes and procedures for faculty evaluation, promotion must be consistent with institution mission statement. These processes must be periodically evaluated to ensure that it is meeting with its objectives.

SALU advertises the vacancies in major newspapers and upon receipt of applications by the registrar office; the candidates are short-listed by the scrutiny committee according to the HEC criteria and the list is forwarded to the Registrar office for further actions i.e. written test / interview.

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 that it is meeting its objectives.

Through teachers, students are the recipient of the delivery of the course material. The program is actively evaluated by Dean, Director and Coordinator. All of the final exams and midterm tests are ratified by Head of the Department.

Standard 5.5: The process that ensures that graduates have completed the requirements of the program must be based on standards, effective and clearly documented procedures. This process must be periodically evaluated to ensure that it is meeting its objectives.

To become eligible for award of BS(CS) degree, a student must satisfy the following requirements:

- a) Must have studied and passed the prescribed courses, totaling at least 130 credit hours.
- b) Must have earned CGPA (Cumulative Grade Point Average) of at least 2.0 on a scale of 4.0.

This is semester based program and student's progress is evaluated through examination at the end of the semester. The degree is awarded on completion of a minimum 130 credits with a CGPA of 2.0 or above. In addition to this, final year project should have been successfully completed and the project report must have been submitted in a given time. The requirements are ensured through checking each student's CGPA and whether they have submitted the final-year project.

A student must submit a clearance form to the Controller Office prior to the degree awarding ceremony. This is to make sure that the student has satisfied all the requirements and has no outstanding issue as a student of ICS.

Criterion 6: FACULTY

The department has got sufficient number of full time faculty members to provide adequate coverage of the program.

Standard 6.1: There must be enough full time faculties who are committed to the program to provide adequate coverage of the program areas/courses with continuity and stability. 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.

Faculty Post	Qualification	Total
Professor	PhD	7
Assoc. Professor	PhD	2
Asst. Professor	M.S/Ph.D.	5
	TOTAL	14

Program area of specialization	Courses in the area and average number of sections per year	Number of faculty members in each area	Number of faculty with Ph.D. degree
CS	29	14	10

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. Effective Programs for Faculty Development.

All the faculty members in CS Department are either MS-qualified or PhD-qualified. The PhD-qualified members are active in research along with teaching activities, and are considered to be the experts in their fields. This is evident from the resumes of the CS faculty members available on our website i.e. <http://salu.edu.pk>.

The faculty members are assigned at most 3 courses per semester along with them they have time for research activities. The department also hires teaching assistants on need basis so that the course load for each faculty member remains below 9 credit hours per semester. In this way, the department ensures that the scholarly activities can be performed.

Standard 6.3: All faculty members should be motivated and have job satisfaction to excel in their profession.

Faculty members only found satisfied in monetary compensation while there are no adequate resources available in the campus for faculty members like: separate offices, washrooms, hostel accommodation, common room for female staff, internet, office boys etc.

Criterion: 7. Institutional Facilities.

Institutional facilities, including library, class rooms and offices must be adequate to support the objectives of the program. To satisfy this criterion, the following standards must be met.

Standard 7.1: The institution must have the infrastructure to support new trends in learning such as e-learning.

The Institution must have the infrastructure to support new trends in learning such as E-learning.

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.

The library must possess an up-to-date (books and relevant material) technical collection relevant to the program and must be adequately staffed with professional personnel.

Standard 7.3: Class-rooms must be adequately equipped and offices must be adequate to enable faculty to carry out their responsibilities.

Class rooms must be adequately equipped and offices must be adequate to enable faculty to carry out their responsibilities.

Criterion: 8. INSTITUTIONAL SUPPORT.

The institution's support and the financial resources for the program must be sufficient to provide an environment in which the program can achieve its objectives and retain its strength.

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.

The faculty members are provided with a decent amount of salary. Compensation in shape of remuneration is also available for faculty members.

Standard 8.2: There must be an adequate number of high quality graduate students,

research assistants and Ph.D. students.

Following is the number of students graduated from ICS SALU with the degree of BS(CS):

No.	Year	Students graduated
1	2019	52
2	2020	75
3	2021	50
4	2022	78

The teacher to student ratio for last four years is provided below:-

No.	Year	No. of Faculty	No. of Students	Faculty: Students
1	2019	15	274	1:18
2	2020	15	304	1:20
3	2021	14	291	1:20
4	2022	14	297	1:21

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

It is demanded to provide well-furnished library with enriched books, journals for the students and faculty members of department of Computer Science.

Teachers Evaluation Form

A: Strongly Agree B: Agree C: Uncertain D: Disagree E: Strongly Disagree

Teacher		A	B	C	D	E
1.	The teacher is prepared for each class	50%	20%	5%	9%	16%
2.	The teacher demonstrates knowledge of the subject Properly	40%	30%	6%	11%	13%
3.	The teacher has completed the whole course	33%	34%	10%	10%	13%
4.	The teacher provides additional material apart from the textbook	36%	32%	5%	12%	14%
5.	The teacher gives citations regarding current situations with reference to Pakistani context.	18%	31%	21%	18%	13%
6.	The teacher communicates the subject matter effectively	37%	30%	10%	10%	13%
7.	The teacher shows respect towards students and encourages class participation	40%	32%	5%	10%	12%
8.	The teacher maintains an environment that is conducive to learning	35%	35%	8%	12%	10%
9.	The teacher is punctual & regular.	50%	25%	5%	10%	10%
10.	The teacher is fair in examination	45%	35%	4%	10%	6%
11.	The teacher returns the checked scripts etc. with his suggestions to the students.	25%	40%	5%	15%	15%
12.	The teacher was available for consultations after class hours.	32%	30%	7%	16%	15%
Course						
	The matter presented in the course has increased the knowledge of the subject	30%	35%	10%	15%	10%
	The syllabus clearly states course objectives requirements, procedures and grading criteria	24%	42%	9%	13%	12%
	The subject integrates theoretical course concepts with real world.	25%	50%	2%	13%	10%
	The assignments and exams taken by the teacher were according to course and syllabi.	40%	40%	2%	5%	13%

Survey Graduating Students

A: Very satisfied **B:** Satisfied **C:** Uncertain **D:** Dissatisfied **E:** Very dissatisfied

S.No.	Question	A	B	C	D	E
1.	The work in the program is too heavy and induces a lot of pressure.	19%	47%	6%	11%	17%
2.	The program is effective in enhancing team-working abilities.	17%	50%	8%	14%	11%
3.	The program is effective in developing analytical and problem solving skills	16%	40%	14%	20%	10%
4.	The program is effective in developing written communication skills.	10%	43%	7%	26%	14%
5.	The program is effective in developing planning abilities.	20%	45%	12%	6%	17%
6.	The objectives of the program have been fully achieved	6%	39%	22%	19%	14%
7.	Faculty was able to meet the program objectives	10%	40%	10%	20%	19%
8.	Environment was conducive for learning	18%	30%	12%	18%	22%
9.	Whether the Infrastructure of the department was good.	9%	51%	1%	19%	19%
10.	Whether the program was comprised of Co-curricular and extra-curricular activities	15%	29%	15%	26%	16%
11.	Whether scholarships/ grants were available to students in case of hardship	0%	14%	17%	28%	40%

Answer question, if applicable.

The internship experience is effective in enhancing

S.No.	Question	A	B	C	D	E
A.	Ability to work in teams.	20%	55%	10%	12%	3%
B.	Independent thinking	19%	61%	11%	3%	6%
C.	Appreciation of ethical values	15%	42%	24%	8%	11%
D.	Professional development	12%	40%	1%	31%	17%
E.	Time management skills	4%	44%	2%	32%	18%
F.	Judgment	7%	55%	18%	5%	17%
G.	Discipline	22%	32%	5%	18%	24%
H.	The line between theory and practical	12%	18%	12%	16%	42%

Student Course Evaluation Questionnaire

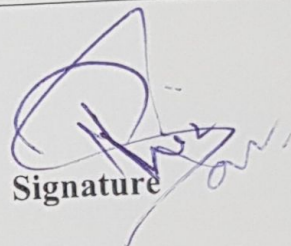
Core Questions

S.No.	Course Content and Organization	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1.	The course objectives were clear.	50%	31%	0%	6%	13%
2.	The Course workload was manageable	30%	32%	6%	24%	9%
3.	The Course was well organized (e.g. timely access to materials, notification of changes, etc.)	33%	33%	0%	25%	9%
Student Contribution		81%<	80%	60%	40%	20%>
4.	Approximate level of your own attendance during the whole Course.	45%	44%	11%	0%	0%
5.	I participated actively in the Course.	30%	51%	15%	4%	0%
6.	I think I have made progress in this Course.	15%	33%	28%	14%	10%
Learning Environment and Teaching Methods		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
7.	I think the Course was well structured to achieve the learning outcomes.	40%	25%	10%	10%	15%
8.	The learning and teaching methods encouraged participation.	43%	24%	5%	14%	14%
9.	The overall environment in the class was academic & friendly.	50%	40%	0%	6%	4%
10.	Classrooms environment were satisfactory.	43%	40%	4%	4%	10%
Learning Resources		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
11.	Learn materials provided by teacher were relevant and useful.	33%	52%	5%	10%	0%
12.	Recommended reading Books etc. were relevant and appropriate	50%	31%	9%	10%	0%
13.	The provision of learning resources in the library was adequate and appropriate.	13%	50%	13%	12%	12%
14.	The provision of learning resources on the Web was adequate and appropriate (if relevant)	25%	51%	10%	14%	0%
Quality of Delivery		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
15.	The Course stimulated my interest and thought on the subject area Teaching techniques of the teacher were interesting and conducive.	39%	30%	5%	26%	0%
16.	The pace of the Course was appropriate	33%	19%	14%	19%	15%
17.	Ideas and concepts were presented by the teacher were clear.	50%	20%	10%	12%	8%

Assessment		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
18.	The methods of assessment were reasonable.	44%	30%	0%	12%	14%
19.	Feedback on assessment was timely.	43%	33%	0%	14%	10%
20.	Feedback on assessment was helpful.	34%	32%	6%	14%	14%
Additional Core Questions		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Instructor / Teaching Assistant Evaluation		48%	24%	14%	5%	10%
21.	I understood the lectures.	50%	24%	0%	17%	10%
22.	The material was well organized and presented.	52%	22%	2%	10%	14%
23.	The teacher was responsive to student needs and problems.	45%	46%	0%	09%	0%
24.	Had the teacher been regular throughout the course?	45%	46%	0%	09%	0%
Practical		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
25.	The material in the practical's was useful.	35%	25%	3%	23%	14%
26.	The demonstrators dealt effectively with my problems.	30%	42%	8%	10%	10%

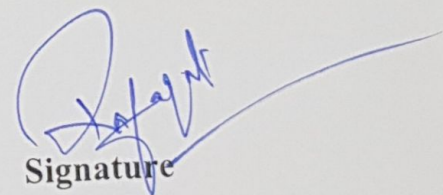
Program Team (PT) Members

1. Prof. Dr. Riaz Ahmed Shaikh



Signature

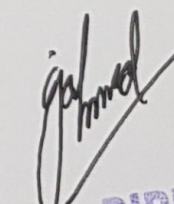
2. Dr. Rafaqat Husain Arain



Signature

Director's Comments

Prof. Dr. Javed Ahmed Mahar



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