UNIVERSITY OF KARACHI

Self-Assessment Report
MPhil/PhD Degree Program

Department of Mathematics,
University of Karachi

Submitted to

Quality Enhancement Cell
University of Karachi

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CRITERION-1

PROGRAMME MISSION, OBJECTIVES AND OUTCOMES

INTRODUCTION

Department of Mathematics was established in 1956. Prof. Dr. Suleman Kerawala was the first chairman. It is one of the biggest Departments in the faculty of Science.

The mission of the department is to bring life to Mathematics and vice versa. Pure, Applied and inter−disciplinary Mathematics is being pursued in teaching and research.

Undergraduate, graduate and postgraduate programmes are being offered. At all levels, students are instructed in the rigor and precision characteristics of mathematical reasoning. They are facilitated to become acquainted with the elementary tools of Mathematics and techniques to use them. Also, they acquire mathematical knowledge and reasoning skills necessary to make effective use of mathematics.

The aim of the department's activities is to help students to develop a significant understanding and appreciation of Mathematics as a creative discipline. Students have facilities of computer lab and seminar library to serve for this purpose. A conference hall has also been established this year for research and other academic activities.

Students graduating from this department get employed in various R&D organizations like SUPARCO, PCSIR, Pakistan Science Federation, Meteorologist Department of Pakistan and Financial organizations like State Bank of Pakistan and numerous public/private educational sectors.

The department currently has 32 full-time teaching staff and, approximately 1200 enrolled students. The department provides full undergraduate degree programmes in Mathematics MSc and BSc(Hons.). These degrees are also offered in the evening under self-finance programme. Additionally, this Department imparts different courses to other degree programs in the Faculties of Social and Applied Science (first two years as subsidiary).

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Chairman

Department of Mathematics

University of Karachi

Criterion-1: Programme Mission, Objectives and Outcomes

Institutional Mission

The mission of the department is to serve the country and wider international community in the development and communication of Mathematics through high quality research, publication and training at both undergraduate and postgraduate levels.

More specifically, our goals are:

- To advance mathematical knowledge through the pursuit of excellence in mathematical research, the dissemination of results through international conferences, leading research journals and the cultivation of international collaboration;
- To foster a stimulating environment for the grounding and training of new mathematical researchers;
- To provide a steady stream of people who are highly trained in the appropriate mathematical skills needed for working in educational, scientific, technical, financial and other areas
- Keep in view the curriculum need of Mathematics to almost every department in the faculty of Social, Biological, Applied and Management Sciences, we provide teachers across the University.

MPhil/PhD Degree Programme

Programme Mission Statement of MPhil/PhD

Our mission of the MPhil/PhD Degree Programme is to produce high quality research scholars for recognition of our country internationally based on quality of work in Mathematics.

Standard 1-1: The Programme must have documented measurable objectives that support college and Institution mission statements.

MPhil/PhD Degree Programme objectives:

This involves helping students:

- To Produce high quality research work.
- To be successful in their postgraduate academic and professional careers
- To enable them to learn Mathematics on their own

- To collaborate with other researchers in solving engineering and scientific problems.
- To become solution provider of real world problems mathematically.
- To develop mathematical culture in our country and at least in our province and our city.
- To take on significant mathematical and scientific projects, solve the problems, and communicate the results of their research.
- To raise the flag of Pakistan by conducting quality research in Mathematics.

Table: Programme Objectives Assessment

S. No.	Objectives	How Measured	When Measured	Improvement Identified	Improvement Made
1	conceive, develop and execute a study plan that has relevance to current issues in Mathematics	by evaluating the assignments and assessment of the student	Every academic year and during semester	None	None
2	gather information from various study tools and resources specially the information technology	By reviewing the thesis and research articles, seminar conducted by student	Every academic year and during semester	None	None
3	have in-depth knowledge of Mathematics and its applications	Through assignments and presentations	Every academic year and during semester	None	None
4	Latest research work without plagiarism	By research articles published in prestigious research journals preferably ISI journals	Every academic year and during semester	None	None

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

After completion of the MPhil/PhD Degree Programme in Mathematics, the students shall be able to:

- acquire a sound understanding of Mathematics
- become quantitatively literate citizens
- do quality research in core areas of Mathematics as well as interdisciplinary areas
- create and communicate mathematical knowledge
- collaborate with other researchers in solving real world problems
- reason mathematically, both formally and intuitively
- read, discuss, write about, and orally present Mathematics
- to work both independently and collaboratively on mathematical problems
- to use contemporary mathematical Softwares

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

a) Strengths and Weaknesses of the Programme

i) Strengths:

There are number of different areas in which actively research is being conducted in mathematic department including Near Ring Theory, Fluid Dynamic, Mathematical Analysis and Applications, Time Scale, Numerical Analysis, Convex Analysis, Operations Research, Mathematical Modeling, …

Since we have a large number of PhD faculty members our programme attracts a number of researchers to get enrolled with us.

ii) Weaknesses

Insufficient facilities for teachers and research students

Lack of financial support to promote research and research culture

No motivation and lack of appreciation for a productive researcher

Unavailability of stipend for research students unlike other institutions which pay a handsome amount to their full-time research students

No projection of work of researchers in terms of Conference and seminars at departmental level

b) Future Development Plans

New courses are introduced time to time in different areas of Mathematics and hopefully this trend will continue in future as well.

Standard 1-4: The department must assess its overall performance periodically.

a) Student Enrolment

S. No	Year	Degree	
		MPhil	PhD
1	2013	28	4
2	2014	No Admission	No Admission
3	2015	8	3

b) Student/Faculty Ratio

In MPhil/PhD program there are approximately 70 enrolled students about 30 percent students could not be able to continue further. So at a time there are around 50 regular students and there are 11 PhD faculty members. In this way, there are 4 to 5 students per teacher approximately.

i) Time for MPhil students

A student who is enrolled in an MPhil programme completes the course work approximately in one year. After course work the student is required to submit a synopsis under supervision of a PhD researcher which is then sent to BASR (Board of Advanced Studies and Research) for approval. After approval of synopsis the student has a maximum of three years' time to submit the MPhil thesis.

ii) Time for PhD students

A student who is enrolled in a PhD programme completes the course work approximately in one year. After course work the student is required to submit a synopsis under supervision of a PhD researcher which is then sent to BASR (Board of Advanced Studies and Research) for approval. After approval of synopsis the student has a maximum of five years' time to submit the PhD thesis.

d) The average student grade point (CGPA)

The average student grade point is 3.0 CGPA

e) Student/Faculty Satisfaction

From Faculty point of view

Most of the research students are not regular in classes and research sessions with supervisor. Also, their English is not good enough therefore most of the students face difficult in reducing plagiarism of the thesis.

Student quality is declining day by day.

From Students point of view

Department conducted a survey for Teachers' and courses evaluation. Here we have summarized some of students' remarks.

Students have the opinion that:

- Mid-term exam, Assignments, Quizzes and Presentations should be a mandatory part of the courses.
- Course outline/curriculum is out dated it should be revised.
- Teachers should focus more on real life applications of Mathematics.
- Latest Mathematical Softwares should also be part of curriculum.
- Workshops and seminars should be conducted on regular basis to motivate students.

Beside these remarks students are also not satisfied with the poor conditions and infrastructure of the departments most of the students complained about

- Unavailability of pure drinking water
- Poor conditions of computer lab
- Shortage of chairs in the class rooms
- Unavailability of electric supply in girls' common room.
- Overall poor conditions of the department related to cleanliness etc.

CRITERION-2

CURRICULUM DESIGN AND ORGANIZATION

Criterion-2 Curriculum Design and Organization

Programme of Studies offered

Year / Semester wise Scheme of Studies of MPhil Programme

1st Year (Semester I)

S. No	Course Code	Course Title
1	Compulsory	RESEARCH METHODOLOGY
2	Optional I	
3	Optional II	
4	Optional III	

1st Year (Semester II)

S. No	Course Code	Course Title
1	Compulsory	ADVANCE RESEARCH METHODOLOGY
2	Optional I	
3	Optional II	
4	Optional III	

List of MPhil Optional courses

SR. #.	MTHN	CR. #.	COURSE TITLES
01.	MTHN	701	DIFFERENTIAL GEOMETRIC TECHNIQUES – I
02.	MTHN	702	DIFFERENTIAL GEOMETRIC TECHNIQUES – II
03.	MTHN	703	DIFFERENTIAL EQUATIONS – I
04.	MTHN	704	DIFFERENTIAL EQUATIONS – II
05.	MTHN	705	GROUP THEORY & SYMMETRIES
06.	MTHN	707	LIE ALGERA – I
07.	MTHN	708	LIE ALGERA – II
08.	MTHN	709	TOPICS IN FLUID DYNAMICS – I
09.	MTHN	710	TOPICS IN FLUID DYNAMICS – II
10.	MTHN	711	CLASSICAL ELECTRODYNAMICS – I
11.	MTHN	712	CLASSICAL ELECTRODYNAMICS – II
12.	MTHN	713	TOPICS IN RELATIVITY – I
13.	MTHN	714	TOPICS IN RELATIVITY – II
14.	MTHN	715	SOME EXACT SOLUTIONS OF EINSTEINS VACUUM FIELD EQUATIONS
15.	MTHN	717	CONTINUUM MECHANICS – I
16.	MTHN	718	CONTINUUM MECHANICS – I
17.	MTHN	719	CLASSICAL FIELD THEORY – I

18.	MTHN	720	CLASSICAL FIELD THEORY – II
19.	MTHN	721	TOPICS IN QUANTUM MECHANICS – I
20.	MTHN	722	TOPICS IN QUANTUM MECHANICS – II
21.	MTHN	723	QUANTUM FIELD THEORY – I
22.	MTHN	724	QUANTUM FIELD THEORY – II
23.	MTHN	725	REPRESENTATION THEORY – I
24.	MTHN	726	REPRESENTATION THEORY – II
25.	MTHN	727	GAUGE THEORY OF GRAVITATION – I
26.	MTHN	728	GAUGE THEORY OF GRAVITATION – II
27.	MTHN	729	TOPICS IN NUMERICAL ANALYSIS – I
28.	MTHN	730	TOPICS IN NUMERICAL ANALYSIS – II
29.	MTHN	731	PLAZMA DYNAMICS – I
30.	MTHN	732	PLAZMA DYNAMICS – II
31.	MTHN	733	ATMOSPHERIC STUDY – I
32.	MTHN	734	ATMOSPHERIC STUDY – II
33.	MTHN	735	SOLAR-SYSTEM ASTROPHYSICS
34.	MTHN	736	STELLAR & GALACTIC ASTRONOMY
35.	MTHN	737	EXTRA-GALACTIC ASTRONOMY
36.	MTHN	738	COSMOLOGY

SR. #.	MTHN	CR. #.	COURSE TITLES
01.	MTHN	747	OPERATIONS RESEARCH – I
02.	MTHN	748	OPERATIONS RESEARCH – II
03.	MTHN	751	GENERAL TOPOLOGY – I
04.	MTHN	752	GENERAL TOPOLOGY – II
05.	MTHN	753	TOPOLOGICAL-DIMENSION THEORY
06.	MTHN	754	DIFFERENTIAL TOPOLOGY
07.	MTHN	755	TOPOLOGICAL GROUPS – I
08.	MTHN	756	TOPOLOGICAL GROUPS – II
09.	MTHN	757	FUNCTIONAL ANALYSIS – I
10.	MTHN	758	FUNCTIONAL ANALYSIS – II
11.	MTHN	759	COMBINATORICS & MEASURE THEORY – I
12.	MTHN	760	COMBINATORICS & MEASURE THEORY – II
13.	MTHN	761	SUMMABILITY THEORY – I
14.	MTHN	762	SUMMABILITY THEORY – II
15.	MTHN	763	FOURIER SERIES – I
16.	MTHN	764	FOURIER SERIES – II
17.	MTHN	765	ALMOST PERIODIC FUNCTIONS – I
18.	MTHN	766	ALMOST PERIODIC FUNCTIONS – II
19.	MTHN	767	HOMOLOGICAL ALGEBRA – I
20.	MTHN	768	HOMOLOGICAL ALGEBRA – II
21.	MTHN	769	ABELIAN GROUPS
22.	MTHN	770	SOLUBLE & NILPOTENT GROUPS
23.	MTHN	771	THEORY OF RINGS – I

24.	MTHN	772	THEORY OF RINGS – II
25.	MTHN	773	SPECIAL CLASSES OF RINGS – I
26.	MTHN	774	SPECIAL CLASSES OF RINGS – II
27.	MTHN	775	NEAR RINGS
28.	MTHN	776	SPECIAL CLASSES OF NEAR RINGS
29.	MTHN	777	GALOIS THEORY & APPLICATIONS – I
30.	MTHN	778	GALOIS THEORY & APPLICATIONS – II
SR. #.	MATH	CR. #.	COURSE TITLES
01.	MATH	701	LIE ALGEBRA – I
02.	MATH	702	LIE ALGEBRA – II
03.	MATH	703	COMPRESSIBLE FLOW – I
04.	MATH	704	COMPRESSIBLE FLOW – II
05.	MATH	705	FOURIER SERIES – I
06.	MATH	706	FOURIER SERIES – II
07.	MATH	707	HOMOLOGICAL ALGEBRA – I
08.	MATH	708	HOMOLOGICAL ALGEBRA – II
09.	MATH	709	ABELIAN GROUPS
10.	MATH	710	SOLUBLE AND NILPOTENT GROUPS
11.	MATH	711	THEORY OF RINGS – I
12.	MATH	712	THEORY OF RINGS – II
13.	MATH	713	NEAR RINGS
14.	MATH	714	SPECIAL CLASSES OF RINGS
15.	MATH	715	GALOIS THEORY AND APPLICATIONS – I
16.	MATH	716	GALOIS THEORY AND APPLICATIONS – II
17.	MATH	717	ASTRODYNAMICS – I
18.	MATH	718	ASTRODYNAMICS – II
19.	MATH	719	ABELIAN GROUPS – I
20.	MATH	720	ABELIAN GROUPS – II
21.	MATH	721	INTEGRAL EQUATION
22.	MATH	722	PARTIAL DIFFERENTIAL EQUATION
23.	MATH	723	NON LINEAR SYSTEM – I
24.	MATH	724	NON LINEAR SYSTEM – II
25.	MATH	749	CONVEX ANALYSIS – I
26.	MATH	750	CONVEX ANALYSIS – II

Year / Semester wise Scheme of Studies of PhD Programme

1st Year (Semester I)

S. No	Course Code	Course Title
1	Optional I	
2	Optional II	
3	Optional III	

1st Year (Semester II)

S. No	Course Code	Course Title
1	Optional I	
2	Optional II	
3	Optional III	

List of PhD Optional courses

SR. #.	MATH	CR. #.	COURSE TITLES
01.	MATH	801	COMPUTATIONAL METHODS FOR FLUID FLOW – I
02.	MATH	802	COMPUTATIONAL METHODS FOR FLUID FLOW – II
03.	MATH	803	MODELING AND SIMNULATION OF BIOLOGICAL SYSTEMS – I
04.	MATH	804	MODELING AND SIMNULATION OF BIOLOGICAL SYSTEMS – II
05.	MATH	805	SPECIAL CLASSES OF RINGS – I
06.	MATH	806	SPECIAL CLASSES OF RINGS – II
07.	MATH	807	STOCHASTIC PROCESSES
08.	MATH	808	RENEWAL PROCESSES AND QUENING THEORY
09.	MATH	809	THEORY OF MATHEMATICAL INQUALITIES AND APPLICATIONS – I
10.	MATH	810	THEORY OF MATHEMATICAL INQUALITIES AND APPLICATIONS – II
11.	MATH	813	THEORY OF MATRIX RINGS AND MATRIX NEAR RINGS – I
12.	MATH	814	THEORY OF MATRIX RINGS AND MATRIX NEAR RINGS – II

Standard 2-1: The Curriculum must be consistent and support the programme's documented objectives

The following table manifests how the programme content (Courses) meets the Programme Objectives.

For MPhil/PhD Programme

Courses	**Programme's Objectives**			
	1	**2**	**3**	**4**
Major Courses	Research methodology			
Elective Courses	Depends on the relevant field of specialization	Depends on the relevant field of specialization	Depends on the relevant field of specialization	Depends on the relevant field of specialization
Practical (Field and Lab)				
Thesis/Dissertation	Depends on the relevant field of specialization	Depends on the relevant field of specialization	Depends on the relevant field of specialization	Depends on the relevant field of specialization

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

The following table indicates the elements covered in core courses:

Elements	**Courses**
i) Theoretical Background	All courses offered by the Department
ii) Problem Analysis	All courses of the Department Elective Courses Internships/Thesis/Dissertation
iii) Solution Design	All courses of the Department Elective Courses Internships/Thesis/Dissertation

Standard 2-3: The curriculum must satisfy the core requirements for the programme, as specified by the respective accreditation body. &

Standard 2-4: The curriculum must satisfy the major requirements for the programme, as specified by the respective accreditation body/council.

The curriculum adopted by our department is in alignment with the Higher Education Commission

(HEC) approved by competent authority and statutory bodies of University of Karachi. The department also actively participated in National Curriculum Development & Revision.

2-5: The curriculum must satisfy the general education, arts and other discipline requirements for the Programme as specified by the accreditation body.

NA

Standard 2-6: Information technology component of the curriculum must be integrated throughout the programme.

Most of the students use different Softwares as per their research need. Most commonly used mathematical Softwares include Matlab, Mathematica, Maple etc. MS Office especially MS word and Latex are used for thesis writing etc.

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

Our focus is mainly on written mathematical communication rather than oral. Oral communication skills are covered during presentations.

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CRITERION-3

LABORATORY AND COMPUTING FACILITIES

CITERION-3: Laboratory and Computing Facilities

Laboratory Facilities

Our department only requires a computer lab the details of which are as under.

Computer Facilities

For research students usually use their own laptops and do not require departmental lab facility.

Internet Facility

In general, there is no internet facility for teachers and students in the department. Some teachers have internet connections by their own resources. Also, most of the time teachers are facing problems in internet connectivity and/or speed.

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

Labs/Practical's and/or software needs and requirements are already given in course outline/curriculum.

Standard 3-2: There must be adequate support personnel for instruction and maintaining the laboratories.

There is no support personnel(s) to provide instruction to the students or to maintain the laboratories or facilitate in computer lab work. As a result, it becomes very difficult for the students to work and maintain the computer lab. These labs require properly trained and technical staff to fulfill the basic needs of researchers

Standard 3-3: The University computing infrastructure and facilities must be adequate to support programme's objectives

i) Computing Facilities

The department doesn't have adequate networking and computer facilities.

ii) Multimedia

There is only one multi-media projector fixed in seminar room.

iii) Website

http://math.uok.edu.pk

iv) Internet

The department has limited internet facility for the faculty and labs provided from main communication network of the university. It is not available to research student because of the non-availability of computers and computer lab. The speed of the internet is gradually decreasing over time and frequently remains unavailable due to technical reasons.

CRITERION-4

STUDENT SUPPORT AND ADVISING

Criterion-4 Student Support and Advising

Although there is a disciplinary committee for students to help them at BSc and MSc level but there is no student advisory for the research students in our department. The faculty members informally provide support, advice, and mentoring. They can freely discuss their concerns with any of the staff they feel comfortable with.

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

Programme	Classes per Week	Practical Classes per Week	Research Guidance
MPhil	12	Only for elective courses with lab.	By Supervisor
PhD	9	Only for elective courses with lab.	By Supervisor

Standard 4-2: Course in the major must be structured to ensure effective interaction between students, faculty and teaching assistants.

The MPhil/PhD programs are based on both structured and non-structured courses. The department is working to revise the curriculum to fulfill todays need of the subject.

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

In general, all faculty members provide assistance for the selection of course, about various requirements for the completion of the program and career choices. All relevant information is displayed on the departmental notice board and a copy is provided to research supervisor. The students are regularly updated about the upcoming seminars, workshops and conferences. Some of the workshops are specially organized for them to learn new techniques or soft wares.

CRITERION-5

PROCESS CONTROL

Criterion-5: Process Control

Standard 5-1: The process by which students are admitted to the programme 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.

Every year a policy is made through departmental board of studies according to which the number of seats and criteria is established to grant admissions.

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

For admission in MPhil students should have completed MSc in Mathematics and for PhD Admission students should have completed his or her MPhil with thesis form any H.E.C recognized university/institution. The admission is granted on the basis of entry test followed by Interview by the Departmental Research Committee.

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 institutional mission statement. These processes must be periodically evaluated to ensure that it is meeting with its objectives.

Faculty Recruitment / Retaining Policy

As per Karachi University Rules/HEC Criteria

Appointments / Promotions Procedure:

As per Karachi University Rules/HEC Criteria

Basic Pay Scale (BPS)

BPS 17

BPS 18

BPS 19

BPS 20

a. Lecturer (BPS- 18):

Minimum Qualification

As per Karachi University Rules/HEC Criteria

b. Assistant Professor (BPS- 19):

Minimum Qualification

As per Karachi University Rules/HEC Criteria

c. Associate Professor (BPS- 20)

Minimum Qualification

As per Karachi University Rules/HEC Criteria

Experience

Minimum Number of Publications

As per Karachi University Rules/HEC Criteria

d. Professor (BPS-21)

Minimum Qualification

As per Karachi University Rules/HEC Criteria

Experience

As per Karachi University Rules/HEC Criteria

Minimum Number of Publications

As per Karachi University Rules/HEC Criteria

Bases for Appointments / Promotions

As per Karachi University Rules/HEC Criteria

Standard 5-4: The process and procedure 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.

We are following semester system. At the end of each semester exam are conducted and performance of students and understanding is checked by assessment of exam copies. Now it is realized that Mathematics curriculum should be revised.

Standard 5-5: The process that ensures that graduates have completed the requirements of the programme must be based on standards, effective and clearly documented procedures. This process must be periodically evaluated to ensure that it is meeting its objectives.

Following semester system, we would be able to ensure and fulfill the above roadmap.

CRITERION-6

FACULTY

Criterion-6 Faculty

Standard 6-1: There must be enough full time faculty who are committed to the programme to provide adequate coverage of the programme areas / courses with continuity and stability. The interest of all faculty members must be sufficient to teach all courses, plan, modify and update courses. The majority must hold a Ph.D. degree in the discipline.

Our department is rich in terms of PhD faculty members out of 32, 11 are PhDs. Our faculty is very competent. We are offering almost all core courses and most of the optional courses are also taught at our department. Faculty members are doing research in diversified fields. Applied side is a little bit heavier in terms of number of faculty members as compared to pure side. We are in danger of shortage of algebra experts in future after retirement of senior members.

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 programmes for faculty development must be in place.

There is always a need to update but our course outline is a little bit outdated and does not fulfill all the present era needs. It must be revised. Also, lack of interest is sown from top management in teachers training and developments. All the teachers should be updated in terms of current mathematical trends and teaching methodology for professional development.

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

Most of the teachers are not happy due to management issues related to poor administration, billing, medical, arrears, promotion and research grants etc. There is also a situation of chaos due to frequent change of policies of HEC and Sind Government. Faculty members who are doing research with dedication have no financial support for research. Very poor condition of class rooms due to shortage of chairs and worst condition of computer lab.

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.

a) Departmental library and Internet Facility

We have one out dated seminar library. No proper internet facility for faculty and students.

b) Main Library

Mahmood Hussain Library is a central library for this purpose.

c) Offices

We also have shortage of faculty offices. In some small offices 4 faculty members are sitting. Also, the conditions of offices are not good.

d) Class Rooms

Very poor condition of class rooms. Shortage of chairs. Poor electricity conditions. Windows without glasses etc.

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

We do have proper librarian for our seminar library. But books are out dated. Also there is no software or computer to manage library digitally.

Standard 7-3: Class rooms must be adequately equipped and offices must be adequate to enable faculty to carry out their responsibility.

Classrooms

Very poor condition of class rooms. Shortage of chairs. Poor electricity conditions. Windows without glasses etc.

Faculty Offices

We also have shortage of faculty offices. In some small offices 4 faculty members are sitting. Also, the conditions of offices are not good. Faculty do not have proper internet and printing facilities.

CRITERION-8

INSTITUTIONAL SUPPORT

Criterion-8 Institutional 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 teacher and scholars.

As mentioned earlier, there are no proper facilities to promote research culture. Also shortage of funds or unavailability of research grants for research.

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

NUMBER OF STUDENTS EXISTING AND ADMITTED IN 2013, 2014, AND 2015

SR. #.	CLASS	NUMBER OF STUDENTS
2013		
01.	M. Phil. Program	28
02.	Ph. D. Program	04
03.	Research Assistants	NA
2014		
01.	M. Phil. Program	NO ADMISSIONS
02.	Ph. D. Program	NO ADMISSIONS
03.	Research Assistants	NA
2015		
01.	M. Phil. Program	08
02.	Ph. D. Program	03
03.	Research Assistants	NA

Student/Faculty Ratio (for the last three years)

Out of 43 students there are 11 teachers, i.e., 43/11= 4 students per teacher approximately

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

As mentioned earlier there are lack of financial resources to maintain seminar library and computer lab properly.

Survey's Results

Dr. Asif Raza Khan conducted a survey of 200 Students. The participation of students is as under in terms of percentage:

MSc Final year students Morning	40%
BSc 3rd year honors students Morning	40%
Passed Out students	1%
MPhil students	2%
PhD students	1%
MSc Final year students Evening	15%
BSc 3rd year honors students Evening	1%

After survey a team under supervision of Dr. Asif Raza Khan tabulated and compiled the survey results. The team was consisting of the following members:

Dr. Asif Raza Khan	Assistant Professor
Mr. Aziz Hussain	Non-Teaching Staff
Mr. Junaid Tahir	Non-Teaching Staff
Mr. Syed Hassan Ali	Teaching Assistant
Mr. Syed Irfan Ahmed	MSc Final Year Student
Mr. Hammad Mustufa	MSc Final Year Student

Following is the survey result.

TEACHER'S EVALUATION						
		5	4	3	2	1
1	The Teacher provides lesson plan in the first lecture	42%	20%	18%	13%	7%
2	The Teacher conducts the classes as per schedule	44%	28%	15%	7%	6%
3	The Teacher comes prepared for each lecture / practical	45%	34%	14%	4%	3%
4	The Teacher demonstrates knowledge of the subject	38%	28%	18%	11%	5%
5	The Teacher provides additional material apart from the text book	21%	26%	27%	10%	16%
6	The Teacher creates an environment that is conducive for learning	23%	29%	26%	9%	13%
7	The Teacher has completed the entire course	27%	35%	16%	14%	8%
8	The Teacher is fair in evaluation	20%	28%	32%	12%	8%
9	The Teacher returns the graded assignments, quizzes answer sheets etc. within specified time period	15%	22%	20%	21%	22%
10	The Teacher remains available for consultation during specified office hours	32%	25%	18%	11%	14%
11	The Teacher follows moral and ethical norms	38%	28%	17%	11%	6%
COURSE EVALUATION						
12	The course is well organized	27%	31%	20%	10%	12%
13	The syllabus clearly states course objectives, requirements, procedures and grading criteria	17%	33%	26%	16%	8%
14	The course integrates the theoretical concepts with real world applications	17%	17%	27%	18%	21%
15	The assignments, quizzes and exams coverd the materials presented in the course	30%	32%	18%	13%	7%
16	The course material is updated	17%	25%	22%	15%	21%
17	The content presented in the course has increased my knowledge of the subject	35%	33%	15%	10%	7%
18	The course content has stimulated my intellectual curiosity	22%	26%	35%	12%	5%

We also got various remarks from students which may be summarized as follows:

Students have the opinion that:

- Mid-term exam, Assignments, Quizzes and Presentations should be a mandatory part of the courses.
- Course outline/curriculum is out dated it should be revised.
- Teachers should focus more on real life applications of Mathematics.
- Latest Mathematical Softwares should also be part of curriculum.
- Workshops and seminars should be conducted on regular basis to motivate students.

students are also not satisfied with the poor conditions and infrastructure of the departments most of the students complained about

- Unavailability of pure drinking water
- Poor conditions of computer lab
- Shortage of chairs in the class rooms
- Unavailability of electric supply in girls' common room.
- Overall poor conditions of the department related to cleanliness etc.

Faculty CVs

CVs of Faculty Members are in Following order of Seniority

1. Dr. Syed Anwar Ali Zaidi (Chairman) Professor PhD
2. Dr. Sarwar Jahan Abbasi Professor PhD, Post Doc.
3. Dr. Najeeb Alam Khan Associate Professor PhD
4. Dr. Mushtaq Ahmed Assistant Professor PhD
5. Mr. Muhammad Javed Ansari Assistant Professor MPhil
6. Mr. Waseem Ahmed Khan Assistant Professor MPhil
7. Dr. Syeda Sadia Zia Assistant Professor PhD
8. Mr. Waseem Ahmed Ansari Assistant Professor MSc
9. Ms. Saba Naz (SL) Assistant Professor MSc
10. Mr. Tanveer Ahmed Siddiqui (SL) Assistant Professor MSc

11. Dr. Muhammad Imtiaz	Assistant Professor	PhD
12. Dr. Syed Inayatullah	Assistant Professor	PhD
13. Mr. Muhammad Ayaz	Assistant Professor	MS
14. Dr. Asif Raza Khan	Assistant Professor	PhD
15. Dr. Fozia Hanif Khan	Assistant Professor	PhD
16. Dr. Saqib Ur Rehman	Assistant Professor	PhD
17. Dr. Syed Ahmed Hassan	Assistant Professor	PhD
18. Mr. Shahid Sultan (SL)	Lecturer	MSc
19. Mr. Asif Iqbal	Lecturer	MS
20. Ms. Asma Rani (SL)	Lecturer	MSc
21. Ms. Hafsa Athar Jafree	Lecturer	MPhil
22. Ms. Hina Zaheer (SL)	Lecturer	MSc
23. Ms. Noor Fatima Siddiqui	Lecturer	MS
24. Mr. Atteeq Razzak	Lecturer	MPhil
25. Mr. Salman Safdar	Lecturer	MS
26. Ms. Samreen Ahmed	Lecturer	MS
27. Ms. Samira Sahar Jamil	Lecturer	MS
28. Ms. Sumayyah Saadi	Lecturer	MS
29. Mr. Muhammad Usman Qureshi	Lecturer	MSc
30. Ms. Wajiha Riaz	Lecturer	MPhil
31. Ms. Aghzia Akram	Lecturer	MSc
32. Ms. Mehwish Shafi Khan	Lecturer	MPhil