

Pir Mehr Ali Shah
Arid Agriculture University, Rawalpindi



Self-Assessment Report (2012-14)

Department of Botany

(M.Phil. Botany)

Programme Self-Assessment Team

- **Prof. Dr. Muhammad Arshad (Coordinator)**
- **Dr. Noshin Ilyas (Member)**
- **Zia-ur-Rehman Mashwani (Member)**

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Introduction

Department of Botany, PMAS Arid Agriculture Rawalpindi, has honour of being pioneer department of university. Department is continuously engaged in academic and research activities. M.Phil is one of the main programs being offered in department in addition to M.Sc and Ph.D. About 36 students are enrolled in M.Phil programme. The number of passed out students in M.Phil programme so far is 53. The Department is incessantly following HEC's recommendations for impost and updation of its activities. A course work of two semesters followed by research work and thesis write up is specialty of M.Phil degree programme. M.Phil scholars are actively involved in research activities in department. Students are working on diverse aspects of plant science including taxonomy, physiology, ethnopharmacology, phytochemistry and plant biochemistry. M.Phil students are also encouraged to participate in scientific gatherings like conferences, symposia and workshops to discuss and communicate their research findings with local as well as foreign experts in addition to learn new techniques and methodologies. Most of the students also submit and publish their research papers during this degree programme.

The department has dedicated and hardworking faculty comprising of 10 teachers. Out of them 7 are Ph.D, 2 are almost near to completion of their Ph.D and one is M.Phil. All faculty members are highly motivated and actively involved in research activities and academic progress. An extensive scheme of studies has been developed including all major aspects such as ecology, genetics, physiology, taxonomy, anatomy, molecular biology of plants and biochemistry. These classes are taught by faculty who enjoy teaching and have a commitment to education. Department is also offering courses to other departments like Biology, Environmental sciences, Agriculture, MBA (Agri-Business) and Department of Forestry and Range Management Opportunities also exist for students to do independent or assist in faculty research projects on campus. Department of Botany prepares students for careers in industry, government agencies and teaching jobs

Faculty in the Department of Botany is involved in collaborative research projects from HEC. Students have opportunities to participate in independent research projects in state-of-the-art faculty research laboratories, or research field sites.

SECTION 1 (this portion shares many common things with Ph.D section so may be rephrased)

Components of Self-Assessment Process:

This Self-Assessment has been prescribed on the cradle of the eight criteria described in self-Assessment Manual. The Self-Assessment Report (SAR) contains eight sections. The first section outlines the program mission and objectives. Section 2 provides information about the curriculum development. Section 3 enlists the laboratories and other relevant information followed by student support and guidance. The last four sections provide information about student support, process control, faculty characteristics and institutional facilities and support provided by the university.

Criterion-1: Program Mission, Objectives and Outcomes

Introduction

The department of Botany is actively involved in training M.Phil students at expert proficiency level.

Standards 1-1: Documented measurable objectives

Mission of the Program:

Our Mission is to compromise an eminence and valuable guidance in the field of Botany. Our integrative encouragement reproduces the position of solid corrective and interdisciplinary methodologies in research and edification. The notable theme of the department is to regulate, indorse, and conduct acquaintance regarding basic plant biology and fetch supremacy in the biological sciences.

Objectives

1. To develop the discipline on up-to-date, creative and innovative lines for teaching and research for the graduate students.
2. To guide the students how to select, plan and prepare the research project on diseases of economic and national importance in the area.
3. The ability to formulate a specific research plan and carry out original independent research on a hypothesis to be tested in depth concerning novel ideas in the field of Botany
4. To commence essential and applied research plan and carry out original independent research on a hypothesis to be tested in depth concerning novel ideas in field of Botany
5. The presentation of the research results to the larger community of scholars nationally and internationally.
6. To transport inventive thinking in students to grow cost effective research accomplishments.

Outcomes:

1. Preparation of research projects based on the identification of problems and use of scientific study techniques.
2. Communication skills through presentations, oral discussions, scientific and review articles, etc.
3. Enhancement of knowledge and vision in the field of Botany.
4. Scientific writing skills and publication of research papers in scientific journals.
5. Identification of priority problems in plant management/conservation and suggest appropriate solutions
6. Plagiarism free papers are being published successfully.

Sr. #	Objectives	How Measured	When Measured	Improvement Identified	Improvement Made
1.	Strengthening of discipline	On the basis of recognition, importance & impact of plant diseases in the area	Continuous activity	Teaching methods need to be improved	Revision and improvement in teaching methods like use of multimedia
2.	Guidance to students in research	Assessing interest of students, students feed back	Before start of research	Students to make presentations and reports	Presentations, seminars, communication skills development
3.	Anticipation of new teaching/ researchable areas,	Through surveys	identity of priority problems	Continuous activity	New courses to be included in curriculum, research on new problems Approval of new curriculum
4.	Essential and Functional Research	Specialized faculty members in specific field. Up gradation of labs	Incessant process	New research lines established	Establishment of herbarium and botanical garden. Vigorous research activities and publication
5.	To ameliorate research environment	Number of research publications and projects	It is generally measured annually	The no. of publications are increasing as the number of projects	At present several research projects are in progress.
6.	To instruct the mechanical evidence	Reflected by student efficacy	At the end of projects	Successful graduates are working in different organization	By doing quality research.

Programme outcomes and their relationship with objectives

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

+ = Moderately satisfactory, ++ = Satisfactory, +++ = Highly satisfactory

Program objectives

Meeting Standards 1-2: Program Outcome Measurement

A number of assessments based on the SAR questionnaires were commenced to assess the Program outcomes/ graduates of the department and teacher's evaluation. Maximum students filled the survey forms.

Program Assessment Results:

The outcomes of Program assessment by the SAR are presented in graphical method. However, the inclusive outcomes show that the students are contented with the Program and method of teaching.

Student Course Evaluation

Maximum of the students favor almost the course contents of each course, their prospect and applications in daily life beside with the presentation by the concerned tutor. The outcomes of this survey are presented graphically, which are affixed

**STUDENTS COURSE
EVALUATION
PROFORMA**

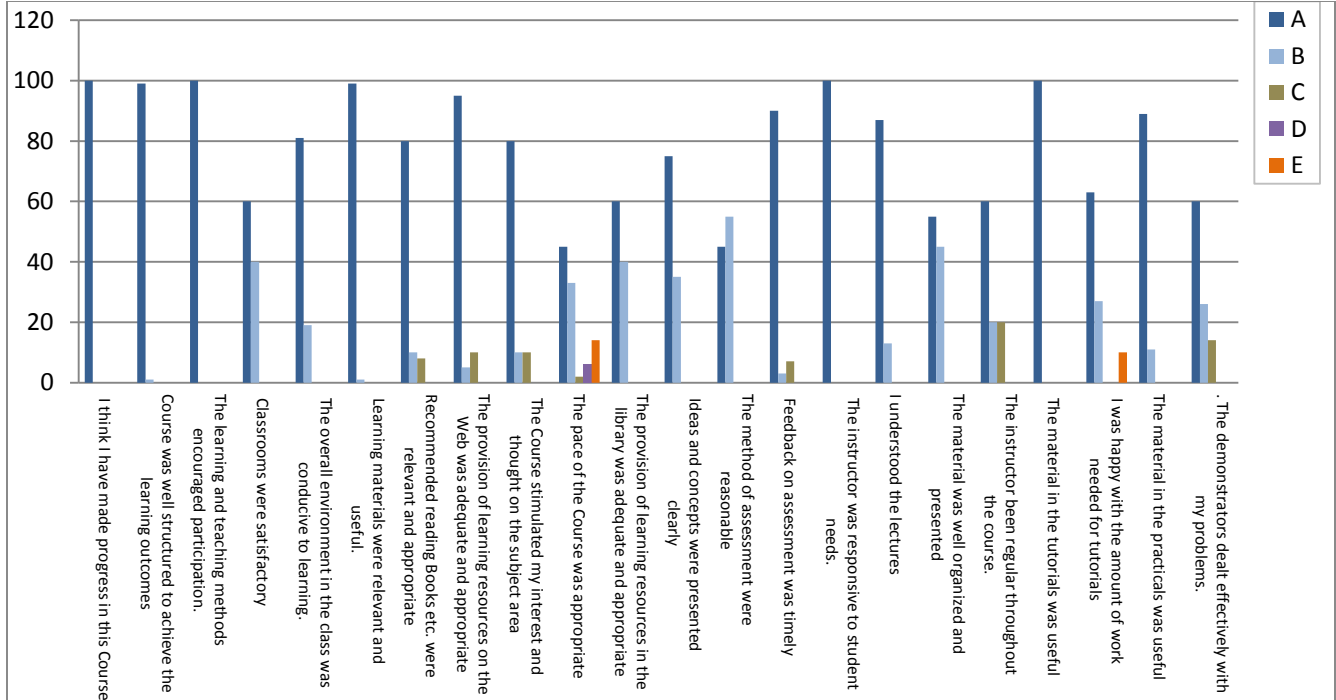
FALL 2012



Pir Mehr Ali Shah Arid Agriculture University

Performa 1

Teacher Name: Yamin Bibi
Course Name: Arid Zone Ecology
Session Name: FALL-12
Section: A M/E: M Semester# 1
Class: M. Phil (Botany)



General Comments of the Students about this Course

Weaknesses: Course overload was indicated.

Strengths: Course objectives were clear and learning material was available in time



Pir Mehr Ali Shah Arid Agriculture University

Performa 1

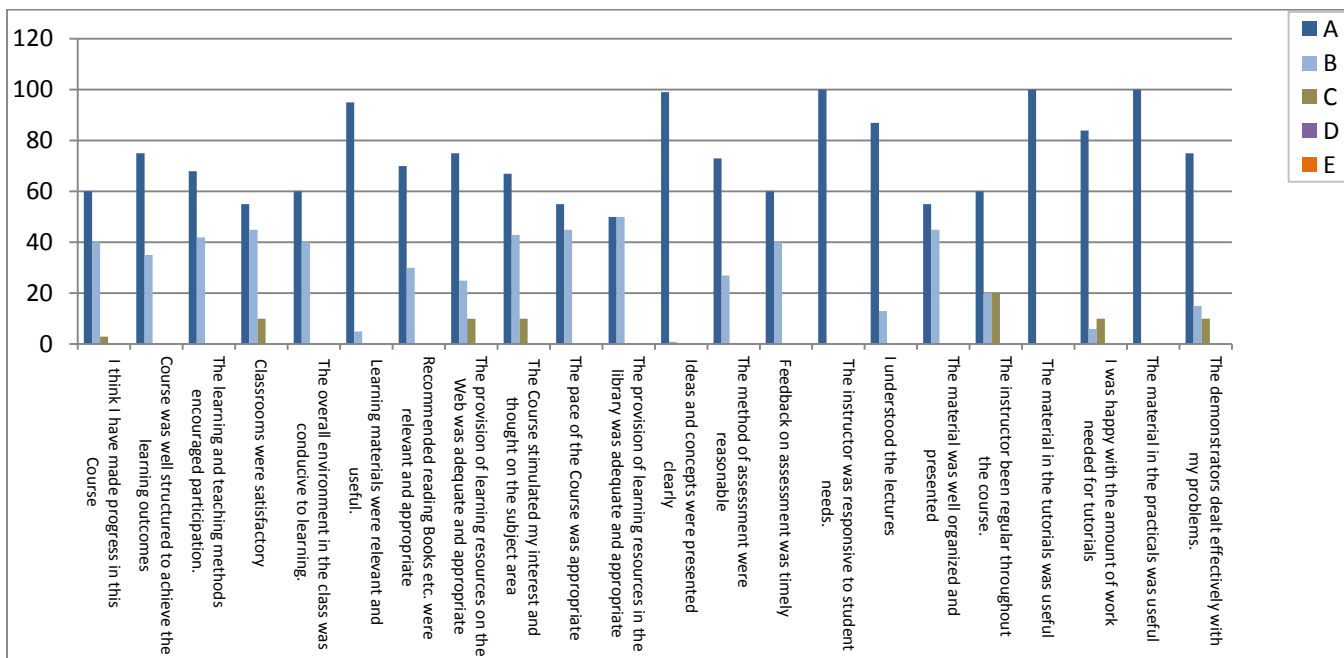
Teacher Name: Yamin Bibi

Course Name: Conservation and Management of Plant Resources

Session Name: FALL-12

Section: A M/E: M Semester# 1

Class: M. Phil (Botany)



General Comments of the Students about this Course

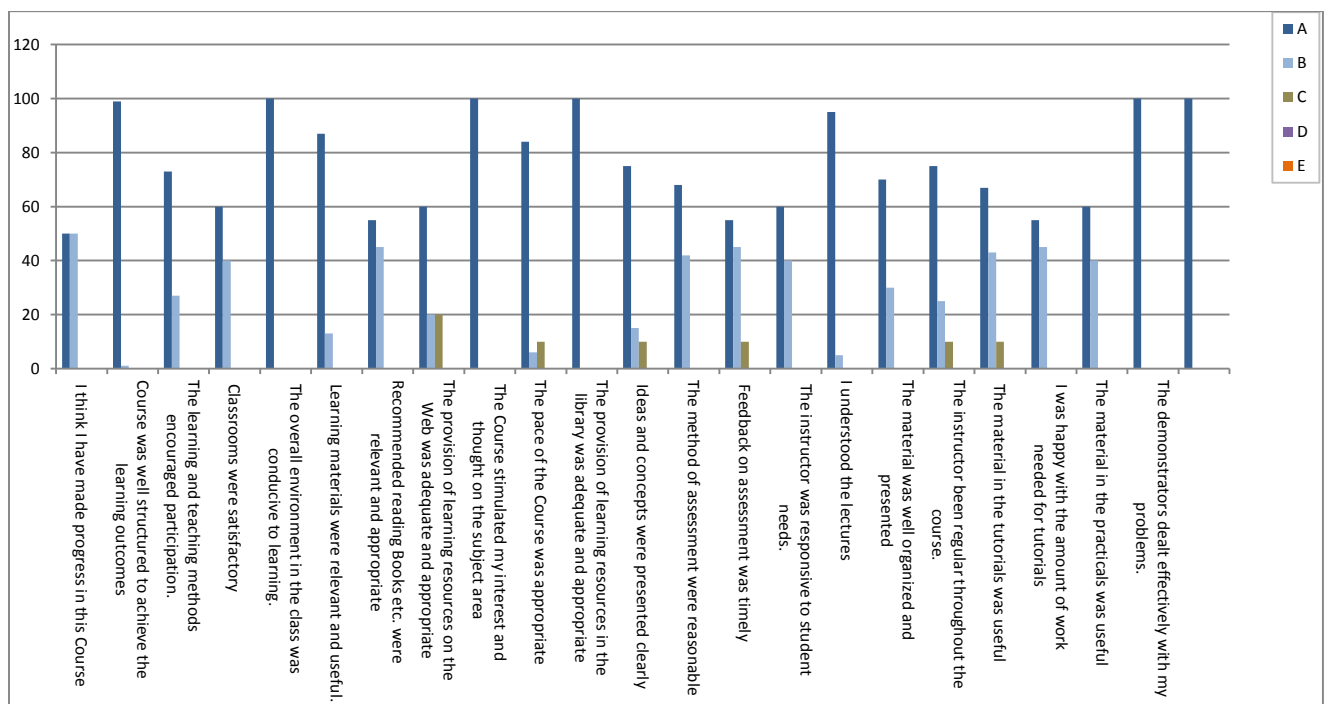
Weaknesses: No weakness was indicated by the students about this course.

Strengths: The tutor presented respectable message ability, guaranteed contribution of students in class discussion, included modern concepts/materials in the course contents and workload was also practicable



Pir Mehr Ali Shah
Arid Agriculture University
Performa 1

Teacher Name: Saira Asif
Course Name: Molecular Plant Development
Session Name: FALL-12
Section: A M/E: M Semester# 1
Class: M. Phil (Botany)



General Comments of the Students about this Course

Weaknesses: Graph represents no weakness.

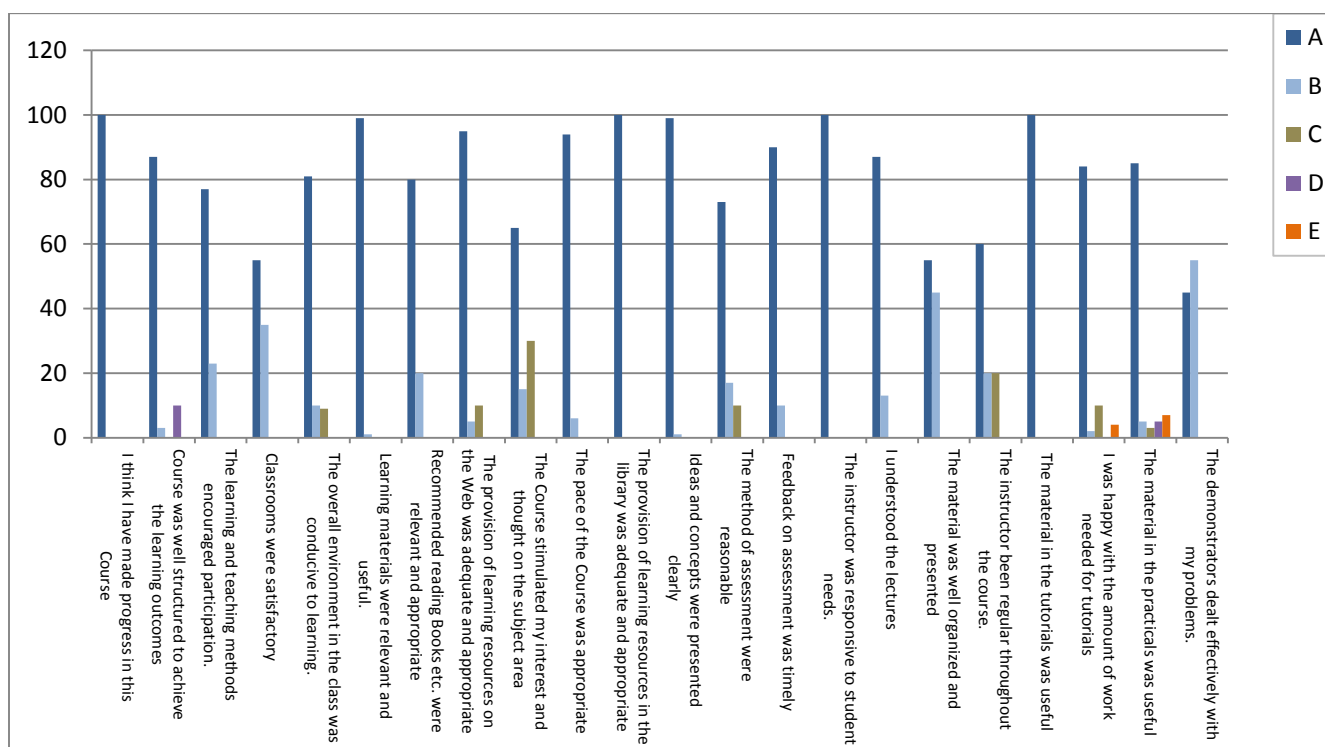
Strengths: Workload was practicable. The tutor showed reasonable conduct and statement skill, confirmed participation of students in class discussion, included recent materials in the course subjects, remained quick and regular.



Pir Mehr Ali Shah Arid Agriculture University

Performa 1

Teacher Name: Noshin Ilyas
Course Name: Plant Proteomics
Session Name: FALL-12
Section: A M/E: M Semester# 1
Class: M. Phil (Botany)



General Comments of the Students about this Course

Weaknesses: Few students suggested course material for practical should be improved.

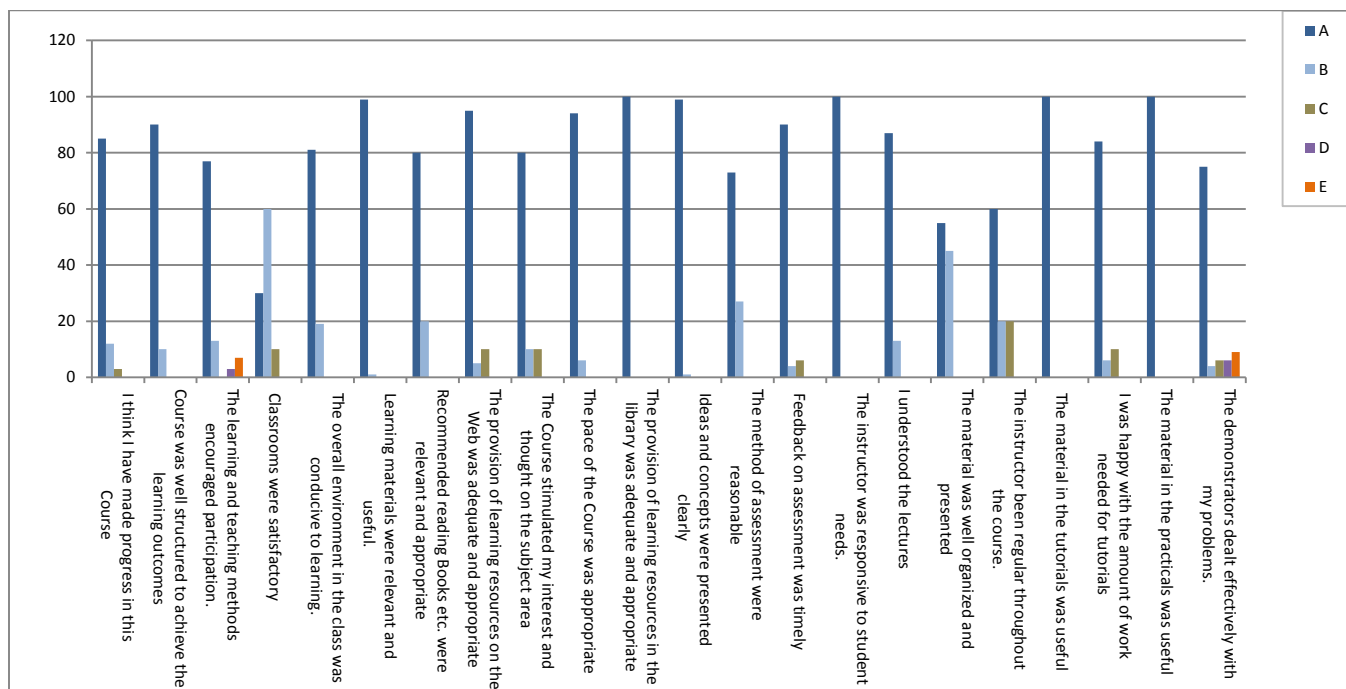
Strengths: The tutor simplified the course objectives. Students were happy with the amount of workload and course organization.



**Pir Mehr Ali Shah
Arid Agriculture University**

Performa 1

Teacher Name: Rahmatullah Qureshi
Course Name: Plant Systematics
Session Name: FALL-12
Section: A M/E: M Semester# 1
Class: M. Phil (Botany)



General Comments of the Students about this Course

Weaknesses: Tutor should deal with student's problems effectively.

Strengths: The tutor showed reasonable attitude and communication skill, established contribution of students in class discussion, included recent materials in the course subjects.

SPRING 2013

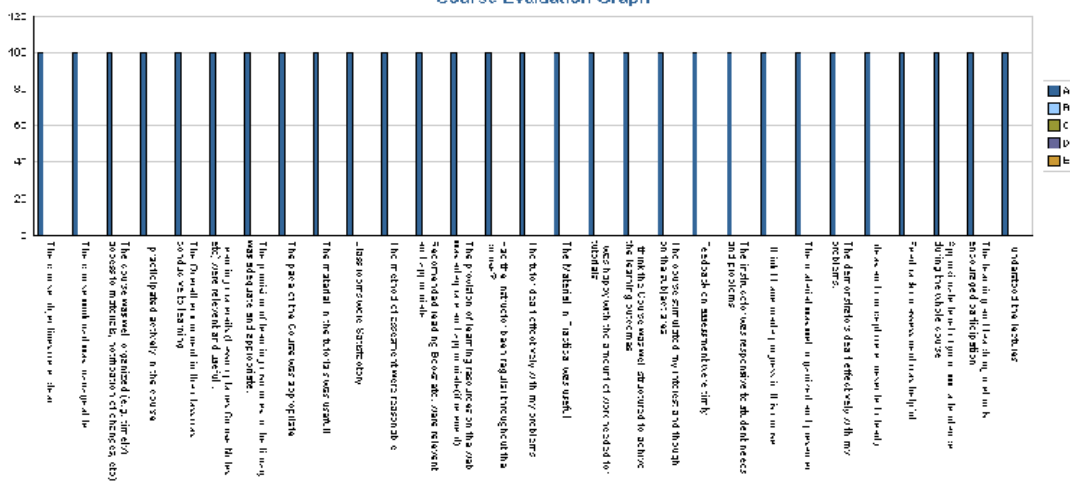


**Pir Mehr Ali Shah
Arid Agriculture University**
Performa 1

Print Date: Nov. 12, 2014

Session Name: SPRING-13
Teacher Name: M. Naveed Iqbal
Course Name: Principles of Genome Analysis and Genomics
Section: A **M/R:** M **Semester#** 2
Class: M.Phil (Botany)

Course Evaluation Graph



General Comments of the Students about this Course

Weaknesses: No weakness indicated by students.

Strengths: The tutor showed reasonable attitude and communication skill for learning outcomes, included recent materials in the course subjects, and remained regular.



Pir Mehr Ali Shah Arid Agriculture University

Performa 1

Print Date: Nov. 12, 2014

Session Name: SPRING-13

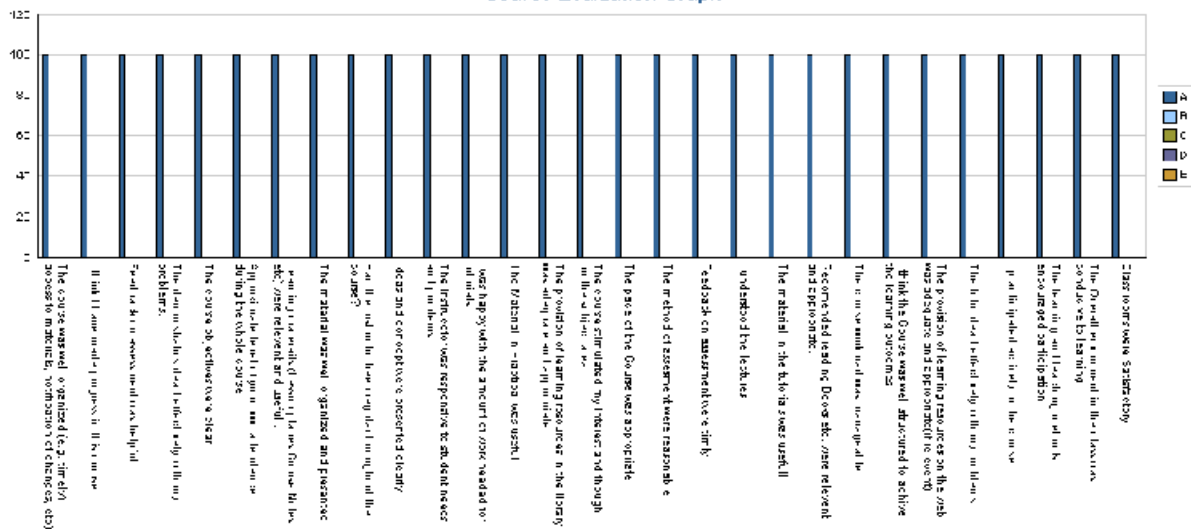
Teacher Name: Muhammad Arshad

Course Name: Medicinal Plants of Pakistan

Section: A M/R: M Semester# 2

Class: M.Phil (Botany)

Course Evaluation Graph



General Comments of the Students about this Course

Weaknesses: No weakness indicated.

Strengths: The tutor showed reasonable conduct and statement skill, confirmed participation of students in class discussion, included recent materials in the course subject.



**Pir Mehr Ali Shah
Arid Agriculture University**
Performa 1

Print Date: Nov. 12, 2014

Session Name: SPRING-13

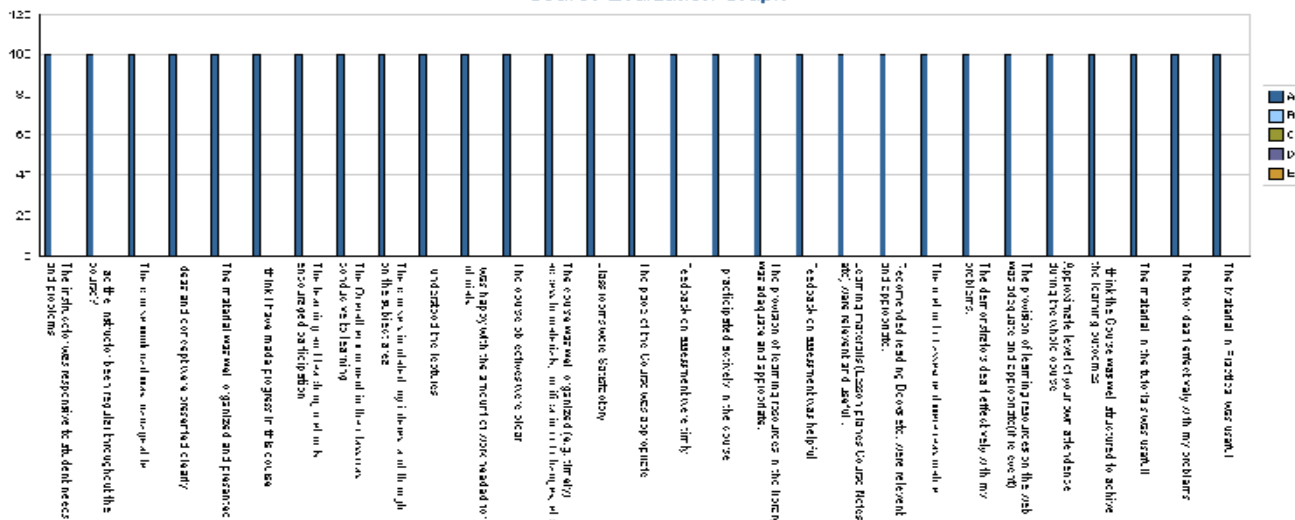
Teacher Name: Rahmatullah Qureshi

Course Name: Applied Ethnobotany

Section: A **M/E:** M **Semester#** 2

Class: M.Phil (Botany)

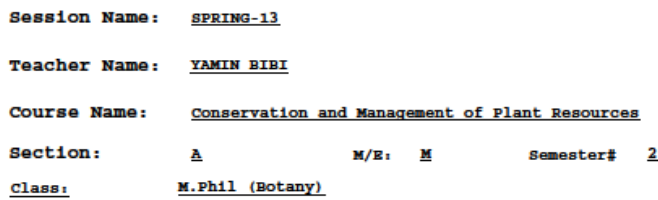
Course Evaluation Graph



General Comments of the Students about this Course

Weaknesses: Figure indicates no weakness.

Strengths: The tutor delivered the course objectives in good manner and tried to solve out the difficulties of students.





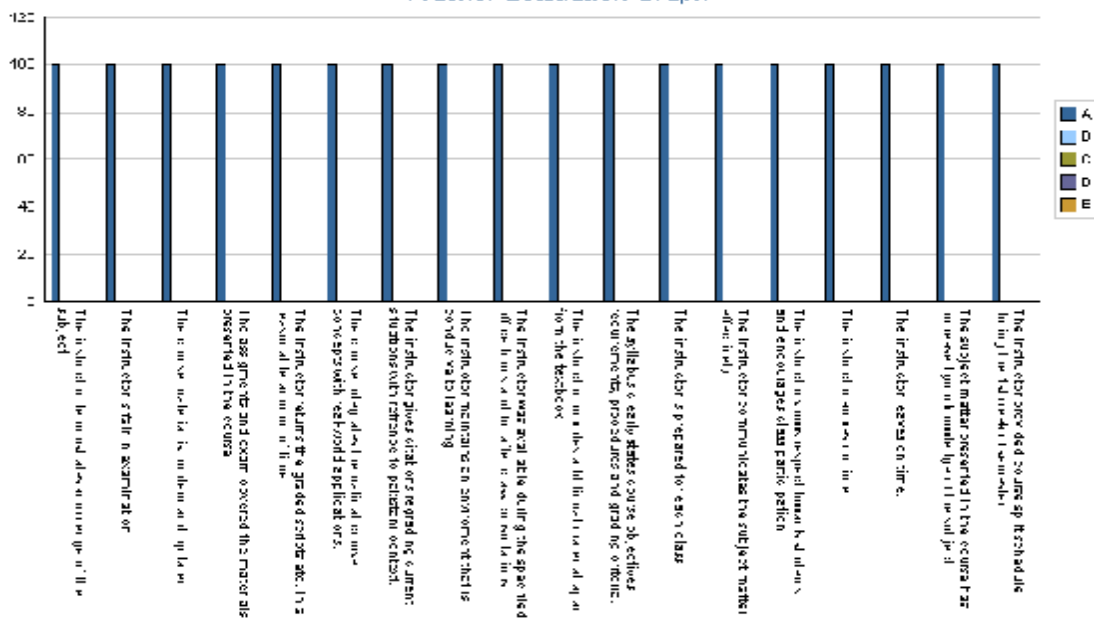
Session Name: SPRING-13

Teacher Name: Noshin Ilyas

Course Name: Stress Physiology

Section: A **M/E:** M **Semester#:** 2

Teacher Evaluation Graph



Weaknesses: No weakness indicated by students.

Strengths: The tutor showed reasonable attitude and communication skill for learning outcomes, included recent materials in the course subjects, and remained regular.

FALL 2013

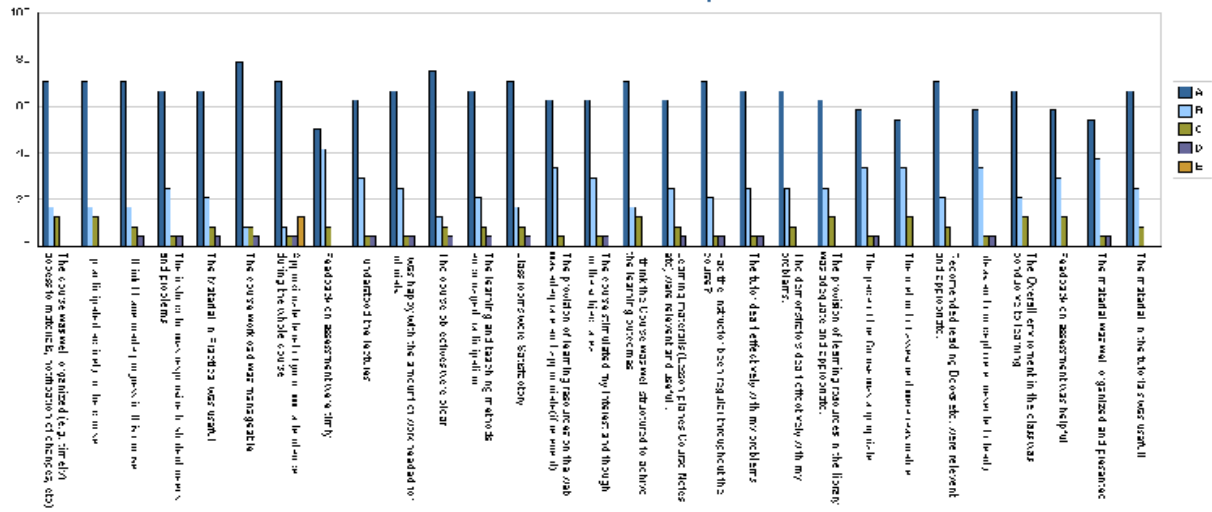


**Pir Mehr Ali Shah
Arid Agriculture University
Performa 1**

Print Date: Nov. 12, 2014

Session Name: FALL-13
Teacher Name: YAMIN BIBI
Course Name: Arid Zone Ecology
Section: A **M/R:** M **Semester#** 1
Class: M.Phil (Botany)

Course Evaluation Graph



General Comments of the Students about this Course

Weaknesses: Participation of students in course activities should be encouraged.

Strengths: Course objective were clear. Workload was practicable. Course was well organized. Students were happy to participate in course activities. Learning materials provided were related to the course. And recommendation of books was proper.

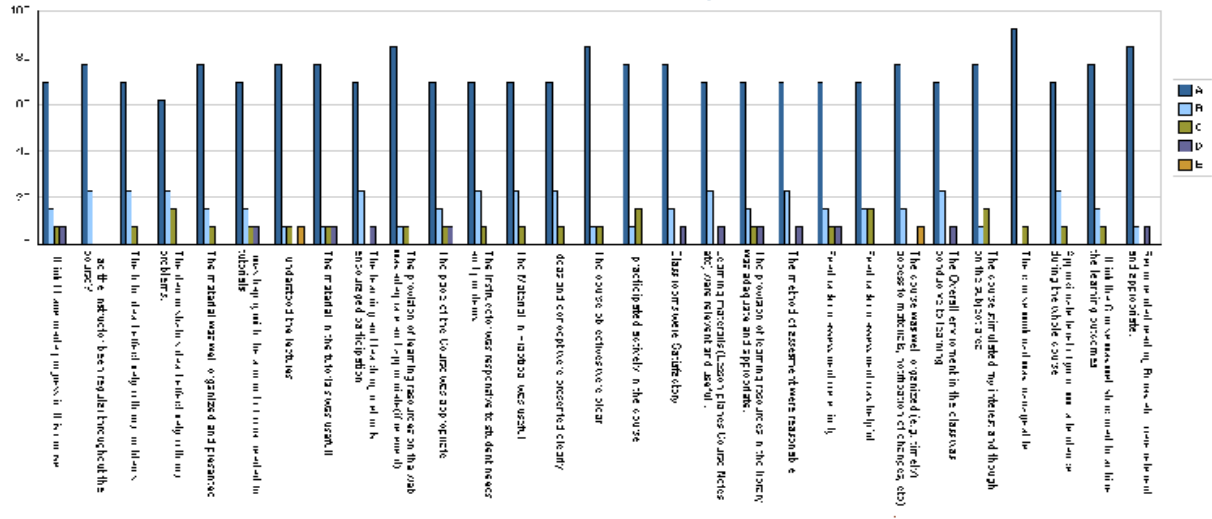


**Pir Mehr Ali Shah
Arid Agriculture University
Performa 1**

Print Date: Nov. 12, 2014

Session Name: FALL-13
Teacher Name: Rahmatullah Qureshi
Course Name: Plant Systematics
Section: A **M/R:** M **Semester#** 1
Class: M.Phil (Botany)

Course Evaluation Graph



General Comments of the Students about this Course

Weaknesses: Some students were confused about the learning material and recommended books relevancy.

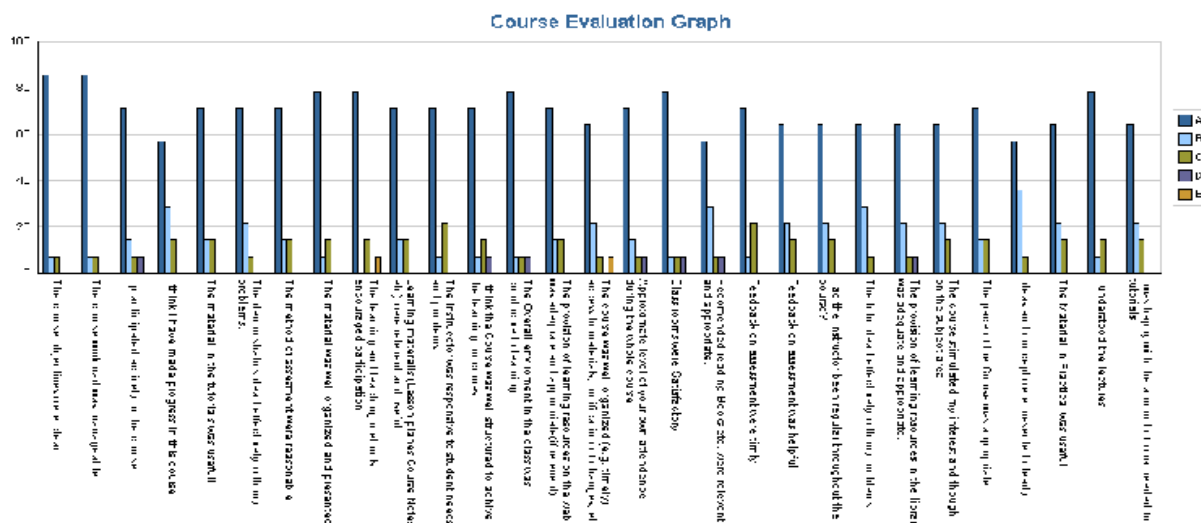
Strengths: The ideas and concepts were reasonable.



**Pir Mehr Ali Shah
Arid Agriculture University
Performa 1**

Print Date: Nov. 12, 2014

Session Name: FALL-13
Teacher Name: Saira Asif
Course Name: Molecular Plant Development
Section: A **M/Z:** M **Semester#** 1
Class: M.Phil (Botany)



General Comments of the Students about this Course

Weaknesses: The students described weakness in scheme of instruction and recommended books.

Strengths: The tutor showed reasonable attitude and communication skill, confirmed participation of students in class discussion

SPRING 2014



**Pir Mehr Ali Shah
Arid Agriculture University
Performa 1**

Print Date: Nov. 12, 2014

Session Name: SPRING-14

Teacher Name: Rahmatullah Qureshi

Course Name: Phytogeography

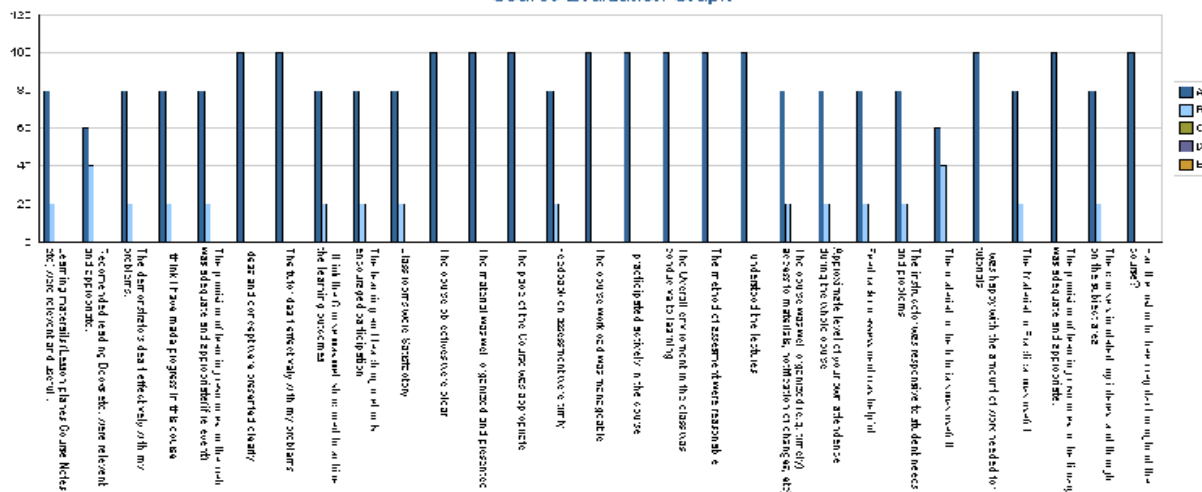
Section: A

M/R: M

Semester# 2

Class: M.Phil (Botany)

Course Evaluation Graph



General Comments of the Students about this Course

Weaknesses: No greater weakness was indicated by the students about this course.

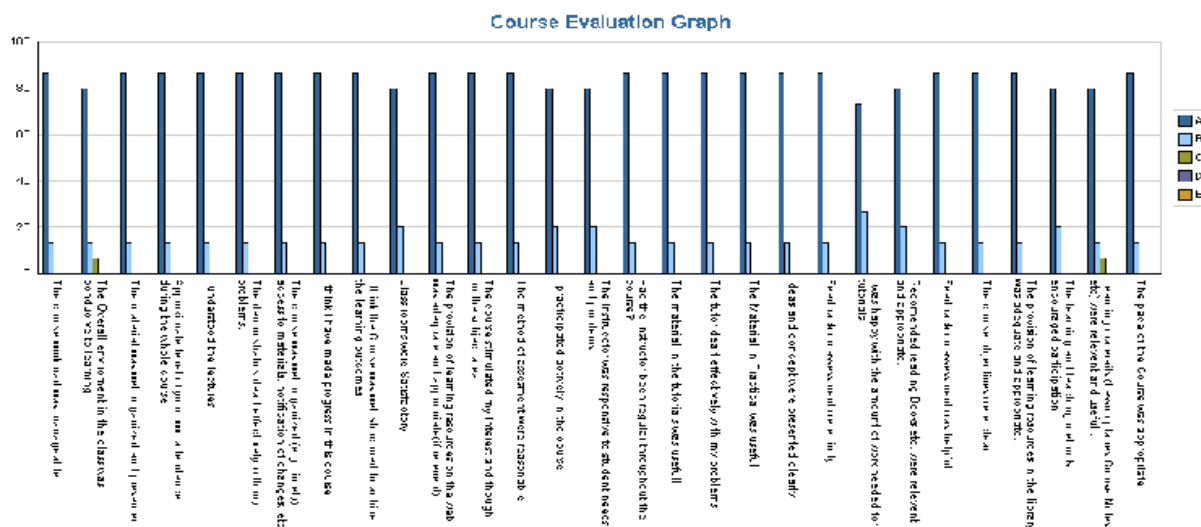
Strengths: The tutor showed reasonable attitude and communication skill, established contribution of students in class discussion, included recent materials in the course subjects.



**Pir Mehr Ali Shah
Arid Agriculture University
Performa 1**

Print Date: Nov. 12, 2014

Session Name: SPRING-14
Teacher Name: Rahmatullah Qureshi
Course Name: Applied Ethnobotany
Section: A **M/Z:** M **Semester#** 2
Class: M.Phil (Botany)



General Comments of the Students about this Course

Weaknesses: No weakness was indicated by the students about this course.

Strengths: Course objectives were clear and learning material was available in time

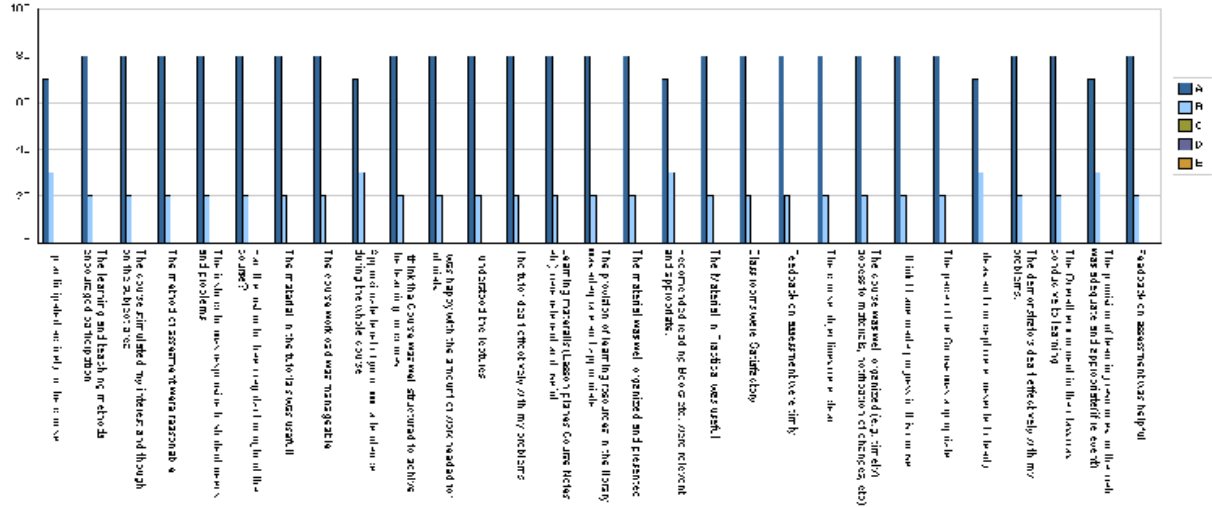


**Pir Mehr Ali Shah
Arid Agriculture University
Performa 1**

Print Date: Nov. 12, 2014

Session Name: SPRING-14
Teacher Name: Rahmatullah Qureshi
Course Name: Conservation and Management of Plant Resources
Section: A **M/E:** M **Semester#** 2
Class: M.Phil (Botany)

Course Evaluation Graph



General Comments of the Students about this Course

Weaknesses: No weakness indicated.

Strengths: The tutor showed good environment in class room, ensured participation of students in class discussion.

**TEACHER
EVALUATION
PROFORMA**

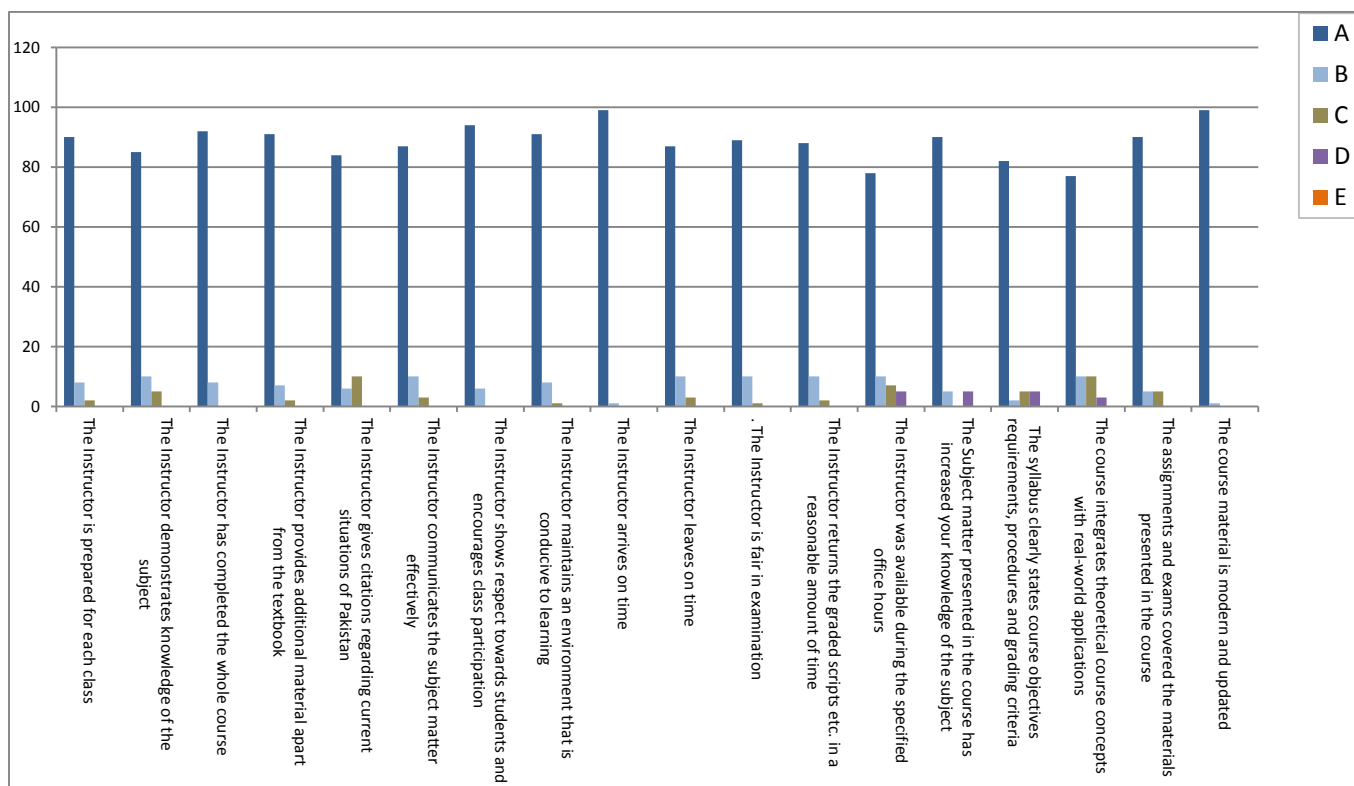
FALL 2012



Pir Mehr Ali Shah Arid Agriculture University

Performa 10

Teacher Name: Yamin Bibi
Course Name: Arid Zone Ecology
Session Name: FALL-12
Section: A M/E: M Semester# 1
Class: M. Phil (Botany)



General Comments of the Students about this Teacher

Weaknesses: Instructor should provide more time for after class consultations.

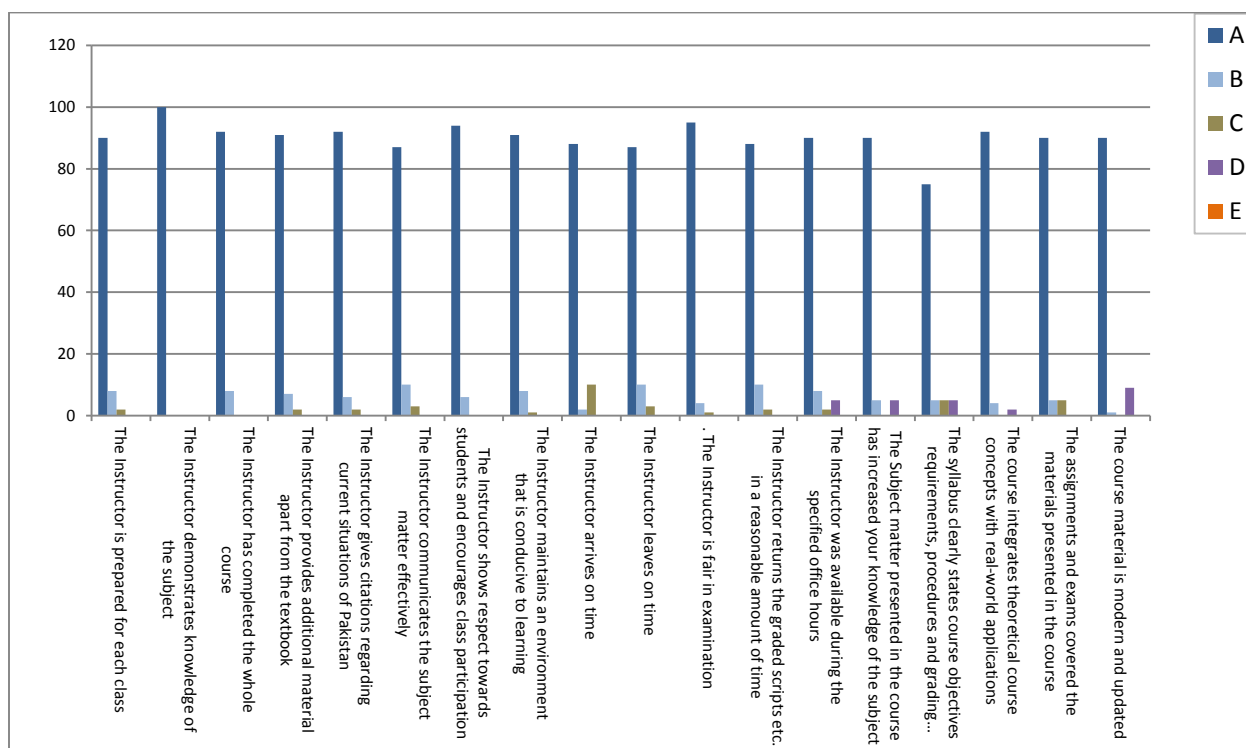
Strengths: Instructor presented the subject matter effectively and completed the whole course. Regularity was excellent. Examination was fair and students have increased their knowledge.



Pir Mehr Ali Shah Arid Agriculture University

Performa 10

Teacher Name: Yamin Bibi
Course Name: Conservation and Management of Plant Resources
Session Name: FALL-12
Section: A M/E: M Semester# 1
Class: M. Phil (Botany)



General Comments of the Students about this Teacher

Weaknesses: Course needed updating, Teacher should improve after class consultation.

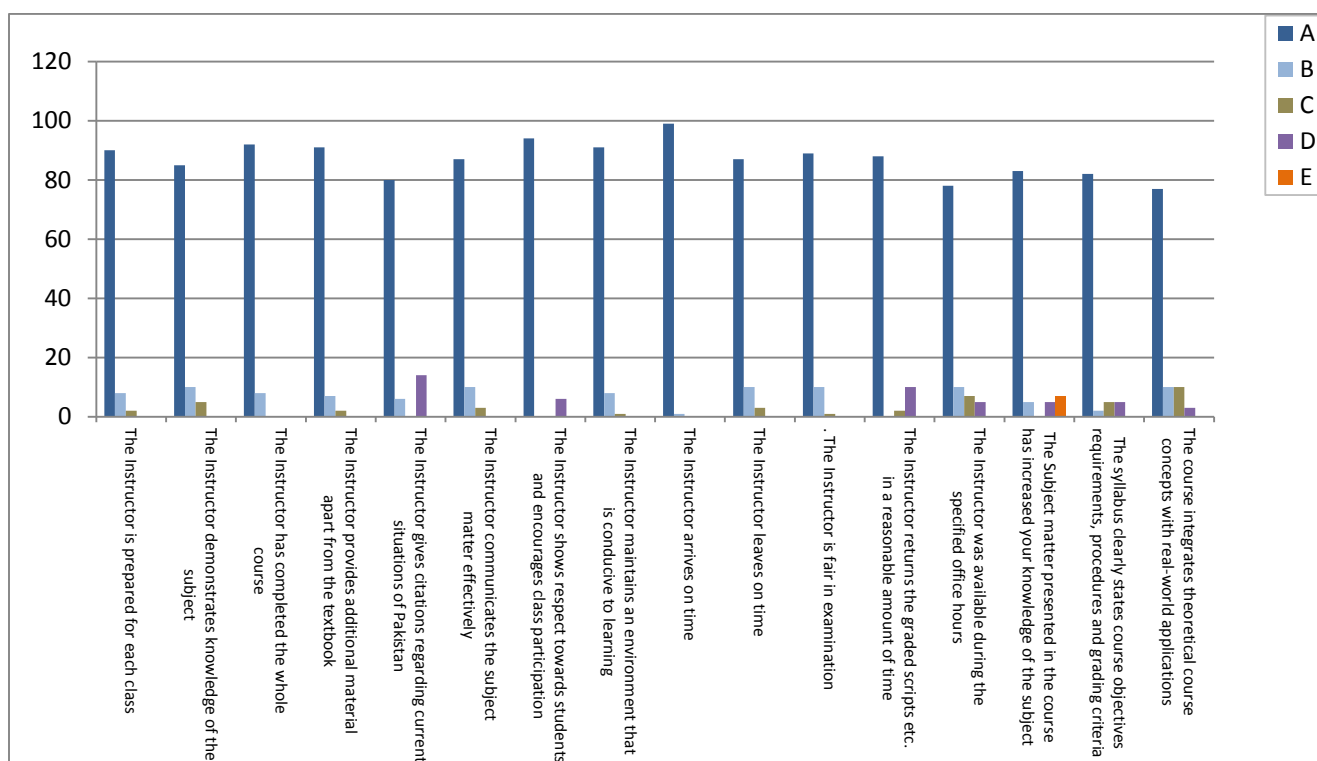
Strengths: The instructor came prepared for each class and communicated subject matter effectively



Pir Mehr Ali Shah Arid Agriculture University

Performa 10

Teacher Name: Saira Asif
Course Name: Molecular Plant Development
Session Name: FALL-12
Section: A M/E: M Semester# 1
Class: M. Phil (Botany)



General Comments of the Students about this Teacher

Weaknesses: According to some students, course should be updated and modernized with recent developments.

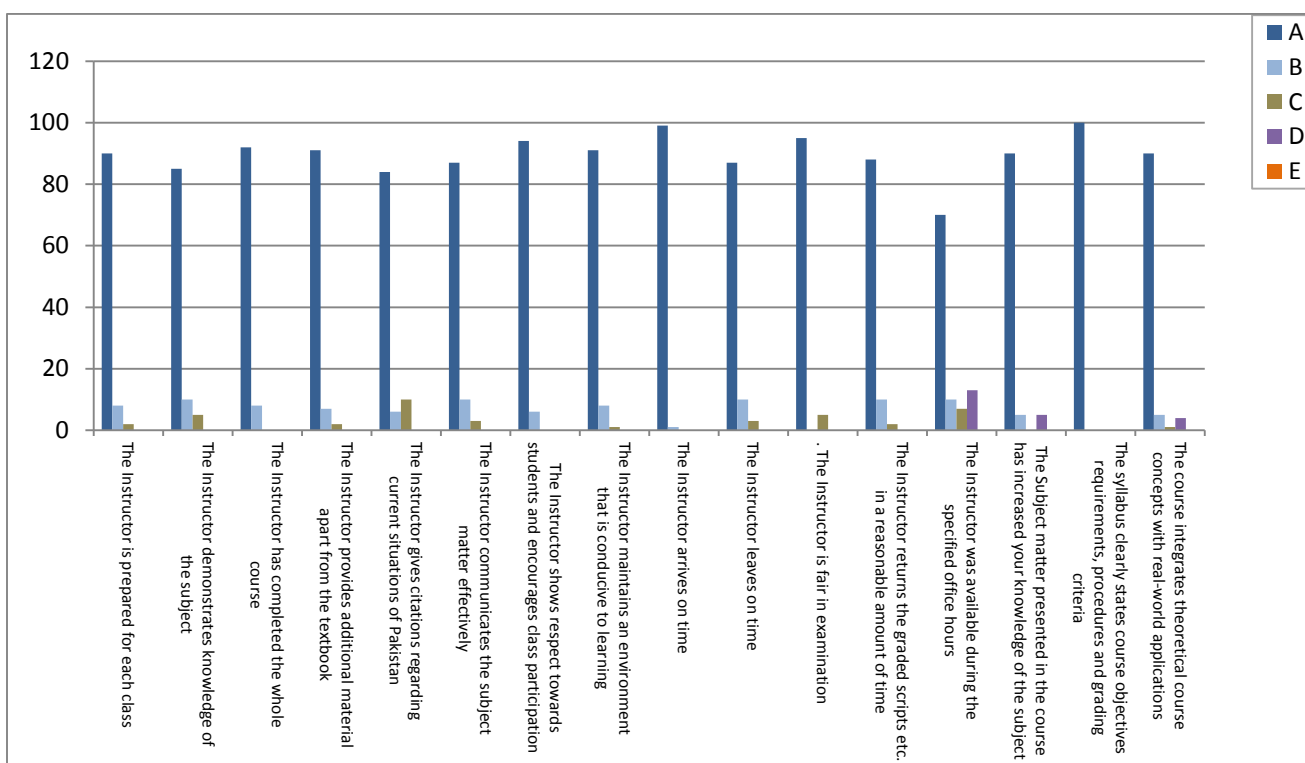
Strengths: Additional materials were provided. Communication, environment of class, feedback of assignments and after class consultation was satisfactory. The course material was contemporary and restructured.



Pir Mehr Ali Shah Arid Agriculture University

Performa 10

Teacher Name: Noshin Ilyas
Course Name: Plant Proteomics
Session Name: FALL-12
Section: A M/E: M Semester# 1
Class: M. Phil (Botany)



General Comments of the Students about this Teacher

Weaknesses: Teacher needs to improve after class consultation.

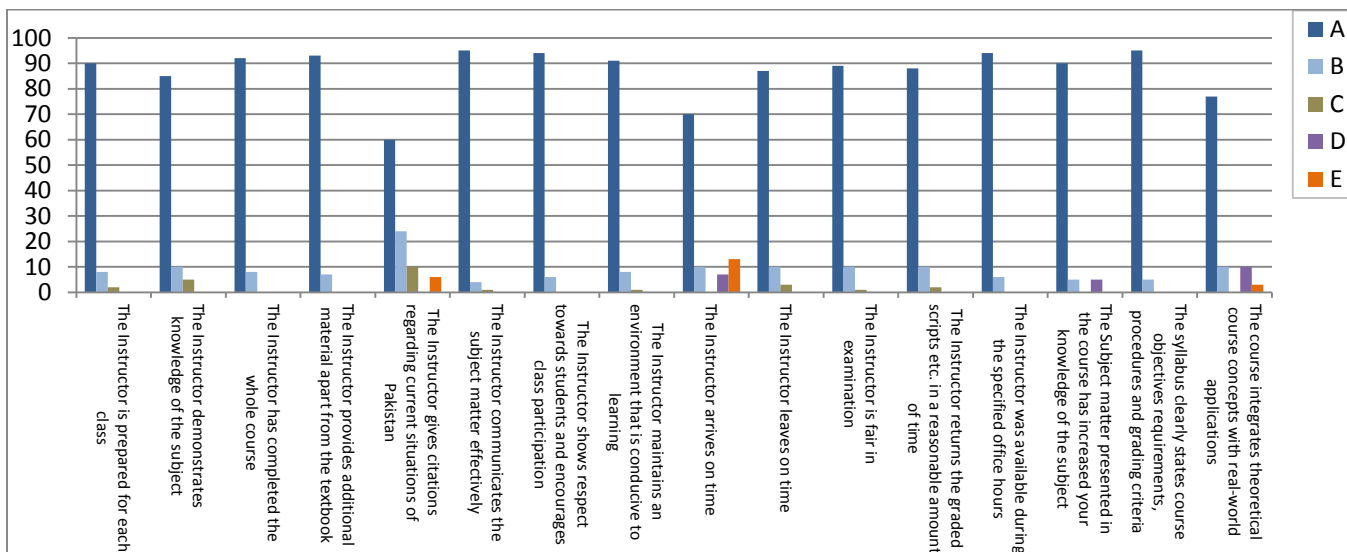
Strengths: Instructor presented the subject matter effectively and completed the whole course. Regularity was excellent. Examination was fair and students have increased their knowledge.



**Pir Mehr Ali Shah
Arid Agriculture University**

Performa 10

Teacher Name: Rahmatullah Qureshi
Course Name: Plant Systematics
Session Name: FALL-12
Section: A M/E: M Semester# 1
Class: M. Phil (Botany)



General Comments of the Students about this Teacher

Weaknesses: Tutor needs to improve punctuality.

Strengths: Tutor well organized the course matter and depicted fair knowledge of the subject. Examination was fair.

SPRING 2013



**Pir Mehr Ali Shah
Arid Agriculture University
Performa 10**

Print Date: Nov. 12, 2014

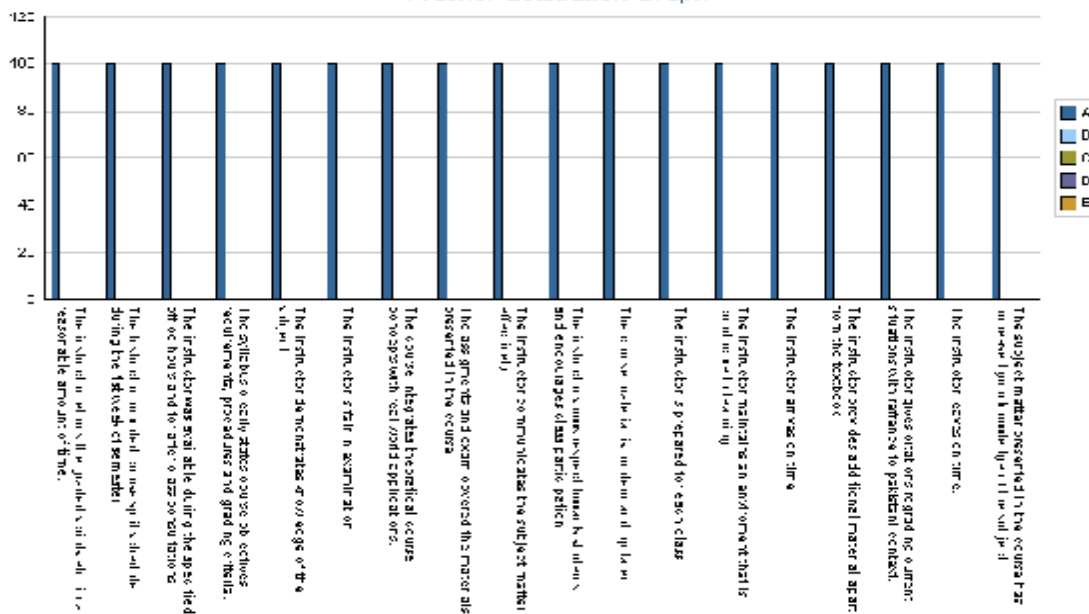
Session Name: SPRING-13

Teacher Name: M. Naveed Iqbal

Course Name: Principles of Genome Analysis and Genomics

Section: A **M/E:** M **Semester#:** 2

Teacher Evaluation Graph



General Comments of the Students about this Course

Weaknesses: There was no weakness specified by the students.

Strengths: The tutor showed sensible attitude and workload was manageable. Course was well organized. Teacher established contribution of students in class discussion and included recent materials in the course subjects.

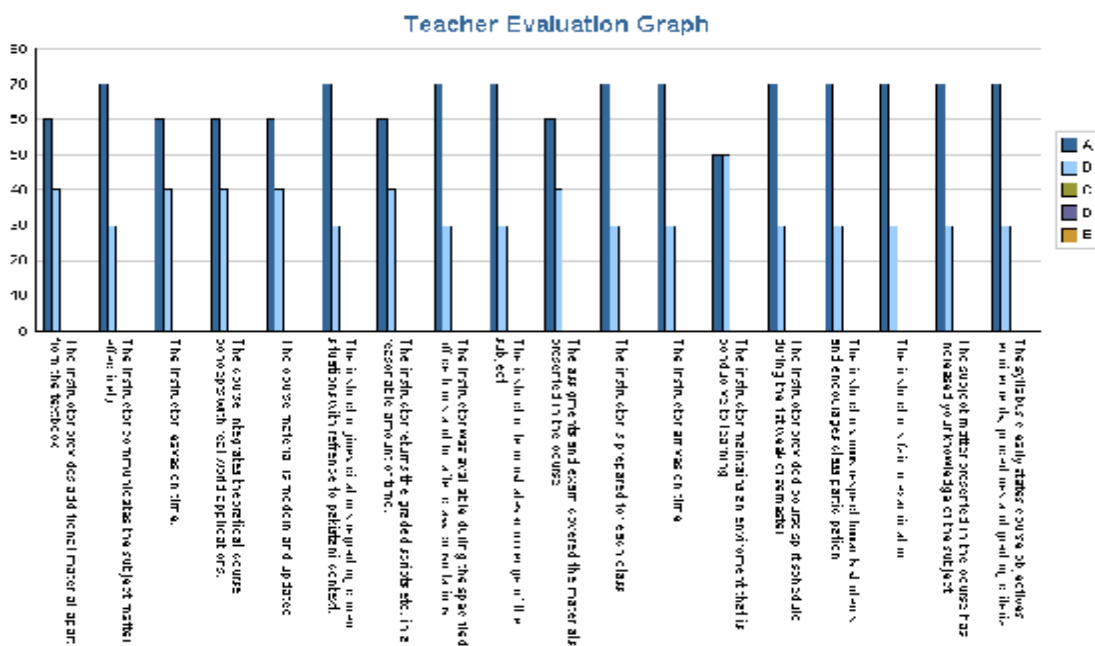


Session Name: SPRING-13

Teacher Name: Rahmatullah Qureshi

Course Name: Phytogeography

Section: A **M/E:** M **Semester#:** 2



General Comments of the Students about this Course

Weaknesses: There is no weakness indicated by students regarding teaching methods

Strengths: Instructor has finalized the whole course and demonstrated the knowledge in this course. Additional materials were provided. Environment of class was conducive for learning.

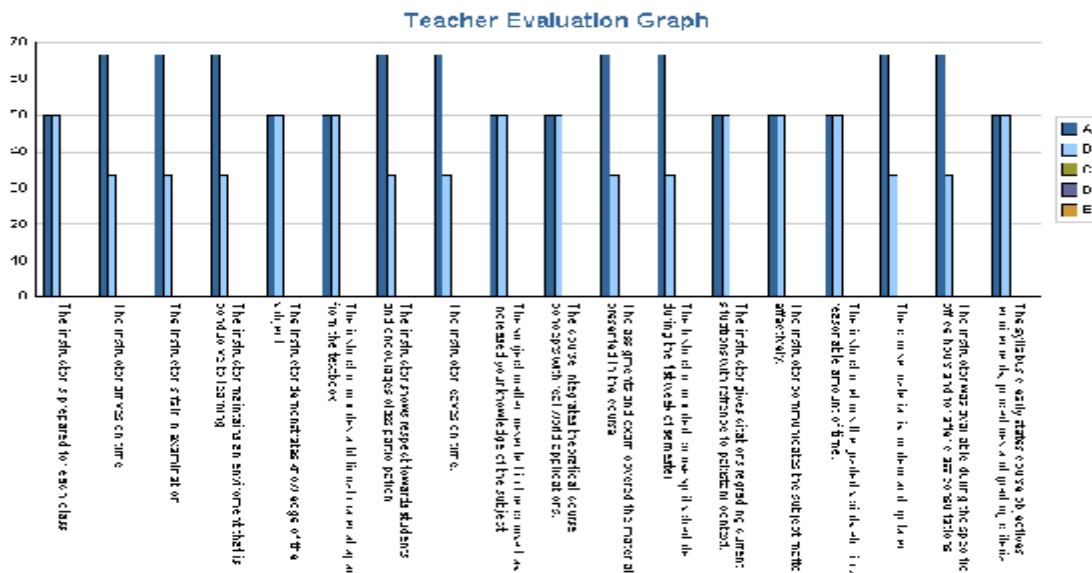


Session Name: SPRING-13

Teacher Name: Saira Asif

Course Name: Molecular Basis of Morphogenesis

Section: A **M/E:** M **Semester#:** 2



General Comments of the Students about this Course

Weaknesses: There is no weakness indicated by students regarding teaching methods

Strengths: Instructor prepared each class for the delivery of knowledge and linked the subject matter successfully. Instructor was available for after class consultation. Overall students have increased their knowledge in this course.



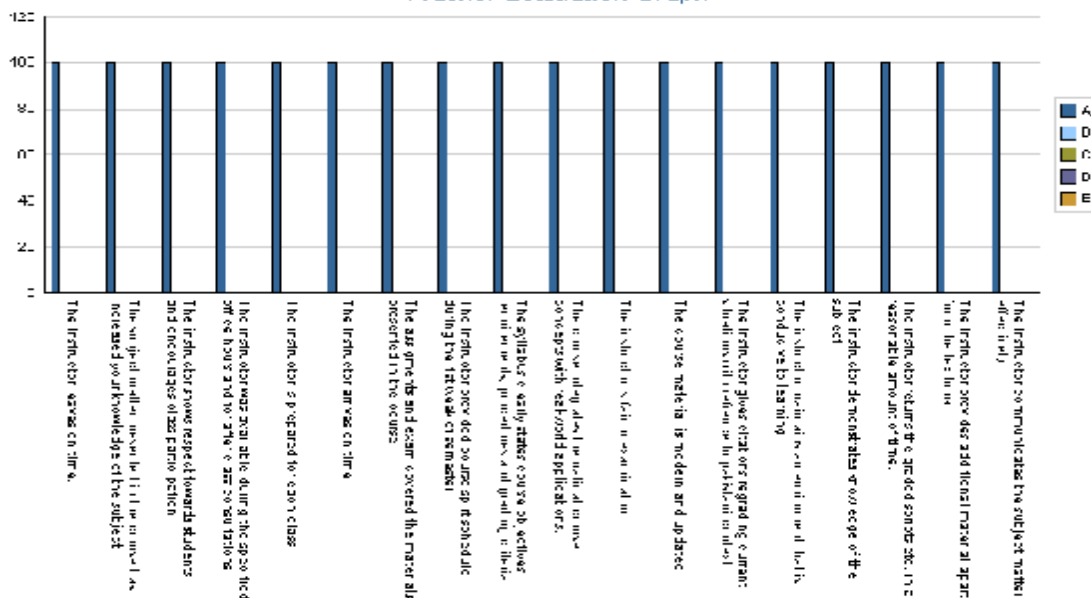
Session Name: SPRING-13

Teacher Name: Zia ur Rehman Mashwani

Course Name: Molecular Advances in Phytosystematics

Section: A **M/E:** M **Semester#:** 2

Teacher Evaluation Graph



General Comments of the Students about this Teacher

Weaknesses: There was no weakness specified by the students.

Strengths: Instructor delivered good knowledge and encouraged the students' participation in the class discussion. Instructor was available for after class consultation. Students have increased their knowledge in this course.

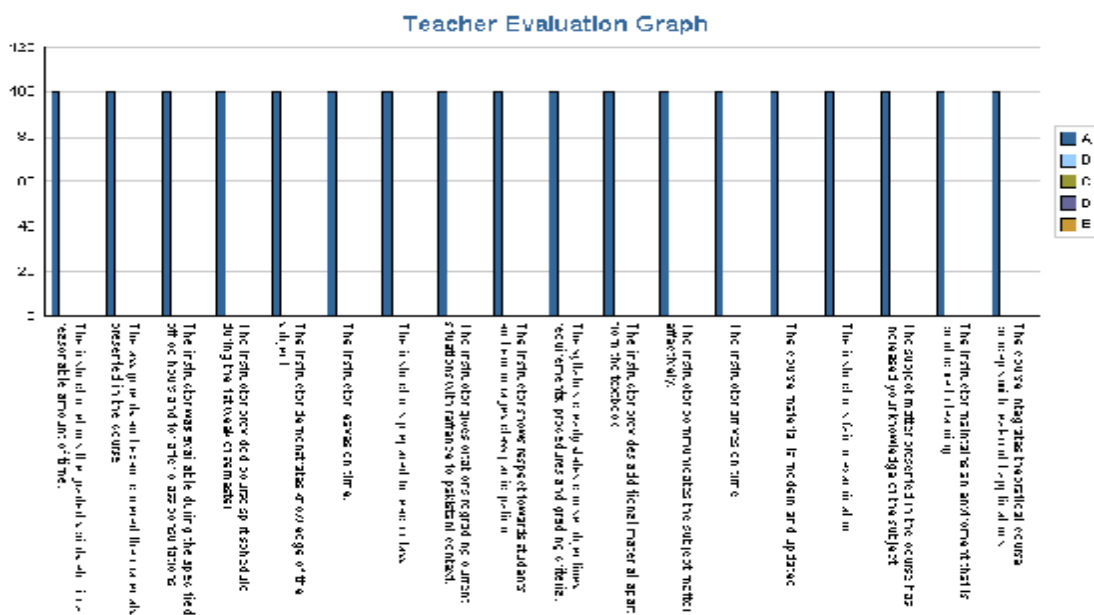


Session Name: SPRING-13

Teacher Name: Muhammad Arshad

Course Name: Medicinal Plants of Pakistan

Section: A **M/E:** M **Semester#:** 2



General Comments of the Students about this Teacher

Weaknesses: There was no weakness specified by the students.

Strengths: Additional materials were provided. Communication, environment of class, feedback of assignments and after class consultation was satisfactory. The course material was contemporary and restructured.



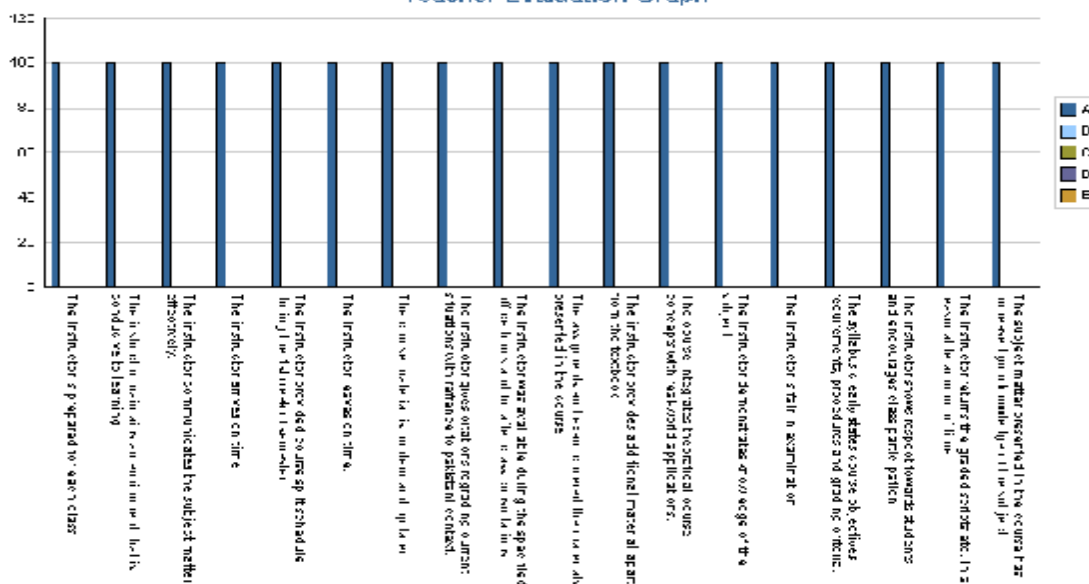
Session Name: SPRING-13

Teacher Name: Rahmatullah Qureshi

Course Name: Applied Ethnobotany

Section: A **M/E:** M **Semester#:** 2

Teacher Evaluation Graph



General Comments of the Students about this Teacher

Weaknesses: There is no weakness indicated by students regarding teaching methods

Strengths: The tutor showed reliable attitude. Teacher established progress in this course and covered it with useful materials in the course subjects.



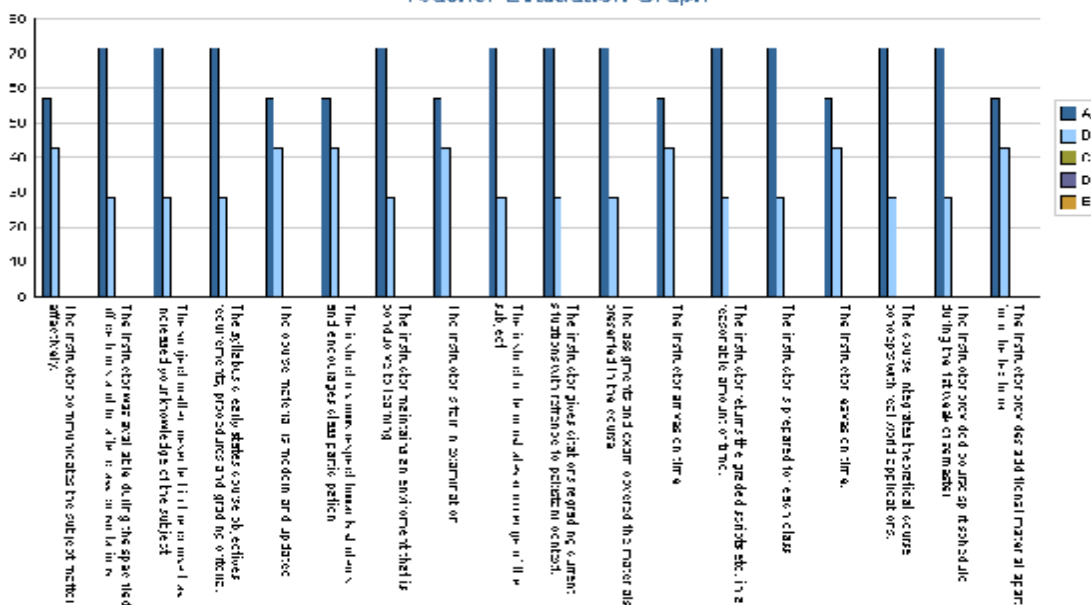
Session Name: SPRING-13

Teacher Name: YAMIN BIBI

Course Name: Conservation and Management of Plant Resources

Section: A **M/E:** M **Semester#:** 2

Teacher Evaluation Graph



General Comments of the Students about this Teacher

Weaknesses: There is no weakness indicated by students regarding teaching methods

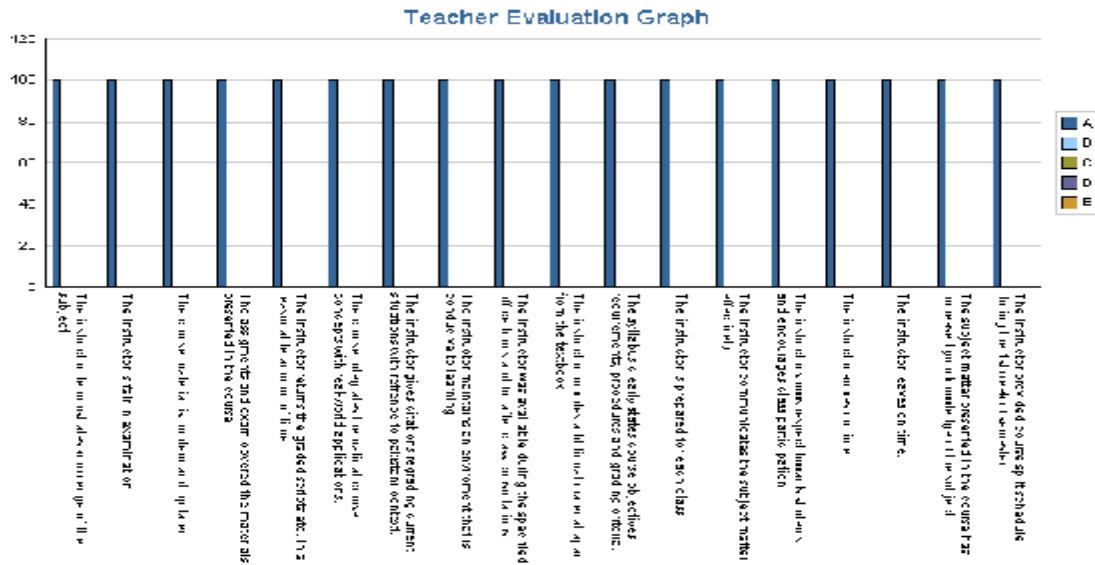
Strengths: Instructor was prepared for each class and completed the whole course. Instructor has delivered the subject matter effectively.



**Pir Mehr Ali Shah
Arid Agriculture University
Performa 10**

Print Date: Nov. 12, 2014

Session Name: SPRING-13
Teacher Name: Noshin Ilyas
Course Name: Stress Physiology
Section: A **M/E:** M **Semester#:** 2



General Comments of the Students about this Teacher

Weaknesses: There was no weakness specified by the students.

Strengths: Instructor has finalized the whole course and demonstrated the knowledge in this course. Additional materials were provided. Environment of class was conducive for learning.

FALL 2013



**Pir Mehr Ali Shah
Arid Agriculture University
Performa 10**

Print Date: Nov. 12, 2014

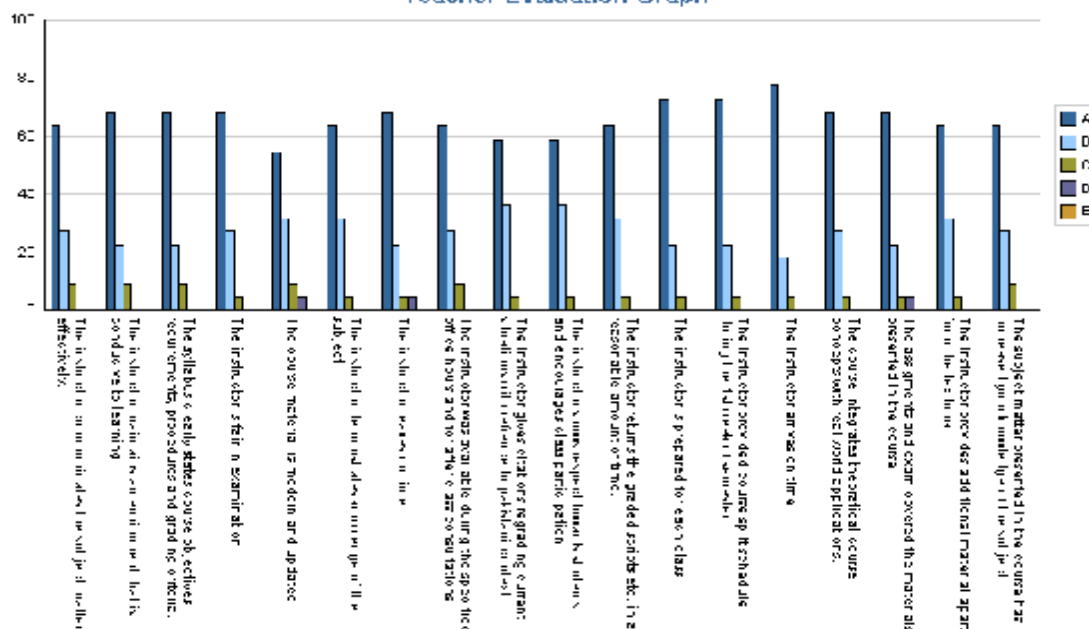
Session Name: FALL-13

Teacher Name: YAMIN BIBI

Course Name: Arid Zone Ecology

Section: A **M/E:** M **Semester#:** 1

Teacher Evaluation Graph



General Comments of the Students about this Teacher

Weaknesses: Course needs updation with recent developments.

Strengths: Instructor completed the whole course. Regularity was excellent

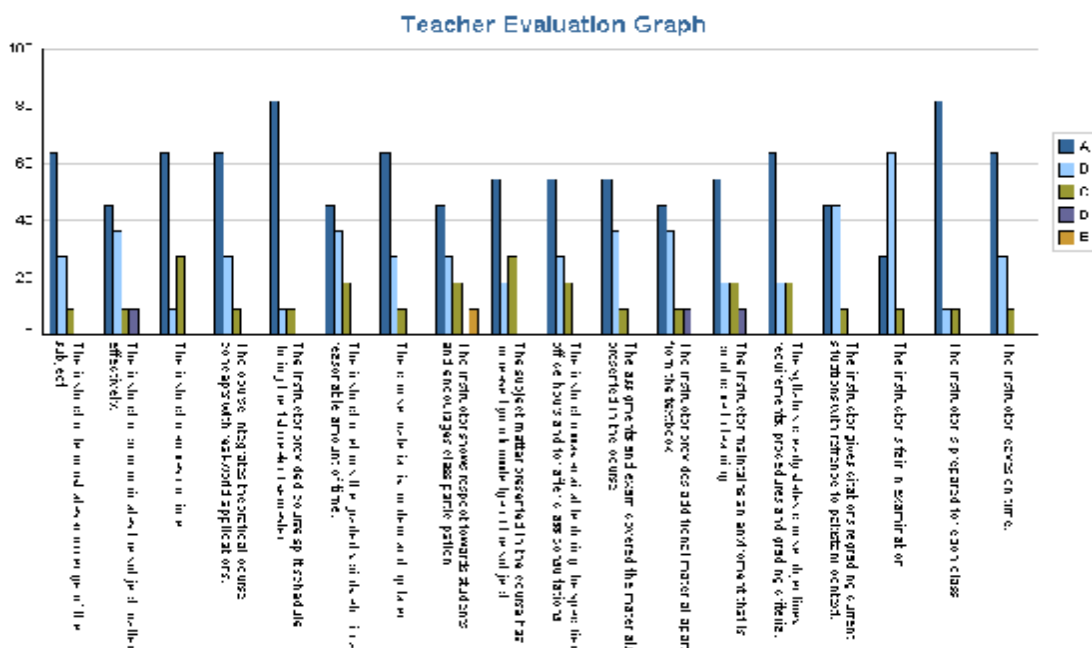


Session Name: FALL-13

Teacher Name: Mubashrah Munir

Course Name: Advances in Phycology

Section: A **M/E:** M **Semester#:** 1



General Comments of the Students about this Teacher

Weaknesses: Teacher should maintain class learning environment and should encourage student's participation in class.

Strengths: Tutor was well prepared for each class and delivered lectures effectively.

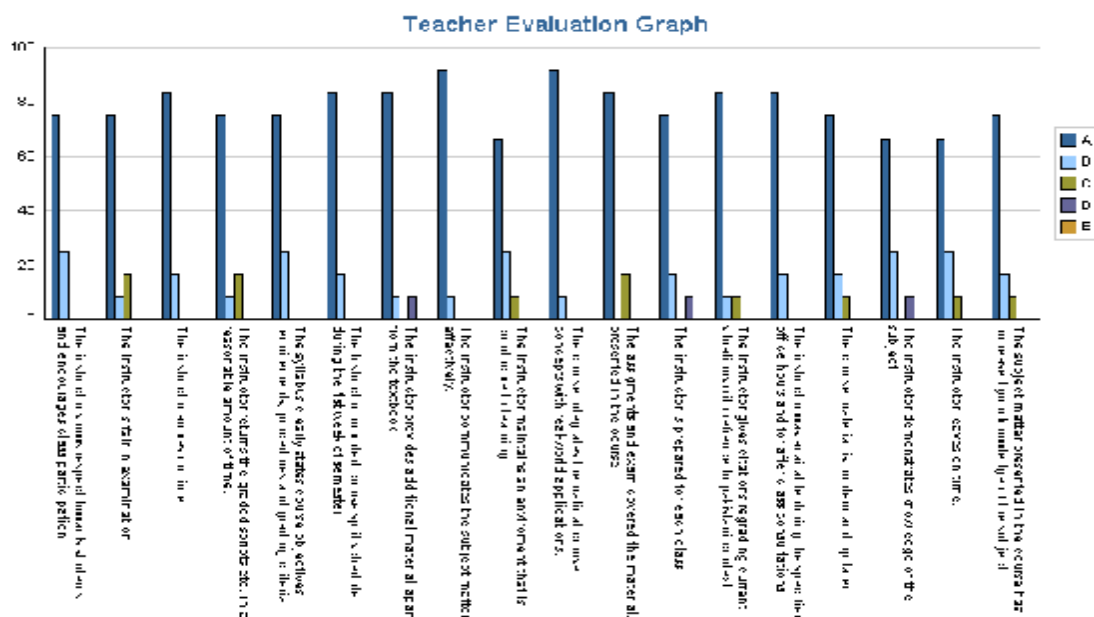


Session Name: FALL-13

Teacher Name: Rahmatullah Qureshi

Course Name: Plant Systematics

Section: A **M/E:** M **Semester#:** 1



General Comments of the Students about this Teacher

Weaknesses: Some students indicated that instructor needs improvement in demonstration of knowledge effectively.

Strengths: Examination was fair and students have increased their knowledge. Most of the students are agreed with teacher



**Pir Mehr Ali Shah
Arid Agriculture University
Performa 10**

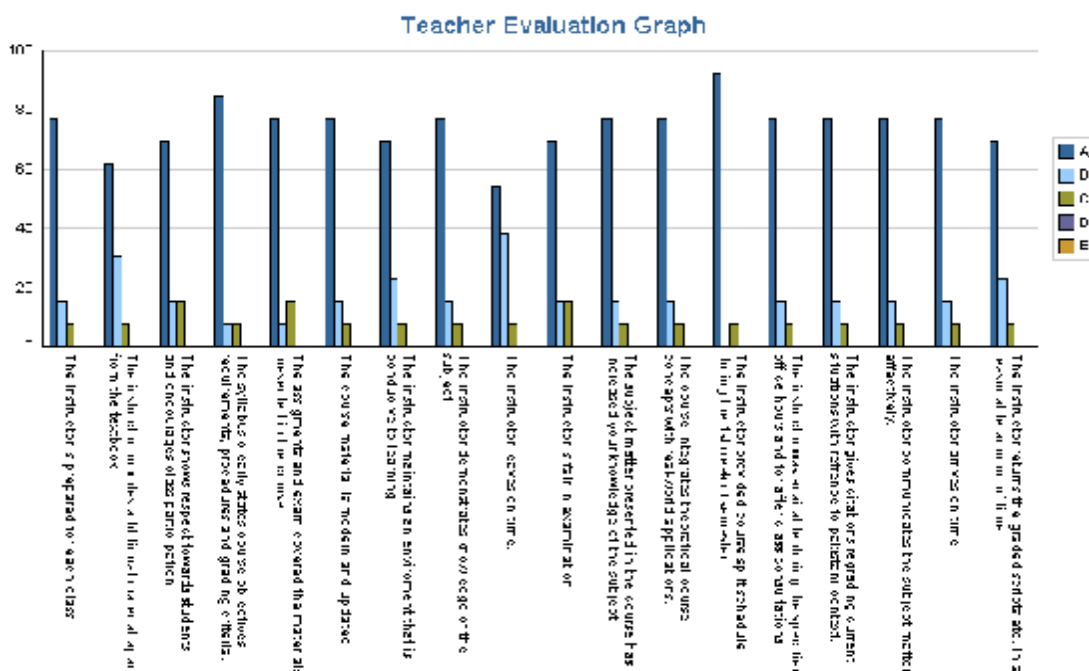
Print Date: Nov. 12, 2014

Session Name: FALL-13

Teacher Name: Saira Asif

Course Name: Molecular Plant Development

Section: A **M/E:** M **Semester#:** 1



General Comments of the Students about this Teacher

Weaknesses: Figure indicates no greater weakness.

Strengths: Instructor completed the whole course. Regularity was excellent. Course material was modern and updated

SPRING 2014



**Pir Mehr Ali Shah
Arid Agriculture University
Performa 10**

Print Date: Nov. 12, 2014

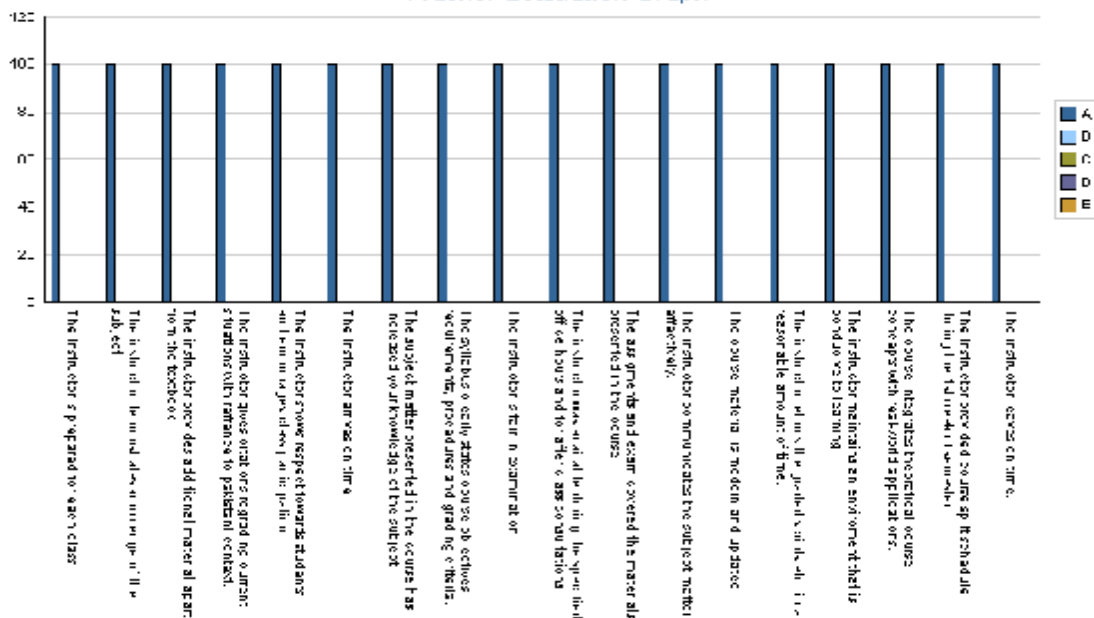
Session Name: SPRING-14

Teacher Name: M. Naveed Iqbal

Course Name: Seminar-II

Section: B **M/E:** M **Semester#:** 2

Teacher Evaluation Graph



General Comments of the Students about this Teacher

Weaknesses: No weakness indicated by students.

Strengths: Workload was practicable. The tutor showed reasonable conduct and statement skill, confirmed participation of students in class discussion, included recent materials in the course subjects, remained quick and regular.



**Pir Mehr Ali Shah
Arid Agriculture University
Performa 10**

Print Date: Nov. 12, 2014

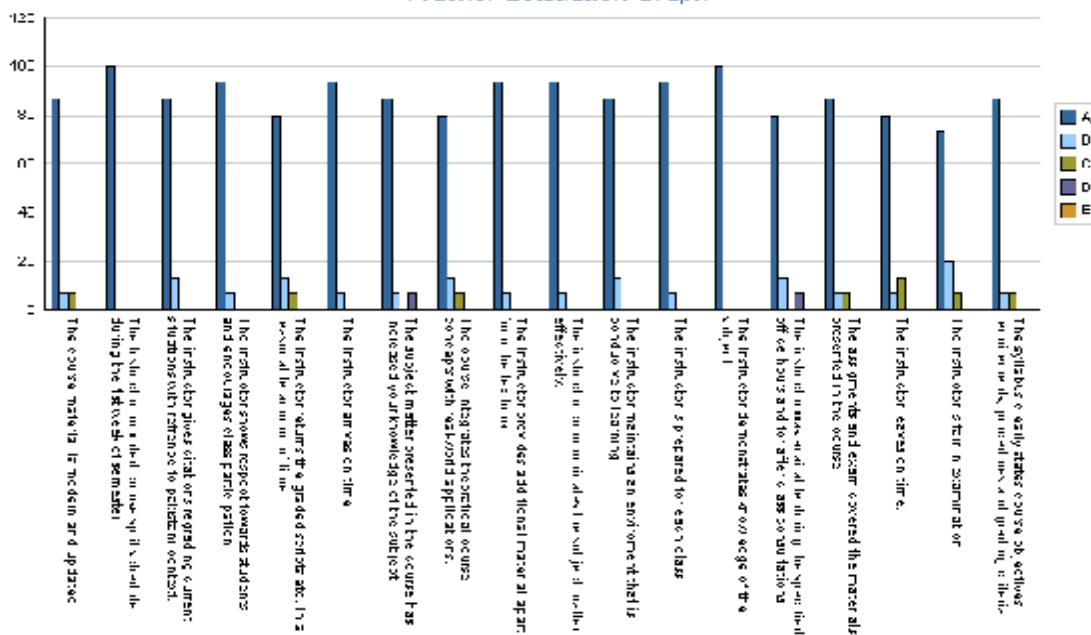
Session Name: SPRING-14

Teacher Name: Noshin Ilyas

Course Name: Plant Proteomics

Section: A **M/E:** M **Semester#:** 4

Teacher Evaluation Graph



General Comments of the Students about this Teacher

Weaknesses: Few students demanded that tutor should provide time for after class consultation.

Strengths: Workload was practicable. The instructor demonstrated good knowledge of the subject.



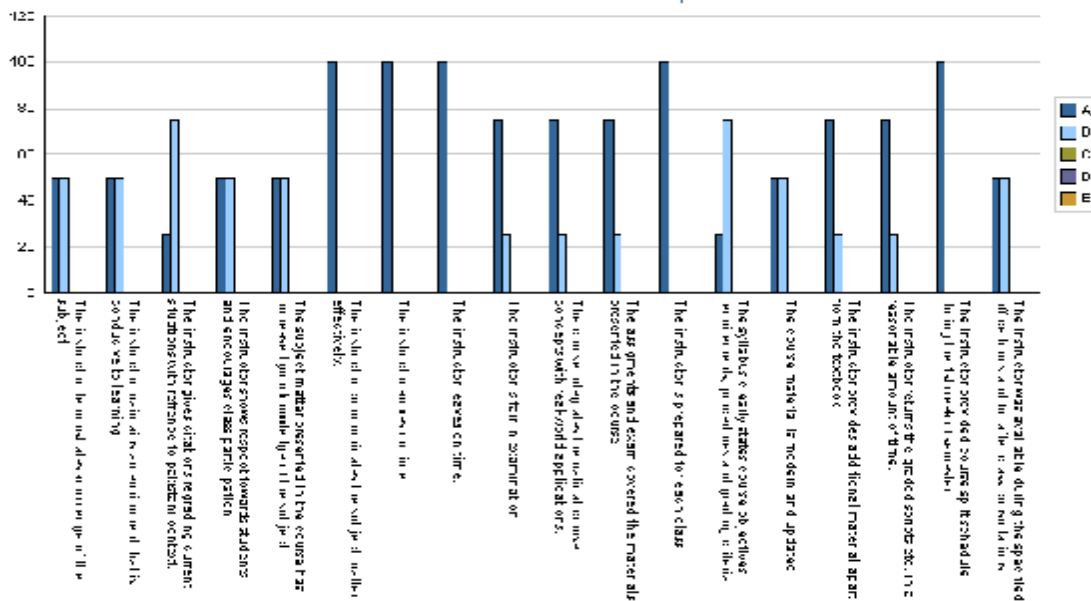
Session Name: SPRING-14

Teacher Name: Rahmatullah Qureshi

Course Name: Phytoecography

Section: A **M/E:** M **Semester#:** 2

Teacher Evaluation Graph



General Comments of the Students about this Teacher

Weaknesses: There was no significant weakness in teaching methods.

Strengths: Instructor delivered good knowledge and encouraged the students' participation in the class discussion. Instructor was available for after class consultation. Students have increased their knowledge in this course.



**Pir Mehr Ali Shah
Arid Agriculture University
Performa 10**

Print Date: Nov. 12, 2014

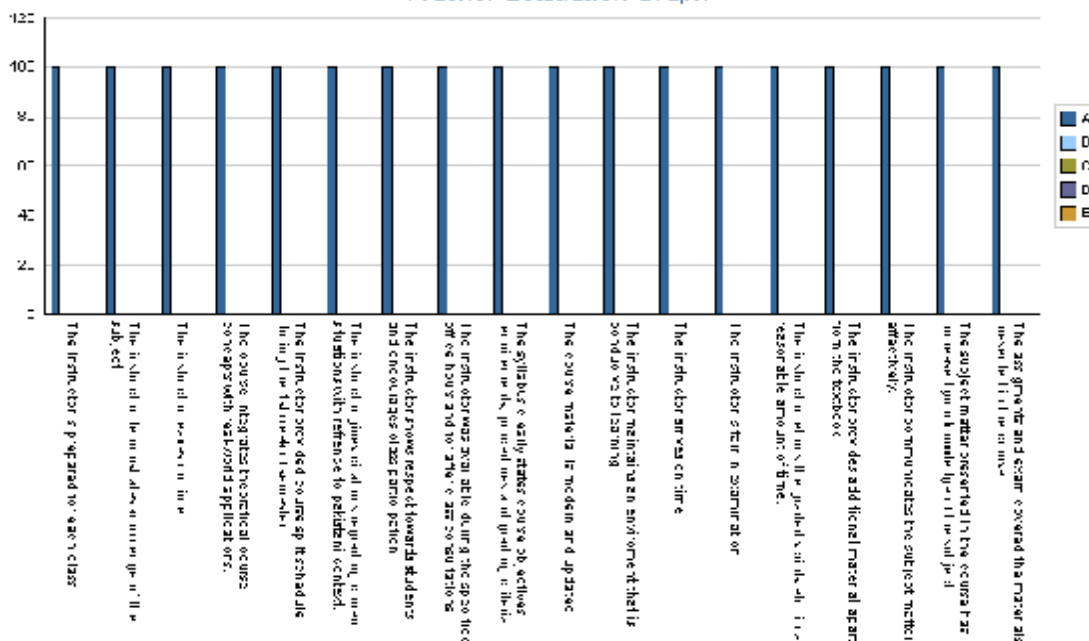
Session Name: SPRING-13

Teacher Name: YAMIN BIBI

Course Name: Seminar-I

Section: A **M/E:** M **Semester#:** 1

Teacher Evaluation Graph



General Comments of the Students about this Teacher

Weaknesses: All students are satisfied with the teaching, no weakness indicated.

Strengths: Instructor has finalized the whole course and demonstrated the knowledge in this course. Additional materials were provided. Environment of class was conducive for learning.



**Pir Mehr Ali Shah
Arid Agriculture University
Performa 10**

Print Date: Nov. 12, 2014

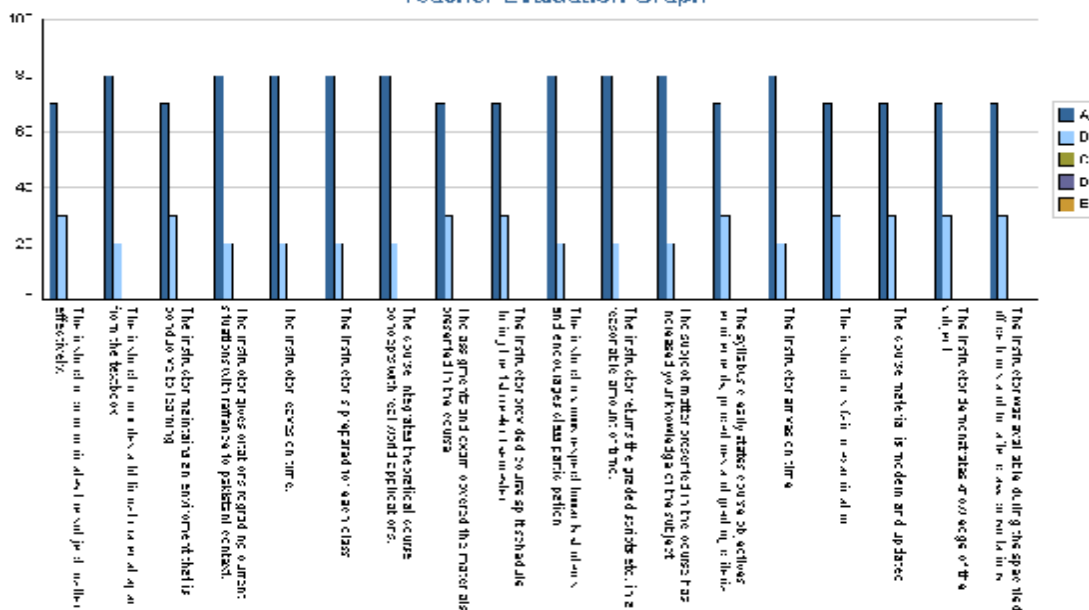
Session Name: SPRING-14

Teacher Name: Rahmatullah Qureshi

Course Name: Conservation and Management of Plant Resources

Section: A **M/E:** M **Semester#:** 2

Teacher Evaluation Graph



General Comments of the Students about this Teacher

Weaknesses: Graph displays no deficiency of the instructor.

Strengths: Instructor has finalized the whole course and demonstrated the knowledge in this course. Additional materials were provided. Environment of class was conducive for education. This course has increased the knowledge of the students and students were pleased to study this course.

Performa 2: FACULTY COURSE REVIEW REPORT

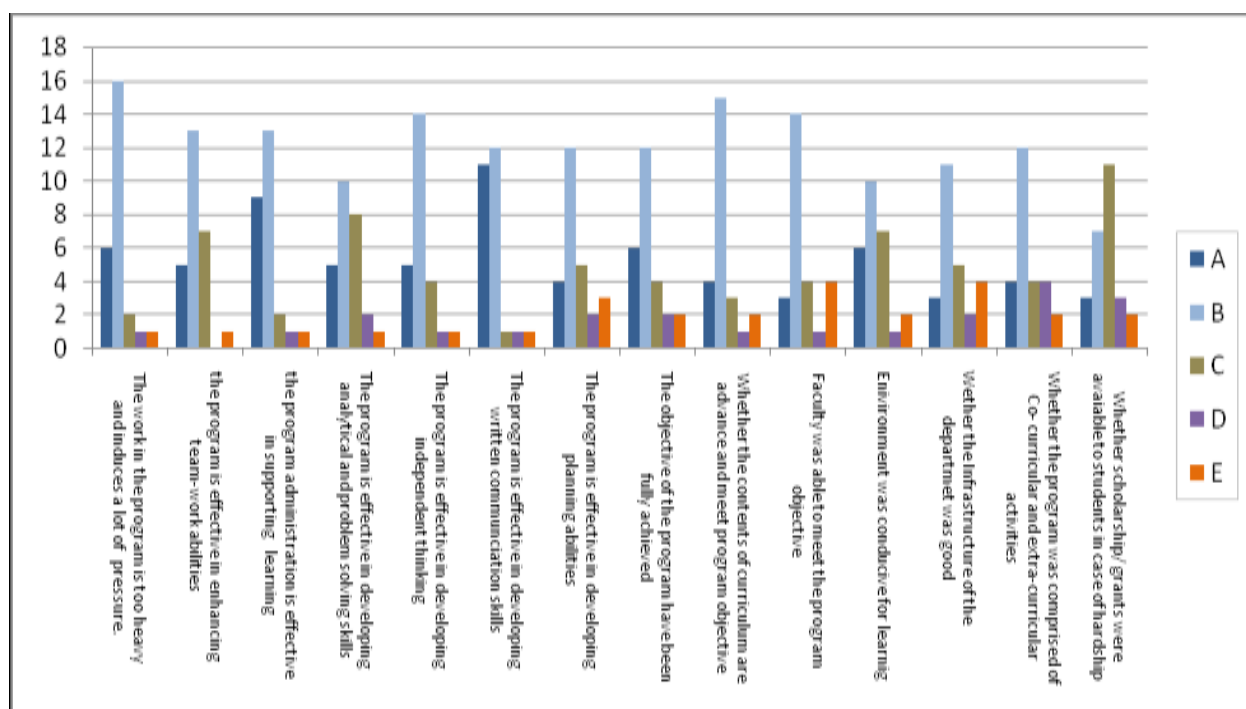
Proforma 2 (faculty course review report)

BOT-714	Mol. Plant Development	3(2-2)	Class Quiz assignment and Exam	12	Satisfactory	nil	Fall 2012	4	1	4	1	2	Ms. Saira
BOT-731	Conservation and management of plant resources	3(1-4)	Class Quiz assignment and Exam	11	Satisfactory	Recent technique added	Fall 2012	0	54.5	27.2	18.18	0	Dr. Yamin Bibi
BOT-732	Plant Proteomics	3(2-2)	Examination /Assignment	22	Satisfactory	Not yet	Fall 2012	10	11	0	1		Dr. Noshin
BOT 737	Applied Ethanobotany	3(2-2)	Examination /Assignment	15	Satisfactory	Not yet	Fall 2012	13	1	1	0	0	Dr. Rahmatullah Qureshi
BOT-720	Seminar-I	1(1-0)	Examination /Quiz	7	Satisfactory	Not yet	Fall 2012	7	0	0	0	0	Dr. Abida
Spring-2013													
Bot - 731	Conservation and management of Plant Resources	3(1-4)	Class Quiz assignment and Exam	11	satisfactory	No	Spring-13	27.2	54.5	18.18	0	0	Dr. Yamin Bibi
Bot - 720	Seminar-1	1(1-0)	Presentation and Speaking skill	02	satisfactory	No	Spring-13	50	50	0	0	0	Dr. Yamin Bibi
Bot - 720	Seminar-2	1(1-0)	Presentation and Speaking skill	08	satisfactory	No	Spring-13	37.5	62.5	0	0	0	Dr. Yamin Bibi
BO T 737	Applied Ethanobotany	3(2-2)	Written exam/Presentation	7	Satisfactory	no	Spring	2	1	1	1	2	Dr Rahmat
Fall-2013													
BOT-720	Seminar-I	1(1-0)	Presentation	2	Satisfactory	Not yet	Fall	2	0	0	0	0	Dr. Abida
BOT-720	Seminar-II	1(1-0)	Presentation	1	Satisfactory	Not yet	Fall	1	0	0	0	0	Dr. Abida
Spring 14													
BOT 715	Phytogeography	3(2-2)	Written exam/presentation	11	satisfactory	no	Spring	3	8	-	-	-	Dr. Rahmatullah Qureshi
BOT 731	Conservation and	3(1-4)	Written exam/Pesent	2 Ph	satisfactory	no	Spring	1	1	-	-	-	Dr. Rahmatu

	management of plant resources		ation	D									llah Qureshi
BOT 737	Applied Ethanobotany	3(2-2)	Written exam/representation	14 Ph D	satisfactory	no	Spring	6	6	-	-	-	Dr. Rahmatullah Qureshi

Proforma 3: GRADUATING STUDENTS SURVEY.

A total of 30 students were included in the survey. The data showed that most of the students were very satisfied or satisfied with the program, but were dissatisfied for the work pressure in the program. Moreover, most of the students were very satisfied with program administration, development of analytical and problem solving skills, the program is effective in developing independent thinking, written communication skills and planning abilities, the contents of curriculum are advanced and meet program objectives, faculty was able to meet the program objectives and the environment was conducive for learning.



Proforma 4: RESEARCH STUDENTS PROGRESS REVIEW

	Question	Comments by Students
1	Please outline details of your progress in your research since your last review	Majority students are in Progress to publish
2	Do you have any comments on the level of supervision received?	Satisfied (100%)
3	What do you plan to achieve over the next six months?	M.Phil (Complete their Lab. Work)
4	Do you have any comment on generic or subject specialist training you may have received or would like to receive internally or externally?	M.Phil(Interested in receiving any this sort of training internally or externally, as possible)
5	Do you have easy access to sophisticated scientific equipments?	Yes (100%)
6	Do you have sufficient research material/commodities available?	Yes (100%)

The results of this proforma showed that most of the research students are satisfied with their research activities. All of the students had access to sophisticated issues and have sufficient research material and commodities available.

Proforma 5: FACULTY SURVEY RESULTS

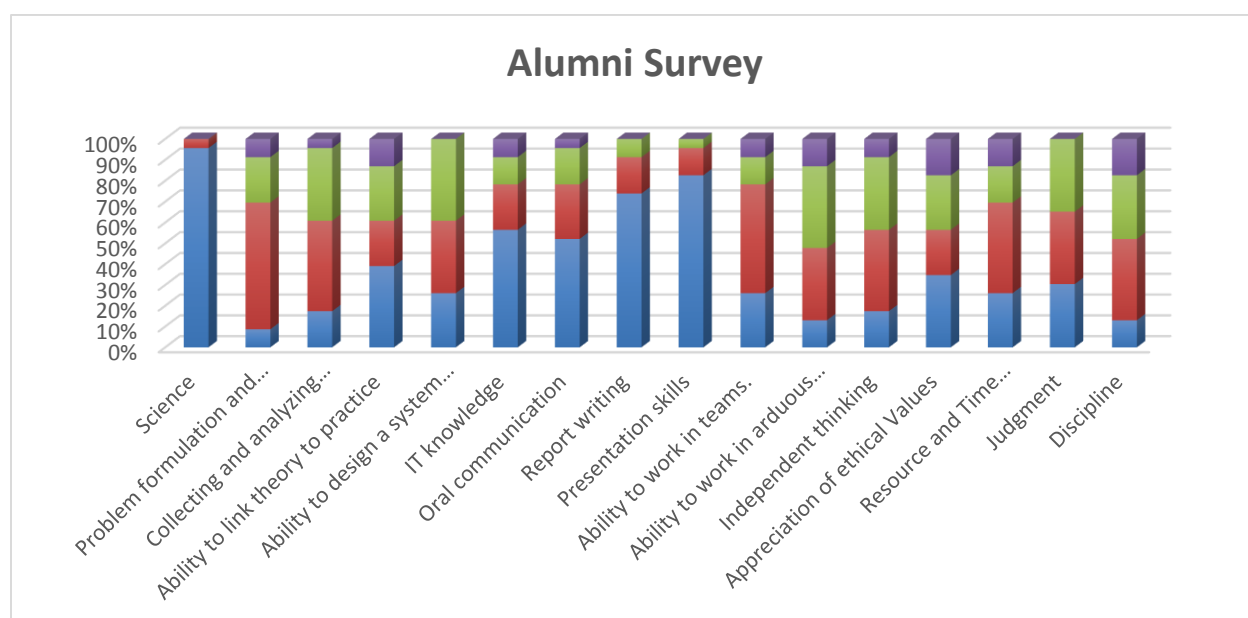
The results of faculty survey showed that most of the faculty members were pleased with their level of academic and research work. All the faculty members have a decent and respectable communication among themselves and with the students. However, some of the faculty members have reservation for the mentoring available to them and also to the time they have for themselves and their family.

S. No	Parameter	Dr. M Arshad	Dr. Rahmat	Dr. Abida	Dr. Noshin	Dr. Naveed	Dr. Yamin	Dr. Mubashrah	Dr Zia	Ms Saira
1.	Your mix of research, teaching and community service	B	B	B	B	B	B	A	A	B
2.	The intellectual stimulation of your work	B	B	B	B	A	B	B	A	B
3.	Type of teaching/research you currently do.	B	B	B	B	A	B	A	A	B
4.	Your interaction with students	A	A	A	A	A	A	A	A	A
5.	Cooperation you received from colleagues	A	B	A	A	A	A	C	A	A
6.	The mentoring available to you	B	B	B	A	A	A	B	A	A
7.	Administrative support from the department	A	B	A	A	B	B	B	A	B
8.	Providing clarity about the faculty promotion process	A	B	A	A	B	A	B	B	A
9.	Your prospects for advancement and progress through	B	B	B	B	A	B	A	B	B

	ranks									
10.	Salary and compensation Packages	B	B	B	B	B	C	C	B	B
11.	Job security and stability at the department	A	A	B	B	A	A	B	A	A
12.	Amount of time you have for yourself and family	C	c	C	C	B	C	D	B	C
13.	The overall climate at the Department	B	B	A	A	A	A	B	A	B
14.	Whether the department is utilizing your experience and knowledge	B	A	A	A	B	A	B	A	B

Proforma 7:ALUMNI SURVEY RESULTS:

The purpose of this survey was to obtain alumni input on the quality of education and research they received and the level of preparation they had at University. A total of 40 alumni were surveyed. Most of the Alumni reported excellent concerning department trained them excellently about the interpersonal skills such as team work,, training of oral communication, IT report writing and management skills, department has excellent infrastructure and repute, working in difficult conditions and independent philosophy, learnt excellent administration of resource and time, learnt excellent power of judgment.



Proforma 08: EMPLOYER SURVEY

A survey was conducted to get the employer's point of view about the working of our former students in their organizations (Proforma 8,. Feed back about 10 employees was obtained from various academic and research organizations). Their views are reflected in the graph. The major emphasis was to know the employers comments on the quality of education regarding: knowledge, communication skill, work skill and interpersonal skills these students have. Survey reflects that our graduates fall above average in all areas and their skill levels revealed more than satisfactory (Fig). Some employers gave general comments about some weaknesses in the practical workability.



PROGRAM OUTCOMES:

Skills and capabilities Reflected In performance as Botanists:

Degree of skills and capabilities that will reflect on their performance as botanist:

- Students shall learn to employ advanced analytical techniques.
- This skill development will lead them to apply given knowledge of plants.
- Students shall have an ability to use conventional as well as modern tools, techniques and skills necessary to conduct botanical research.
- Students shall learn to develop an insight for research design and projects.
- Students will learn to conduct research in economically thematic areas.
- Students shall have an understanding of professional and ethical responsibilities of a botanist.
- Students shall have an ability to work effectively in teams including multidisciplinary teams to solve problems relevant to their field.
- Students will be able to work as professionals.
- It will also build confidence to communicate and shall also develop the skill of effective writing.

Strength of the Department

1. Faculty members are
 - fully qualified
 - Have good command of their subject.
 - And have specialization in their respective fields.
2. Labs are reasonably equipped.
3. Different project are going on in the department which are helping in strengthening of department.

Weaknesses Identified in the Program

1. There is a need of short foreign training to faculty members
2. There is a lack of lectures halls.
3. Latest literature and review are hardly available
4. Lack of Gas supply in Laboratories
5. As an integral part of the department, it must have

- Herbarium & botanic garden
- Green house,
- Computer Lab,
- Departmental library

6. Lack of essential equipment like

- Scanning electronic microscope,
- Homogenizer,
- PCR equipment and ultra-centrifuge.

7. There is lack of supporting staff.

Major Feature of Improvement Plans

- To establish herbarium and Botanic garden in order to aid the students by physically observing plants in preserved and live state.
- To establish computer Lab for students
- To develop departmental library.

Table 3: Quantitative Assessment of the Department (Year 2011-2012)

Sr. No.	Particular	No	Remarks
2	M. Phil.	15	In progress
4	Students: Faculty rates	1:20	Fulfil HEC criteria
5	Technical : No technical ratio	2: 4	Fulfil HEC criteria
6	Average grade point		Fulfil HEC criteria

The evaluation process indicated high efficiency of system and satisfactory impact of outcomes. Almost all the graduates and post graduates got jobs in various organizations (provincial department, universities, research organizations, banks and private firms).

Table 4: Present performance Measures for Research Activities

S. No	Faculty	Journal Publication (National & International)	Conference Publication (proceedings abstract)	Projects
1.	Dr. M. Arshad	40	Nil.	02
2.	Dr. Abida Akram	13	03	01
3.	Dr. Rahmatullah Qureshi	46	Proceeding 01	01
4.	Dr. Noshin Ilyas	9		01
5.	Dr. Naveed Iqbal Raja	6		01
6.	Dr. Yamin Bibi	14	05	01
7.	Ms. Mubashra Munir	7	0	01
8.	Mr. Zia Ur Rehman Mashwani	4	2	01
9.	Ms Saira Asif	2	Nil	Nil

The department is well staffed; distinguishing feature is the availability of all expertise (Genomics, Ecology, Taxonomy, Physiology, and Mycology).

Faculty Satisfaction Regarding the Administrative Services

- There are some reservations of faculty about some administrative offices of the university about disposal of documents which usually delayed.

Table 5: Degree requirements

Degree	Pre-requisites
M. Phil.	M. Sc. Examination in aggregate with CGPA of not less than 2.50 or with 50% of the marks from a recognized institution, entry test

SECTION 2

Criterion 2: Curriculum Design and Organization

A. Title of Degree Program: M. Phil. in Botany

Intent: All the courses for degree program were developed by board of studies, faculty and then academic council. Guidelines given by HEC curriculum committee are also considered.

B. Definition of Credit Hour

A student must complete a definite number of credit hours. One credit hour is one theory lecture or two hours laboratory (practical work/weeks). One credit hour carries 20 marks.

C. Degree Plan

Presently three degree programs including M. Phil are organized by the department.

- **M. Phil.**

The M. phil. degree programme consists of 02 academic years / 04 semesters. One full year is given to research work and final thesis write up.. Degrees are awarded after completing the required number of credit hours (courses) following by Comprehensive Examination.

Table 6: Core Courses

S. No.	Course	Title	Credit
1	BOT-701	Diversity in Non- Vascular Plants	3(2-2)
2	BOT-702	Plant and Cell Physiology-I	3(2-2)
3	BOT-703	Plant and Cell Physiology-II	3(2-2)
4	BOT-704	Phytosociology	3(2-2)
5	BOT-705	Plant Taxonomy and Embryology	3(2-2)
6	BOT-706	Diversity in Vascular Plants	3(2-2)
7	BOT-707	Plant Anatomy	3(2-2)
8	BOT-708	Mycology and Plant Pathology	3(2-2)
9	BOT-709	Plant Ecology	3(2-2)

S. No.	Course	Title	Credit
10	BOT-710	Ethnobotany	3(2-2)
11	BOT-711	Environmental Pollution	3(2-2)
12	BOT-712	Research Planning and Report Writing	3(1-4)
13	BOT-720	Seminar	1(1-0)
Optional Courses			
14	BOT-713	Medicinal Plants of Pakistan	3(2-2)
15	BOT-714	Molecular Plant Development	3(3-0)
16	BOT-715	Phytogeography	3(2-2)
17	BOT-716	Research Techniques and Instrumentation	3(2-2)
18	BOT-717	Phytohormones	3(2-2)
19	BOT-718	Arid Zone Ecology	3(2-2)
20	BOT-719	Special Problem	1(1-0)
21	BOT-720	Seminar-I	1(1-0)
22	BOT-720	Seminar-II	1(1-0)
23	BOT-721	Stress Physiology	3(2-2)
24	BOT-722	Plant Nutrition	3(2-2)
25	BOT-723	Advance in Plant Physiology	3(3-0)
26	BOT-724	Molecular Basis of Morphogenesis	3(3-0)
27	BOT-725	Molecular Advances in Phytosystematics	3(3-0)
28	BOT-726	Environmental Toxicology and Bioremediation	3(2-2)
29	BOT-727	Environmental Biotechnology	3(3-0)
30	BOT-728	Principles of Genome Analysis and Genomics	3(3-0)
31	BOT-729	Biology of Halophytes	3(2-2)
32	BOT-730	Environmental Plant Physiology	3(2-2)
33	BOT-731	Conservation and Management of PlantResources	3(1-4)
34	BOT-732	Plant Proteomics	3(2-2)
35	BOT-733	Physiological Genetics of Plants	3(3-0)
36	BOT-734	Forensic Botany	3(3-0)
37	BOT-735	Plant-microbe Interactions	3(2-2)
38	BOT-736	Plant systematic	3(2-2)
39	BOT-737	Applied Ethnobotany	3(2-2)
40	BOT-751	Integrated Biological Resource Management	3(3-0)
All courses offered for M. Sc. Programmes can be offered to the Ph. D. students, depending upon their requirements			

Curriculum course requirement for M. Sc./M. Phil./Ph. D degree is summarized in the following table, whereas , their detailed description is also provided at end of report.

Standard 2.1: Assessment of the Curriculum of Botany Department

The assessment of curriculum is done in the following table and the courses are cross tabulated according to the program out comes.

Meeting Standard 2.1: Courses versus Program Outcomes

Table 7: Course vs. Program Outcome

COURSE	Outcomes		
	1	2	3
BOT-707	**	**	***
BOT-710	***	**	**
BOT-703	**	**	**
BOT-708	**	**	***
BOT-737	***	**	**
Biol-302	***	**	**
BOT-706	**	**	***
BOT-705	**	***	**
BOT-702	***	**	***
BOT-708	**	**	**
BOT-712	**	**	***
Biol-301	**	***	**
BOT-701	***	**	**

* = Relevant
 ** = Relevant and satisfactory
 *** = Very relevant and satisfactory
 **** = highly relevant and satisfactory

- The curriculum fits well and satisfies the core requirements for the program, as specified the respective accreditation body.
- The curriculum satisfied the general arts and professional and other discipline required for the program according to demands and requirements set by the higher education Commission.

Standard 2-2: Elements Vs Courses

Meeting standard 2-2: Percentage of Elements in Courses

Elements	Courses
----------	---------

Theoretical backgrounds	BOT-701, BOT-702, BOT-703, BOT-704, BOT-705, BOT-706, BOT-707, BOT-708, BOT-709, BOT-710, BOT-711, BOT-713, BOT-714, BOT-715, BOT-717, BOT-718, BOT-721, BOT-722, BOT-723, BOT-724, BOT-725, BOT-726, BOT-727, BOT-728, BOT-729, BOT-730, BOT-732, BOT-733, BOT-735, BOT-738
Problem analysis	BOT-712, BOT-736, BOT-737, BOT-751
Solution designs	BOT-716, BOT-719, BOT-720, BOT-731, BOT-734, BOT-799

Standard 2-3

The curriculum for the core courses is designed as per requirements as approved by HEC.

Standard 2-4

The curriculum meets major requirements as approved by HEC.

Standard 2-7

Enhancing Oral and written Communication Skills of the students

- Skill is developed through seminars, assignment and presentation by the faculty in their respective courses.

SECTION 3

Criterion 3: LABORATORIES AND COMPUTING FACILITIES

There are four Laboratories in the department. The facilities and shortcomings of these laboratories are listed as under.

LAB-1

Laboratory title	<i>Plant Ecology Lab.</i> (for the graduate and post graduate students)
Location and Area	Faculty of Sciences, Department of Botany, 1 st floor, New Academic Block.
Objectives	Laboratory is used for ➤ Practical exercise and demonstration to master students in their introductory and major courses. ➤ Research work for the graduate and post graduate students. ➤ Used for implementing the funded projects by the university, HEC, PSF, PARC and other agencies. ➤ Laboratory is spacious and adequate for research and teaching.

Major apparatus vizequipments	Microscopes, oven, vacuum pump, thermograph, pH meter, electric balance, sieve shaker, refrigerator, pH and EC meter, etc.
Safely Regulations	Safely measures are unavailable against fire (extinguisher), minor hazards and accidents, injuries (First Aid Kit). However, the university maintains a Medical Dispensary for such incidents.

LAB-2

Laboratory title	<i>Plant Physiology Lab</i> (for the graduate and post graduate students)
Location and Area	Faculty of Sciences, Department of Botany, 1 st floor, New Academic Block. .
Objectives	Laboratory is used for ➤ Practical exercise and demonstration to master students in their introductory and major courses. ➤ Research work for the graduate and postgraduate research fellows. ➤ Laboratory is spacious and adequate for teaching as well as research purpose. ➤ Used for implementing the funded projects by the university, HEC, PSF, PARC and other agencies.
Major apparatus vizequipments	Refrigerators, pH meter, EC meter, UV visible spectrophotometer, Osmometer, water potential apparatus, Leaf area meter, oven, Microscopes, elective balance, etc
Safely Regulations	Safely measures are unavailable against fire (extinguisher), minor hazards and accidents, injuries (First Aid Kit). However, the university maintains a Medical Dispensary for such incidents.

LAB-3

Laboratory title	<i>Molecular Mycology Lab.</i> (For the master and post graduate research scholars.)
Location and Area	Faculty of Sciences, Department of Botany, 1 st floor, New Academic Block. .
Objectives	Laboratory is used for

	➤ Practical exercise and demonstration to master students in their introductory and major courses. ➤ Research work for the graduate and post graduate research scholars. ➤ Used for implementing the funded projects by the university, HEC, PSF, PARC and other agencies. ➤ Laboratory is spacious and adequate.
Major apparatus vizequipments	Research microscopes, autoclave, Laminar Flow, deep freezer, refrigerators, Test tube mixer, elective balance, HPLC, Phase contrast Microscope, Electrophoresis, etc.
Safely Regulations	Safely measures are unavailable against fire (extinguisher), minor hazards and accidents, injuries (First Aid Kit). However, the university maintains a Medical Dispensary for such incidents.

LAB-4

Laboratory title	<i>Plant Taxonomy & Ethnobotany Lab.</i> (For the master and post graduate research scholars.)
Location and Area	Faculty of Sciences, Department of Botany, 1 st floor, New Academic Block. .
Objectives	Laboratory is used for ➤ Practical exercise and demonstration to master students in their introductory and major courses. ➤ Research work for the graduate and post graduate research scholars. ➤ Used for implementing the funded projects by the university, HEC, PSF, PARC and other agencies. ➤ Laboratory is spacious and adequate for undertaking research and teaching in the relevant field.
Major apparatus vizequipments	Hotplate, Microscopes, stereomicroscope, dissecting microscope, deep freezer, electric balance, sieve shaker, refrigerator, pH and EC meter, plant pressers, etc.
Safely Regulations	Safely measures are unavailable against fire (extinguisher), minor hazards and

	accidents, injuries (First Aid Kit). However, the university maintains a Medical Dispensary for such incidents.
--	---

Standard 3-1: Laboratory Manuals:

- Individual teachers have prepared some manuals but in general there lacking of labortary manual of each subject on account of absence of department Library.
- The equipments are fairly sufficient however; instruments regarding molecular approaches are lacking e.g. refrigerated centrifuge, PCR Spectrophotometer.

Standard 3-2: Support/Laboratory Personal for Maintenance of Laboratory

Laboratories are maintained by only one laboratory assistant (equipment, glassware, chemicals, material etc). Three laboratories attendants assist students in practical, cleaning and washing.

Standard 3-3: Computing Infrastructure and Facilities

Computer facilities are insufficient and not available to all faculty members and the postgraduate students. However the department has the following shortcomings/ problems:

- Majority of the faculty members do not have access to the PCs as department have only one Computer provided by the university.
- IT issues, virus problems, telephone sets / connections?
- Not availability of internet facility

SECTION 4:

Criterion 4: Student Support and Advising

Departmental Orientation

All newly admitted students are given orientation session at departmental level. It covers orientation about semester system, introduction of faculty and staff and use departmental facilities and services.

Student Advisor

One of the faculty members is deputed as student advisor. The services provided by the student advisor are:

- Organization of function at departmental level
- Solving students problems (personal and academic)
- Providing general assistance

Standard 4-1: Frequency of courses

- Courses are taught as per approved scheme of study.

Standard 4-2: Structure of the Courses

The majority of the courses are divided into two major aspects: Theoretical and Practical.

Theoretical portion covered in teaching, assignments and presentations.

Practicals aspects are covered by performing experiments in Labs and fields. In order to update students about the latest developments in study area visits to various research organization areas is also organized.

Standard 4.3: Guidance to the Students

There is a strong and regular communication between student advisors and students to discuss about program requirements. Regular interaction between student and teacher supports advising and counseling system.

SECTION 5: PROCESS CONTROLL

Standard 5.1: Admission Criteria for Programme

- The process of admission well established and followed as per rules and criteria set by university. For this purpose an advertisement is given in the national papers by the Registrar office.
- Admission criteria:
 - **M. Phil.** (M. Sc. Botany/Biology with CGPA 2.5 out of 4 or 50% marks under annual examination system and entry test.
- Admission criteria are revised every year before the announcement of admissions.

Standard 5.2: Process of Registration and Monitoring of Students.

- The complete list of finally admitted candidate after fulfilling the admission criteria is to be forwarded to the registrar office for proper registration in the specific program. Registration numbers are issued to the students
- Students are registered once in a degree programme.
- Mid, Final, Practical exams and assignments are used to monitor student progress.

Standard 5.3: Recruiting Process for Faculty

Recruitment policy for faculty followed by the University is as per HEC standard recommendation. New inductions are as follows:

- Vacant and newly created positions are advertised in the leading daily newspapers. Applications are received by the registrar office; call letters are issued to the short listed candidates on the basis of their experiences, qualification, publications and other qualities/ activities as fixed as per university rules.
- The candidates are interviewed by the university selection Board. Principal and alternate candidates are selected
- Selection of candidates is approved by the syndicate for issuing orders to join within a specified time period.
- Induction of new candidates depends upon the number of approved vacancies.
- Standard set by HEC are considered.

Retention of Excellent Faculty Members

- At present, no procedure exists for retaining highly qualified faculty members.
- HEC also supports appointment of highly qualified members as foreign faculty professor, National Professors and deposes them in various departments of the university.

Standard 5.4: Process and Procedure to Ensure Teaching and Delivery of Course Material

- Periodical revision of the curriculum helps high quality teaching. This revision is based upon requirements, innovations and new technology
- With the emergence of new fields, new courses are set and included in the curriculum
- Relevant and supporting material is available in university library
- Lecture aids are prepared by the teachers and given to the students.
- Most of the lectures are also supplemented by overheads, slides and pictures

- All efforts are made that the courses and knowledge imparted meet the objectives and outcomes. The progress is regularly reviewed in the staff meetings.

5.5. Completion of Program Requirements

- Announcement of the date of commencements examination by the controller of examinations announces.
- Notification of results after 30 days of the examinations finish, the controller office notifies the results of the students.
- The evaluation procedure consists of quizzes, mid and final examinations, practical formulas, assignments and reports, oral and technical presentation.

SECTION 6

Criterion 6: FACULTY

Standard 6-1: Full Time Faculty

Table 8: Faculty Distribution by Program Areas in Botany

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
Taxonomy & Ethnobotany	6	2	1
Ecology	6	1	1
Physiology	8	1	1
Mycology and Plant Pathology	2	1	1
Tissue Culture	3	2	2
Total	25	7	6

Table 9: Faculty Specialization

S. No	Name	Position	Qualification	Specialization
1.	Dr. Muhammad Arshad	Professor	PhD	Plant Ecology
2.	Dr. Abida Akram	Assoc. Professor	Ph.D	Mycologist
3.	Dr. Rahmatullah Qureshi	Assoc. Professor	PhD	Plant Taxonomy & Ethnobotany
4.	Dr. Noshin Ilyas	Assist Professor	PhD	Plant Microbiologist
5.	Dr. Naveed Iqbal Raja	Assist Professor	PhD	Tissue culture
6.	Dr. Yamin Bibi	Assist Professor	PhD	Phytochemistry
7.	Ms. Mubashra Munir	Lecturer	M. Phil.	Fresh water biologist
8.	Ms. Saira Asif	Lecturer	M.Phil	Tissue Culture
9.	Mr. Zia Ur Rehman Mashwani	Lecturer	M.Phil	Ethnopharmacology

Standard 6.2: Effective Programs for Faculty Development

- Proficient implementation and accessibility of pleasing research and academic facilities are provided conferring to the faculty members.
- Incentives in the practice of allowances to thesis supervisors have been implemented lately to promote high standard research.

Standard 6.3: Faculty member motivation

- There is a calamitous necessity of motivation

SECTION 7
Criterion 7: Institutional Facilities

Standard 7-1 infrastructure

The institutional facilities are insufficient though the department has provided new space. These shortfalls are under:

- There is only one lecture hall for all classes on departmental disposal and the remaining shared with other department.
- The department has lack of departmental library.
- The Department lacks the computer and internet laboratory.
- New Labs are also required.
- Lab of the dept. lack the gas supply
- Upturn the department budget for research and experimentation.

Standard 7-2 Library facilities

The university central library has very limited number of books, journals and periodical, it's a small library in term of space and facilities no catalogue systems; it does not meet the standards of a university library. Department itself does not have a library.

Standard 7.3 Class Room and Faculty Offices

- Shortage of lecture halls
- Faculty offices are inadequate.

SECTION 8
Criterion 8: Institutional Support

- There should be more encouragement for the faculty members to carry out quality research.
- There is inadequate supporting technical and official staff and some equipment.
- There is one classroom available therefore; classes are taken in the labs.

Standard 8-1 Support and Financial Resources

At present department is having a very insufficient financial resource to maintain the present needs of the department. Individual research grants for students and faculty are mainly supporting the departmental research activities. There is dire need of increasing the financial resources allocated to the department to establish a library, laboratories and computer facilities. Suggestions and factors that can contribute to the motivation to the faculty are given as follows:

- Research grants to the young faculty members.
- Discrimination should be discouraged at all levels.
- Sabbatical leaves for researches in the country and abroad.

Standard 8-2 High Quality Graduate Students and Research scholars

Graduate students are enrolled once in a year.. A strict merit policy adopted and GRE/NTS examination is implemented. Lately, details of the students and research scholars are given following tables.

Table 12: Showing the Number of students obtaining degree in different programs from 2003-14.

STUDENTS	NOS											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
M.Phil	--	--	--	--	--	13	09	13	14	14	15	15
Research Associate				01	02							

Students: Faculty ratio	1:20	Fulfills HEC criteria
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Standard 8-3 Financial Resources:

Total budget of the department for the financial year 2011-12 is Rs. 1, 00000/- (One Lac rupees only) which hardly fulfills the departmental needs particularly for the purchase of necessary chemicals, etc.

Name	Prof. Dr. MUHAMMAD ARSHAD
Personal	PMAS ARID AGRICULTURE UNIVERSITY, MURREE ROAD, RAWALPINDI PAKISTAN. E. Mail: arshad2uaar @ yahoo.com H. No. 12, UNIVERSITY COLONY NO. 2, PMAS ARID AGRICULTURE UNIVERSITY, MURREE ROAD, RAWALPINDI PAKISTAN. Off: 051-9062207
Experience	Professor Feb 2007 to date Department of Botany, PMAS Arid Agriculture University, Rawalpindi, Pakistan. Associate Professor Dec 2004 to Feb. 2007 Department of Botany, University of Arid Agriculture, Rawalpindi, Pakistan. Assistant Professor Jan., 1998 to Dec 2004 Department of Botany, University of Arid Agriculture, Rawalpindi, Pakistan. Chairman, Jan., 1998 to Feb, 1998 Department of Biological Sciences University of Arid Agriculture, Rawalpindi, Pakistan Lecturer May 1986 to Jan., 1998 Department of Botany, University of Arid Agriculture, Rawalpindi, Pakistan.
Honor and Awards	• Medalist scored first position in M. Phil., Quaid-i-Azam University, Islamabad, Pakistan. • Award Merit Scholarship during H.S.C. • Member Syndicate. University of Arid Agriculture, Rawalpindi for the period of two years (2005-2007). • Member of University Finance and Planning Committee as a representative of Syndicate for the period of two years (2005-2007). • Member of Advanced Studies and Research Board, Kohat University of Science and Technology, Kohat.
Memberships	• Member Pakistan Phytopathological Society. • Member of advisory group of WWF project” Capacity building in ethnobotany applied to conservation and sustainable use of plants

	resources from 2001-2004.		
Graduate students	Year	Degree	Number of
Postdocs	students		
Undergraduate students	1996 – 2005	M.Sc.	15
Honour students	2006 to date	M.Phil	40
	2003 to date	Ph.D.	07
Service Activity	• Worked as Secretary, Department of Plant Protection, Barani Agricultural College, Rawalpindi, Pakistan. • Worked as Hostel Superintendent form 1986 - 1989, Barani Agricultural college, Rawalpindi, Pakistan. • Member of Examination Committee, Barani Agricultural College, Rawalpindi, Pakistan. • President, Student Tutorial Group “Heaven” University of Arid Agriculture, Rawalpindi, Pakistan. • Member of Board of Faculty, Faculty of Sciences, university of Arid Agriculture, Rawalpindi, Pakistan. • Member of Environmental Friendly Club, University of Arid Agriculture, Rawalpindi, Pakistan. • Incharge Sports (Badminton), University of Arid Agriculture, Rawalpindi, Pakistan. • Academic supervisor of M.Sc. Botany students, University of Arid Agriculture, Rawalpindi, Pakistan. • Member of Comprehensive Examination Committee of M.Sc. Botany students, University of Arid Agriculture, Rawalpindi, Pakistan. • Incharge Administration, Department of Biological Sciences, University of Arid Agriculture, Rawalpindi.		
Research Interest	Plant Ecology; Phytosociology; Plant Biosystematics; Plant Taxonomy; Medicinal Plants; Ethnobotany.		
Publications	Impact Factor Publication 1. Rahim, G., R.Qureishi, M. Gulfraz, M. Arshad and S. Rahim 2012 Preliminary phytochemical screening and ethnomedicinal uses of <i>Teucrium stocksianum</i> from Malakand Division. <i>J. Med. Pl. Res.</i>, 6(5): 704-707(Impact factor = 0.879). 2. Muneer, M., A. Hussain, I. Haq, R. Qureishi, M. Munazar, M. Arshad and M. K. Lagari 2012 Callogenesis Potential of cotyledonary explants of <i>Althaea rosea</i> L. from Pakistan <i>Pak. J. Bot.</i>, 43(1): 121-133 (Impact factor = 1.207). 3. Mashwani Z. A., M.A Khan, M. Ahmad, M. Zafar, N. I. Raja, M. Arshad and Samiullah, (2012) Macro-mineral quantification of the forage grass species in the Gandgar hills, western Himalaya, Pakistan. <i>Pak. J. Bot.</i>, 44: 117-121 (Impact factor = 1.207) 4. Sultana, S., M. Ahmad, M. Zafar M. A. Khan and M. Arshad. 2012. Authentication of Herbal drug Senna		

	(<i>Cassia angustifolia</i> Vahl.): A village Pharmacy for Indo-Pak Subcontinent. <i>African Journal of Pharmacy and Pharmacology</i>, 6(30): 2299-2308 (Impact factor = 0.839) 5. Munazir, M., R. Qureshi, M. Arshad and M. Gulfraz. 2012. Antibacterial activity of root and fruit extracts of <i>Leptadenia pyrotechnica</i> (Asclepiadaceae) from Pakistan. <i>Pak. J. Bot.</i>, 44(4): 1209-1213. (Impact factor = 1.207). 6. Shah G. M., M. Ahmad, M. Arshad, M. A. Khan, M. Zafar and S. Sultana. 2012. Ethno-phyto-veterinary medicines in Northern Pakistan. <i>Journal of Animal & Plant Science.</i>, 22(3): 791-797 (Impact factor: 0.638). 7. Muneer, M., R. Qureshi, , M. Arshad, S. K. Chaudhari and M. K. Lagari 2012. Taxonomic study of Bacillariophyta From Kallar Kahar Lake Chakwal, Punjab, Pakistan <i>Pak. J. Bot.</i>, 43(1): 121-133 (Impact factor = 1.207). 8. Javid A., M. Ahmad, M. Zafar, S. Sultana, M. A. Khan and M. Arshad, 2012. Palyno-anatomical studies of <i>clematis</i> l. (Ranunculaceae) from Poonch valley ajk, pakistan. <i>Journal of Animal & Plant Sciences</i>, 22(4): 1173-1176. (Impact factor = 0.638) 9. Mehmood, K., M. Arshad, G. M. ALI and A. Razzaq. 2013. Tissue culture responses of some Wheat (<i>Triticum aestivum</i> L.) cultivars grown in Pakistan. <i>Pak. J. Bot.</i>, 45(SI): 545-549(Impact factor = 1.207). 10. Kausar, R., M. Arshad., A. Shahzad and S. Komatsu. 2013. Proteomic analysis of sensitive and tolerant Barley genotypes under drought stress. <i>Amino Acid-SpringerLink</i>, 44(2): 345-359 (Impact factor = 4.1) 11. Ahmed, E., M. Arshad, A. Saboor, R. Qureshi, G. Mustafa, S. Sadiq, S. K. Chaudhari. 2013. Ethnobotanical appraisal and medicinal use of plants in Patriata, New Murree, evidence from Pakistan. <i>Journal of Ethnobiology and Ethnomedicine</i>, 9 (13): 1-10 (Impact factor = 2.42). 12. Rahim, G., R. Qureshi, M. Arshad and M. Gulfraz. 2013. Phytochemical analysis and Antioxident properties of <i>Teucrium stocksianum</i> Flowers from Malakand Division. Pakistan. <i>Int. J. Agric. Biol.</i>, 15(2):377-381 (Impact factor = 0.944) 13. Ilyas M., R. Qureshi, M. Arshad and S. N. Mirza, 2013. A preliminary checklist of the vascular flora of Kabal Valley, Swat, Pakistan. <i>Pak. J. Bot.</i>, 45(2): 605-615 (Impact factor = 1.207). 14. Ahmad M., M. Zafar, H. Sadia, S. Sultana, M. Arshad, M. Irfan and M. A. Khan, 2013. Physio-Chemical Characterization of Sunflower Oil Biodiesel by Using Base Catalyzed Transesterification. <i>Int. J. Green energy</i>. (Impact factor = 2.069) 15. Muneer , M., R. Qureishi,M. Munazar, M. K. Lagari, M.
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Research Grant	Date Title Organization 2003 Ethnobotanical study of the Galliyat for UAAR botanical demography and bioecological diversification. (Amount Funded: Rs. 100,000/-) Ethnobotanical Study of Mountain Range of Kalla Chitta in Potohar Region , Pakistan Funded by WWF Pakistan. Exploration and Eco.Taxonomic Screening Of Fodder Grasses from Thal Desert (Khushab) of Pakistan.
Selected Professional Presentations	A focus on Phytogeography of Medicinally important flora in suburban region, their mitigation redress, In-SITU Conservation and sustainable use. International Workshop on Conservation and Sustainable uses of Medicinal and Aromatic Plants in Pakistan. Organized Jointly by WWF, Qarshi Industries Pvt. Ltd. And MINFAL, Islamabad. (2003).

	In vitro Conservation and its Implication for Grape Germplasm Biodiversity. International conference biotechnology shaping future agriculture. Organized by UAAR. June 20-21, 2006.
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Personal	DR. RAHMATULLAH QURESHI Muhammad Shafi Qureshi Pakistani 45502-9070455-3 Sindh [District Sukkur] 01-06-1972 Department of Botany, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Punjab, Pakistan +9251-9290093 +923006730496 rahmatullahq@yahoo.com , phytotaxonomist@gmail.com rahmatullahq@uaar.edu.pk,														
PRESENT POSITION	❖ Associate Professor (TTS), Department of Botany, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi (Pakistan) since 29 th August, 2011 to Date.														
EXPERIENCE	1. Associate Professor (Regular), Department of Botany, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi (Pakistan) since 14 th December, 2010 to 28 th August, 2011. 2. Assistant Professor, Department of Botany, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi (Pakistan) since 23 rd May, 2007 to 13 th December, 2010. 3. Seed Certification Assistant (BPS-17) in Federal Seed Certification & Registration Department from 4 th January, 2002 to 22 nd May, 2007. 4. Research Associate in the Department of Botany, Shah Abdul Latif University Khairpur from 25 th September 1998 to 31 st December, 2001.														
Honor Students	A. <u>Ph.D. Theses Supervised (Major supervisor)</u> <table border="1"> <thead> <tr> <th>S. No.</th><th>Name</th><th>Year</th><th>Title of theses</th></tr> </thead> <tbody> <tr> <td>1</td><td>Ms. Mubashrah Munir HEC Indigenous Scholar</td><td>2014</td><td>Ecology of Algal Flora from Kallar Kahar Lake and its tributaries</td></tr> <tr> <td>2</td><td>Mr. Gul Rahim HEC Indigenous Scholar</td><td>2014</td><td>Bioactivity Guided Assessment of some medicinal plants of Malakand Division</td></tr> </tbody> </table>			S. No.	Name	Year	Title of theses	1	Ms. Mubashrah Munir HEC Indigenous Scholar	2014	Ecology of Algal Flora from Kallar Kahar Lake and its tributaries	2	Mr. Gul Rahim HEC Indigenous Scholar	2014	Bioactivity Guided Assessment of some medicinal plants of Malakand Division
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2	Mr. Gul Rahim HEC Indigenous Scholar	2014	Bioactivity Guided Assessment of some medicinal plants of Malakand Division												

B. PhD Theses Supervised (Co-supervisor/Member)

S. No.	Name	Year	Title of theses
1	Fakhira Shamim (03-arid-901)	2013	Relative physiological & biochemical evaluation of some tomato (<i>Lycopersicon esculentum</i> L.) genotypes under water deficit conditions
2	Mr. Ahmed Ali (06-arid-763)	2013	Utilization of triticeae primary gene pool to improve drought tolerance in bread wheat (<i>Triticum aestivum</i> L.)
3	Zakir Husain (07-arid-1074)	2013	Vegetation analysis, grassland productivity & carrying capacity of Deosai National Park, Gilgit-Baltistan
4	Dawood Ahmed	2013	Study of phytochemicals and antitumor activity of <i>Taraxicum officinale</i> L. in rats
5	Ms. Shamim Akhter (04-arid-985)	2013	Amelioration of iron deficiency in groundnut (<i>Arachis hypogea</i> L.) through genetic engineering
6	Pervaiz Anwar	2014	Biochemical analysis of oil extracted from wild olive (<i>Olea ferruginea</i>) and its comparison with standard oil of cultivated olive (<i>Olea europea</i>)
7	Khalid Mehmood (03-arid-827)	2014	Improvement of wheat for drought tolerance through Genetic Engineering
8	Ms. Sammar Fatima (02-arid-281)	2014	Drought stress induced metabolic changes in local cultivar of wheat (<i>Triticum aestivum</i> L.)s

C. PhD Theses (Research complete/Under Write-up)

1. Cytotoxic and phytochemical analysis of selected medicinal plants from salt range, Pakistan (Mr. Muhammd Maqsood)
2. Phytosociology Floral Diversity and Conservation Status of Muree- Kotli Sattaian-Kahuta National Park (Mr. Wasim Ahmed)

D. M. Phil. Theses Supervised (Major Supervisor)

Name	Year of Passing	Title of theses
Sehrish Sadia	2012	Allelopathic potential of <i>Tagetes minuta</i> for controlling broad and narrow leaved weeds

	<table> <tr> <td>Abida Hussain</td> <td>2012</td> <td>Ethnobotanical study of Rawalakot, AJK</td> </tr> <tr> <td>Shahida Perveen</td> <td>2012</td> <td>Antimicrobial activity of <i>Cymbopogon jwarancusa</i> from Thal Desert</td> </tr> <tr> <td>Memoona Akram</td> <td>2012</td> <td>Weed flora dynamics of maize crop in Tehsil Gujrat, Pakistan</td> </tr> <tr> <td>Rukhsana Kausar</td> <td>2012</td> <td>Weed flora composition of wheat crop in Tehsil Gujrat, Pakistan</td> </tr> <tr> <td>Simeen Masood</td> <td>2012</td> <td>Ecotaxonomic study of cyanophyta of Kallar Kahar Lake</td> </tr> <tr> <td>Sadaf Anwaar</td> <td>2013</td> <td><i>In vitro</i> anthelmintic activity of native medicinal plants from Thal Desert</td> </tr> <tr> <td>Kaleem Ullah</td> <td>2013</td> <td>Floristic and ethnobotanical investigations of Monocotyledons from Thal Desert</td> </tr> <tr> <td>Mirza Faisal Qaseem</td> <td>2013</td> <td>Folk wisdom of plants used by the rural communities of Kotli, Azad Jammu and Kashmir</td> </tr> <tr> <td>Abdullah Rahim</td> <td>2014</td> <td>Ethnobotanical profile of District Battagram, KPK</td> </tr> <tr> <td>Saima Sharif</td> <td>2014</td> <td>Ethnobotanical Enumeration of Tehsil Bagh, AJK</td> </tr> </table>	Abida Hussain	2012	Ethnobotanical study of Rawalakot, AJK	Shahida Perveen	2012	Antimicrobial activity of <i>Cymbopogon jwarancusa</i> from Thal Desert	Memoona Akram	2012	Weed flora dynamics of maize crop in Tehsil Gujrat, Pakistan	Rukhsana Kausar	2012	Weed flora composition of wheat crop in Tehsil Gujrat, Pakistan	Simeen Masood	2012	Ecotaxonomic study of cyanophyta of Kallar Kahar Lake	Sadaf Anwaar	2013	<i>In vitro</i> anthelmintic activity of native medicinal plants from Thal Desert	Kaleem Ullah	2013	Floristic and ethnobotanical investigations of Monocotyledons from Thal Desert	Mirza Faisal Qaseem	2013	Folk wisdom of plants used by the rural communities of Kotli, Azad Jammu and Kashmir	Abdullah Rahim	2014	Ethnobotanical profile of District Battagram, KPK	Saima Sharif	2014	Ethnobotanical Enumeration of Tehsil Bagh, AJK
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Saima Sharif	2014	Ethnobotanical Enumeration of Tehsil Bagh, AJK																													
Brief Statement of Research Interest	My major focus is on systematic botany and plant taxonomy. I am interested primarily in describing and identifying arid zone (desert) plants and determination of their conservation status. In my PhD thesis, I studied floristic and ethnobotanical appraisal of Nara Desert, Pakistan. I have worked on various research projects. My further focus is on followings: ❖ Plant Taxonomy & Systematic Botany ❖ Biodiversity & Conservation ❖ Weed & Plant Ecology ❖ Ethnobotany ❖ Bioactivity of native medicinal plants																														
PUBLICATIONS	<u>INTERNATIONAL</u> <u>(Impact Factored)</u> 1. Shaheen, H., R. Qureshi, I. Zahra M. Munir and M. Ilyas. 2014. Floristic diversity of Santh Saroola, Kotli Sattian, Rawalpindi, Pakistan. <i>Pak. J. Bot.</i>, 46(6): 1945-1954 (Impact Factor: 1.207). 2. Qureshi, R. and S. Raana. 2014. <i>Conyza sumatrensis</i> (Retz.) E. H. Walker: A new record from Pakistan. <i>Plant Biosystems</i>, 148(5-6): 1035-1039. http://dx.doi.org/10.1080/11263504.2013.850119 (Impact Factor: 1.910) 3. Maqsood, A., A. Rehman, I. Ahmad, M. Nafees, I. Ashraf, R. Qureshi, M. Jamil, M. Rafay and T. Hussain. 2014. Physiological attributes of fungi																														

- associated with stem end rot of mango (*Mangifera indica* L.) cultivars in postharvest fruit losses. *Pak. J. Bot.*, 46(5): 1915-1920 (**Impact Factor: 1.207**).
4. Zahara, K., S. Tabassum, S. Sabir, M. Arshad, **R. Qureshi**, M.S. Amjad and S.K. Chaudhari. 2014. A review of therapeutic potential of *Saussurea lappa*-An endangered plant from Himalaya. *Asian Pac. J. Trop. Med.*, 7(Suppl 1): 560-569 (**Impact Factor: 0.926**).
 5. Wariss, H.M., S. A. Pirzada, K. Alam, S. Anjum and **R. Qureshi**. 2014. Flora of Lal Suhanra National Park, Bahawalpur, Punjab, Pakistan. *Pak. J. Bot.*, 46(4): 1331-1341 (**Impact Factor: 1.207**).
 6. **Qureshi, R.**, H. Shaheen, M. Ilyas, M. Wasim and M. Munir. 2014. Phytodiversity and plant life of Khanpur Dam, Khyber Pakhtunkhwa, Pakistan. *Pak. J. Bot.*, 46(3): 841-849 (**Impact Factor: 1.207**).
 7. Gulfraz, M., D. Ahamd, M.S. Ahmad, **R. Qureshi**, R.T. Mahmood, N. Jabeen and K.S. Abbasi. 2014. Effect of leaf extracts of *Taraxacum officinale* on CCl₄ induced Hepatotoxicity in rats, *in vivo* study. *Pak. J. Pharm. Sci.*, 27(4): 825-829 (**Impact Factor: 0.95**).
 8. Shaheen, H., **R. Qureshi**, A. Akram and M. Gulfraz. 2014. Inventory of medicinal flora from Thal Desert, Punjab, Pakistan. *Afr. J. Tradit. Complement. Altern. Med.*, 11(3): 282-290 (**Impact Factor: 0.56**).
 9. Shaheen, H., **R. Qureshi**, A. Akram, M. Gulfraz and D. Potter. 2014. A preliminary floristic checklist of Thal Desert Punjab, Pakistan. *Pak. J. Bot.*, 46(1): 13-18 (**Impact Factor: 1.207**).
 10. Anwar, P., A. Bendini, M. Gulfraz, **R. Qureshi**, E. Valli, G.D. Lecce, S.M.S. Naqvi and T. G. Toschi. 2013. Characterization of olive oils obtained from wild olive trees (*Olea ferruginea* Royle) in Pakistan. *Food Research International*, 54(2): 1965–1971 (**Impact Factor: 3.005**).
 11. Ahmed, D., M. Gulfraz, M.S. Ahmad, **R. Qureshi**, R.T. Mahmood and P. Anwar. 2013. Cytoprotective potential of methanolic leaves extract of *Taraxacum officinale* on CCl₄ induced rats. *Pensee Journal*, 75(11): 220-227. (**Impact Factor: 0.026**).
 12. Ilyas M., **R. Qureshi**, Z.K. Shinwari, M. Arshad, S.N. Mirza and Z.U. Haq. 2013. Some Ethnoecological aspects of the plants of Qalagai Hills, Kabal Valley, Swat, Pakistan. *Int. J. Agric. Biol.*, 15 (5): 801–810 (**Impact Factor: 0.940**).
 13. Sadiq, M., R. Asghar, **R. Qureshi** and A. Ali. 2013. Study of polypeptides induced by drought stress in some local varieties of barley from Pakistan. *Pak. J. Bot.*, 45(4): 1251-1254. (**Impact Factor: 1.207**)
 14. Munir, M., R. Qureshi, M. K. Laghari, M. Arshad and A.K. Ch. 2013. Taxonomy of some pennate diatoms from Kallar Kahar Lake, District Chakwal, Pakistan. *The Journal of Animal & Plant Sciences*, 23(2): 457-463. (**Impact Factor: 0.585**).
 15. Ilyas M., **R. Qureshi**, M. Arshad and S.N. Mirza. 2013. A Preliminary checklist of the vascular flora of Kabal Valley, Swat, Pakistan. *Pak. J. Bot.*, 45(2): 601-615. (**Impact Factor: 1.207**)
 16. Rahim, G., **R. Qureshi**, M. Arshad and M. Gulfraz. 2013. Phytochemical analysis and antioxidant properties of *Teucrium stocksianum* flower from Malakand Division, Pakistan. *Int. J. Agric. Biol.*, 15 (2): 377–381 (**Impact Factor: 0.940**)
 17. Ahmed, A., M. Arshad, A. Saboor, **R. Qureshi**, G. Mustafa, S. Sadiq and

- S.K. Chaudhari. 2013. Ethnobotanical appraisal and medicinal use of plants in Patriata, New Murree, evidence from Pakistan. *Journal of Ethnobiology and Ethnomedicine*, 9:13. **(Impact Factor: 2.39)**
18. Abbas Q., **R. Qureshi**, A.N. Naqvi, S.W. Khan and I. Hussain. 2013. Floristic inventory and ethnobotanical study of the Naltar Valley (Karakoram Range), Gilgit, Pakistan. *Pak. J. Bot.*, 45(SI): 269-277. **(Impact Factor: 1.207)**
 19. Jamil S., S.A. Pirzad, M.K. Alam, H.M. Wariss, **R. Qureshi**, K.A. Ansari and S.A. Sheikh. 2013. Seed Morphometry of Some Grasses and Sedges from Cholistan Desert, Pakistan. *Archives Des Sciences*, 66(1): 128-133. **(Impact factor: 0.474)**
 20. **Qureshi, R.**, H. Qureshi, H. Shaheen, G. Rahim, W. Ahmed, N.I. Raja, M. Hanif and M.A. Malik. 2012. Medico-Ethnobotanical Knowledge of Jhang Saiyidan, Islamabad, Pakistan. *Archives Des Sciences*, 65(12): 259-271. **(Impact factor: 0.474)**
 21. Rahim, G., **R. Qureshi**, H. Shaheen, M. Hanif and M.A. Malik. 2012. Germplasm screening of *Myrtus communis* var. *baetica* L. from Lower Dir (Malakand Division), Pakistan. *Archives Des Sciences*, 65(12): 49-77. **(Impact factor: 0.474)**
 22. Imran, M., M.J. Asad, M. Gulfraz, **R. Qureshi**, H. Gul, N. Manzoor and A.N. Choudhary. 2012. Glucoamylase production from *Aspergillus niger* by using solid state fermentation process. *Pak. J. Bot.*, 44(6): 2103-2110. **(Impact Factor: 1.207)**
 23. Ahmad, K.S., **R. Qureshi**, M. Hameed, F. Ahmad and T. Nawaz. 2012. Conservation Assessment and Medicinal Importance of some Plants Resources from Sharda, Neelum Valley, Azad Jammu and Kashmir, Pakistan. *Int. J. Agric. Biol.*, 14 (6): 997–1000. **(Impact Factor: 0.940)**
 24. Sher, A., M. Ansar, M.A. Malik, A. Wasaya, G. Shabbir and **R. Qureshi**. 2012. Variability of Hydrocyanic acid in fresh leaves of forage Sorghum grown under different soil moisture regimes. *Archives Des Sciences*, 65 (11): 752-762. **(Impact factor: 0.474)**
 25. **Qureshi, R.**, Qurat-Ul-Ain, M. Ilyas, G. Rahim, W. Ahmad, H. Shaheen and K. Ullah. 2012. Ethnobotanical study of Bhera, District Sargodha, Pakistan. *Archives Des Sciences*, 65 (11): 690-707. **(Impact factor: 0.474)**
 26. Munir, M., **R. Qureshi**, M. Arshad, A.K. Chaudhry and M.K. Laghari. 2012. Taxonomic study of bacillariophyta from Kallar Kahar Lake Chakwal, Punjab, Pakistan. *Pak. J. Bot.*, 44(4): 1805-1814. **(Impact factor: 1.207)**
 27. Munazir, M., **R. Qureshi**, M. Arshad and M. Gulfraz. 2012. Antibacterial activity of root and fruit extracts of *Leptadenia pyrotechnica* (Asclepiadaceae) from Pakistan. *Pak. J. Bot.*, 44(4): 1209-1213. **(Impact factor: 1.207)**
 28. Ilyas, M., Z.K. Shinwari and **R. Qureshi**. 2012. Vegetation composition and threats to the montane temperate forest ecosystem of Qalagai Hills, Swat, Khyber Pakhtunkhwa, Pakistan. *Pak. J. Bot.*, 44 (SI May, 2012): 113-122. **(Impact factor: 1.207)**
 29. Munir, M., A. Hussain, I. Haq, **R. Qureshi**, M. Munazir, M. Arshad and M.K. Laghari. 2012. Callogenesis potential of cotyledonry explant of *Althea rosea* From Pakistan. *Pak. J. Bot.*, 44 (SI): 271-275. **(Impact factor = 1.207)**.
 30. Amber, P., A. Akram, **R. Qureshi** and Z. Akram. 2012. HPLC analysis for secondary metabolites detection in *Sclerotium rolfsii* isolated from Chickpea. *Pak. J. Bot.*, 44 (SI): 417-422. **(Impact factor = 1.207)**.

31. **Qureshi, R.** 2012. Medicinal flora of Hingol National Park, Baluchistan, Pakistan. *Pak. J. Bot.*, 44 (2): 725-732 (**Impact factor = 1.207**).
32. Rauf, F., **R. Qureshi** and H. Shaeen. 2012. Folk medicinal uses of indigenous plant species of Barroha, Bhara Kahu and Maanga in Islamabad, Pakistan. *Journal of Medicinal Plants Research*, 6(11): 2061-2070 (**Impact factor = 0.879**)
33. Shaheen, H., **R. Qureshi**, A. Akram and M. Gulfraz. 2012. Some important medicinal flora of Noorpur Thal, Khushab, Pakistan. *Archives Des Sciences*, 65(2): 57-73. (**Impact factor = 0.474**).
34. **Qureshi, R.**, M. Munazir, A.A. Abul-Soad and M.A. Jatoti and G. Shabbir. 2012. In vitro callus induction protocol for *Leptadeniapyrotechnica* using various explants. *Journal of Medicinal Plants Research*, 6(3): 379-382. (**Impact factor = 0.879**).
35. Rahim, G., **R. Qureshi**, M. Gulfraz, M. Arshad and S. Rahim. 2012. Preliminary phytochemical screening and ethnomedicinal uses of *Teucrium stocksianum* from Malakand Division. 2012. *Journal of Medicinal Plants Research*, 6(5): 704-707. (**Impact factor = 0.879**)
36. Anwar, Z., M. Gulfraz, M. Imran, M.J. Asad, A.I. Shafi, P. Anwar and **R. Qureshi**. 2012. Optimization of dilute acid pretreatment using response surface methodology for bioethanol production from cellulosic biomass of rice polish. *Pak. J. Bot.*, 44(1): 169-176. (**Impact factor = 1.207**)

(Non-Impact Factored Papers)

37. **Qureshi, R.**, M. Khanum, H. Shaheen and M. Munir. 2014. Medicinal plants of Koont research farm, Pir Mehr Ali Shah Arid Agriculture University Rawalpindi, Pakistan. *Indian J. Nat. Prod. Resour.*, 5(3): 273-277.
38. Abbas, Q., S. W. Khan, S. Khatoon, S. A. Hussain, S. N. Hassan, A. Hussain, **R. Qureshi** and I. Hussain. 2014. Floristic biodiversity and traditional uses of medicinal plants of Haramosh Valley Central Karakoram National Park of Gilgit district, Gilgit-Baltistan, Pakistan. *J. Bio. & Env. Sci.*, 5 (6): 75-86.
39. Fatima, S. M. Arshad and **R. Qureshi**. 2014. QTL mapping for physiological maturity in synthetic hexaploid wheat (*Triticum aestivum* L.) under drought stress. *Pure Appl. Bio.*, 3(1): 25-31.
40. Ali, S., M.A. Malik, M. Ansar and **R. Qureshi**. 2014. Weed growth dynamics associated with rainfed wheat (*Triticum aestivum* L.) establishment under different tillage systems in Pothwar. *International Journal of Plant, Animal and Environmental Sciences*, 4(2): 146-154.
41. Shaheen, H., **R. Qureshi**, S. Iqbal and M. F. Qaseem. 2014. Seasonal availability and palatability of native flora of Santh Saroola Kotli Sattian, Rawalpindi, Pakistan. *African Journal of Plant Sciences*, 8(2): 92-102. DOI:10.5897/AJPS12.169.
42. Fatima, S., M. Arshad, A.M. Mastrangelo, D. Marone, G. Laido, **R. Qureshi**, A.G. Kazi, and A.B. Kazi. 2013. Detection of QTL for drought tolerance in a doubled-haploid mapping population. Annual wheat newsletter, vol. 59: 70-71. Edited by W.J. Raupp, Department of Plant Pathology, Kansas State University, Manhattan, KS 66506-5502 USA.
43. Kouser, R. and **R. Qureshi**. 2013. Antimicrobial activity of *Fagonia indica* from Thal Desert, Punjab, Pakistan. *International Journal of Phytomedicine*, 5(1): 113-118.

	44. Raana, G., S. Khalid, R. Qureshi, S. Sadia and A.A. Bajwa. 2012. Screening and evaluation of <i>Euphorbia pulcherrima</i> for weed management. <i>Pak. J. Weed Sci. Res.</i>, 18(4): 529-539. 45. Saeed, S., R. Qureshi, M.A. Ullah and M. Nasir. 2012. Herbaceous flora of Chotran area, Rawalpindi in Pakistan. <i>Agricultural Science Research Journal</i>, 2(6): 312 – 317. <u>NATIONAL</u> 46. Sadia, S., S. Khalid, R. Qureshi and A.A. Bajwa. 2013. <i>Tagetes minuta</i> L., A useful underutilized plant of family Asteraceae: A Review. <i>Pak. J. Weed Sci. Res.</i>, 19(2): 179-189. <u>BOOK CHAPTER/RESEARCH SUMMARY PUBLISHED</u> 47. Qureshi and G.R. Bhatti. 2014. Floral diversity of Nara Desert, Pakistan. , 413-431. In: Biodiversity of Pakistan (Editor: Rafique, M., K.A. Ibupoto, S.A. Hussain & K. Mahmood). pp. 413-431. (ISBN: 978-969-8040-28-4). 48. Qureshi, R. 2014. Floral Diversity, Threats and Conservation Measures: A Case Study from Nara Desert, Pakistan. In: Environmental and Agricultural Research Summaries (Editor: Lucille T. Cacioppo). Volume 3. pp.175-176. ISBN: 978-1-63117-090-4. eBook: ISBN: 978-1-63117-094-2. <u>BOOKS</u> 49. Qureshi, R. 2012. <i>The Flora of Nara Desert, Pakistan</i>. Nova Science Publishers, Inc. Hauppauge, New York, USA. Hard cover (ISBN: 978-1-62081-683-7). Pp. 1-317. 50. eBook (ISBN: 978-1-6281-648-6). https://www.novapublishers.com/catalog/product_info.php?products_id=33457 51. Qureshi, R. and H. Shaheen. 2013. <i>The Ethnobotanical profile of Tehsil Kotli Sattian, Rawalpindi, Pakistan</i>. Nova Science Publishers, Inc. Hauppauge, New York, USA. 978-1-62417-290-8. Pp. 1-165. 52. eBook (978-1-62417-626-5) https://www.novapublishers.com/catalog/product_info.php?products_id=38770.
PROJECT SUBMITTED FOR FUNDING	1. Establishment of Herbarium & Botanical Garden submitted to Ministry of Science & Technology.
Travel Grant for research paper presentation	1. International Conference on Anthropology in the World, organized by British Museum of Natural History, London by Pakistan Science Foundation, Islamabad, vide letter No. PSF/P&D/T.G.II (534)/11 dated 14.05.2012. 2. Hong Kong International Tropical Medicine Forum, Hong Kong, China by Pakistan Science Foundation, Islamabad vide letter NO. PSF/P&D/T.G-II (470)/11 dated 09.01.2012.
ABSTRACTS PRESENTED/PUBLISHED	1. Qureshi, R. 2012. Medico-Ethnobotany of plants used by the nomads of Nara Desert, Pakistan. Anthropology in the world organized by Royal Anthropological Institute, British Museum, London dated 8th to 10th June, 2012. Pp. 106.

2. **Qureshi, R.** 2012. Flora of Khanpur Dam, Punjab, Pakistan. 12th National & 3rd International Conference of Botany, Quaid-i-Azam University, Islamabad. 1st to 3rd September, 2012. OPTE-21. Pp.206.
3. **Qureshi, R.,** H. Shaheen, M. Maqsood, A. Akram, and M. Gulfraz. 2012. Survey of Medicinal Plants From arid Land of Khushab, Punjab, Pakistan. In: *The 3rd International Symposium on medicinal plants, their cultivation and aspects of uses*, Beit Zaman Hotel & Resort, Petra – Jordan, November 21-23/ 2012.
4. **Qureshi, R.** 2013. Traditional Date palm farming in Pakistan In: International conference on Date Palm: "Present Status and Future Prospects" organized by University College of Agriculture & Environmental Science, The Islamia University of Bahawalpur, Pakistan dated 02 to 03.09.2013.
5. **Qureshi, R.** and G.R. Bhatti. 2014. Palatability, seasonal availability and animal preference of native forage species from Northern Nara Desert, Pakistan. In: 4th International and 13th National conference of Botany, organized by Pakistan Botanical Society, Shaheed Benazir Butto University, Sheringal, Upper Dir, Pakistan dated 27 to 30.08.2014.
6. **Qureshi, R.** and G.R. Bhatti. 2014. Medicinal uses of trees and shrubs by the inhabitants of Northern Nara Desert, Pakistan. In: 4th International and 13th National conference of Botany, organized by Pakistan Botanical Society, Shaheed Benazir Butto University, Sheringal, Upper Dir, Pakistan dated 27 to 30.08.2014.

Name:	Dr. AbidaAkram
Personal:	Associate Professor Dept. Botany 0333-5320262 abidaaakram@hotmail.com abidaaakram@uaar.edu.pk
Honors and Awards	List honors or awards for scholarship or professional activity
Memberships	Botanical Society of Pakistan Pakistan Phytopathological Society. Soil Science Society of Pakistan (UAAR-47)
Graduate Students, Postdocs, Undergraduate Students, Honor Students	M.Phil : 14 Ph.D (under supervision) : 03
Service Activity	List University and public service activities.
Brief Statement of Research Interest	Recent working on mcoflora, mycotoxins and mcotoxin management Strategies.
Publications	1. Fatima.S., A.Akram, M.Arshad, S.K.Chaudhri, M.S.Amjad and H.Qureshi. 2014. Effect of biological potassium fertilization (BPF) on availability of phosphorus and potassium to maiz (<i>Zea mays</i> L.) under controlled conditions. I. J. of Biosc. (IJB) 8(5):25-36 Impact factor 0.553 2. Nayyar, B. G., A. Akram .,S. Akhund and M. Rafiq, 2014. Short Communication: Seed Viability Test and Pathogenecity Assessment of Most Prevalent Fungi Infecting <i>Sesamum indicum</i> L. J. of Pharm. & Bio. Sc. (IOSR-JPBS) 9(5): 21-23 Impact factor 1.12 3. Nayyar, B. G., S. Akhund and A. Akram, 2014. A review: management of <i>Alternaria</i> and its mycotoxins in crops. Scho. J. Of Agri. Sc.4(7): 432-437. Impact factor 1.3725 4. Shaheen. H., R. Qureshi., A. Akram, M. Gulfraz . 2014. Inventory of medicinal flora from Thal Desert, Punjab, Pakistan. Afr. J. Tradit. Complement Altern Med. 11(3):282-290 Impact factor 0.71 5. Shaheen. H., R. Qureshi., A. Akram, M. Gulfraz and D. Potter. 2014. A preliminary floristic checklist of Thal desert Punjab, Pakistan. Pak. J. Bot., 46(1): 13-18. Impact factor 1.207 6. Batool, S., M. Gulfraz1, A. Akram, S.M. S. Naqvi, I.Haq, B. Mirza and M. S. Ahmad. 2014 Evaluation of antioxidant potential and hplc based identification of phenolics in <i>Polygonum amplexicaule</i> extract

	and its fractions. Pak. J. Pharm. Sci., 7. Nayyer.G.B., A. Akram, M.Arshad, S.M. Mughal, S. Akhund and S. Mushtaq. 2013. Mycoflora detected from seeds of <i>Sesamum indicum</i> L.in Sialkot, Pakistan. IOSR J. Phar.& Bio Sc.7(3) 99-103 Impact factor 1.138 8. Razzaq,A., M. Arshad, S. Ashraf, A. Akram, A. Qayyum and I. Mahmood. 2013. Evalution of Psyllium Husk (<i>Plantago ovata</i>) as a low cost gelling for callus formation and regeneration in wheat (<i>Triticum aestivum</i> L.) cultivar GA-2002.Wul. J,Klagenfurt, Austria 20(7)153-161 9. Impact factor 0.467. 10. Bano, Q., N. Ilyas., A. Bano., N. Zafar. A. Akram and F. Hassan. 2013. Effect of <i>Azospirillum</i> inoculation on maize (<i>Zea mays</i> L.)under drout stress. Pak. J. Bot., 45(SI): 13-20 11. Amber, P., A. Akram., R. Qureshi and Z. Akram.2012. HPLC analysis for secondary metabolites detection in <i>Sclerotium rolfsii</i> isolated from chickpea. Pak. J. Bot., 44: 417-422 special issue March 2012 12. Jabeen, Z., A. Riaz., K. sultana., A. Akram., M. Ansar., I. Hassan and I. Ahmad. 2012. Incidence of <i>Aspegillus flavus</i> and extent of aflatoxin contamination in peanut samples of Pothwar region of Pakistan. Af. J. of Micro. Re.6 (9):1942-1946 13. Shaheen. H., R. Qureshi., A. Akram and M. Gulfraz. 2012. Some important medicinal flora of Noorpur Thal, Khushab, Pakistan. Arch. Des Sc. 2(65):57-73
Research Grants and Contracts	1).13-02-2012 Virulence analysis of <i>Xanthomonas campestris</i>pv sesame and <i>Pseudomonas syringae</i>pvsesame the casual organism of sesame (<i>Sesamumindicum</i> L.) bacterial blight. HEC Rs. 6,413,760/- (in progress) 2). Screening of mycoflora and mycotoxins from some pulses of arid region. PMAS-AAUR Rs. 108000/- (Completed 2012) 3). Molecular characterizationof <i>Sclerotium rolfsii</i>Sacc. isolated from chickpea (<i>Cicer arietium</i> L.). Funded PMAS-AAUR Rs. 138,000/- (completed in 2009).

	4). Characterization to determine the adaptive role of dehydrins under drought stress in wheat (<i>Triticumaestivum</i> L.). ALP project PARC. Rs. 2.943 Million (completed in 2009).
Other Research or Creative Accomplishments	NA
Selected Professional Presentations	

Name:	Dr. Noshin Ilyas
Personal:	Department of Botany, PNMAS-Arid Agriculture University Rawalpindi 0572032247 noshinilyas@uaar.edu.pk
Experience	22-02-2010 Lecturer Botany, PMAS-AAUR 01-01-2010 Assist Prof Botany, PMAS-AAUR
Honors and Awards	1. Gold medallist (M.Sc Botany) 2. HEC indigenous scholarship
Memberships	Pakistan Botanical Society
Graduate Students, Postdocs, Undergraduate Students, Honor Students	M.Phil : 12 Ph.D 1
Service Activity	1. Member SAR team 2. Member of QEC team of department. 3. Faculty in charge for CMS
Brief Statement of Research Interest	1. Plant Physiology 2. Plant Microbiology
Publications	1. Ilyas M., N. Ilyas , M. Arshad, A. G. Kazi, A. M. Kazi, A. Waheed. 2014 QTL mapping of Wheat Doubled Haploids for Chlorophyll content and chlorophyll fluorescence kinetics under drought stress imposed at anthesis stage. Pakistan Journal of Botany. 46 (5) :1889-1898 2. Batool N., N. Ilyas , T. Noor, M. Saeed, R. Mazhar, F. Bibi, A. Shahzad, 2014. Evaluation of drought stress effects on

	germination and seedling growth of <i>Zea mays</i> L. International Journal of Biology. 5(4) 203-209. 3. Batool N., N. Ilyas, A. Shahzad. 2014. Asiatic Mangrove (<i>Rhizophora mucronata</i>) – An overview. European Academic Research. 2(3). 3349-3363. 4. Batool N., A. Shahzad, N. Ilyas, T. Noor. 2014. Plants and Salt Stress. International Journal of Agriculture and Crop Sciences, 7(9):582-589 5. Batool N., Y. Bibi, N. Ilyas. 2014. Current status of <i>Ulmus wallichiana</i>: Himalayan endangered Elm. Pure and Applied Biology, 3(2): 60-65 6. Batool N., N. Ilyas. Polyhydroxyalkanoates from plants and microorganism. International Journal of Biosciences. 5(1):298-307 7. Bano Q., N. Ilyas, A. Bano, N. Zafar, A. Akram F. Hassan. 2013. Effect of <i>Azospirillum</i> inoculation on maize (<i>Zea mays</i> L.) under drought stress. Pakistan Journal of Botany 45(S1):13-20. Impact Factor: 0.947 8. Ilyas N., A. Bano, S. Iqbal, N.I. Raja. 2012. Physiological, biochemical and molecular characterization of <i>Azospirillum</i> spp. isolated from maize under water stress Pakistan Journal of Botany.44: 71-80. Impact Factor: 0.947 9. Iqbal S., Bano A. and Ilyas N. 2012. Absciscic acid (ABA) seed soaking induced changes in physiology of two wheat cultivars under water stress. Pakistan Journal of Botany.44:51-56. Impact Factor: 0.947
Research Grants and Contracts	Date Title Agency / Organization Total Amount Principal Investigator of HEC funded project “Exploration of Genetic Variations for Drought Tolerance in Wheat (<i>Triticumaestivum</i> L) by Using Some Physiological and Biochemical Attributes”
Other Research or Creative Accomplishments	8 Accession numbers submitted at NCBI

Name:	Dr. Naveed Iqbal Raja
Personal:	Department of Botany, PMAS-Arid Agriculture University Rawalpindi +92-(0)313-5257004 drnaveedraja@gmail.com
Experience	17-09-2010- to date Assist Prof Botany, PMAS-AAUR
Honors and Awards	HEC indigenous scholarship
Memberships	Pakistan Botanical Society
Graduate Students, Postdocs, Undergraduate Students, Honor Students	M.Phil : 04
Service Activity	Date Sheet incharge
Brief Statement of Research Interest	Plant biotechnology
Publications	Paper (Impact factor) : 06
Research Grants and Contracts	Correlation of percentage disease resistance with level of gene expression in transgenic wheat with Xa21 gene. Donar agency: HEC, Worth: 0.5 Millions
Other Research or Creative Accomplishments	Nil
Selected Professional Presentations	

FACULTY RESUME

Name	DrYamin Bibi
Personal	Department of Botany PMAS Arid Agriculture University Rawalpindi Email address: dryaminbibi@uaar.edu.pk yamin.phd@gmail.com Contact #: +923035712234
Experience	From 4 th July 2012 to date (Regular) As Assistant professor Botany (BS-19) PMAS Arid agriculture University Rawalpindi

	From September 2011 to 3rd July 2012 Assistant Professor (IPFP) PMAS Arid agriculture University Rawalpindi
Honor and Awards	Award of merit scholarship during HSC 1st Position in MSc Botany Gold Medalist Award of Indigenous Scholarship by HEC Award of IRSIP for six months research in UK Excellent Result in PhD Course Work Award of HEC approved supervisor Reviewer in national and international journals
Memberships	-
Graduate Students Postdocs Undergraduate Students Honour Students	Degree: PHD (In Progress) NAME: Muhammad Ishaque Degree: Mphil Year: 2014 Names: LubnaShafique, ZakiaBenish
Service Activity	Research and academics
Brief Statement of Research Interest	Plant based Natural Products Evaluation and Isolation characterization, Tissue culture of medicinal plants
Publications	1. NazimaBatoool, Yamin Bibi and NoshinIlyas (2014).Current status of <i>Ulmuswallichiana</i>: Himalayan endangered Elm. <i>Pure Appl. Bio.</i>, 3(2): 60-65. (HEC Recognised) 2. Sunbal Khalil Chaudhari, Yamin Bibi and Muhammad Arshad (2014).<i>Podophyllumhexandrum</i>: An endangered medicinal plant from Pakistan. <i>Pure Appl. Bio.</i>, 3(1): 19-24. (HEC Recognised) 3. ShaistaTabassum, Yamin Bibi, KulsoomZahara. (2014) A Review on conservation status and pharmacological potential of <i>Podophyllumhexandrum</i>. <i>International journal of Biosciences</i>. 5(10): 77-86. 4. Ejaz Ahmed, Yamin Bibi, Muhammad Arshad and KaleemUllah. 2014. Conservation status of <i>Taxusfloridana</i>, a critically endangered evergreen coniferous plant. <i>Pure and Appl. Biology</i>. 3(4): 188-191. (HEC Recognised) 5. KulsoomZahara, Yamin Bibi and ShaistaTabassum 2014. Clinical and therapeutic benefits of <i>Centellaasiatica</i> .<i>Pure andAppied Biology</i> 3(4): 152-159. (HEC Recognised) 6. HummaMehreenSadaf, Yamin Bibi, Muhammad Arshad, Muhammad ShoaibAmjad2014. Status of Maiden Hair Tree-<i>Ginkgo biloba</i> : Living Fossils Becoming Endangered. <i>Nova Journal of Medical and Biological Sciences</i> 3(4), 2014:1-3. 7. NaureenAuregzeb, Sobia Nisa, Yamin Bibi, FarrukhJaved and Farrukh Hussain. 2014. Phytoremediation potential of aquatic herbs from steel foundry effluent Brazilian journal of chemical engineering .31 (4): 881 – 886. 1.043 impact factor 8. Huma Qureshi, Muhammad Arshad, Yamin Bibi (2014). Invasive flora

	of pakistan: a critical analysis. International journal of Biosciences Vol. 4, No. 1, p. 407-424, (Impact factor 0.03) 9. Huma Qureshi, Muhammad Arshad and Yamin Bibi. (2014) Toxicity assessment and phytochemical analysis of <i>Broussonetiapyrifera</i> and <i>Lantana camara</i>: Two notorious invasive plant species. Journal of Biodiversity and Environmental Sciences 5 (2): 508-517. 10. Sadia Sarwar, BirgitDietz, Yao Ping, YaminBibi, SobiaNisa and Muhammad FayyazChaudhary (2013). Novel anti-uteruscancerpotential of fruitextract of <i>Lantana camara</i> as exhibitedthroughtheinhibition of alkalinephosphatase in human endometrial adenocarcinomaticcell line. Journal of Medicinal Plants Research 7(18): 1216-1221 11. Abdul Waheed, Yamin Bibi, Sobia Nisa, Muhammad Zia, Sabbir Ahmed and M Fayyaz Chaudhary (2013). Anticancer activity of extracts from <i>Viburnum foetenson</i> human breast and colorectal cancer cells <i>in vitro</i>. Asian Pacific Journal of Tropical Diseases 3(1): 32-36. 12. Sobia Nisa, Yamin Bibi, Muhammad Zia, Abdul Waheed, M Fayyaz Chaudhary (2013). Anticancer investigations on <i>Carissa opaca</i> and <i>Toonaciliata</i> extracts against human breast carcinoma cell line. Pakistan Journal of Pharmaceutical Sciences 26(5): 1009-12. 13. Yamin Bibi, Sobia Nisa, Abdul Waheed, Muhammad Zia, Sabbir Ahmed and M Fayyaz Chaudhary(2012) Invitro cytotoxic activity of <i>Aesculusindica</i> against breast adenocarcinoma cell line (MCF-7) and phytochemical analysis. Pakistan Journal of Pharmaceutical Sciences 25(1): 183-187. (impact factor 1.103) 14. Yamin Bibi, Sobia Nisa, Abdul Waheed, Muhammad Zia, Sabbir Ahmed and M Fayyaz Chaudhary(2012) "The study of anticancer and antifungal activities of <i>Pistaciaintegerrima</i> extract in vitro" Indian Journal of Pharmaceutical Sciences 74(4): 375-379.(Impact factor 0.626)
Research Grants and Contracts.	In Review Year 2014 Title: Isolation and screening of anticancer natural products: A step towards new drug discovery Amount: 9 Million
Other Research or Creative Accomplishments	NA
Selected Professional Presentations	➤ Oral Presentation In National Science Conference at PMAS arid Agriculture University, 10th Jan to 12th Jan, 2012. ➤ 12th national and 3rd international conference of Botany, 1st-3rd Sep, 2012 at Quaid-i-Azam University Islamabad Pakistan

Name	Dr. Mubashrah Munir Assistant Professor PMAS- Arid Agriculture University, Rawalpindi											
Personal	Father’s nameMian Munir Ahmad Date of BirthApril 13, 1978 CNIC No352029616805-8 ReligionIslam DomicileLahore Marital statusMarried E. mail Address mubjan@gmail.com , mubashrah@uaar.edu.pk Present AddressDeptt. of Botany, PMAS-Arid Agriculture University, Rawalpindi Permanent AddressH. No. 23 Mohammadi Mohallah Shahdrah More Lahore											
Qualification	Ph.D. (2014)PMAS- Arid Agriculture University, RWP M.Phil. (2002)1 st Govt College University, LHR M.Sc. (1999)1 st Govt College University, LHR B.Sc (1997)2 nd University of Punjab, LHR HSSC. (1995)1 st BISE, LHR SSC (1993)1 st BISE, LHR											
International Trainings	Six months training on Algal Taxonomy especially Diatoms in Michigan State University, USA under HEC IRSIP programme.											
Experience	<table><thead><tr><th>Date</th><th>Title</th><th>Institution</th></tr></thead><tbody><tr><td>3-03-2015</td><td>Assistant Professor</td><td>Deptt.of Botany, PMAS- AAUR</td></tr><tr><td>24-01-2006</td><td>Lecturer</td><td>Deptt.of Botany, PMAS- AAUR</td></tr></tbody></table>			Date	Title	Institution	3-03-2015	Assistant Professor	Deptt.of Botany, PMAS- AAUR	24-01-2006	Lecturer	Deptt.of Botany, PMAS- AAUR
Date	Title	Institution										
3-03-2015	Assistant Professor	Deptt.of Botany, PMAS- AAUR										
24-01-2006	Lecturer	Deptt.of Botany, PMAS- AAUR										
Memberships	Life time member of Pakistan Botanical Society											
Impact Factor	10.19											
Honors Students	Supervised students <table><thead><tr><th>Year</th><th>Degree</th><th>Name</th></tr></thead><tbody><tr><td>2012</td><td>M.Phil Botany</td><td>Simeen Imtiaz 10-arid-1780</td></tr><tr><td>2014</td><td>M.Phil Biology</td><td>Mumtaz Begum 10-arid-1780</td></tr></tbody></table> Under Supervision: PhD. Students			Year	Degree	Name	2012	M.Phil Botany	Simeen Imtiaz 10-arid-1780	2014	M.Phil Biology	Mumtaz Begum 10-arid-1780
Year	Degree	Name										
2012	M.Phil Botany	Simeen Imtiaz 10-arid-1780										
2014	M.Phil Biology	Mumtaz Begum 10-arid-1780										

	2013	PhD Botany	Rehana Kausar	
	2014	PhD Botany	Rizwan	
	Under Supervision: M.Phil students			
	2014	M.Phil Botany	Saeed Khalil	10-arid-1780
	2014	M.Phil Botany	Sajeed Safeer	10-arid-1780
	2014	M.Phil Biology	Farhan	10-arid-1780
	2015	M.Phil Biology	Sidra Murtaza	11-arid-2473
	2015	M.Phil Biology	Sobia Kiran	14-arid-4337
Research Interest	Algal Eco-taxonomy and Biotechnology			
Citation	27 (upto 9-7-2015)			
International Publications	- Humaira Shaheen, Rahmatullah Qureshi, Iram Zahra, Mubashrah Munir And Muhammad Ilyas. 2014. Floristic diversity of Santh Saroola, Kotli Sattian, Rawalpindi, Pakistan. <i>Pak. J. Bot.</i>, 46(6): 1945-1954. (Impact factor: 1.207). - Akhtar S., N. Bangash, R. Asghar, Mubashrah Munir and Nauman Khalid. 2014. Allelopathic Assessment Of Selected Invasive Species Of Pakistan <i>Pak. J. Bot.</i>, 46(5): 1709-1713. (Impact factor: 1.207). - Qureshi, R., M. Khanum, H. Shaheen and Mubashrah Munir. 2014. Medicinal plants of Koont research farm, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi. <i>Indian Journal of Natural Products and Resources</i>, 5(3):273-277. - Qureshi R., Shaheen H., Ilyas M., Ahmed W. and Mubashrah Munir. 2014. Phytodiversity and plant life of Khanpur Dam, Khyber Pakhtunkhwa, Pakistan. <i>Pak. J. Bot.</i>, 46(3): 841-849. (Impact factor: 1.207). Mubashrah Munir., R. Qureshi., M. K. Laghari, M. Arshad and A.Khaliq Ch. 2013. Taxonomic study of some pennate diatoms from Kallar Kahar Lake, District Chakwal, Pakistan. <i>JAPS</i>, 23 (2):457-463. (Impact factor: 0.638). Mubashrah Munir., Rahmatullah Qureshi., M. Arshad and M. K. Laghari. 2012. Taxonomic study of Bacillariophyta from Kallar Kahar Lake Chakwal, Punjab. <i>Pak. J. Bot.</i> 44(5) 1805-1814. (Impact factor: 1.207). Mubashrah Munir., A. Hussain., I. Haq., Rahmatullah Qureshi., M. Munazir., M. Arshad and M. K. Laghari. 2012. Callogenesis potential of cotyledonary explants of <i>A. rosea</i> L. from Pakistan <i>Pak. J. Bot</i> special issue. 44:271-275(Impact factor: 1.207).			
Workshops attended	One day training workshop on Dendrochronology, 22nd April 2014.			

Name:	Dr. Zia-ur-Rehman Mashwani
Personal:	Department of Botany, PNMAS-Arid Agriculture University Rawalpindi 03339022077

	mashwani@uaar.edu.pk
Experience	10-02-2010 Lecturer Botany, PMAS-AAUR
Honors and Awards	1. HEC indigenous scholarship 2. Silver medal in MSc Botany
Memberships	Pakistan Botanical Society
Graduate Students, Postdocs, Undergraduate Students, Honor Students	M.Phil : 10 Ph.D 0
Service Activity	1. Program Team Representative, Quality Enhancement Cell (QEC) 2. Central Lab In-charge, Department of Botany 3. In-charge, time table and date sheet 4. Focal person and faculty representative in Student Resource centre 5. Department Course in-charge 6. Member, ASA executive body 7. Member, M.Sc. admission committee 8. Member, M.Phil./Ph.D. admission committee 9. Member, Board of Studies of Botany and Biology 10. Member, Program assessment team Biochemistry
Brief Statement of Research Interest	1. Medicinal plant and Ethnopharmacology 2. Medicinal plant biotechnology
Publications	• Mashwani, ZR., M. A. khan, M. Ahmad. 2014. Potential of Pakistani traditional medicinal plants to combat diabetes. J. Tradit. Chin. Med. 15; 34(4): 488-490 • Khan, G., F. Zhang, Q. Gao, ZR. Mashwani, K.Rehman, M.A.Khan and S. Chen. 2013. Trichomes diversity in the tropical flora of Pakistan. J.Med.Plant.Res 7(22):1587-1592 • Mashwani, ZR., M.A. Khan, S. Irum and M. Ahmad. 2013. Antioxidant potential of root bark of Berberis lycium Royle. from Galliyat, Western Himalaya, Pakistan. Pak. J. Bot., 45(SI): 231-234. • Mashwani, ZR., M. A. khan, M. Ahmad, M. Zafar, N. I. Raja, M. Arshad and Samiullah. 2012. Macro-mineral quantification of the forage grass species in the Gandgar Hills, Western Himalaya, Pakistan. <i>Pak. J. Bot.</i>, 44: 117-121 SI.

Other Research or Creative Accomplishments	N/A
Selected Professional Presentations	• Abstract published in “1st international Symposium on the Himalayas of Pakistan; Resources and Conservation Issues” November 27-30, 2014 at Hazara University, Mansehra • Abstract published in International Conference on Emerging Trends in Life Sciences for Sustainable Development 9-11th October, Forman Christian College (A Chartered University), Lahore, Pakistan • Abstract published in International Conference of Plant Sciences organized by Department of Botany, at GC University, Lahore Pakistan on 22-24 September 2014 • Abstract published and Poster presentation at the 5th International Conference on Agriculture, Food Security and Climate Change jointly organized by University of Poonch Rawalakot, PAS-Forum and HEC on 09-14 September 2014. • Two abstract published at 4th International and 13th National conference of Botany organized by Pakistan Botanical Society at Shaheed Benazir Bhutto University, Sheringal, Dir Upper, Khyber Pakhtunkhwa Pakistan on 27-30 August 2014. • Abstract published in “International I conference on Advances of Plant Sciences (ICAPS-2012)” November 14-18, 2012, Chiang Mai, Thailand • Abstract published in “First national conference on poverty alleviation through sustainable management of biodiversity in Pakistan” September 29-30, 2012 Bara Galli, Organized by Institute of Plant Sciences and Biodiversity, Uni. Of Swat and HEC. • Five abstracts published in proceeding of “12th National &

	3rd International Conference of Botany”, published by Pakistan Botanical Society. • Poster presentations in “12th National & 3rd International Conference of Botany”, published by Pakistan Botanical Society on September, 1-3, 2012 at Quaid-i-Azam University, Islamabad • Abstract published in “National Science Conference, Roadmap to cutting edge technology”, January 10-12, 2012 at PMAS Arid Agriculture University, Rawalpindi
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Resume “Saira Asif “

Objective	To acquire experience, creativity, talents, and commitments to excellence scientific research work	
Personal Information	Father’s name Date of Birth CNIC No Religion Cell No Mohammad Asif Janjua 2-12-1984 34601-6251531-6 Islam 0341 9089889	
Service Activity	1. Teaching of various courses relevant to Plant Sciences. 2. Time Table Management of the Department.	
Experience	Four years.	
Publications		
Membership	Life time membership of Pakistan Botanical Society	

SUMMARY AND CONCLUSION

This Self-Assessment Report (SAR) comprises plans and activities carried out for M. Phil. programme in department of Botany, PirMehr Ali Shah Arid Agriculture Rawalpindi from fall semester 2010-11 to fall 2011-12. The main objective of Self-Assessment Report (SAR) was to overview the academic and research activities as perceived by students of M. Phil. in Department of Botany.

The data revealed that students are satisfied with the subject approach of faculty members, their fairness in examination, and level of knowledge. Pre-requisites are fully observed and examinations are conducted as per schedules. Teachers remain busy in designing advance courses for M. Phil. programme. The number of courses along with their titles and respective credit hours, course content for degree program is fully planned. Students are in process of training towards higher profiles of research in accordance with the new challenges and requirements.

The data were collected on prearranged proformas and later on analyzed and presented in the form of graphs and tables. The performance of the department may be further improved considering following shortcomings like gas supply, library, classroom, and faculty offices. Absence of gas supply in research labs particularly is affecting the progress of work badly. Institutional facilities need to be strengthened. Glass house of department also needs to be linked with electric and water supply. The data were collected on prearranged proformas and later on analyzed and presented in the form of graphs and tables. The data revealed that students are satisfied with the subject approach of faculty members, their fairness in examination, and level of knowledge. Pre-requisites are fully observed and examinations are conducted as per schedules.

Teachers remain busy in designing advance courses for M. Phil. programme. The number of courses along with their titles and respective credit hours, course content for degree program is fully planned. As regards the process control covering admission registration, recruiting policy, delivery of material, academic requirements, performance and grading, ample effectiveness is evident. The strong academics enables them to specialize in one or more areas reflecting the student's particular interest. In addition they have sufficient specialist knowledge in selected areas to allow them to pursue a research degree. The rules formulated by university and HEC are properly followed regarding admission registration, performance and grading. The efficacy was measured through set standards and was found to be satisfactory.

Various research projects as well as research activities have been carried out in department. Research being pursued by M. Phil. students is also strengthening research activities in department. The courses aim to develop and strengthen students capacity to grasp principles and practices based on scientific principles.

Prepared by:

Dr. Zia-ur-Rehman Mashwani
Lecturer
Department of Botany
Pir Mehr Ali Shah Arid Agriculture
University, Rawalpindi

Dr. Noshin Ilyas
Assistant Professor
Department of Botany
Pir Mehr Ali Shah Arid Agriculture
University, Rawalpindi

Prof. Dr. Muhammad Arshad
Chairman
Department of Botany
Pir Mehr Ali Shah Arid Agriculture
University, Rawalpindi

Checked By:

Director,
Quality Enhancement cell
Pir Mehr Ali Shah Arid Agriculture
University, Rawalpindi

Date of submission to HEC