



National Agriculture Education Accreditation Council

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**Report of the
Accreditation Inspection Committee
(AIC)**

Prof. Dr. Muhammad Arif Chohan

Dr. Nazir Javed

**Department of Plant Pathology,
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1. General

1.1 Constitution of Accreditation Inspection Committee (AIC)

The Chairman, National Agriculture Education Accreditation Council (NAEAC), in pursuance to its mandate given by the HEC under clause 10 subsections (d) and (1) of the byelaws of NAEAC, constituted an Accreditation Inspection Committee (AIC) for the external review of the Degree Programs B.Sc (Hons) and M.Sc (Hons) of the Department of Plant Pathology, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi (PMAS AAUR). The AIC consists of the following members who visited the PMAS AAUR on March 2-3, 2010 for the inspection and in-depth review of the degree programs of the Department.

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|-----|---|----------|
| i) | Prof. Dr. Muhammad Arif
Chairman, Department of Plant Pathology,
NWFP Agricultural University, Peshawar | Convener |
| ii) | Dr. Nazir Javed
Chairman, Department of Plant Pathology,
University of Agriculture, Faisalabad | Member |

1.2 Term of Reference of AIC

The main terms of reference (ToRs) of the committee were as follows:

- To validate the Self-Assessment Reports prepared by the Department of Plant Pathology
- To carry out an external evaluation of the degree programs of the Department of Plant Pathology for assessment and accreditation
- To submit synthesized and consolidated analytical report on the basis interaction with Dean, Chairman, Faculty members, students and supporting staff as well as detailed visits of infrastructure and other learning resources
- To submit accreditation recommendations to NAEAC Chairman.

The itinerary of the AIC visit schedule is given at Annex-I.

1.3 The University and the Department

The AIC was briefed by the Chairman, Department of Plant Pathology, about the faculty, students, research projects and future plans of the department. The Department of Plant Pathology started functioning with the establishment of the Barani Agricultural College in 1979 as a supporting discipline and gained the status of major discipline for undergraduate students in 1986. The college was upgraded to University of Arid Agriculture in 1994 and M.Sc (Hons) degree programs in Plant Pathology commenced in 1997 and PhD Program in 2000. The program of Plant Pathology is designed to provide necessary skills in understanding pathological problems. The department is committed to quality teaching, research and development of trained manpower in the discipline of Plant Pathology. The department provides a variety of study programs such as Mycology, Bacteriology, Virology and Nematology to enhance students' professional training and career opportunities. The faculty is actively engaged in a number of research projects; some of which are internationally collaborated and funded.

The Department of Plant Pathology has produced five PhD, 44 M.Sc (Hons) and 95 B.Sc (Hons) graduates. Currently 36 students in B.Sc (Hons), 18 students in M.Sc (Hons) and one in Ph. D are enrolled.

1.4 Program Mission and Objectives

Mission Statement

To deliver quality education, conduct superior research and extend knowledge for the amelioration of agriculture, environment and human health to ensure self-sufficiency in quality food by reducing quantitative as well as qualitative losses in crop yields due to diseases.

Program Objectives

- To develop the discipline on modern and innovative lines for teaching and research for the graduate and post-graduate students.
- To impart basic and applied education through high quality knowledge and skills in the field of Plant Pathology advanced analytical techniques for disease diagnosis, pathogen detection and characterization, disease epidemiology and management.
- To guide the students and conduct research on diseases of economic and national importance in the area.

- To strengthen the discipline with incorporation and integration of advanced knowledge and approach of related subjects such as Molecular Biology, Genetic Engineering, Biotechnology, Host Parasite Interactions and Vector Involvement.
- To anticipate new and emerging problems in the field.
- To inculcate culture of research in teaching faculty and students.

1.5 Academic Programs

The Department is presently offering three degree programs as per following details:

1. B.Sc (Hons) Agriculture specializing in Plant Pathology
2. M.Sc (Hons) Agriculture specializing in Plant Pathology

2. Criterion-wise Program Evaluation and Analysis

2.1 Criteria-I. Strength and quality of faculty

Presently there are 11 faculty members; among them, two are national professors working in the Department as regular faculty and two are abroad for perusing higher studies. Out of 11, there are nine faculty members holding Ph.D degrees and two faculty members are working for their Ph.D (Annexure-II). Most of the faculty members are 20+ years of teaching and research experience. However, junior faculty had 2 to 11 years of teaching and research experience. Out of this faculty, two each are of the cadre of Professor, Associate Professor and Assistant professor and three are lecturers and two are the National Professors. Teaching load for the professor, Associate Professor, Assistant Professors and Lecturer are almost same by teaching three to four credit courses.

The faculty members are well qualified and possess adequate teaching experience in their respective disciplines. The Department has reasonable number of faculty representing four major areas of specialization such Mycology, Bacteriology, Virology and Nematology. The committee felt that the faculty staff was adequate in commensurate with the current needs. However, the number of students and their choice for various sub-disciplines is also on the increase which necessitates considering addition to the faculty staff. The area of Mycology especially fungal systematic and Virology is quite strong due the presence of one each National Professor working as regular faculty in the Department. However, after their retirement, the Department may have deficiency of qualified faculty in these areas.

The course review reports by the faculty members at the time of completion of the course are submitted regularly and the Program monitoring system was in place. However, the monitoring system needs some improvements.

Training of faculty is inadequate as there is hardly any established system. There is an urgent need to establish such a system on regular basis. Training abroad for teachers may also be arranged on priority basis. Currently such training is being arranged on personal level.

Majority of faculty members are satisfied with their job, however, some are only partially satisfied. Job satisfaction is a function of both internal working atmosphere besides the financial benefits and freedom of professional activity. All the faculty members are satisfied with their salaries but have a consistent complaint for ever increasing living costs and non payment of house requisition.

2.2 Criteria-II. Curriculum design and development

The curriculum for the following Degree programs of the Department of Plant Pathology was approved by HEC (Annex-III).

1. B. Sc (Hons) Agriculture (Plant Pathology), eight semesters degree requirement is 151 credit hours, including 15 credit hour internship in the eighth semester.
2. M.Sc (Hons) Agriculture (Plant Pathology), four semesters with 45 credit hour's course work and research thesis.

There are a definite number of credit hours for each course. Internship is an essential pre-requisite and the student has to complete it successfully before the award of the degree. Discussion with the teachers and students revealed that all the rules and conditions are being properly fulfilled.

The AIC observed that the curriculum was designed in line with the mission statement and the HEC guidelines. The courses reflect the needs of the society and cater for the latest trends in Plant Pathology. Necessary amendments or additions in the curriculum are also made by the Board of Studies, with final approval by the Dean of the faculty and the university academic council.

Feedback from stakeholders is occasional. The students strongly commented for more emphasis on practical/laboratory work. The students further emphasized that they must have opportunity to attend lectures from scholars in different areas of Plant Pathology in term of lectures, symposia, workshops and conferences, etc. However, the curriculum of the programs is sufficiently flexible to accommodate any changes arising out of the latest trends in the subject.

The committee had gone through the course contents and found that objectives of all the courses for B.Sc and M.Sc were not defined and according to the HEC guidelines. The courses were revised and some new courses were developed during the year 2005. The courses and credit hours are designed in such a way that all the contents are covered in a stipulated time period (16 to 18 weeks/Semester). It has been observed that in certain courses, books of old editions are still recommended as text books which need to be reviewed to add new books so as to update the knowledge of students with new trends and technologies. It was suggested by the AIC that Plant Pathology curriculum is currently under revision, therefore, the faculty of the Department may take professional interest to improve curriculum of degree programs. It was noted that all the faculty members maintain their course files and provide lecture wise course detail, time of mid-test, assignments, quizzes and final test to the students in their first meeting at the beginning of a semester. Evaluation system of each course is in place and effective.

2.3 Criteria-III. Students support and progression

The AIC was informed that students are provided lecture material in the class containing topics wise data and for the given class and semester. The curricula are properly presented in the form of handbooks for Bachelor, M.Sc and Ph.D programs. Courses were mainly those approved by Higher Education Commission (HEC).

Students from B.Sc (Hons) are sent to various research institutes for internship throughout the province where they acquire practical training and submit a formal report. A few internship reports were checked and found of good quality. To resolve students' issues regarding provision of guidance and information in various social and educational matters, Directorate of Students Affairs provides an effective support. University organizes various cultural activities and study tours/visits to broaden the students knowledge and experience.

Students informed that department is without library, Computer laboratory, and common room facility. However, gymnasium at university level for indoor games such as table tennis, badminton, basketball is available without any swimming facility. Medical, Hostel and transport facilities are available on limited scale and need improvement. Financial support is only available at University as different need and merit based scholarships but the students passing different degree programs not availing their due share.

All of the courses are designed/tailored to address the teaching needs in an effective way.

Keeping in view the feedback from students and teachers, courses are structured and updated in the board of study meeting. It is common and general practice to maintain an effective interaction between students and faculty and inter and intra classes of the students. The department has developed full harmony among the faculty members and students. The students were quite appreciative in connection with student – teacher interactions. Students are informed about the program requirement through the office of the head of the department. Their information records related to their studies are regularly updated through teacher-students interaction. Directorate of Placement bureau also helps in communication and exploring jobs for the university students.

2.4 Criteria-IV. Infrastructure and learning resources

Research and Teaching Labs: There are five laboratories, four in the Department of Plant Pathology and one at the Koont farm, Mandra-Chakwal Road. Laboratories are not spacious and are without air-conditioning facilities.

Laboratory Equipment: Equipment like incubator, stereoscopes, camera fixed stereoscopes, to cater the need of present level of enrolment of postgraduate and Ph.

D levels should be addressed. More spacious and well equipped laboratories to fulfill the contemporary level of research/education are necessitated for better output.

Laboratory manuals are not available. The department library has not all the relevant books. However, individual teachers have their own books. The laboratories are not spacious and inadequate. The equipment is out dated and out of order. Equipment regarding molecular approaches is lacking such as stereoscope, centrifuge (low and ultra), PAGE electrophoresis apparatus, PCR-machine, Spectrophotometer, relevant software, chemicals and bio-chemicals.

Laboratories are maintained by only one laboratory assistant (equipment, glassware, chemicals, material etc). One attendant assists the students in practical, cleaning and washing.

To upgrade the prevailing education facilities, separate class rooms are needed as presently classes (lectures) are taken in laboratories. Space limitation is a major constraint of the Department. Computing facilities support is not available to all faculty members and the post graduate students.

Shortcoming in computing infrastructure: computers with internet facilities should be available to all faculty members and post-graduate students.

Safety arrangements: There is no proper safety arrangement and no security plan is in place in case of emergency. The department is located on the 2nd floor; there is no emergency exit for the laboratories. No fire extinguishers have been installed in any laboratory.

No first aid kits/facilities provided in the laboratories/department.

Greenhouses and Experimental Fields

Greenhouse: There is no such facility for the degree programs.

Experimental field: The department was provided with an experimental area allotted by the university at its Koont farm, Mandra-Chakwal Road. At this farm, construction work on one Plant Pathology Laboratory is almost completed.

Departmental and Main Library

Departmental Library: Department Library does not exist. There is no budget for the purchase of books.

Central library: The central library contains about 2300 books directly or indirectly relate to Plant Pathology and allied subjects. The library is linked with digital library, where, over 15000 full text journals and 25000 abstracted journals are available free of cost. The library has equipment including internet, multimedia, and other facilities. At present only one computer is available for 11 students. Keeping in view the large

number of post-graduate students, more computers with printers and internet facilities are required.

Computer Laboratory: Department is without any computer lab. Well equipped computer laboratory for post-graduate students is essential.

Classrooms and teaching aids: There are only three classrooms for under and post graduate students each with 3312 sq. ft of size. There is serious shortage of classrooms. Increasing number of students results in the congestion of classrooms which affects adversely the quality of teaching. There is only one multimedia in the department.

Faculty Offices: Only four (04) faculty offices are available. Faculty members are sitting in laboratory or they have converted laboratories into their offices. Most of the faculties have their computer purchased by them or in project grants.

2.5 Criteria-V. Research and Consultancy activities

There seem adequate research and consultancy activities at the Department as reflected by the ongoing research projects and those submitted for funding (Annex-IV). It is noted that the faculty of the Department is actively engaged in research work. Significant number of research publications have been made through the research conducted by the faculty members as is evident from the publications made.

The department has developed a reasonable research culture and the staff is motivated to contribute to research journals. However, more encouragement should be provided to faculty staff to carry forward the spirit and implementation of research programs. Presently, five projects are on-going whereas eight are in the pipeline.

The above mentioned projects indicate that faculty is very well engaged in research along with teaching and other management assignments. Overall, the faculty published more than 65 research papers in International Journals, 216 in National Journals and 123 papers in international and local proceedings.

Consultancy services are offered to various clients both in the private and public sector. Farmers' awareness campaigns are executed to educate the farmers about disease problem. Participation in the Farmers Melas, exhibitions and field days is obligatory. Leaflets, bulletins and flyers are distributed and displayed for the information of farming community.

Collaboration has been established with national and international institutions for exchange of scholars and training.

2.6 Criteria-VI. Governance and leadership

PMA Arid Agriculture University, Rawalpindi (PMAS AAUR) is an autonomous body having its own charter of functions as per University Ordinance 1979. The highest governance authority is the Vice Chancellor assisted by the Registrar, Treasurer, and Controller of Examinations, Director of Board of Studies and Director Quality Control. There are four faculties of Agricultural sciences/subjects and a competent/experienced scientist is the Dean of each faculty. There are various departments in each faculty headed by a senior professor and assisted by a number of teaching staff.

Vice Chancellor is the overall controlling authority of the University. He performs his functions through bodies including the Syndicate, the Senate, Academic Council, Advance Studies & Research Board, Finance and Planning Unit, and directorates of Student Affairs, Quality Control and Placement Bureau. All these bodies function within the frame work of rules & regulations and guidance defined by HEC. Funds are provided by HEC for regular activities and specific research & special programs. There is a good working relationship between faculty members and the management; however, some operational constraints have been experienced. This is attributed to the governance system prevailing in the country. The budget allocation for operational expenses and research are very low as compared to the expectations. Efforts are also underway for generating finances which may ease out problems for operating expenses.

2.7 Criteria-VII. Innovative practices

Some innovative practices adopted by Department of Plant Pathology at PMAS AAUR are as under:

- The Department has an advantage in being in twin cities to interact with various professional organizations and multi-disciplinary research and development centers to broaden the vision of the students.
- More in-take of female students due to secure educational environment.
- Teacher and student assessment system has been implemented which has created sense of responsibility and all time attentiveness.
- Assessment of individual courses based on feed back from students also deserves appreciation.
- Students are encourage to check their answer books and resolve anomalies.
- Introduction of comprehensive exam/paper covering major subjects

SWOT Analysis

3.1 Major strengths

- The teaching faculty is highly qualified (95% PhDs) and experienced with vision and capacity to impart quality education. Five faculty members are HEC approved supervisors
- Prescribed rules, procedures and standards are being properly followed for admission and assessment of performance of students and teachers with feedback from stakeholders
- Necessary and moderate infrastructure and learning facilities are available including four laboratories equipped with essential equipment, experimental farm, learning resource unit for undergraduate and post-graduate teaching and research
- The faculty has been active to hunt externally funded research grants with five projects in hand; another eight are in pipeline from various national and international donor agencies.
- The students have reasonable access to digital library, research journals, text and reference books for updating their knowledge.
- The Department has produced 95 B.Sc (Hons), 44 M.Sc (Hons) and five Ph.D. Recently, the intake of students particularly female students has increased significantly

3.2 Major weaknesses

- Lack of spacious and controlled conditioned laboratories and unsatisfactory safety arrangements, fume hoods and security system. Faculty offices in laboratories make the facility further deteriorated.
- No separate class rooms for specializing students and use of laboratories as class room limit the scope of research activities.
- Laboratories are deficient with modern equipment such as ultracentrifuge, Polymerase Chain Reaction (PCR) equipment, Gel electrophoresis and documentation related equipment, insufficient -20 and -80C refrigeration storage of specimens and kits, etc.
- Department is without its own library facility, and main library of the University have insufficient number of books and none of Plant Pathology journals published internationally available in hard form.
- Laboratories with inadequate and un-trained without relevant trained supporting staff with no back up service for the equipment from supplier or from the University.

- Experimental Farm is almost 70 KM from the Department and beyond the routine access of the students with no environmentally controlled facility at the station.
- The Department has no common room, no computer laboratory for students as well as faculty. Most of the faculty claimed that they have their own PCs.

3.3. Major opportunities

- The Department is engaged to develop infrastructure with HEC and University of California, Davis, USA, collaboration. This will further improve the opportunities for teaching and development activities of the Department.
- An informal alumni association of the Plant Pathology graduates exists; therefore, this opportunity may be further streamlined to enhance curricular and extra-curricular activities of the students.
- Professional linkages need to be further improved to provide better opportunities for the undergraduate and post-graduates students in their academic programs and provision of employment.
- Increased trend in the intake of female students in the Department/University could be exploited for women training and employment in different R & D institutions in twin cities.
- The Department can establish a central Disease Clinic facility to address the disease diagnostic issues of the area.

3.4. Major challenges

- Upon retirement of a Senior Professor and two National Professors, the Department shall face immediate shortage of teaching faculty in three major areas such as bacteriology, mycology and virology. Therefore, process for the induction of new qualified faculty in these areas need to be initiated immediately.
- Retaining the experienced staff is another challenge which can be met by providing attractive salary packages, better working environment and adequate teaching - research facilities to the faculty members.
- Serious efforts are required to enhance the operational budget for the graduate programs and mobilize the faculty to hunt research grants from national and international donor agencies

Stakeholders feed-back

- Computer and analytical skills of the graduates should be improved to enable them to match market demands and face technological advancements.
- Communication and presentation skills with leadership qualities of graduates to be improved.
- Problem solving and field oriented research should be encouraged
- More training and skill to use modern laboratory equipment, Internship and practical training should be regular feature for all the students.

4. Recommendations

4.1 General recommendations

- The department needs additional working space; at-least one laboratory & three class rooms for graduate and undergraduate classes and five faculty offices.
- Induction of faculty members in the areas of Mycology, Phyto-bacteriology and Virology should be initiated immediately
- Department has some valuable equipment like incubator, stereoscopes, camera fixed stereoscopes, which needs to be maintained and utilized to the fullest extent for which funds should be available on recurrent basis.
- For Post-graduate level research/experiments, at least a medium size glasshouse (30x20 ft) and a plastic tunnel (40x25 ft) are urgently needed.
- A separate inoculation and culture room facility are required for preparing culture and maintaining pure cultures of the important bacterial and fungal plant pathogens
- The capacity of young faculty members may be enhanced through short-term and long-term (doctoral and post-doctoral) training abroad.
- The department library should be enriched with induction of latest text and reference books, local and international journals, literature and computers on continuous basis.
- Safety arrangements and security plans are not in place. The department is located on the 2nd floor. Emergency exits may be arranged. The laboratories should also be well equipped in first aid kits/facilities.
- Provision of appropriate funds for the purchase of glass ware, chemicals, diagnostic kits and other day-to day laboratory supplies to the faculty for their teaching and research activities.

- More linkages should be developed with institutions of higher learning both at national and international levels.
- Participation of faculty members in conferences, seminars and workshops may be encouraged to improve exposure and interaction with peer groups worldwide.

4.2 Final Recommendation

The academic Programs of the Department of Plant Pathology are well strengthened in major areas such as Phyto-bacteriology, Fungal Systematic, Plant Nematology and Plant Virology. The department however, needs to address weaknesses reported above.

Based on the external assessment of teaching-learning resources and facilities, the AIC unanimously recommended accreditation of the Degree Programs of Department of Plant Pathology [(B.Sc (Hons) & M.Sc. (Hons)], Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi (PMAS AAUR) in the “X” category of National Agriculture Education Accreditation Council/Higher Education Commission (HEC).

4.3 Comments and signature of the Chairman:

I agree with the observations and recommendations made by the Accreditation Inspection Committee (AIC) in this report which is based on the discussions and visit to different facilities of this Department.

Chairman
Department of Plant Pathology
PMAS Arid Agriculture University,
Rawalpindi (PMAS AAUR)

4.4 Name, Designation and signatures of the AIC Members

Prof. Dr Muhammad Arif (Convener)
Chairman
Department of Plant Pathology
NWFP Agricultural University, Peshawar

Dr. Nazir Javed (Member)
Chairman
Department of Plant Pathology
University of Agriculture, Faisalabad

Dated: April 2, 2010

5.1 Itinerary of Accreditation Visit

Host Institution:	PMAS Arid Agriculture University, Rawalpindi
Department/ Program:	Department of Plant Pathology B. Sc (Hons) & M. Sc (Hons)
Review Team:	<ol style="list-style-type: none"> Prof. Dr. Muhammad Arif (Convener) Chairman, Department of Plant Pathology NWFP Agricultural University, Peshawar Dr. Nazir Javed, (Member) Chairman, Department of Plant Pathology University of Agriculture Faisalabad
Plant Pathology Department Coordinator:	Dr. Tariq Mukhtar
NAEAC Resource Person:	Mr. Naseer Alam Khan, Secretary NAEAC

Schedule of Visit: March 3-4, 2010

March 3, 2010	Time	Activity	Remarks
	09:00-09:30	Meeting with Dean of the faculty <ul style="list-style-type: none"> AIC Convener Explain purpose of the visit Describe the Program review process 	Convener of AIC
	09:30-11:30	Presentation: Chairman, Department of Plant Pathology <ul style="list-style-type: none"> History of department / academic programs Mission statement Program goals and objectives Annual operational budget (08-09) & human resources (Total) Curricula summary, revision/update Admission and withdrawal policy Faculty summary, qualification/ experience, supporting staff Students' feed back Grading system Infrastructure summary, labs, greenhouse, library Employer's feed back Alumni survey Parent viewpoint Question/answer session 	All AIC Members
	11:30-13:00	Curriculum Review: Department of Plant Pathology Coordinator <ul style="list-style-type: none"> Course files maintenance Attendance requirements Examination record Session/semester record 	All AIC Members

		<ul style="list-style-type: none"> • Evaluation instruments • Research projects by faculty / students 	
	13:00-14:00	Zohar prayer and Lunch	
	14:00-16:00	Infrastructure Visit: Department Resource Person <ul style="list-style-type: none"> • Research & teaching labs • Greenhouses & experimental facilities • Departmental and main library • Computer labs, internet and multimedia facilities • Classrooms number & size with multimedia • Faculty offices & facilities 	All AIC Members
	16:00-17:00	Meeting of AIC for review and synthesis	
March 4, 2010	09:00-09:30	Meeting with Dean of the Faculty <ul style="list-style-type: none"> • Briefing on yesterday's activities of the visit • Seek guidance/help if required 	All AIC Members
	09:30-11:30	Faculty Meetings: 10-15 minutes per faculty member <ul style="list-style-type: none"> • Graduation and higher studies • Personal background • Area of interest vs teaching –learning environment • Perception about the academic programs, students and peers • Opportunities for professional growth • Research opportunities • Salary perception and other incentives • Teaching load, student- teacher ratio • Meeting with supporting staff 	Individual AIC members
	11:30-13:00	Classroom Visit: Two classrooms with 45 min. each <ul style="list-style-type: none"> • Students interviews (B. Sc Hons final & M. Sc Hons) • Students assessment (Department coordinator) • Senior students view and suggestions to improve teaching-learning environment and facilities <p>* In case of no class, meeting of AIC members with two groups of undergraduate and graduate [M. Sc (H)] students</p>	All AIC Members
	13:30-14:30	SWOC Analysis: faculty /students point of view <ul style="list-style-type: none"> • Major strengths of academic programs • Major weaknesses of academic programs • Major opportunities for academic programs • Major challenges for academic programs 	All AIC Members
	14:30-15:30	Concluding meeting with Chairman of the Department	
	14:30-15:30	Prayers and Lunch	
	15:30-16:30	Detailed discussions among the Evaluation Team	
	16:30-17:30	Concluding /Exit meeting with Dean <ul style="list-style-type: none"> • Salient findings of the review • Formulation of recommendations • Next procedure 	All AIC Members

Summary Profile of Teaching Faculty

Program to be Evaluated: Department of Plant Pathology, PMAS Arid
Agriculture University, Rawalpindi

A. Faculty Information:

Employment Nature	Professors		Associate Professors		Assistant Professors		Lecturers		Total
	PhD	MS	PhD	MS	PhD	MS	PhD	MS	
Full Time	02	Nil	02	Nil	01	01	02	01	09
Foreign	-	-	-	-	-	-	-	0	0
Contractual	02	-	-	-	-	-	-	-	02
Part Time	-	-	-	-	-	-	-	-	Nil
Total	04	Nil	02	Nil	01	01	02	01	11

B. Full Time Faculty Stability

End of Year	Total Faculty	Resigned	Retired	Terminated	New Induction during the year
2005-2006	Seven	One	Nil	Nil	One faculty member move to BZU
2006-2007	Nine (7+*2)	Nil	Nil	Nil	Two
2007-2008	Ten (8+2)	Nil	Nil	Nil	One
2008-2009	Eleven (9+2)	Nil	Nil	Nil	One

* Contractual National Professors

C: Faculty Profile: Department of Plant Pathology, PMAS Arid Agriculture University, Rawalpindi

Name	Academic Degree		Major Area	Teaching Experience (years)		Publication Record							
	Degree	Awarding Institution		Graduate	Undergrad.	Journal Publications		Conference Publications		Books		Patents	Tech. Reports
						Intl.	Local	Intl.	Local	Books	Book Chapters		
Prof. Dr. Irfan Ul-Haque	Ph.D	UMC Missouri, USA	Phytobacteriology	14	14	16	20	10	30	1	0	Nil	10
Prof. Dr. Abdul Rauf	Ph.D	QAU, PAK	Fungal Pathology	24	24	6	35	7	30	0	0	Nil	6
Dr. Tariq Mukhtar	Ph.D	AUF, PAK	Plant Nematology	4	4	4	29	3	14	0		Nil	Nil
Dr. M. Inam-ul-Haq	Ph.D	AUF, PAK	Phytobacteriology	29	29	8	50	2	4	0	0	Nil	1
Dr. Abid Riaz	Ph.D	AAUR, PAK	Fungal Pathology	11	11	2	13	0	0	0		Nil	Nil
M. Usman Raja	In Progress	UK	Fungal Pathology	06	--	02	04	0	0	0		Nil	Nil
Mrs. Gulshan Irshad	In Progress	AAUR, PAK	Mycology	6	6	2	8	0	6		1	Nil	1
Dr. Muhammad Ashfaq	Ph.D	AUF, PAK	Plant Virology	5	5	1	11	0	6	0	0	Nil	1
Dr. Farah Naz	Ph.D	AAUR, PAK	Fungal Pathology	4	4	1	2	0	4	0	0	Nil	0
Dr. S.M. Mughal*	Ph.D	Australia	Plant Virology	--	--	17	07						
Dr. Kishwar Sultana Nazir*	Ph.D	Punjab University, PAK	Mycology	4	4	6	37	3	14	1		Nil	0

* Contractual National Professors

Major Courses Offered

Summary of core courses for the B.Sc (Hons) degree programs involving course code, course title, and credit hours

Course Code	Course Title	Credit Hours	Semester
AGR-301	Basic Agriculture	3 (2-2)	Semester-I
AEC-311	Introduction to Economics and Agricultural Economics	3 (2-2)	-do-
ENG-301	Functional English	3 (2-2)	-do-
HORT-301	Introductory Horticulture	3 (2-2)	-do-
IS-301/ES-301	Islamic Studies/Ethics	2(2-0)	-do-
MATH-301/BIOL-301	Maths-I/ Botany-I	3 (2-2)	-do-
SS-301	Introduction to Soil Science	3 (2-2)	-do-
AGR-302	Summer Crops	3 (2-2)	Semester-II
ENG-302	Communication skills	3 (2-0)	-do-
FT-302	Introduction to Food Science and Technology	2 (2-0)	-do-
HORT-302	Principal of Horticultural Practices	2(1-2)	-do-
MATH-302/ BIOL-302	Maths-II/ Botany-II	3 (3-0) 3 (2-2)	-do-
RF-302	Introduction to Rang & Wildlife Management	3 (2-2)	-do-
SS-302	Soil and Water Conservation	2 (2-0)	-do-
SSH-302	Pakistan Studies	2 (2-0)	-do-
AGR-401	Winter Crops	3 (2-2)	Semester-III
AS-401	Animal Husbandry	3 (2-2)	-do-
ENT-401	Introductory Entomology	2 (1-2)	-do-
FT-401	Food Processing and Preservation	3 (2-2)	
IT-401	Introduction to Information Technology	3 (1-4)	-do-
PBG-401	Introductory Genetics	2 (1-2)	-do-
PP-401	Introduction to Plant Pathogens	2 (1-2)	-do-
RF-401	Introduction to Agro Forestry and watersheds	2 (1-2)	-do-
AGR-402	Field Crop Physiology	3 (2-2)	Semester-IV
ENT-402	Applied Entomology	2 (2-2)	-do-
AEE-301	Introduction to Agric. Extension Education	3(3-0)	-do-
AS-402	Poultry Husbandry	2 (1-2)	-do-
PBG-402	Introductory Plant Breeding	3(2-2)	-do-
PP-402	Introduction to Plant Pathology	3 (2-2)	-do-
STAT-402	Introduction to Statistics	3 (3-0)	-do-

Cont...

	General Courses		Semester-V
AEN-501	Farm Mechanization	2 (1-2)	
AGR-501	Arid Zone Agriculture	2 (2-0)	
SOC-501	Rural Sociology	2 (2-2)	
	Major Courses		
PP-501	Introductory Mycology	3 (2-2)	
PP-503	Introductory Plant Nematology	3 (2-2)	
PP-505	Introduction to Prokaryotes	3 (2-2)	
PP-507	Introduction to Plant Viruses	3 (2-2)	
PP-509	Beneficial Microorganisms	3 (2-2)	
	General Courses		Semester-VI
AEN-502	Conservation Engineering and Water Resources Development	2 (1-2)	
SS-508	Instrumentation and Laboratory Techniques	2 (0-4)	
	Major Courses		
PP-502	Introduction to Molecular Plant Pathology	3 (2-2)	
PP-504	Diseases of Field Crops	3 (2-2)	
PP-506	Diseases of Horticultural Crops	3 (2-2)	
PP-508	Clinical Plant Pathology	3 (1-4)	
PP-510	Plant Resistance to Diseases	3(2-2)	
	General Courses		Semester-VII
STAT-601	Experimental Designs	2 (1-2)	
MGT-601	Introduction to Agri. Business Management	2 (2-0)	
	Major Courses		
PP-604	Principles and Methods of Plant Disease Management	3(2-2)	
PP-603	Range and Forest Pathology	2 (1-2)	
PP-605	Seed and Post harvest Pathology	3 (2-2)	
PP-609	Project Planning and Scientific Writing	2 (1-2)	
ENT-603	Plant Resistance to insect Pests	3 (2-2)	
PP-602	Internship	15(0-30)	Semester-VIII

Cont...

Post-graduate Scheme of Studies
Core /Major Courses: M. Sc (Hons) and Ph. D

Course Code	Course Title	Credit Hours
PP-701	Mycology-I (Lower Fungi and Basidiomycetes)	3(2-2)
PP-702	Mycology-II (Ascomycetes and Deuteromycetes)	3(2-2)
PP-703	Plant Bacteriology	3(2-2)
PP-704	Plant Nematology	3(2-2)
PP-705	Genesis of Phytopathological Concepts	3 (3-0)
PP-706	Plant Virology	3(2-2)
PP-707	Physiology of Diseased Plants	3(3-0)
PP-708	Genetics of Host-parasite Interaction	3(3-0)
PP-709	Urban Plant Pathology	3(2-2)
PP-710	Principles of Plant Pathology	3(3-0)
PP-711	Ecology of Plant Pathogens	3(2-2)
PP-712	Plant Disease Epidemiology	3(2-2)
PP-713	Plant Disease Management – I (Chemical Methods)	3(2-2)
PP-714	Plant Disease Management–II (Biological, Physical, Cultural and Regulatory Methods)	3(2-2)
PP-715	Integrated Plant Disease Management	3(2-2)
PP-716	Molecular Plant-microbe Interaction	3(3-0)
PP-717	Forest and Shade Tree Pathology	3(3-2)
PP-718	General Plant Pathology	3(2-2)
PP-719	Special Problem	1 (1-0)
PP-720	Seminar	1 (1-0)

Research Projects by the Faculty of PMAS-AAUR

Status	As Principal Investigator	As Co-Principal Investigator
Completed	09	01
On-going	03	01
Submitted	08	