

ANNUAL REPORT 2019



**PIR MEHR ALI SHAH
ARID AGRICULTURE UNIVERSITY
RAWALPINDI**

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VICE CHANCELLOR'S MESSAGE

I extend my deep felicitation on great success and accomplishment of outgoing students who have completed their degrees in 2019. Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi joins you in celebrating your achievements and bliss on this day of 21st Convocation.



As the graduates celebrate graduation, we share the joy and glory with their parents, guardians, loved ones, sponsors and faculty members who supported throughout their learning journey and made significant contributions to their education. The source of enduring dynamism at Arid Agriculture University is the learned faculty that has made this day possible for you. I would urge the graduates to acknowledge spirit, dedication and unwavering commitment to excellence.

I am confident that during academic stay at campus the University took every possible step to make your time productive and help providing conducive learning environment. This nation paid for all the resources you enjoyed now time has arrived to return the dividends. I hope in practical endeavors, you would be giving your best and make us proud of you. I expect technological advancements and change from all of you, as you are the best product of the University.

I once again congratulate and felicitate the graduates, their parents and faculty for their contribution and tireless efforts.

PROF. DR. QAMAR-UZ-ZAMAN

EXECUTIVE SUMMARY

During the year 2019, Pir Mehr Ali Shah (PMAS) Arid Agriculture University Rawalpindi made substantial efforts to improve academic as well as research activities along with financial resources. Various teaching departments were upgraded/ strengthened through the development of infrastructure, procurement of sophisticated scientific equipments and purchase of books etc. So far 356 Research Projects worth Rs. 635.95 million were sponsored by various funding agencies i.e. HEC, PSF, PARC, PARB, UAF and University Own Resources.

Faculty members attended Two hundred and Eight National/International workshops/ seminars/ symposiums/ conferences to share/transfer knowledge in different scientific fields within the country and globally. The faculty members were encouraged to improve their qualifications and visit universities abroad to update their technical knowledge and transfer technical know-how from international universities/institutes. During the year, faculty members of different departments of the University obtained short term trainings, doctoral/post-doctoral fellowships and executed research work in Germany, Netherlands, China, USA, Singapore, Malaysia, Azerbaijan, Korea and Turkey. The strength of the students is increasing day by day by virtue of the academic record and excellence of the university. At present more than eleven thousand students are quenching their thirst of education from this prestigious educational organization. Three hundred & eight scholars are doing their Doctorates in different disciplines of Agriculture, Forestry and Biological Sciences at this university.

The linkage between faculty, Industry and farming community was further promoted/ strengthened to ensure the penetration and achievements of objectives of the university. Memorandum of Understandings (MoUs) with various national and International organizations was signed for academic and research sharing. The provision of better Research facilities encouraged the faculty to publish 341 Research Papers in National and International reputed journals.

ABOUT THE UNIVERSITY

Pir Mehr Ali Shah Arid Agriculture University Rawalpindi (PMAS-AAUR) was established in 1994 as University of Arid Agriculture by upgrading the Barani Agriculture College on the recommendation of Barani Commission Punjab. The mandate of the university is to produce high quality Agricultural Scientists and to form an organized scientific infrastructure for teaching and research for the development of dry land region of the country in general and Pothwar in particular; thus minimizing the income gap between the rich and poor.

Since its inception, PMAS-AAUR has experienced remarkable growth and is offering undergraduate as well as post graduate degree programs in variety of disciplines. The University includes a Faculty of Crop and Food Sciences, Faculty of Sciences, Faculty of Social Sciences, Faculty of Forestry, Range Management & Wildlife, Faculty of Veterinary & Animal Sciences, Faculty of Agricultural Engineering & Technology, University Institute of Management Sciences (UIMS), University Institute of Information Technology (UIIT), Institute of Food & Nutritional Sciences, Institute of Geo-Information & Earth Observations, University Institute of Biochemistry & Biotechnology and Institute of Soil Science. The University building contains an auditorium, multi-storied administrative and academic blocks, a state of the art library and a sports gymnasium.

Pursuit of excellence on the University campus is a function of competent and dedicated university faculty. PMAS-AAUR has, therefore, made constant efforts at staff development with the result that nearly 60% of the faculty possesses Ph.D. degrees, while the others have M.Sc. (Hons) and M.Phil degrees.

Furthermore, PMAS-AAUR is committed to delivering an outstanding student experience; as well as to enjoy a reputation for excellence in teaching and learning alongside research. Students actively participate in extracurricular and co-curricular life on campus which includes speech events, seminars and activities related to entrepreneurial skill development. Together with a research-informed curriculum, and extracurricular activities, PMAS-AAUR strives to provide a well-diversified environment to students so that they can effectively contribute towards development of the country.

ACADEMIC ACTIVITIES

FACULTIES/INSTITUTES

FACULTY OF CROP & FOOD SCIENCES
Department of Agronomy
Department of Horticulture
Department of Entomology
Department of Plant Pathology
Department of Plant Breeding & Genetics
Department of Agricultural Extension
FACULTY OF SCIENCES
Department of Zoology/Biology
Department of Botany
Department of Mathematics/Statistics
FACULTY OF SOCIAL SCIENCES
Department of Sociology
Department of Anthropology
Department of Economics and Agricultural Economics
Department of Education
Department of Humanities
FACULTY OF FORESTRY, RANGE MANAGEMENT & WILDLIFE
Department of Forestry & Range Management
Department of Environmental Sciences
Department of Wildlife Management
FACULTY OF VETERINARY & ANIMAL SCIENCES
Department of Veterinary Biomedical Sciences
Department of Microbiology & Parasitology
Department of Clinical Studies
Department of Livestock Production and Management
Department of Poultry Sciences
Department of Animal Breeding & Genetics
Department of Veterinary Pathology
FACULTY OF AGRICULTURAL ENGINEERING & TECHNOLOGY
Department of Structures & Environment Engineering
Department of Farm Machinery & Precision Engineering
Department of Land & Water Conservation Engineering
Department of Energy Systems Engineering
UNIVERSITY INSTITUTE OF MANAGEMENT SCIENCES
UNIVERSITY INSTITUTE OF INFORMATION TECHNOLOGY
UNIVERSITY INSTITUTE OF BIOCHEMISTRY & BIOTECHNOLOGY
INSTITUTE OF FOOD & NUTRITIONAL SCIENCES
INSTITUTE OF SOIL SCIENCE
INSTITUTE OF GEO-INFORMATION & EARTH OBSERVATIONS

ACADEMIC PROGRAMS

UNDERGRADUATE PROGRAMS		
BSc (Hons) Agriculture	BS in Biochemistry	BS in Computer Science
BS in Economics	BS in Forestry	B.Ed
BBA (Bachelor of Business Administration)	BS in Information Technology	DVM (Doctor of Veterinary Medicine)
BSc (Hons) Agri. Engineering	B.Sc (Hons) Human Nutrition & Dietetics	BS (Microbiology)
BS Environmental Sciences	BS (Remote Sensing & GIS)	BS Commerce
BS Software Engineering		
POST GRADUATE PROGRAMS (M.Sc)		
Biochemistry	M.Ed	MBA (Agri. Business) 1-1/2 Years
Botany	Anthropology	MBA (Agri. Business) 3-1/2 Years
Zoology	Criminology	MDM
Biology	Sociology	MCS
Statistics	Economics	MIT
Mathematics	Wildlife Management	MBA (Agri. Business) 1-1/2 Years
Education	Environmental Sciences	
M.SC (HONS)		
Soil Science	Agronomy	Food Technology
Entomology	Horticulture	Plant Breeding & Genetics
Plant Pathology		
M.PHIL/MS		
Botany	Statistics	Forestry & Range Mgt.
Zoology	Education	Wildlife Management
Botany	Sociology	Environmental Sciences
Veterinary Microbiology	Remote Sensing & GIS	Veterinary Pathology
Veterinary Parasitology	Animal Breeding & Genetics	Computer Science
Animal Nutrition	Livestock Management	
PhD		
Soil Science	Botany	Environmental Sciences
Entomology	Zoology	Computer Science
Plant Pathology	Education	Food Technology
Plant Breeding & Genetics	Sociology	Remote Sensing & GIS
Agronomy	Botany	Computer Science
Horticulture	Forestry & Range Management	Veterinary Pathology
	Wildlife Management	

ACADEMIC ACHIEVEMENTS

The university offers 79 degree programmes in various disciplines of Agriculture, Agricultural Engineering, Basic & Social Sciences, Veterinary, Forestry, Range Management, Wildlife, Business Administration, Computer Sciences & Information Technology and Education. Currently the enrollment of the University is 11112 which are increasing every year. This University has so far turned out 436 Ph.D., 24043 M.Phil, M.Sc. (Hons.)/ MS/ M.Sc. and 14045 B.Sc. (Hons.)/ D.V.M/ BS/BBA/B.Ed.

PMAS-AAUR Secured 3rd Position in the Country by UI Green Metric World Universities Ranking 2019

Pir Mehr Ali Shah Arid Agriculture University Rawalpindi has been ranked 3rd in all over the Pakistan, 111th in Asia and 295 among all 780 participating Universities of the world as per latest UI Green Metric World Universities ranking 2019. UI Green Metric University Sustainability Ranking is a world university ranking to assess and compare campus sustainability efforts. The criteria for the ranking of Universities includes campus setting and infrastructure, energy and climate change, waste, water, transportation and education. The Arid Varsity has been ranked as 295th among the top 780 universities of the world with the total score of 5475 as per UI GreenMetric World Universities ranking 2019.

HONOURS AND AWARDS

Awards of the Faculty

- ☞ *Prof. Dr. Azeem Khalid, Department of Environmental Sciences, Awarded High Level End Foreign Expert Program of Ministry of Science and Technology, China.*
- ☞ *Prof. Dr. Azeem Khalid, Department of Environmental Sciences, Nominated as Jury Member of the Kingdom of Saudi Arabia Award for Environmental Management in Islamic World, by Islamic Educational, Scientific and Cultural Organization (ISESCO), Rabat, Morocco and General Authority of Meteorology and Environmental Protection in the Kingdom of Saudi Arabia.*
- ☞ *Prof. Dr. Tariq Mukhtar, Department of Plant Pathology has been received “Publ on Peer Review Award Top Reviewers” in Agricultural Sciences 2019.*
- ☞ *Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Sciences has been received Gold Medal from Worlds Poultry Science Association in recognition of “Meritorious services toward Poultry Industry” and Society.*

- ☞ *Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Sciences selected as “**Global Group leader of small scale Family Poultry**”, Bangkok, Thailand.*
- ☞ *Dr. Zaib Ur Rehman, Lecturer, Department of Poultry Sciences has been awarded with “**Outstanding Graduate Students Award**” 2019 from Chinese Academy of Agrcultural Sciences.*

INSTITUTIONAL LINKAGES

- ☞ Four Brothers Group of Companies Lahore
- ☞ Capital Develo pment Authority Islamabad
- ☞ The Rawalpindi Chamber of Commerce & Industry
- ☞ State Life Insurance Corporation of Pakistan
- ☞ Agribusiness Support Fund
- ☞ Sustainable Used Specialist Group-Central Asia (SUSG-CASIA) Quetta
- ☞ DELL Pakistan
- ☞ Water and Power Development Authority (Wapda)
- ☞ Dairy and Rural Development Foundation
- ☞ CAB International (CABI) Central and West Asia, Rawalpindi
- ☞ Barani Agricultural Research Institute (BARI) Chakwal
- ☞ Indus Consortium Islamabad
- ☞ MKS (Magnus Kahl Seeds) Australia
- ☞ Rawalpindi Waste Management Company (RWMC)
- ☞ Lantix Technology (Private) Limited Pakistan
- ☞ M/S Tamshoon Gold- Pakistan
- ☞ Star Farm Pakistan Private Limited
- ☞ Foster Learning Pakistan

RESEARCH AND DEVELOPMENT

R&D – AN OVERVIEW

The University, being the prime institute for agricultural education and research has the obligation to provide trained manpower to all sectors of agriculture in Punjab Province. The Faculty and Researchers of this University have been conducting basic and applied research in the field of:



- ❖ New Technologies to Overcome Water Shortage
- ❖ Production of Biofuels
- ❖ Formulation of New Food Products
- ❖ Promotion of High Yielding & Drought Resistance Wheat and Canola Cultivars
- ❖ Recycling of Organic Wastes of Sustainable Crop Productivity
- ❖ Production of Pathogen Free Horticultural Plant Nurseries
- ❖ Soil and Water Contamination Studies
- ❖ Biotechnology

The university is focusing its efforts on need base research of arid agriculture in general and Pothwar region in particular. A number of research projects have been completed in the past and still many research projects are being run by the faculty. Conducting research is mandatory for all students of both graduate and undergraduate levels. The faculty and researchers at the University are availing different funding opportunities for their research projects. Some are listed below:

- ❖ Higher Education Commission of Pakistan
- ❖ Pakistan Science Foundation
- ❖ Pakistan Agricultural Research Council (PARC)
- ❖ Punjab Agriculture Research Board (PARB)
- ❖ Endowment Fund Secretariate, University of Agriculture, Faisalabad.
- ❖ International Foundation for Science

RESEARCH FOCUS

University faculty focused their research activities on the issues of farming community of Barani areas in general and Pothwar in particular. These included projects related to soil conservation, weed management, drought tolerance studies in wheat through genetic engineering and environmental related issues. The following Research projects were operational during 2019:

- ❖ *Are Anurans Impacted by Urbanization? Anuran Monitoring and Conservation in a Human dominated Landscape*
- ❖ *Biotreatment of Tannery Wastewater and Its Application for Biomass Production of Energy Crops*
- ❖ *Somatic Hybridization for Citrus Improvement: A Way Towards a Low Input Sustainable Citrus Culture in Pakistan*
- ❖ *Screening for the Selection of Exopolysaccharide-Producing Strains for Yoghurt Making*
- ❖ *Improvement of Host Disease Resistance in Tomato Through Genetic Transformation*
- ❖ *Evaluation of biochar from different sources to control heavy metal toxicity to soil Microorganisms and Plants*
- ❖ *Nutritional quality assessment and comparison of commonly consumed rainfed arid cereal varieties of Pakistan for their effective marketing and commercialization*
- ❖ *Expression of pathogenesis - related (PR) proteins to acquire systemic resistance against fungal pathogens (Alternaria and Fusarium) of sesame*
- ❖ *Evaluation for Antifreeze Proteins Extracted From Various Sources for Cryopreservation of Buffalo Spermatozoa*
- ❖ *Monitoring and Characterization of Insecticide Resistance in Spotted Boll Worm, *Earias Vitell* (Lepidoptera: Noctuidae) Against Different Insecticides*
- ❖ *Optimization of Agro-management techniques for *sinapis alba**
- ❖ *Modeling rainfed cereal-based cropping systems to climatic extremes*
- ❖ *Evaluation of rapeseed (canola) germplasm for erucic acid content based on presence and expression of genes*
- ❖ *Perspective study of using weeds nano material for the management of weeds, tolerance of drought and improvement of productivity in wheat*
- ❖ *Screening of wild grape biodiversity for drought tolerance and their rootstock-scion compatibility for sustainable grape production in Pakistan*
- ❖ *Development of high yielding, more sugar content and increased stay green leaf sorghum lines*
- ❖ *Development of high yielding wheat breeding material with improved grain iron and zinc content for rain-fed areas of Pakistan*
- ❖ *Development of double haploid lines of chillies resistant to phytophthora root rot*
- ❖ *Physio-morphic and biochemical characterization of wheat varieties in response to silver based nanoparticles against heat stress*
- ❖ *Parental decisions on girls schooling levels within demographic framework of rural households in Pothohar Region, Punjab, Pakistan*
- ❖ *Drug trafficking in Pakistan: Indepth study of drug smugglers*
- ❖ *Improving agricultural extension in Pakistan through communication for development*
- ❖ *Buffer Optimized High Gradient Magnetic Separation Technology to Study the Biology of Livestock Parasites*
- ❖ *Comparison of Carbon Sequestration in Different Cropping System of the Punjab*
- ❖ *Visual Ethnography of the Dying Culture of Northern Punjab Pothohar*
- ❖ *Ostrich farming in Pakistan: Novel and key nutritional solutions to accelerate profitability*

- ❖ *Detection and Molecular Characterization of Mastitis, Mammitis and Reproductive Tract Disorders Causing Herpesviruses in Dairy Cattle*
- ❖ *Clinical and Therapeutic Functioning of Canine Mesenchymal Stem Cells in Canine Bone Regeneration*
- ❖ *Green synthesis and evaluation of silver nanoparticles for anti-microbial and biochemical profiling in kinnow (citrus reticulata L.) to enhance fruit quality and productivity under biotic stress*
- ❖ *Development of Nutraceutical Products From Indigenous Source*
- ❖ *Validation of Novel Rhizobium for Mass Production of Pulses Biofertilizer*
- ❖ *Soybean Based Double Cropping System for Rainfed Areas of Pakistan*
- ❖ *Expression Profiling of Regulatory Factors in Various Phenotypic Classes of Tuberculosis Patients*
- ❖ *Genetic diversity and population structure of markhor in Pakistan*
- ❖ *Mutational and expressional profile of microRNA in thyroid cancer*
- ❖ *Production through suspension culture and in vivo testing of bistorta amplexicaulis bioactive compounds*
- ❖ *Genetic Determinants of Coronary Heart Disease Risk in Central and General Obesity*
- ❖ *Genome editing in plants through oligonucleotide targeted nucleotide exchange*
- ❖ *The study of epigenetic signatures and immune system programming in tuberculosis*
- ❖ *Effectiveness of different processing techniques for the reduction of pesticide residues in vegetables at household level*
- ❖ *Molecular Characterization of Apis Mellifera (L.) Hygienic Behaviour Against Varroa Mite in Pakistan (Phase I)*
- ❖ *Developing Reproductive Technologies for Conserving Quail*
- ❖ *Morpho-molecular characterization and management powdery mildews of cucurbits*
- ❖ *Sustainable Urbanization and the Impact of Sprawling Communities in Pakistan*
- ❖ *Harnessing Untapped Potential of Oleaginous Bacteria for Development of Lipid Based Biorefineries Using Food Processing Waste*
- ❖ *Inhibition of TGFBR Signalling Pathway in Cancer Cells Using Selected Natural Compounds*
- ❖ *Molecular Cloning and Heterologous Expression of Endopolygalacturonase Gene in E.coli as a Promising Application for Food Industry*
- ❖ *Epidemiology, population biology and management of chilli anthracnose in Punjab, Pakistan*
- ❖ *Identification of Parasitoids and Ants Complex Associated with Psyllids on Trees and Management of Olive Psyllid in Pothwar and KPK*
- ❖ *Adaptability and development of production technology of guar (Cyamopsis tetragonoloba (L.) Tauba) in rainfed Pothwar through simulation modeling*
- ❖ *Research for productivity enhancement of drought tolerant and shattering resistant cultivars of sesame in rainfed areas of Punjab Pakistan*
- ❖ *Improving Drought Tolerance and Quality of Fodder Maize Genotypes for Silage Using Growth Hormone and Selenium*
- ❖ *Validation of Rhizobium for Mass Production of Groundnut Biofertilizer*
- ❖ *Development of a Fourier Function Model for Selection of High Fertility Buffalo Bulls for AI*

- ❖ *Development of Bio-Pesticides for the Control of Soil-Borne Diseases of Tomatoes and Chillies Caused by Pythium and Phytophthora spp.*
- ❖ *Modeling approach for assessing the impact of climate change on growth and yield of wheat and groundnut and possible adaptation/management strategies under rainfed condition.*
- ❖ *Evaluation and Introduction of Some Exotic Kiwi Cultivars*

RESEARCH PROJECTS FUNDING

The PMAS-AAUR faculty also undertook Research Projects in addition to teaching assignments. These projects were sponsored by different funding/donor agencies. The detail of Research Projects is given below:

S No.	Name of Funding Agency	Completed	On Going	Total No of Projects	Amount (Rs. in M)
1	HIGHER EDUCATION COMMISSION	45	52	97	460.500
2	PAKISTAN SCIENCE FOUNDATION	27	1	28	56.417
3	PAKISTAN AGRICULTURE RESEARCH COUNCIL	10	8	18	54.734
4	PUNJAB AGRICULTURAL RESEARCH BOARD	1	3	4	22.575
5	ENDOWMENT FUND UAF	4	0	4	7.997
6	OTHER FUNDING AGENCIES (INTERNATIONAL FOUNDATION FOR SCIENCE/ WORLD WIDE FUND (WWF) ETC.)	6	0	6	5.550
7	UNIVERSITY FUNDED RESEARCH PROJECTS	199	0	199	28.177
Total		292	64	356	635.95

PUBLICATIONS

The faculty published 341 Research Publications in National and International reputed journals in 2019. (Details are given at Annexure-I)

CONFERENCES, SEMINARS AND WORKSHOPS, ETC.

Holding of Seminars, Workshops and Conferences is regular feature of the university where experts from various fields are invited to share their experiences with faculty, students & researchers on current issues of international and national importance. Such an activity is important for research and academic development of an institution as it provides guidelines for policy development at national level. During 2019, different



departments of the University organized Fifty one (51) International and National Workshops/Seminars/Conferences. The university faculty also participated and contributed research papers in Twenty four (24) International and One Hundred and Eighty four (184) National Workshops/Seminars/Conferences (Details are given at Annexure-II).

RESEARCH JOURNALS

Journal of Arid Agriculture and Biotechnology (JAAB)

A new research journal “Journal of Arid Agriculture and Biotechnology” has been launched. The aim of the journal is to publish latest research achievements and promote integration and cooperation in agriculture and allied sciences.



Quarterly Baran Magazine

The University has started publishing a quarterly baran magazine under the experienced management. This initiative has been taken by the worthy Vice Chancellor for the dissemination of modern agriculture technology and information among the farming community. This magazine will also fill the gap among the policy makers, scientific community and end beneficiaries. The magazine has been distributed among the extension workers, policy makers, agricultural related authorities and progressive farmers in all over Pakistan on compliment basis. It is hope that this magazine will work as ambassador of the University with respect to the technology transfer programs.

Quarterly News Letter

In order to have a close contact with community and activities at university “Quarterly News Letter” is being published on quarterly basis. This is widely circulated among the students, faculty and all other sister organizations.

RESEARCH COLLABORATIONS

The University has initiated collaborative projects with the following R&D organizations for the purpose of research:

- ☞ Himalayan Wildlife Foundation (HWF), Islamabad
- ☞ Punjab Wildlife & Parks Department, Lahore
- ☞ Directorate of Wildlife & Fisheries, AJ&K, Muzaffarabad
- ☞ Sustainable Use Specialist Group, Central Asia, Quetta
- ☞ Human Rights & Minorities Affairs Department. Govt. of Punjab, Lahore
- ☞ Agribusiness Support Fund
- ☞ Dairy and Rural Development Foundation
- ☞ World Wide Fund
- ☞ Pakistan Bait-ul-Mal
- ☞ Rohicon Academy for Research & Professional Excellence, Islamabad

FOREIGN LINKAGES

The University has developed external linkages with the reputed R&D organization all over the world in order to strengthen his students and faculty. These are as follows:

- ☞ University of Florida USA
- ☞ International Center for Agriculture Research in the Dry Areas (ICARDA) Syria
- ☞ Institute of Agro Environmental and Forest Biology & National Research Council Italy
- ☞ Ohio State University USA
- ☞ Curtin University of Technology, Western Australia
- ☞ Nova Scotia Agriculture College, Canada
- ☞ Hebei Agriculture University (HAU) China
- ☞ The University of Bedfordshire U.K.
- ☞ Massey University New Zealand
- ☞ Northwest A&F University China
- ☞ Department of Environmental Engineering, Bioenergy Technical University of Denmark
- ☞ Management Committee of Baise National Agricultural Science and Technology Zone of Guangxi, P.R. China
- ☞ Biogas Institution of the Ministry of Agriculture (BIOMA) P.R. China
- ☞ Kyungpook National University
- ☞ Chinese Academy of Agricultural Mechanization Sciences (CAAMS)
- ☞ Engineering Research Center of Biological Control, Ministry of Education, College of Natural Resource and Environment, South China Agricultural University
- ☞ Selcuk University Turkey
- ☞ Kastamonu University Turkey
- ☞ University of Tuscia, Italy
- ☞ Mammalian Ecology and Conservation Unit, University of California, Davis, USA
- ☞ Anyang Quanfeng Biological Technology Co. Ltd China
- ☞ Mugla Sitki Kocman University Mugla, Turkey
- ☞ Joint Laboratory on Livestock and Forage Genetics Resources Beijing China
- ☞ Institute of Soil and Water Conservation, Chinese Academy of Sciences and Ministry of Water resources, China
- ☞ Adiyaman University Turkey
- ☞ Shihezi University, Xinjiang, China.

OPERATIONS OF OFFICE OF RESEARCH, INNOVATION AND COMMERCIALIZATION (ORIC)

The Office of Research, Innovation & Commercialization (ORIC) a central staff office reporting to the Vice Chancellor, is charged with administrative responsibility for all University research and related activities involving extramural sponsorship. In fulfilling its duties, the Office of Research serves as both a center of advocacy for research and related activities, and facilitator of the research environment. The functional areas supported by Office of Research staff include information services, project and proposal development



assistance, and grants and contracts administration for pre-award and selected post-award tasks. All proposals submitted by University personnel must be transmitted to and reviewed by Office of Research staff to assure adherence to internal and external policies and procedures. The Director of the Office serves as the designated University Officer for all related matters. The Office of Research, Innovation & Commercialization seeks to enhance the environment for all research and scholarships by:

- ❖ Supporting the university's strategic research directions and policies
- ❖ Increasing and diversifying external research funding
- ❖ Improving recruitment and retention of top faculty
- ❖ Improving integration of research and education at all levels of the university
- ❖ Improving translation of research into the public benefit
- ❖ Strengthening university-industry relationships
- ❖ Promoting entrepreneurship, technology-transfer and commercialization activities that energize and support the local and national economy
- ❖ Promoting and enhancing crosscutting and multi-disciplinary research initiatives

QUALITY ENHANCEMENT CELL

QUALITY ENHANCEMENT CELL

Arid Varsity established Quality Enhancement Cell (QEC) in 2007 aimed to assess, monitor and assure quality of educational program and research to converge towards international compatibility using the following tools/practices:-



- Review quality standards in teaching, learning and research;
- Promote public confidence in academics and research outputs of the University;
- Develop quality assurance processes and methods of evaluation to affirm that the quality of provision and the standards of awards are being maintained; and,
- Develop procedures for monitoring, evaluation, departmental review of different degree programs, students's and employer's feedback about quality of education etc.

VISION

“To develop the Pir Mehr Ali Shah Arid Agriculture University into a Centre of Excellence by providing an outstanding educational environment with emphasis on arid/rainfed agriculture and related professions”

MISSION

- To achieve excellence in teaching and research through continuous quality enhancement by monitoring and reviewing the progress
- To form a well-organized scientific infrastructure for teaching and high-tech research for the development of dry land regions of the country
- To produce graduates with adequate training for high professional achievements to enhance the scientific vision for the Barani areas

IMPACT OF QUALITY ASSURANCE

A. Progress Review Meeting and Training of QECs

Quality Enhancement Cell (QEC) team attended Progress Review Meeting and Training of QECs on 1-2 April, 2019 arranged by Higher Education Commission of Pakistan at Grand Ambassador Hotel Islamabad. Sessions include reviewing Progress of QEC regarding different parameters, revised template of YPR along with database of DAI. The training is basically planned to guide the DAIs regarding preparation of YPR as required database and acceptable evidences against each parameter of revised criteria.

B. Self Review of MS/MPhil/Equivalent & PhD Degree Program

The Quality Enhancement Cell, PMAS-AAUR organized the Self Review of MS/MPhil/Equivalent & PhD Degree Program on 27th of June, 2019. The purpose of the visit was to review MS/MPhil/Equivalent & PhD Programs to ensuring compliance with the HEC's minimum criteria/guidelines set for these Programs.

C. PhD Thesis

Fifty three (53) PhD Semi-final theses were checked and verified for similarity index by QEC using Anti-Plagiarism software (Turnitin) before sending them to foreign evaluators during 2019.

D. Research Laboratory Note Books

To improve the Quality research culture in the University, it has been made compulsory for all the Post Graduate Research students to prepare and maintain Research Laboratory note books. The number of registered laboratory books is 269 in the Year of 2019.

E. Memberships of Associations/Networks obtained by Quality Enhancement Cell

- i) Asia Pacific Quality Network (APQN)**
- ii) TUFTS University/Talloires Network UK**
- iii) Association of Quality Assurance Agencies of the Islamic World (IQA)**

FACULTY DEVELOPMENT

Faculty Development is a continuous phenomenon in order to achieve academic excellence. Therefore, to improve academic programs, the addition of new faculty is a regular feature at the University. The management of the University has great coherence, liaison and coordination with faculty in enhancing quality educational & research opportunities. Resultantly, PMAS-AAUR is producing useful & trained human resource in specialized sectors of Agriculture, Sciences, Information Technology, Management Sciences and Allied Disciplines. The details of regular faculty members in different faculties are as under:-

Sr. #	Name of Faculty/Institute	Lecturer	Assistant Professor	Associate Professor	Professor	Total
1.	Faculty of Crop & Food Sciences	4	21	12	10	47
2.	Faculty of Sciences	4	14	2	5	25
3.	Faculty of Social Sciences	15	9	5	2	31
4.	Faculty of Forestry, Range Management & Wildlife	3	6	2	1	12
5.	Faculty of Veterinary & Animal Sciences	17	10	6	2	35
6.	Faculty of Agricultural Engineering & Technology	4	5	1	0	10
7.	University Institute of Information Technology	9	10	1	0	20
8.	University Institute of Management Sciences	10	7	2	0	19
9.	University Institute of Biochemistry & Biotechnology	1	5	3	1	10
10.	Institute of Food and Nutritional Science	3	2	2	2	9
11.	Institute of Geo information and Earth Observation	2	2	0	1	5
12.	Institute of Soil Science	0	2	3	2	7
	Total	72	93	39	26	230

The University has been encouraging and supporting its faculty and researchers to opt for different professional development training programmes both at national and international level. These programmes include short term trainings and other joint research and development activities with universities and institutions. The faculty and researchers have also been facilitated for presenting their research and publications at national and international fora. The faculty members were encouraged to improve their qualifications and visit universities abroad to update their technical knowledge and transfer technical know how back home from international universities/institutes. During the year, following faculty members/PhD students obtained doctoral/post-doctoral fellowships and short term trainings in abroad:

POST DOCTORATE

S. #	Name of Faculty Member	Department	Name of Country
1.	Dr. Muhammad Arif Zafar, Associate Professor	Clinical Studies	USA
2.	Dr. Zia-ur-Rehman, Assistant Professor	Botany	Republic of Korea
3.	Dr. Sajid Umar, Lecturer	Pathobiology	Turkey
4.	Dr. Muhammad Akram Khan, Lecturer	Pathobiology	China
5.	Dr. Safdar Hussain, Superintendent/ Lecturer	Economics	China

DOCTORATE

S. #	Name of Faculty Member	Department	Name of Country
1.	Ms. Sumaira Hassan, Lecturer	Veterinary Biomedical Sciences	Pakistan
2.	Ms. Sumera Saleem, Lecturer	Economics	China
3.	Mr Osman Zulfiqar Alvi	UIMS	Pakistan
4.	Ms. Sidra Shahzadi, Lecturer	UIMS	Malaysia
13.	Mr Zia ur Rehman	UIMS	Malaysia
14.	Mr Mujeeb ur Rehman Sohoo	Veterinary Biomedical Sciences	Pakistan
15.	Mr Nasir Mehmood	Economics	Germany
16.	Dr. H. M. Waheed	Animal Breeding & Genetics	Pakistan
17.	Mr. Fahad Raza	Clinical Studies	USA
18.	Mr Mudassar Nawaz	Clinical Studies	Pakistan
19.	Dr. Zaib ur Rehman	Poultry Sciences	China
20.	Dr. Kanza Gulzar	-	China
21.	Mr Zeeshan Akbar	Vet. Anatomy	Australia
22.	Mr Nasir Mehmood Minhas	UIIT	Sweden
23.	Ms. Sumaira Kiyani	Education	China
24.	Dr. Tahir Iqbal	Farm Machinery & Precision Engineering	China
25.	Mr. Shujaat Hussain	Clinical Medicine & Surgery	Pakistan
26.	Ms. Mehwish Zeeshan	Anthropology	Pakistan
27.	Mr. Ghulam Shabbir	Animal Breeding & Genetics	Pakistan
28.	Mr. Muhammad Akhlaq	Structural & Environmental Engineering	China
29.	Mr. Munibullah	Clinical Studies	USA
30.	Hafiz Muhammad Shakeel	Clinical Studies	South Korea
31.	Mr. Asif Riaz	Veterinary Biomedical Sciences	USA

TRAINING COURSE/SHORT TERM TRAININGS

S. #	Name of Faculty Member	Department	Name of Course/Training	Name of Country
1.	Dr. Muhammad Hassan	Geo informatics	One Belt & One Road Hyperspectral Remote Sensing and Precision Agriculture	China
2.	Ms. Aniq Batool	Environmental Sciences	One Health Training Program	Indonesia
3.	Prof. Dr. Ghulam Jilani	Institute of Soil Science	Chinese Academy of Sciences, President's International Fellowship Initiative for serving as Visiting Scientist	China
4.	Dr. Shahid Mehmood	Environmental Sciences	One Health Training Program	Indonesia
5.	Dr. Ayesha Riaz	Parasitology & Microbiology	One Health Training Program	Indonesia
6.	Dr. Arfan Yousaf	Clinical Studies	One Health Training Program	Indonesia
7.	Dr. Muhammad Arif	Clinical Studies	One Health Training Program	Indonesia
8.	Dr. Murtaz Ul Hassan	Clinical Studies	One Health Training Program	Indonesia
9.	Dr. Muhammad Ali Abdullah Shah	Parasitology & Microbiology	One Health Training Program	Indonesia
10.	Dr. Zuhair Hassan	Sub-Campus Attock	International Training Workshop on Rainwater Harvesting	China
11.	Dr. Muhamad Naveed Tahir	Agronomy	UAV Application Training	China
12.	Dr. Saif ur Rehman	Parasitology & Microbiology	Training under One Health fellowship program	Singapore

BASIC ENROLLMENT

The detail of Student's enrollment is as under:

Sr. No	Name of Degree	2014	2015	2016	2017	2018	2019
1.	Undergraduates	4730	6009	6626	7786	8631	8561
2.	Post Graduates	3691	4073	4093	4236	3351	2243
3.	Doctoral	332	342	366	425	392	308
TOTAL		8753	10424	11085	12447	12374	11112

GENDER-WISE DETAIL

Sr. No.	Program	Male	Female	Total
1.	Bachelors	5867	2694	8561
2.	Masters	522	1265	1787
3.	M.Phil/MS (Hons)/MS	280	176	456
4.	Ph.D	200	108	308
TOTAL		6869	4243	11112

EMPLOYABILITY

In order to facilitate the graduates in job placement, Directorate of Financial Assistance & University Advancement consistently striving to develop linkages with the industry by providing the online recruiting tools either through its own resources and/or the private partners. A total of 20633 students have registered on Alumni Portal out of which 2411 students have been registered in the Year 2019 who are regularly informed about various opportunities/job openings through electronic email. Students of the Agriculture Department found jobs in different fields of government, semi-government and private sectors.

FACULTY-STUDENT RATIO

The faculty-students ratio is Approximately 1: 30.

UNIVERSITY BUILDING ECONOMIES

UNIVERSITY-INDUSTRY LINKAGE

The University is in the process of developing linkage with the industrial / farming community. It has developed linkage with following organizations at National and International level:-

1. Barani Area Research Institute, Chakwal.
2. Fauji Fertilizer Company, Multan.
3. Alfalah Bank, Rawalpindi
4. Agency for Barani Area Development, Rawalpindi.
5. Pakistan Council for Scientific & Industrial Research, Lahore.
6. Ali Akbar Group of Pesticides.
7. Syngenta Pakistan Pvt. Ltd.
8. FMC Pvt. Ltd.
9. Nestle Milk Pack Pakistan.
10. Nuclear Institute for Biotechnology & Genetic Engineering Faislabad.
11. Arqam Foods.
12. Fuji Cereals.
13. Shezan Pak. Ltd. Hattar, Rawalpindi.
14. Vita Bread & Dawn Bread, Rawalpindi,
15. Haleeb, Pepsi Cola (Pvt) Ltd.

NEW INITIATIVES OF THE UNIVERSITY

PMAS-Arid Agriculture University Rawalpindi is striving hard to provide a diversified academic environment for Pothwar youth looking towards joining hands with modern world for exportable surplus. University administration is endeavouring to bring about a tangible change with a view to equip the graduates for self-employment thereby making a positive contribution in national development in addition to providing livelihood for themselves and the poor farming community of the region. The university has embarked upon new initiatives and projects tapping need oriented vision for the Pothwar.

Establishment of University Green Office

The University Syndicate in its 80th meeting held on 30.06.2018, approved to establish the University Green Office at PMAS-Arid Agriculture University Rawalpindi. The University Green Office has been established under the auspices of Directorate of Planning & Development to boost up the sustainability practices in the Campus. The Green Office of PMAS-AAUR is the platform for students and employees of the University where sustainable

ideas are shaped, plans are put together and projects are launched, all with the objective to make the university more sustainable. This office will also raise awareness among students and staff about the sustainable achievements and ambitions of the PMAS-AAUR.

Establishment of Green Office Nursery

A Plant Nursery under University Green Office has been established at the Main Campus of the University in October, 2018. Under this nursery, saplings are being provided to the students of the University and local community for planting more trees in order to make Pakistan Green.

State of the Art Integrated Waste Management Station

PMAS-Arid Agriculture University Rawalpindi has established a state of the art integrated Waste Management Station where modern treatment facility is based on the mechanical and biological treatment process of solid waste with proper segregation and recovery of the recyclables. This facility being not only the first one in the educational institutes but also in the country. The key features of this recently developed station are to transform decomposable waste in to compost for organic agriculture and bio-gas which can provide safe and healthy food to the community. Additionally, this solid waste if handled properly would maintain the natural balance of essential elements and thereby promote more harvest from nature. PMAS-AAUR and Rawalpindi Waste Management Company (RWMC) also signed MoU with an aim to clean environment and obtain energy from solid waste/biomass on the lines of developed model at PMAS-AAUR.



Establishment of Clean Drinking Water Facility

With increase in population in the country, the demand for clean drinking water has increased significantly. However due to burgeoning environmental pollution people are being confronted with many water borne diseases and the problem is increasing day by day. The present Government is determined to provide such basic common facilities to common people for better tomorrow and bright, healthy future. Keeping above in view, the university established the Clean Drinking Water Facility for the students and staff of the University.

Establishment of Staff Club

The purpose for establishment of staff club is to arrange social events/gatherings/dialogs among the various tier of University employees/staff so that to enhance interaction between them. The social gatherings related to their interests will be conducted at this club.

Rain Water Harvesting Model for Small Farmers

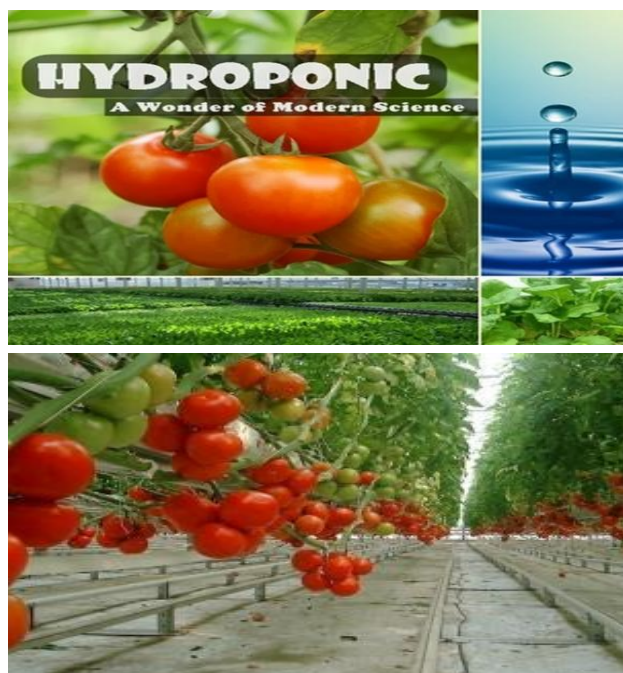
Taking advantage of the short spell of monsoon rains, the University has converted its research area into a model farm with provision for collecting summer rains into small reservoirs through which the water saved amounts to 45 acre-foot which is sufficient for irrigation of its entire farm spreading over 250 acres using high efficiency irrigation system operated through solar energy. Similarly, for urban areas a rainwater harvesting model of rooftops of university campus has also been developed



and the water stored is enough to irrigate experimental plots on acreage at the campus. This effort presents an excellent model for kitchen gardening through rainwater harvesting in urban areas besides minimizing street flooding and resulting discomforts in civic life during rainy season.

Low Cost Indigenous Hydroponics System

PMAS-Arid Agriculture University is successfully operating a state-of-the-art hydroponic vegetable production facility on commercial basis where certified, spray and disease free vegetables, salads and herbs are being grown and marketed inland and off shore. To lessen the input costs and make adaptable by the small farmers, the university faculty is engaged in development of simplified and low cost hydroponics technology. Objectives of this effort also include provision of inputs such as nursery, nutrients and growing substrates by the University at minimum cost for popularization of the technology at masses level.



In addition to above, the University erected the twelve (12) Hydroponic Units (each on 02 Kanals) at various locations of District Punjab through ADP funded project titled “Testing Indigenous Hydroponic Greenhouses for Vegetable Growing at Various Locations in Punjab” amounting to Rs. 77.571 million.

PATENTS

The faculty of the University is doing exclusive research and succeeded in applying the patents for the outcomes of their research activities which are beneficial for the local farming community in order to increase the Agriculture and Livestock production in the Barani areas of the region.

S #	Product Name	Ingredients	Effects/Benefits
1.	A polyherbal composition for cooling, refrigerant, antioxidant and appetizer By Prof. Dr. Azra Khanum	Cichorium intybus, Foeniculum vulgare, Corchorus depressus, Citrullus lanatus, Cucumis melo and C. sativus	Cooling, diuretic and refrigerant tonic that can be used for treating jaundice, lack of appetite and burning sensation of palm and soles
2.	Six Transgenic Wheat varieties with Bacterial disease resistant genes By Prof. Dr. Kasusar Nawaz Shah	Six What varieties viz. Chakwal-97, Inqulab-91, GA-2002, Aquab-2002, Tartara-2000 and Punjnanad-2000 with Xa21 gene (a gene produce inhibitor like protein that act as broad spectrum Anti-bacterial protein)	Although bacterial diseases are less destructive for wheat in Pakistan as compare to fungal diseases. But this product and procedure will help in production of Fungal disease resistant wheat in future (project under progress). Similarly, these transgenic wheat varieties can enhance yield up to 20% where bacterial diseases cause a significant loss in wheat yield.
3	Integrated solid waste management system By Prof. Dr. Rai Niaz Ahmad	Machine consists of outer cylinder, inner cylinder, pressure gage, boiler, food hopper, food outlet, water inlet, water outlet, solidwaste feeder, digester, catalyst shower, moisture meter, drainage pipe, gas extraction pipe	Production of poultry feed, biogas and valueable compost for organic gardening.
4	Indegenour hydroponic system By Prof. Dr. Rai Niaz Ahmad	Unit consists of greenshed, cooling/ heating system, drip irrigation, fertigation system, drainage and detectors for different controlled parameters	Production of quality vegetables likes tomatoes, cherry tomatoes, pepper, cucumber etc with pesticide residue free and high shelf life, several fold production and affordable to local farming community to produce out of season crops.
5	Water seed drill By Prof. Dr. Rai Niaz Ahmad	Main frame, water tank, water distribution pipes, water nozzles and control volve.	Provision of water to soil at the time of seed sowing in order to facilitate seed germination under moisture stress conditions.

INTERNSHIP AND PLACEMENT OFFICE

Vertical and horizontal expansion of academic programs, subsequent increased gross enrollment and tangible improvement in academic and research standards necessitated a dedicated entity in the form of University Placement Bureau (UPB, Estd. 2006) to facilitate the students/graduates in attainment of scholarships, internships and jobs. In 2009, Higher Education Commission of Pakistan also took this three pronged policy in hand and desired public and private universities to establish their resource and consultation centers for graduates' welfare and university advancement. Thus, UPB was renamed as Students Resource Centre (SRC) in 2009, to pave the linkage between the graduates, prospective employers and scholarship benefactor agencies. Prompt dissemination of information regarding jobs, scholarships, skill enhancement training facilities, workshops, seminars, events/activities at the campus etc. to the registered graduates through electronic mail; were the regular feature of Students Resource Centre. The University has revamped this chapter and transformed in to Directorate of Financial Assistance & University Advancement in 2014.

Directorate of Financial Assistance and University Advancement is a focal point for all types of internal and external scholarships availed by the students of University. The centre strives to ensure the transparency in award of scholarships right from collection of applications to disbursement of funds. Directorate of Financial Assistance and University Advancement also facilitates various entities offering scholarships independently in verification and performance appraisal of their scholars at University.

ACTIVITIES OF DIRECTORATE

Different scholarships offered by directorate are as follows:

S.No	Name of Scholarship	Scholarship Eligibility Criteria
1.	Ehsaas Undergraduate Scholarship	Offered for undergraduate needy students
2.	PEEF (Punjab Educational Endowment Fund) Scholarship	Offered for undergraduate/postgraduate students having Punjab domicile
3.	Vice Chancellor Talent Scholarship	Offered at subject/discipline level in each semester
4.	Pakistan Bait-ul-Mal Scholarship	Offered for the deserving students of university
5.	HEC Need Based Scholarship	Offered for all degree programs
6.	Chief Minister's Merit Scholarship	Offered for postgraduate students having any domicile
7.	USAID Funded Merit & Need Based Scholarship Program	Offered for undergraduate/postgraduate agriculture/veterinary students
8.	Gurmani Foundation Scholarship	Offered for students of southern Punjab
9.	Dr. Sadiq Foundation Scholarship	Offered for veterinary students
10.	National Educational Scholarship for Talent (NEST)	Offered for needy students of remote areas
11.	Diya Pakistan Scholarship	Offered for needy students
12.	Pakistan Scottish Scholarship Scheme	Offered for only female students
13.	Award of Scholarships for Students from Gwadar	Offered for the undergraduate students belongs to Gwadar
14.	Prime Ministers tuition fee Scholarship	Offered for less developed areas
15.	OIC common wealth Scholarship	Offered for foreigner students
16.	Higher Education Scholarship for students of Balochistan & FATA	Offered for students belonging to Balochistan & FATA
17.	National Bank of Pakistan Loan Scheme	Offered for needy students

SUMMARY OF SCHOLARSHIPS:

A total of 1991 scholarships have been awarded to the university students processed in 2019. Following are the details:

S.No.	Name of Scholarship	Scholarships Awarded
1.	PEEF (Punjab Educational Endowment Fund) Scholarship	460
2.	Vice Chancellor Talent Scholarship	305
3.	Pakistan Bait-ul-Mal Scholarship	280
4.	HEC Need Based Scholarship	627
5.	Chief Minister's Merit Scholarship	103
6.	USAID Funded Merit & Need Based Scholarship Program	61
7.	Gurmani Foundation Scholarship	8
8.	Dr. Sadiq Foundation Scholarship	9
9.	National Educational Scholarship for Talent (NEST)	12
10.	Diya Pakistan Scholarship	1
11.	Pakistan Scottish Scholarship Scheme	1
12.	Award of Scholarships for Students from Gwadar	2
13.	Prime Ministers tuition fee Scholarship	113
14.	OIC common wealth Scholarship	5
15.	Higher Education Scholarship for students of Balochistan & FATA	2
16.	National Bank of Pakistan Loan Scheme	2
Total		1991

COMPARISON OF SCHOLARSHIPS FROM 2015-2019

Years	2015	2016	2017	2018	2019
Scholarships Awarded	1046	1279	2787	2454	1991

PRIME MINISTER'S LAPTOP SCHEME:

Prime Minister's Laptop scheme has also been dealt by Directorate of Financial Assistance & University Advancement. A total of 2676 laptops have been distributed to the talented students of various disciplines/departments of PMAS-AAUR in year 2019 under Phase-IV & Phase-V of Prime Minister's (National) Laptop Scheme, who were selected on merit by the Higher Education Commission.

ALUMINI REGISTRATION:

Directorate of Financial Assistance & University Advancement also deals with Alumni Registration. A total of 20633 students have registered on Alumni portal. 2411 students have been registered in Year 2019.

ACTIVITIES RELATED TO SCHOLARSHIP SELECTION

Directorate of Financial Assistance & University Advancement has conducted the following Institutional Scholarship award committees (ISAC) for selection of applicants during the year 2019:

Sr. No.	Details	Month
i.	ISAC of PEEF Scholarship Program	January -2019
ii.	ISAC of HEC Need Based Scholarship Program	April – 2019
iii.	ISAC of Pakistan Bait ul Mal Scholarship Program	November - 2019

UNIVERSITY GREEN OFFICE

The University Syndicate in its 80th meeting held on 30.06.2018, approved to establish the University Green Office at PMAS-Arid Agriculture University Rawalpindi. The University Green Office has been established under the auspices of Directorate of Planning & Development to boost up the sustainability practices in the Campus. The Green Office of PMAS-AAUR is the platform for students and employees of the University where sustainable ideas are shaped, plans are put together and projects are launched, all with the objective to make the university more sustainable. This office raises awareness among students and staff about the sustainable achievements and ambitions of the PMAS-AAUR.

Major Objectives are as under:

- ✦ Reduce the consumption of natural resources in offices of University.
- ✦ Planning and partnerships to achieve environmental goals. Strategic Planning and proper implementation of the university's master plan in issues such as traffic management, energy and green buildings.
- ✦ Policy making for energy efficiency and use of clean and environmentally friendly technologies.
- ✦ Solid Waste Management with an emphasis on source sorting and reduction of waste production by declaring the campus "Zero solid waste campus".
- ✦ Monitoring the activities of the various units of the University in order to follow principles of Green Management.
- ✦ Aligning environmental activities in different areas in order to prevent parallel tasks.
- ✦ Taking incentive policies for the participants in the Green Management of the University.
- ✦ Promoting the principles of environmental education at the university level and society.
- ✦ Engagement and participation in environmental policy and planning in twin cities of Rawalpindi & Islamabad.
- ✦ Encouraging and support of environmental NGOs (NGO) and environmental organizations in the University.

ACTIVITIES OF UNIVERSITY GREEN OFFICE

1. Tree Plantation Campaigns

The environmental pollution and temperature is increasing every day due to highest deforestation rate in the country. Trees can serve as green shelter during extreme climate conditions thus making earth cooler for animal and human life. It provides cleaner air to breath. Plants to earth are like lungs to the human body. Tree plantation campaigns were launched by University Green Office in 2019 at PMAS-Arid Agriculture University Rawalpindi. In these Campaigns, Dean, directors, Faculty Members and Students were participated for the purpose of planting the tree.



2. Free Plant Distribution by Green Office Nursery

A piece of land has been provided by the University in 2018 wherein, a Green Office Nursery was established under University Green Office. During the year 2019, almost 20,000 plants were distributed free of cost to the students, faculty and local community to strengthen the Prime Minister's Campaign "Plant for Pakistan."

 یونیورسٹی شاہ بارانی درمی یونیورسٹی راولپنڈی گرین آفس نرسری فہرست موجودہ پودا جات 			
نام پودہ	نمبر شمار	نام پودہ	نمبر شمار
ایپل اپل	13	سفیدہ	1
جیک رنڈا	14	چیر پائن	2
ریشما	15	چنار	3
امرد	16	کچنار	4
جاسن	17	سلو راوک	5
انگور (3 اقسام)	18	ارجن	6
کالی مرچ	19	اماتاس	7
ناشپاتی	20	پائدر	8
گلاب	21	شیشم	10
چنبیلی	22	سکندر	9
راست کی رانی	23	شکھر چین	11
سوبا چننا	24	بیرس	12
دن کارلہ	25		

3. Participation in UI GreenMetrics World Universities Ranking

The UI GreenMetric World University Ranking is an initiative of University of Indonesia which is being launched in 2010. The aim of this ranking is to provide the result of online survey regarding the current condition and policies related to Green Campus and Sustainability in the Universities all over the world. It is expected that by drawing the attention of university leaders and stakeholders, more attention will be given to Education & Research, Infrastructure Development, Energy & Climate, Waste Management/Treatment, Water



Conservation/Recycling and Green Transportation. It is believed that the ranking is useful to the university leaders in their efforts to put in place eco-friendly policies and manage behavioral change among the academic community at their respective institutions.

Thousands of universities around the world are invited to take part in the International Ranking. These universities include many which already have a presence in other World Universities Rankings, such as THES-QS, Webometrics, and Shanghai Jiao Tong ranking. Universities that wish to participate are asked to provide numeric data on a number of criteria that can give a picture of their commitment to the greening of their campus and putting in place environmentally friendly policies that support sustainability. The criteria include such baseline information as the size of the university, spatially and in terms of population, the campus location and the amount of green space; and also information on energy use, transport, water use and recycling and waste treatment. In addition, it will ask about efforts being made by the institution towards establishing green policies and management.

Pir Mehr Ali Shah Arid Agriculture University Rawalpindi has been ranked 3rd in all over the Pakistan, 111th in Asia and 295 among all 780 participating Universities of the world as per latest UI Green Metric World Universities ranking 2019. UI Green Metric University Sustainability Ranking is a world university ranking to assess and compare campus sustainability efforts. The criteria for the ranking of Universities includes campus setting and infrastructure, energy and climate change, waste, water, transportation and education. The Arid Varsity has been ranked as 295th among the top 780 universities of the world with the total score of 5475 as per UI GreenMetric World Universities ranking 2019.

2. RESULTS SUMMARY

World Ranking	SI Ranking	EC Ranking	WS Ranking
295	209	613	502
	WR Ranking	TR Ranking	ED Ranking
	95	155	265

3. WORLD RANKINGS HISTORY



Figure 3.1 World Rankings History Diagram

4. RANKING IN PAKISTAN

Country Ranking	SI Ranking	EC Ranking	WS Ranking
3	4	24	8
	WR Ranking	TR Ranking	ED Ranking
	1	2	4

STRENGTHENING PHYSICAL INFRASTRUCTURE

DEVELOPMENT PROJECTS (LABORATORIES, LIBRARIES, ETC.)

Developmental projects play a very important role in uplifting and growth of an institution. The University is continuously taking initiatives for improvement of the current status through different development projects. Twenty three development projects have already been completed. Currently the University is implementing three such projects (Rs. 2294.34 million) while new proposals were also submitted to HEC and Punjab Government in next year. The University carried out various plans, formulated strategies & putting in strenuous efforts to enhance the financial resources from avenues outside PMAS-AAUR. Funds were also fetched from the Higher Education Commission of Pakistan and Government of the Punjab under different schemes for



establishing/strengthening new departments at PMAS-AAUR. These efforts will create more research facilities for the students and the faculty members.

The funds amounting to Rs. 786.577 million have been fetched from Government of the Punjab for the project titled **“Establishment of Sub Campus of PMAS-Arid Agriculture University at Attock (Phase-II)”**. The construction activities at the site of Sub-Campus Attock are in progress.



Another mega project titled **“Establishment of National Center for Livestock Breeding, Genetics & Genomics (NCLBG&G) at PMAS-Arid Agriculture University, Rawalpindi”** amounting to Rs. 756.519 million is operational during the current year which was approved by the CDWP in 2018.



Development Projects : i) COMPLETED

Name of the Project	Total Cost Rs. In Million
Development of Academic Facilities at UAAR	49.740
Establishment of Centre for Information Technology	27.961
Strengthening of Higher Education Facilities at UAAR	39.645
Establishment of Centralized Instrumentation Centre	37.108
Establishment of Department of Range Management & Forestry	35.972
Establishment of Fiber Optic Backbone & Campus Wide Local Area Network	25.300
Production of Pathogen Free Horticultural Plants	35.884
Construction of Hostel for Visiting Faculty	24.438
Construction of Hostel for Students	36.436
Strengthening of Department of Soil Science & SWC	33.580
Strengthening of Centre for Information Technology	34.346
Strengthening of Department of PBG	31.783
Strengthening of Sports Facilities at UAAR	38.885
Strengthening of Department of Entomology	34.783
Establishment of R&D Facility in Hydroponic	52.546
Strengthening of Department of Wildlife Management	36.141
Strengthening/ Up gradation of Library Facilities at PMAS-AAUR	41.021
Establishment of University Institute of Biochemistry & Biotechnology	358.619
Establishment of Faculty of Veterinary & Animal Sciences	468.620
Development On Farm Students Research Facilities	343.224
The Establishment of Pak-Korea Capacity Building Center for Agriculture & Livestock Technology at PMAS-AAUR	395.500
Establishment of Sub Campus of PMAS-Arid Agriculture University Rawalpindi at Attock	188.260
Testing Indigenous Hydroponic Greenhouses for Vegetable Growing at Various Locations in Punjab	77.571
Total (Rs. in Million)	2447.363

ii) ONGOING

Development Projects (On-Going)	Cost (million Rs.)
Strengthening of Agricultural Engineering & Women Development Programs at PMAS-AAUR	751.244
Establishment of Sub Campus of PMAS-Arid Agriculture University at Attock (Phase-II)	786.577
Establishment of National Center for Livestock Breeding, Genetics & Genomics (NCLBG&G) at PMAS-AAUR	756.519
Total (Rs. in Million)	2294.34

RESEARCH EQUIPMENT

Research being an integral part of projects is built in the PC-I while planning project proposals. The state of art equipment is up and running at project facilities. These include much high voltage equipment at University Research Laboratories.

The University has a unique facility having Central Research Laboratory in which postgraduate students and faculty are busy for the accomplishment of their research activities. This facility has several sophisticated research equipments being exclusively used for this purpose. The research projects being executed through this facility/laboratory have generated a lot of research findings in the area of Agriculture, Sciences and Forestry. The Laboratory has also produced a number of skilled and trained manpower in the shape of graduate students who by taking up various positions in Government and non-governmental organizations, could significantly contribute towards the over objective of national economy. The major equipments available in the Central Research Laboratory are as under:

Name of Equipment	Make/Model	Main Specification
Gas Chromatograph	GC-NU74 Agilent Technology Singapore	Includes Special Configuration LAN Rs-232 interfaces and 7683 interface, detector EPC Board 6tem ramps, 6 heated zones plus oven, 2 analog out
HPLC	SCL-10A, LC-10NT CTO-10AS, SPD-10A, SIL-10AD Shimadzu Japan	Binary pump with automatic variable piston stroke Delay volume 180-482ul <0.3% RSD setpoints from 0.001 to 5.0 ml/min in 0.001 ml/min 0-40MPa (0-400bar, 0-5880Psi)
DNA Sequencer	CEQ-800, Beckman Coulter Switzerland	CEQ Genetic Analysis System 100-240V, 5A, 50/60HZ A fully automated high throughput sequencing and fragment analysis system
Total Organic Carbon Analyzer	ASI-V, VCPH, TNM-1 SSM-5000A Shimadzu Japan	High temperature catalytic combustion from 680C ⁰ to 950C ⁰ Method is EPQA4151 Standard methods 5310B, dIN 38409113
Freeze Drier	CRYODOS-50 Telstar Spain	Air cooled Refrigerator 0.37KW (1/2 HP). CFC and H-CFC free refrigerant without vacuum pump ice condenser temperature approx. -55C ⁰
Ultra Centrifuge	Optima-100P. US Beckman Coulter Switzerland	CE Mark Speeds to 100,000 Rpm g. Forces to 802,400g vacuum-encased, frequency controlled direct drive (induction)
Flame Photometer	Jenway-PFP-7	Microprocessor controlled purity monitor. Providing digital resistively readings temperature to 25C
Deionizer	SG Hamburg	(i) Capacity 120g readability 0.1 mg power
Precision Analytical Balance	(i) Jex 120 Japan (ii) BL-210S Sortorius Germany	(ii) Capacity 210g readability 0.1mg power 220VAC 50/60HZ
Aluminum Block Heater	UDK42/26 Italy	Digital Microprocessor Controlled Temperature Settings upto 450C ⁰ built in timer with capacity 42 digestion tubes. Tubes capacity 100 ml operated voltage 220VAC
Oven	(i) UE-600 Memmert Germany (ii) 100-800 Memmert Germany	Digital Microprocessor temperature range up to 300C ⁰ capacity -256 Ltr
Porometer	AP-4 IRMECO England	Portable, microprocessor controlled. For measurement of stomatal gas flow Measurement Range 0-40S-Cm-1(resistance) 0.2-30mmS-1 (Conductance)
IRGA/Plant Photosynthesis Analyzer	LCA-4 IRMECO England	Different measurements, non-dispersive infra-red gas analyzer Range 0.3000ppm frequency 80HZ Source Life 10,000 Hours
Confocal Microscope	TSI Sr. No. 291300105 Canada	Two laser (i) Red (635) (ii) Green (532), Two Micron-Optical, Resolution using one micron

STRENGTHENING TECHNOLOGICAL INFRASTRUCTURE

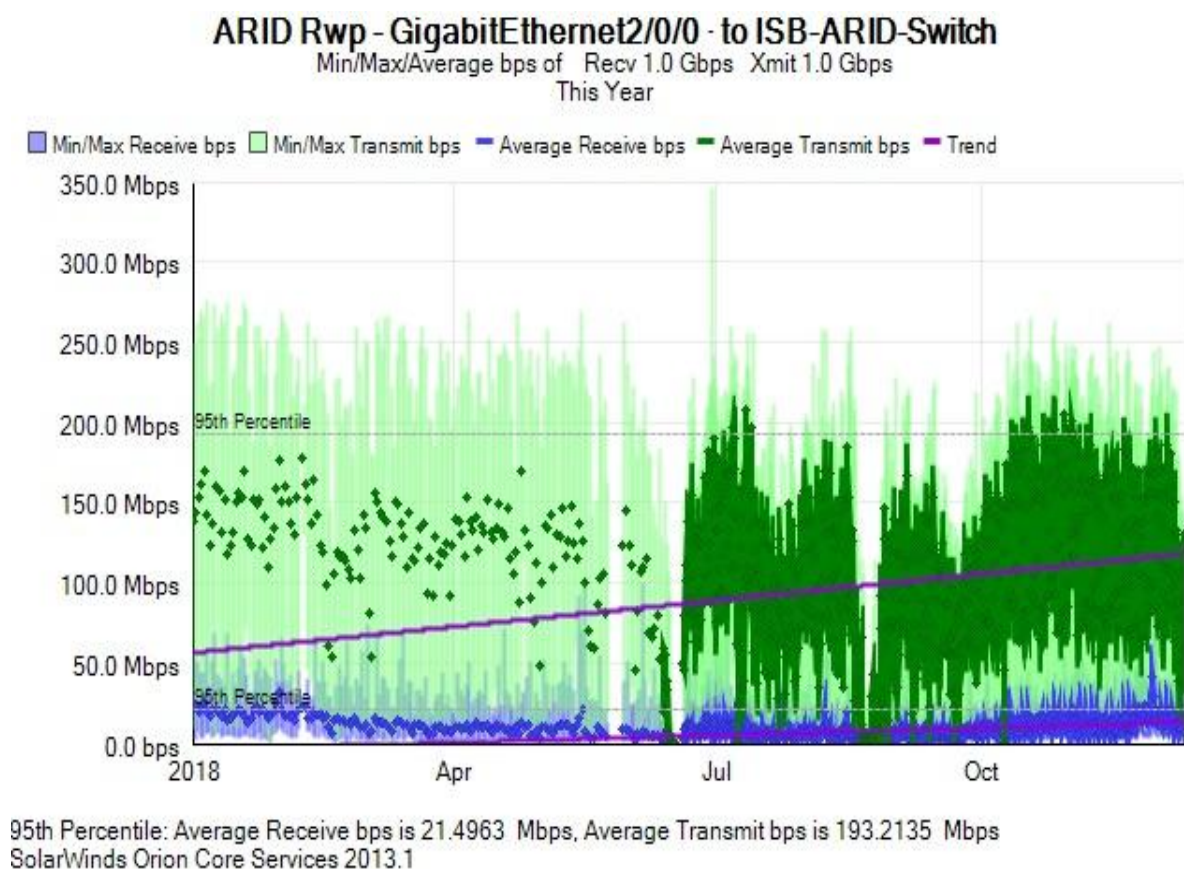
Digital Library

Digital Library 24/7 has easy access in our Network internet protocols (IPs), **Usage data of digital library has managed by Pakistan Educational Research Network HEC.**

Update on PERN

Pakistan Education and Research Network, we are connected with HEC PERN2 with bandwidth of 270MB, campus network (24/7 Access), server virtualization management, **load balancing, reliable, scalable, environmental protection, wireless network facility (Boys and Girls hostels) and digital library throughout the university network.**

Network Availability in PMAS-AAUR Graph



Video Conferencing System

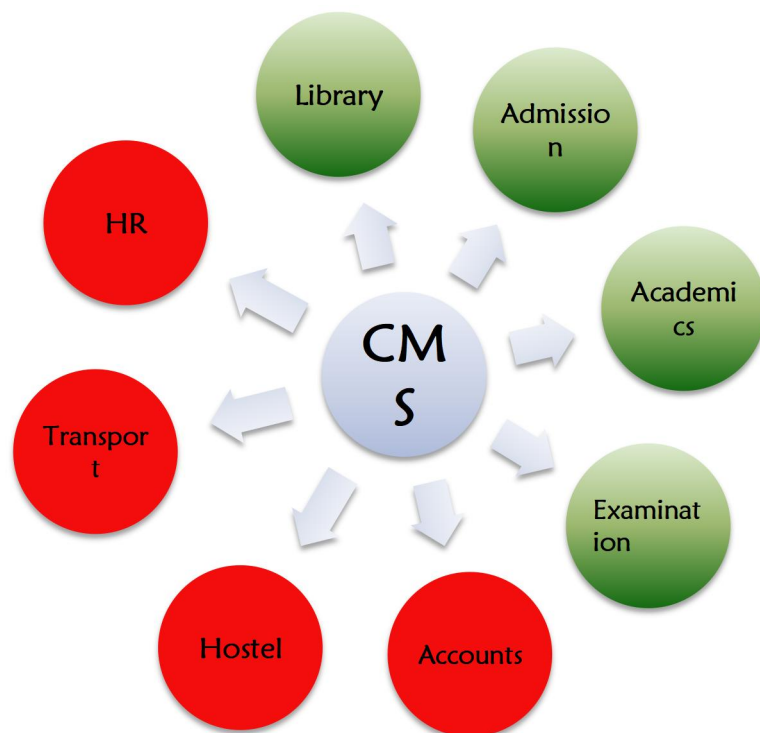
Video conferencing equipments and software installed at conference room University Institute of Information Technology (UIIT). It's set up consist of HD video cam, premium audio system,

recording facility, presentations equipments and sound proofed room with live IP address that is connected with 24/7 online support meeting capabilities and competent compelling team.

Campus Management Solution (CMS)

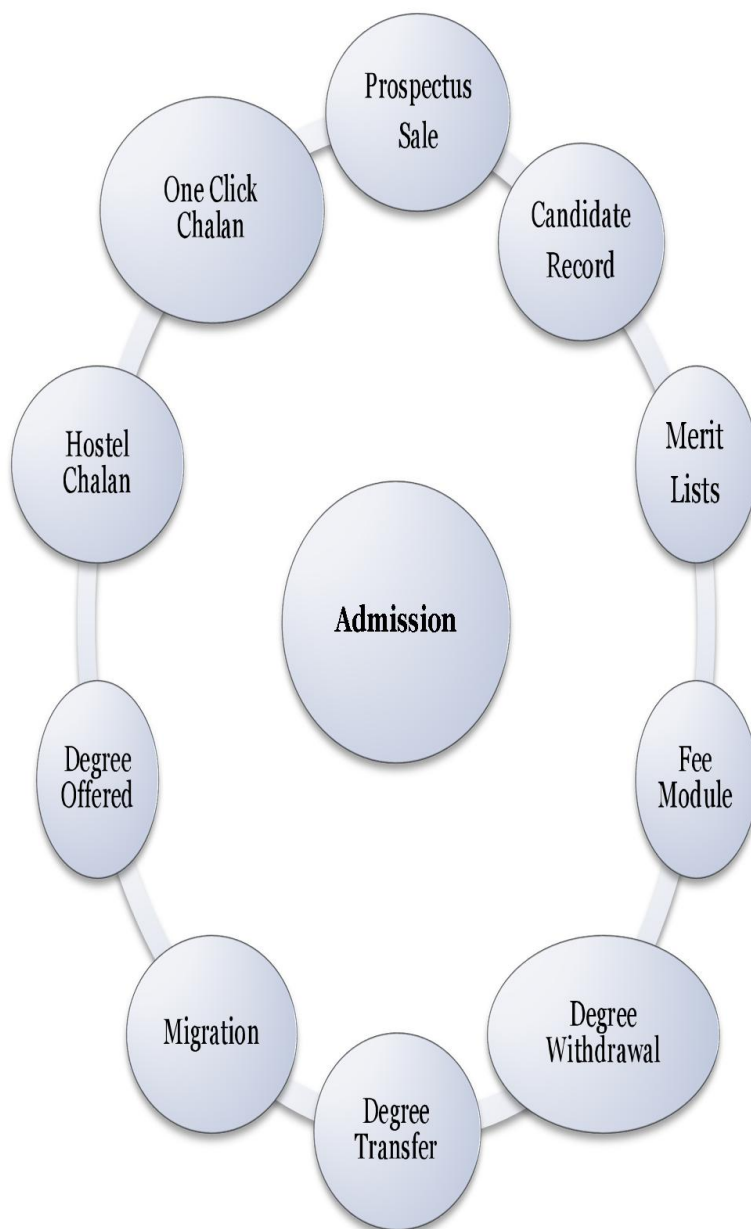
- ☞ Campus Management Solution is the most effective tool that has automated the management functionality of this university by streamlining some of the processes involved.
- ☞ It has reduced the manual handling of processes and thus helps in effective and accurate outcomes.
- ☞ CMS also helps in maintaining transparency in admissions and accounts processes and reduces administrative overhead by providing powerful services.
- ☞ It helps in effective decision making of authorities by generating reports from different aspects.

CMS-A Glance



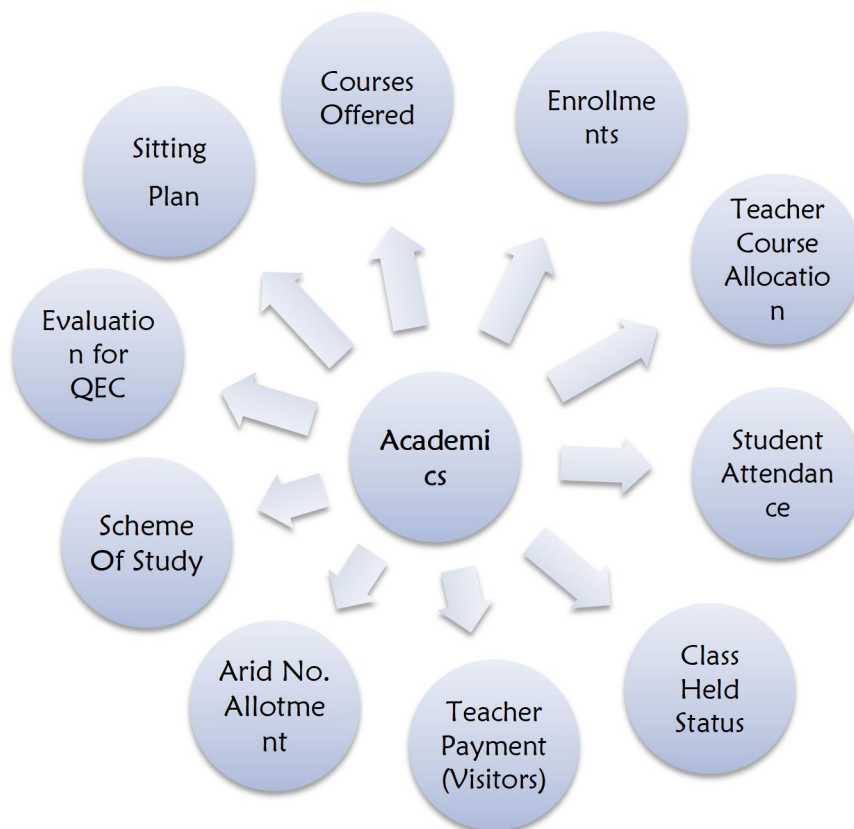
Admission-a glance

- Prospectus Sale Report
- Date wise Candidate entry report
- Tracking Of Merit(Waiting Merit List)
- Total vs Vacant Seats Information Report
- Fee Vouchers Generated through system
- Banks Uses Fee Module
- Fee Reports in different formats
- Bank Departments and Treasure Office Reconcile fee Data
- Different Fee Structures
- Fee Installments
- Quota System
- Admission Scroll



Academics-A Glance

- ☞ Student's University Card
- ☞ GS-10/ Gs-12 Reports in different formats
- ☞ Attendance/Enrollment Status online at university network
- ☞ Teacher Evaluation Reports (Graphical)for QEC
- ☞ Section Assignments
- ☞ Students Attendance Sheets
- ☞ Attendance shortage Attendance Feeding status
- ☞ Student Profile

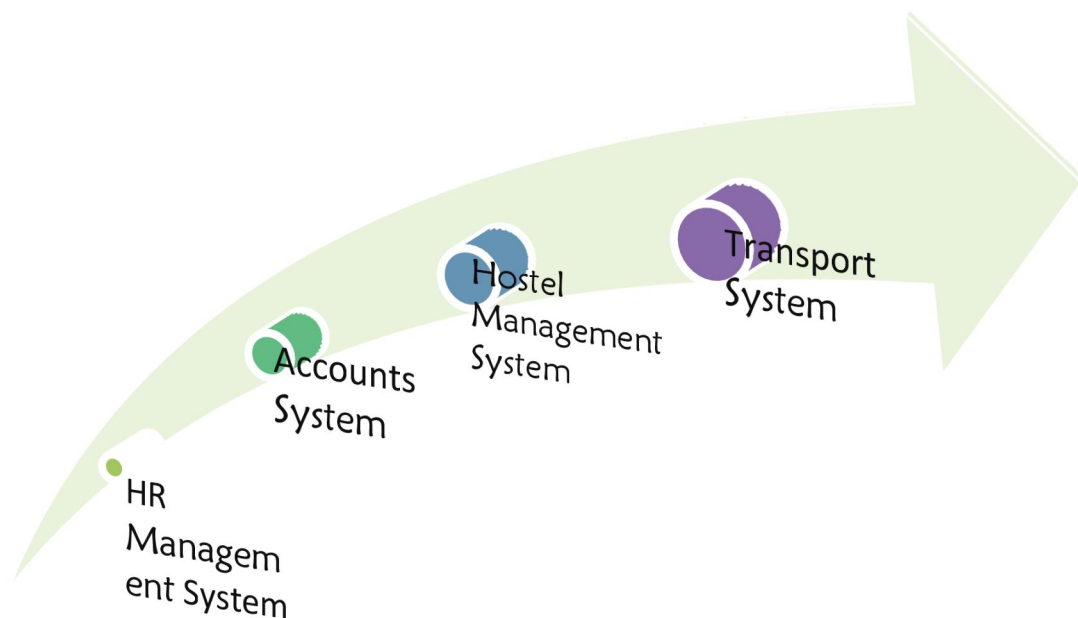


Examination-a glance

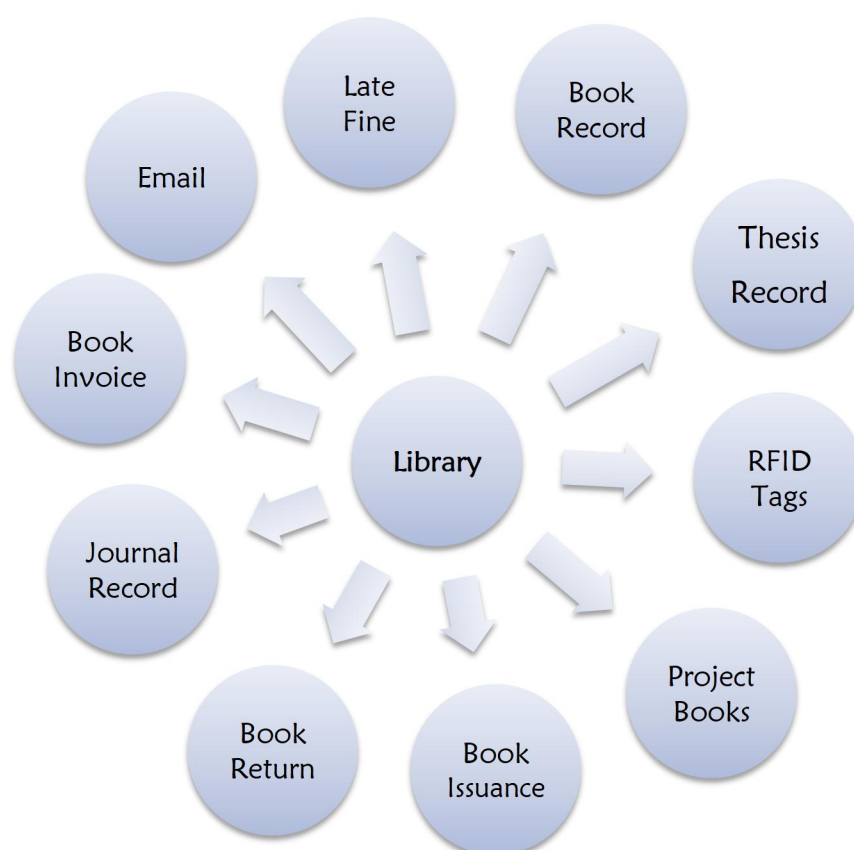
- Calculation of GPA, CGPA, Quality Points, Grades & All others Report Cards required to Controller Office and any other departments.
- Exam Attendance Sheet
- Award List
 - Mid Result
 - Final Result
- Transcripts
- Medal Lists
- Semester Result Notifications
- Final Result Notifications
- Provisional Certificate
- Intermediate Transcript with Picture
- Degrees Printing
- Graduate Directory



Future Enhancement



Library-a glance



WEB PORTAL:

The web portal consist of different modules, some are given below:

Scholarships: University offers different scholarship programs (e.g. HEC, USAID, PEEF, and NEST etc.) for the deserving students. Web portal facilitates those students to apply online for these scholarship programs.

Alumni Junction: Graduates of different faculties can register through this forum for development of friendly and business relationships.

Alumni Job info Portal: The University has about number of registered members on its Alumni Association who are regularly informed about various job openings through electronic emails to the members.

Academics: In this section all faculties and respective departments which are related to university have all the information i.e. faculty's basic information, staff members, degree programs and their completed or ongoing research projects.

Admissions: The web portal provides all the information about latest admission programs which are offered by the university and it also facilitates the candidates to apply online. For this ease number of applicants throughout the Pakistan had applied through website during the last session. The website also uploads the list of eligible students (Merit lists). If student name is in the list, in turn they can enter CNIC in the form to download the fee challan.

Complaint Cell: Website has provided the platform in which different walk of personnel can send their queries related to university. The concerned department can then entertain those queries accordingly.

News & Events: Web portal has provided all information about the events which are held in university. This information is in the form of news, photos, videos and in print media. This section also contains the information about the latest jobs and tenders.

Visiting Faculty Job Portal: The Job portal is developed for Visiting Faculty members. All Visiting faculty members apply online in every semester. Portal create detailed Job Application with all of candidate Personal, Academics, and Experience record in pdf form.

Admin Panel: All the data in web portal is manage through admin panel (i.e. upload, edit, delete). This includes photos, videos, news, press clipping, tenders, staff members information and events.

Admin Panel Online Admission portal: There is also an admin panel for Admission portal through which they can received online form of all the candidates who's apply online throughout the Pakistan. The candidate also checks their application form status, if is it received or not.

Admin Panel -SRC: There is also an admin panel for SRC through which they can manage alumni data of the registered members. They can send emails for new job announcements to members. Latest events are also handled through this panel.

Along with all these, web portal provides the download facility for different manuals, Performa, application forms, notes, membership forms and scholarship forms.

Admin Panel Visiting Faculty Job Portal: There is also an admin panel for selection of visiting faculty. Admin panel allow to respective Faculty/institute to search course wise application and view these applications.

UNIVERSITY BUILDING COMMUNITIES

UNIVERSITY-COMMUNITY INTERACTION

PMAS-AAUR is one of the leading higher education institutions in Pakistan. It plays a major role in grooming future leaders who can make a positive difference to the world around them. University has been involved with numerous community support programs. It has been working with different NGOs, government, semi-government/ non-profit organizations.

UNIVERSITY'S ROLE IN BUILDING COMMUNITY

The University has a significant social impact on the region. This impact extends beyond the staff and students to the broader community in general. University offers a wide range of cultural and recreational programs, contribute to the provision of health and community services, provide services to local government and provide assistance to community groups.

In addition to providing research, cultural and social fields, university provides valuable infrastructure for the community including venues for public events, libraries, sporting facilities and research laboratories.

The scholarly activities of a university serve to enhance the reputation of the local region both nationally and internationally. This may result in an increased attractiveness of the region to industries and investment. The University also offers regional communities a better chance to retain their talented youth population.

The students, faculty and administration of PMAS-Arid Agriculture University Rawalpindi have always worked tirelessly to serve their countrymen and at the time of floods when a catastrophe has hit our motherland, the university once again standing united to help the people of these areas in dealing with the after affects of this devastating flood. The University also dispatched the relief goods to the flood affected areas.

ACTIVITIES RELATED TO CAREER COUNSELING

STRUCTURAL ARRANGEMENTS FOR STUDENTS CAREER COUNSELING & PLACEMENT PROGRAM:

Career counseling is important and have vital role in students professional life. University administration of PMAS-AAUR established a specific career counseling center (Directorate of Financial Assistance & University Advancement) as per requirement of current era. Directorate of financial assistance & university advancement regularly shares jobs (published in print & electronic media) with university alumni and final semester students.

Following are the details of the alumni, interactive and scholarship activities organized for university scholars and alumni:-

Sr. No.	Alumni interactive/Scholarship Activities	Month
i.	Laptop distribution Ceremony	January – December 2019
ii.	Interactive Session by PEEF Scholarship Team	March – 2019
iii.	Scholarship award Ceremony by USAID funded Merit & Need Based Scholarship Program	March – 2019
iv.	Alumni Reunion 2019	May – 2019
v.	Monitoring visit by USAID – funded Merit & Need Based Scholarship Program Team	June – 2019
vi.	PEEF Scholarship cards Distribution Ceremony	August – 2019
vii.	Interactive Session by USAID MSI Team	November – 2019
viii.	Nest Scholarship Cheque Distribution	November – 2019
ix.	PEEF Scholarship Cards Distribution Ceremony	November - 2019

SPORTS

The Directorate of Sports is working hard for the promotion of sports and healthy activities at PMAS-Arid Agriculture University. The beautiful and prestigious Khalid M. Khan Gymnasium was completed in the university premises in 2010. The following Intervarsity Sports Championship was organized by Directorate of Sports:



PMAS-AAUR Students Team also participated in the following Intervarsity Sports Championship during the Year:

- ❖ **All Pakistan HEC Inter University Athletic Women Championship 2018-19** held at Lahore College for Women University Lahore (**November 11-14, 2018**)
- ❖ **All Pakistan HEC Inter University Athletic Men Championship 2018-19** held at University of Punjab Lahore (**November 11-14, 2018**)
- ❖ **HEC Inter University Table Tennis Zone C Men Championship 2018-19** held at University of Engineering and Technology Taxila (**November 24-27, 2018**)
- ❖ **HEC Inter University Badminton Zone C Men Championship 2018-19** held at University of Engineering and Technology Taxila (**December 08-11, 2018**)
- ❖ **All Pakistan HEC Inter University Badminton Men Championship 2018-19** held at University of Karachi, Karachi (**December 17-21, 2018**)
- ❖ **HEC Inter University Football Zone-C Men Championship 2018-19** held at PIES University Islamabad (**December 26-30, 2018**)
- ❖ **All Pakistan HEC Inter University Badminton Women Championship 2018-2019** held at Shaheed Benazir Bhutto Women University Peshawar (**January 02-06, 2019**)
- ❖ **HEC Inter University Cricket Zone C Men Championship 2018-19** held at COMSATS University Islamabad (**January 16-20, 2019**)
- ❖ **HEC Inter University Volleyball Zone C Men Championship 2018-19** held at University of Engineering and Technology Taxila. (**February 01-05, 2019**)
- ❖ **HEC Inter University Basket Ball Zone C Men Championship 2018-19** held at COMSATS University Islamabad. (**March 08-11, 2019**)
- ❖ **All Pakistan HEC Inter University Tennis Men Championship 2018-19** held at Air University Islamabad (**April 10-14, 2019**)
- ❖ **All Pakistan HEC Inter University Volleyball Women Championship 2018-19** held at Fatima Jinnah Women University Rawalpindi. (**April 30 2019 to May 04, 2019**)

The following Inter Faculty Sports Competitions were organized by Directorate of Sports during the Year.

- ❖ Interfaculty Badminton Boys Championship 2018-19
- ❖ Interfaculty Badminton Girls Championship 2018-19
- ❖ Interfaculty Basketball Boys Championship 2018-19
- ❖ Interfaculty Football Boys Championship 2018-2019
- ❖ Interfaculty Cricket Boys Aridian Premier League Championship 2018-19
- ❖ Interfaculty Tug of War Boys Championship 2018-19 (During Independence Day Celebration)
- ❖ Interfaculty 100 Meters Boys Championship 2018-19 (During Independence Day Celebration)
- ❖ Interfaculty Handkerchief Boys Championship 2018-19 (During Independence Day Celebration)
- ❖ Interfaculty Musical Chair Boys Championship 2018-19 (During Independence Day Celebration)
- ❖ Interfaculty Chatti Race Girls Championship 2018-19 (During Independence Day Celebration)
- ❖ Interfaculty Handkerchief Girls Championship 2018-19 (During Independence Day Celebration)
- ❖ Interfaculty Tug of War Girls Championship 2018-19 (During Independence Day Celebration)
- ❖ Interfaculty Musical Chair Girls Championship 2018-19 (During Independence Day Celebration)

SPORTS GALA FATIMA JINNAH WOMEN UNIVERSITY

The University Students Team Girls has participated in the following Sports Competitions in the Fatima Jinnah Women University 2018-19

- ❖ 3rd Position in the Intervarsity Volleyball Girls Championship Sports Gala Fatima Jinnah University 2018-19
- ❖ 3rd Position in Intervarsity Table Tennis Girls Championship Sports Gala Fatima Jinnah University 2018-19
- ❖ 3rd Position in Intervarsity Squash Girls Championship Sports Gala Fatima Jinnah University 2018-19
- ❖ 2nd Position in Intervarsity Tug of War Girls Championship Sports Gala Fatima Jinnah University 2018-19
- ❖ Overall 3rd Position in Sports Gala at Fatima Jinnah University, Rawalpindi 2018-19

UNIVERSITY BUILDING LEADERSHIP

STUDENT LEADERSHIP (UNIVERSITY DRAMAS, EXHIBITIONS, EXPOS, COMPLETIONS, DEBATES AT NATIONAL AND INTERNATIONAL LEVELS)

SR.#	EVENTS	EVENT DATE
1.	Celebrations of International Women's Day	08.March.2019
2.	Entrepreneurship Staff Competition	04.April.2019
3.	Seminar on Safe and Informed Student Migration for study purpose in top ranked World Universities	04.April.2019
4.	Seminar on Tax Awareness in Connection with Tax Day Celebrations	09.April.2019
5.	Participation in 2 nd International Student Convention & Expo	17.April.2019 To 19.April.2019
6.	Participation in Bol'19-4 th All Pakistan Literary Competition	29.April.2019 To 30.April.2019
7.	Participation in 3 rd Riaz shad All Pakistan bilingual declamation Contest and Punjabi Taakra	03.May.2019
8.	Participation in Museum's Educational Programme at National History Museum, Lahore	25.May.2019 To 26.May.2019
9.	Independence Day Celebrations	19.August.2019
10.	Organization of Kashmir Solidarity Walk	30.August.2019
11.	Celebration of Defense Day of Pakistan & Kashmir Solidarity Walk	06.September.2019
12.	Participation in Lunch Event of Prime Minister Youth Program	17.October.2019
13.	Commemoration of Anti corruption Day, 2019 with Collaboration of National Accountability Bureau (Rawalpindi)	03.December.2019
14.	Special Program Relating Pegam-e-Pakistan	17.December.2019 To 18.December.2019
15.	Role of Youth for Peace Building in Pakistan	17.December.2019

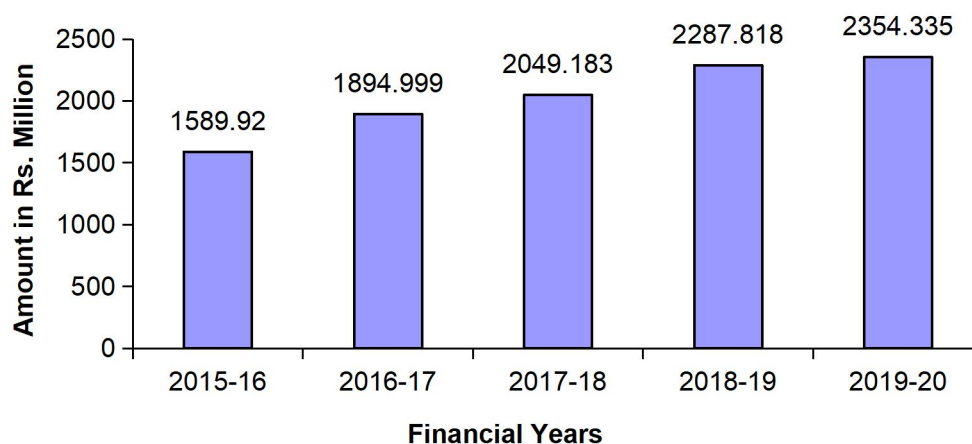
FINANCE

SUMMARY OF REVISED BUDGET ESTIMATES FOR THE YEAR 2019-2020

INCOME ESTIMATES				EXPENDITURE ESTIMATES			
Sources of Income	Budget-Estimates 2018-19	Revised Budget Estimates 2018-2019	Budget Estimates 2019-2020	Head of Accounts	Budget Estimates 2018-19	Revised Budget Estimates 2018-2019	Budget Estimates 2019-2020
Opening Balance	505050000	744555395	898129728	Pay and Allowances	900662893	861092415	976667932
Punjab Government	71003000	71003000	71003000	Purchase of Durable Goods	32000000	54300000	39000000
Federal Government	663714000	666941000	592402000	Research Projects	11000000	11000000	6250000
Supplementary Grant from Federal Government	5000000	-	-	Construction Work	181188595	184788595	184950000
Own Resources	416786464	376087718	316127631	Repair of Durable Goods	13000000	11000000	8500000
University Fee From UIMS	96945871	88104120	73120460	Commodities & Services	173850000	181495000	155242694
University Fee from UIIT	198256877	194132500	171754120	Transfer Payments	215000000	334561360	309300000
Income from Affiliated Institutes	69051978	75249060	80649073	Miscellaneous Expenditure	36000000	47000000	47200000
Khushab Campus	17950700	16393173	17267490	Contingent Paid Staff	33000000	33000000	57850641
Federal Government Grant for Tenure Track Faculty	14575672	14575672	14575672	Overtime/Evening sitting	13000000	15000000	17000000
Federal Government Grant for Need Based Scholarships	33501000	33501000	33501000	Reimbursement of Medical Charges	8500000	12500000	12500000
PMAS-AAUR Sub Campus Attock	7275500	7275500	5795600	Building Rent	2000000	1000000	1000000
Institute of Soil Sciences & Water Conservaion			2378220	Tenure Track System	14575672	14575672	14575672
Institute of food Technology/ Human Nutrition & Dietics/Food			31275460	Need Based Scholarships	33501000	33501000	33501000
Institute of Biochemistry & Bio technology (UIBB)			40246110	IT Network Data Centre	34727704	37705928	38030648
Institute of Geo information & Earth Observation			6110360	UIIT	79220814	87663786	90519728
				UIMS	66566940	71552408	71866888
				Institute of Soil Science & water Conservation	25558060	28491288	28149716
				Institute of Food & Nutritional Sciences	29472104	32125240	35486256
				Institute of Biochemistry & Biotechnology	31705048	37309660	36672124
				Institute of Geo-Information & Earth Observations	13102206	29674738	24842796
				Institute of Hydroponic Agriculture	37365110	38979392	37093196
				UAAR Research Farm Chakwal Road	34342550	38342500	38457004
				PMAS-AAUR Sub Campus Khushab	50447446	60218396	58385408
				PMAS-AAUR Sub Campus Attock	28079538	30542816	31185152
Total	2099111062	2287818138	2354335924	Total	2097865680	2287420194	2354226855

FINANCIAL YEAR AT A GLANCE

SUMMARY OF BUDGET ESTIMATES



RECURRING BUDGET

Recurring Funding (Punjab Govt.) In Million Rs.						
2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
50.241	55.265	73.984	78.423	78.423	71.003	71.003
Recurring Funding (HEC) In Million Rs						
2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
414.441	464.379	533.344	606.153	651.180	663.714	592.402

SELF GENERATED INCOME

For FY 2018-19 = Rs. 757.200 million

For FY 2019-20 = Rs. 744.700 million

SUMMARY OF DEVELOPMENT BUDGET ESTIMATES (2018-19)

S. No.	Name of Project	Estimated Cost (Rs. In m)	Total Exp. Upto (30.06.17) Actual (Rs. In m)	Unspent Balance Carried Forward for (2017-18) (Rs. In m)	Releases during (2017-18) (Rs. In m)	Total Available Funds (2017-18) (5+6) (Rs. In m)	Exp. During (2017-18) (Rs. In m)	Total Exp. (4+8) (Rs. In m)	Unspent Balance Carried forward 2018-19 (7-8) (Rs. In m)	PSDP Allocation (2018-19) (Rs. In m)	Estimated Budget During (2018-19) (10+11) (Rs. In m)
1	2	3	4	5	6	7	8	9	10	11	12
i.	Establishment of Sub Campus of PMAS-AAUR at Attock (Phase-II)	188.260	0.000	0.000	130.00	130.00	58.475	58.475	71.525	200.00	271.525
ii.	Strengthening of Agricultural Engineering & Women Development Programs at PMAS-AAUR	751.244	84.161	315.839	100.00	415.839	170.48	254.641	245.359	251.244	496.603
Grand Total		939.504	84.161	315.839	230.00	545.839	228.955	313.116	316.884	451.244	768.128

UNIVERSITY GOVERNANCE

SYNDICATE

The syndicate is the executive body of the University. Subject to the provisions of the Act and the Statutes, it takes effective measures to raise the standard of teaching, research and publications and other academic pursuits and exercises general supervision over the affairs and management of the property of the University. During the reporting period, Four (04) Syndicate meeting was arranged and necessary decisions were taken in the best interest of PMAS-AAUR.

The University Syndicate consists of:

a.	The Vice Chancellor	Chairman
b.	Member of Provincial Assembly of the Punjab nominated by the Speaker of the Assembly	Member
c.	Chief Justice of the Lahore High Court, or his nominee	Member
d.	Secretary, Department of Agriculture, Government of Punjab, Lahore	Ex-officio Member
e.	Secretary, Department of Livestock and Dairy Development, Government of Punjab, Lahore	Ex-officio Member
f.	Secretary, Department of Finance, Government of the Punjab, Lahore.	Ex-officio Member
g.	One nominee of the Higher Education Commission	Member
h.	One Dean to be nominated by the Chancellor on the recommendations of the Vice Chancellor	Member
i.	Four elected members from the faculty of the University	Members
j.	Three persons of eminence to be nominated by the Chancellor	Members
k.	The Registrar	Secretary

ACADEMIC COUNCIL

The Academic Council is the academic body of the University. It is responsible to lay down proper standards of teaching / instructions, research, publications and examinations and to regulate and promote the academic life at the University. In year 2019, Two (02) meeting of Academic Council was conducted, wherein revised/amended and new curricula for Undergraduate and Postgraduate studies were discussed and approved. The general rules and regulations pertaining to academic and administration were also argued and the decisions were made for implementation.

The Academic Council consists of:

a.	The Vice Chancellor	Chairman
b.	The Deans of the Faculties	Members
c.	The Directors of the Divisions/Institutes	Members
d.	All University Professors including Professors Emeritus	Members
e.	The Chairmen/Chairpersons of the Teaching Departments	Members
f.	All Associate Professors	Members
g.	Two Assistant Professors and two Lecturers to be elected by and from amongst themselves	Members
h.	The Librarian	Members
i.	The Controller of Examinations	Members
j.	Two Agricultural Scientists to be nominated by the Chancellor	Members
k.	Four representatives of NARC to be nominated by the Director General, NARC, Islamabad	Members
l.	The Registrar	Member/Secretary

ADVANCED STUDIES AND RESEARCH BOARD

The Advanced Studies and Research Board advise the authorities on all matters concerning promotion of advanced studies, publications and research in the University. The board considers and reports to the authorities on the institution of research degrees in the University. In the academic year 2019, Advanced Studies & Research Board was met for two times; the board afforded approvals and advised amendments, where necessary, on admission to post-graduate level, synopsis and research titles of post-graduate students, rules and regulations. The Board also scrutinized various research projects and approved/referred for revision.

Advanced Studies and Research Board consists of:

a.	The Vice Chancellor	Chairman
b.	The Deans	Members
c.	Directors of the Divisions and the Institutes of the University	Members
d.	Principals of Affiliated Colleges/Directors of affiliated Institutes	Members
e.	Three University Professors, other than Deans, to be appointed by the Syndicate	Members
f.	Three University teachers to be appointed by the Academic Council	Members
g.	Five experts from other sister Institutions to be nominated by the Syndicate	Members
h.	Director Advanced Studies	Secretary

FINANCE AND PLANNING COMMITTEE

The Finance and Planning Committee advise the Syndicate on all matters relating to planning, development, finance, investments, and accounts of the University. In year 2019, Three (03) meetings of Finance and Planning Committee were conducted.

The Finance and Planning Committee consists of:

a.	The Vice Chancellor	Chairman
b.	One member of the Syndicate to be appointed by the Syndicate	Member
c.	Two members of the Academic Council to be appointed by the Academic Council	Members
d.	Two nominees of the Chancellor, one each from Agriculture Department and Finance Department, Punjab	Members
e.	The Registrar	Member
f.	The Treasurer	Member/Secretary

CAMPUS COMMITTEE

The syndicate of the University approved the constitution of Campus Committee with the following Rules of Business:

- To approve all estimates for the purchase of lands and construction work on the campus
- To engage Architects and Engineering consultants
- To let out works to the contractors
- To do other necessary works to complete the construction at the campus

In year 2019, Seven (07) Meetings of Campus Committee were conducted. The Campus Committee consists of:

a.	The Vice Chancellor	Chairman
b.	Director General RDA or His representative	Member
c.	Superintending Engineer Building Department Rawalpindi.	Member
d.	DCO Rawalpindi or His representative (for purchase of Land)	Member
e.	Dean FA&ET	Member
f.	Principal Officer Student Affairs	Member
g.	Principal Officer Estate Care & Security	Member
h.	The Registrar	Member
i.	The Treasurer	Member
j.	The Resident Auditor	Member
k.	Project Director Works	Member
l.	Director Planning & Development	Secretary

FACULTY PUBLICATIONS

1. Abbas, G., W. Nazeer, A. Batool, Z. Hasnain and N. Perveen. 2019. Genetic behavior of yield contributing and ionic concentration traits under salt stress conditions in cotton (*Gossypium hirsutum* L.). *European journal of Biotechnology and BioScience* 7(3):30-37.
2. Abbasi, K. S., Qayyum, A., Mehmood, A., Mahmood, T., Khan, S. U., Liaquat, M., Sohail, A., A. Ahmad. 2019. Analysis of selective potato varieties and their functional assessment. *Food Science and Technology*. Accepted for publication. <http://dx.doi.org/10.1590/fst.26217>
3. Abubakar, S., I. Hamid, W. Li, Q. Nawaz, S. Mushhad, M. Gilani. "Image Representation Using Variants of Principal Component Analysis: A Comparative Study" in 11th International Conference on Communication Software and Networks (ICCSN 2019), Chongqing, China, June 12-15, 2019. published
4. Adnan, M., Kang, S., Zhang, G., Anjum, M. N., Zaman, M., Ali A. F., 2019. Evaluation of SWAT Model performance on glaciated and non-glaciated subbasins of Nam Co Lake, Southern Tibetan Plateau. *Journal of Mountain Science*, 16(5): 1075-1097. <https://doi.org/10.1007/s11629-018-5070-7>[IF = 1.423]
5. Adnan, M., Kang, S., Zhang, G., Saifullah, M., Anjum, M. N., Ali A. F., 2019. Simulation and analysis of the water balance of the Nam Co Lake using SWAT model. *Water*, 11:1383. [IF = 2.524]
6. Aftab, A., Hassan, I., Ashfaq H. A., Irshad, G., Mahnoor, S. H., Hussan, A and Rabbani G. 2019. Effect of calcium chloride on growth and production of *Antirrhinum* flower. *Sarhad journal of Agriculture* (HEC Recognized)
7. Afzal, A., A. Riaz, F. Naz, S. K. Nawaz Shah, S. R. Ali, M. Ijaz. 2019. Pedigree analysis of wheat advanced lines to assess genetic diversity and screening for durable resistance against stripe rust in wheat. *Journal of Gen. Pl. Path.* (Accepted).
8. Ahmad, I., S. A.Wajid, A. Ahmad, M. J. M. Cheema and J. Judge. 2019. Optimizing irrigation and nitrogen requirements for maize through empirical modeling in semi-arid environment. *Environmental Science and Pollution Research*. 26(2) 1227 – 1237 DOI: 10.1007/s11356-018-2772-x Impact Factor: 2.800
9. Ahmad, I., M. Tayyab, Zaman, M., Anjum, M.N., 2019. Finite-Difference Numerical Simulation of Dewatering System in a Large Deep Foundation Pit at Taunsa Barrage, Pakistan. *Sustainability*, 11(3): 1–17. [IF = 2.592]
10. Ahmad, J., Athar, M. R., Azam, R. I., Hamstra, M. R., and Hanif, M. 2019. A Resource Perspective on Abusive Supervision and Extra-Role Behaviors: The Role of Subordinates' Psychological Capital. *Journal of Leadership & Organizational Studies*, 26(1), 73-86.
11. Ahmad, M., B. Rasool, M. Ahmad and D. A. Russell. 2019. Resistance and synergism of novel insecticides in field populations of cotton bollworm, *Helicoverpa armigera* (Lepidoptera: Noctuidae) in Pakistan. *Journal of Economic Entomological*, 112(2): 859-871. (IF 1.936)

12. Ahmad, M. D., M. Kirby and M. J. M. Cheema. 2019. Impact of Agricultural Development on Evapotranspiration Trends in the irrigated districts of Pakistan: Evidence from 1981 to 2012. *Water International Journal*. 44:1, 51-73, DOI: 10.1080/02508060.2019.1575110. (IF: 1.956)
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SEMINARS, WORKSHOPS & CONFERENCES

SEMINARS, WORKSHOPS & CONFERENCES HELD AT UNIVERSITY

Sr. #	TITLE OF EVENTS	DATE
1.	Teacher Training Program TeaPro: Understanding and designing an activity of evaluation	01.January.2019 To 02.January.2019
2.	International Seminar on UAV based Precision Agriculture Spraying technology and Field Demonstration	08.January.2019 To 09.January.2019
3.	5 th National training workshop on commercial Ostrich Farming	29.January.2019
4.	2 nd National poultry training on Ventilation essentials of Poultry seminar	31.January.2019
5.	Training workshop on Climate Data Analysis using NCL	January.2019
6.	Food product development competition on Pulses	09.February.2019
7.	World Pangolin Day Seminar 2019	14.February.2019
8.	International Conference on “Olive Orchard Management and Value Chain Development	19. February.2019 To 20.February.2019
9.	World Wildlife Day Seminar 2019	01.March.2019
10.	Seminar on World Forest Day: Forests and Education – Learn to Love Forests	21.March.2019
11.	International Conference on Recent Advances for Crop Productivity Enhancement.	02.April.2019 To 03. April.2019
12.	2 nd WPSA seminar Broiler Breeder Seminar	11.April.2019
13.	Seminar on Thalassemia Awareness and Screen Camp	04.April.2019
14.	Seminar on “Quality Culture in the Higher Education: Students Learning Perspective”.	16.April.2019
15.	Regional Workshop on ICT Role for Disaster Prediction & Management	02.May.2019 To 04.May.2019
16.	2 nd National training Workshop on Commercial Meat Production	13.June.2019 To 14.June.2019

17.	Pro CRISPR course CODON Corps	17.June.2019
18.	Two Days Training Workshop on Entrepreneurship in Life Sciences	17.June.2019 To 18.June.2019
19.	Certificate of appreciation and to organize “Annual Dinner 2019 & Eid Milan Party”	20. June.2019.
20.	National Honey Festival	18.June.2019
21.	Technical Proposal Writing	24.June.2019
22.	Seminar on “Role of Benchmarking in Quality Assurance in Higher Education”.	27.June.2019
23.	Feed to feed Conference Seminar	07.July.2019
24.	Environmental Reporting to Bridge the Gap Between Public and Academia for Achieving Sustainable Developmental Goals	17.July.2019
25.	Innovative Technologies in Agriculture	23.July.2019
26.	Seminar on Combating Desertification in Pakistan: Let’s Grow the Future Together	31.July.2019
27.	Dengue Prevention and Control	27.August.2019
28.	Capacity building of farmers regarding ecofriendly management of Chilli Anthracnose	05.September.2019
29.	Productivity enhancement of pulses in Pakistan	02.October.2019
30.	Industry-Academia Collaboration: Retreat & Way Forward	10.October.2019
31.	Conference on Rural Transformation through Young Generation	09.October.2019 To 10.October.2019
32.	A seminar on Digiskills	16.October.2019
33.	World Food Day Celebrations 2019 with the theme Our Actions are our Future, Healthy Diets for A #ZeroHunger World	16.October.2019
34.	Medicinal Importance of Hemp	16.October.2019
35.	Strategies for Academia-Government-Industry Linkage for Sustainable Agriculture	17.October.2019
36.	7 th National poultry seminar on novel nutrients of Chicken Eggs	22.October.2019

37.	Poster presentation and egg dishes cooking competition on World Egg Day	22.October.2019
38.	Awareness Walk on World Egg Day Seminar	22.October.2019
39.	Seminar on “Implementation of Quality Assurance Procedures for MPhil and Doctoral Education at the Arid Varsity”.	23.October.2019
40.	Layer Quality Seminar	23.October.2019 To 24.October.2019
41.	Seminar on Breast Cancer Awareness	30.October.2019
42.	Training of internees under Internship project	07.November.2019
43.	2 nd National training Workshop on Commercial Dairy Farming	18.November.2019 To 19.November.2019
44.	Value-added Agriculture as a Strategy to Promote Agrifood Export	20.November.2019
45.	Opportunities to collaborate in Academics and Research Initiatives	28.November.2019
46.	Training workshop for newly Appointed Teachers	16.December.2019 To 20.December.2019
47.	Achieving food security in the Digitalized world	December 2019
48.	Sustainable Management of Land and Water Resources in Pakistan	19.December.2019
49.	One day Training workshop for Food Handlers	26.December.2019
50.	Seminar on “The Impact of Future Internet Technologies	2019
51.	Training of new IoTs Technology	2019

WORKSHOPS, SEMINARS AND CONFERENCES ATTENDED BY THE FACULTY

INTERNATIONAL

1. Dr. Muhammad Rais, Assistant Professor, Department of Wildlife attended Applying Ex-situ Conservation Guidelines organized by Conservation Planning Specialist Group, at IUCN on February 28, 2019.
2. Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Sciences attended VIV Asia, Bangkok Thailand, 6th feed to food conference at Bangkok Thailand from March 13-15, 2019.
3. Prof. Dr. Riaz Ahmad, Director, Quality Control attended the International conference on “quality assurance qualifications and recognition: fostering trust in a globalized world” at University Grants Commission, Colombo, Sri Lanka from March 25-28, 2019.
4. Dr. Tariq Mahmood, Associate Professor, Department of Wildlife attended a wild solution to climate change at Webinar held on April 10, 2019.
5. Dr. Tariq Mahmood, Associate Professor, Department of Wildlife attended Indian pangolin red list assessment: skype call meeting on April 05, 2019.
6. Dr. Farid Asif Shaheen, Assistant Professor, Department of Entomology attended 1st International Molecular Plant Protection congress (Molecular approaches for better plant Protection) at Cukurova University, Adana Turkey from April 10-13, 2019.
7. Dr. Aneela Afzal, Assistant Professor, Department of Sociology attended Gender-inclusive learning/research activities: The Family Farm Teams approach, University of Canberra Australia at University of Canberra Australia held on April 2, 2019.
8. Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Sciences attended XVII European symposium on the quality of eggs and egg products at Izmir Turkey from June 23-26, 2019.
9. Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Sciences attended XXIV European Symposium on the quality of meat products at Izmir, Turkey from June 23-26, 2019.
10. Prof. Dr. Shamim Akhter, Department of Zoology attended Fourier harmonic analysis of buffalo sperm for prediction of bull fertility at Department of Animal Sciences, University of Wisconsin- Madison, USA from July 1-30, 2019.
11. Dr. Muhammad Sajid Nadeem, Associate Professor, Department of Zoology attended Training of trainers-environmental management action plan (EMAP) and DEBMP at PTDC, Besham from July 2-3, 2019.
12. Dr. Farid Asif Shaheen, Assistant Professor, Department of Entomology attended Smart Integrated Farming for sustainable Agriculture at Agrotechnology innovation center Gadjahmada University, Yogyakarta, Indonesia from July 15-24, 2019.
13. Dr. Muhammad Rais, Assistant Professor, Department of Wildlife attended Facilitating Species Conservation Planning Workshop Conservation Planning Specialist Group, at IUCN from August 26 to September 04, 2019.
14. Dr. Mahmood Ul Hassan, Assistant Professor, Department of Plant Breeding & Genetics attended Australian pulse conference at Horsham, Australia from October 14-16, 2019.

15. Prof. Dr. Muhammad Ali Shah, Dr. Murtaz ul Hassan, Associate Professor and Dr. Aayesha Riaz, Assistant Professor, Department of Microbiology & Parasitology attended controlling disease outbreaks of especially dangerous pathogens at Bali, Indonesia from October 07-15, 2019.
16. Dr. Naeem Abbas Malik, Lecturer, Institute of Geo Information & Earth Observation attended conference on Asia Pacific federation for information technology in agriculture at Feng Chia University, Taichung, Taiwan on October 2019.
17. Prof. Dr. Azeem Khalid, Department of Environmental Sciences attended Invited speaker asia-pacific symposium on energy utilization of municipal solid waste for a sustainable development of city and international conference on solid waste at Hangzhou, China from November 13-16, 2019.
18. Dr. Zahid Akram, Associate Professor, Department of Plants Breeding & Genetics attended 1st silk road wheat innovation alliance on November 1-3, 2019 at NWAUFU Yangling, China.
19. Dr. Zuhair Hasnain, Assistant Professor/Project Director (Sub-Campus Attock) attended International training workshop on rainwater harvesting at Gansu Academy for water conservancy, at Lanzhou (Gansu), China from October 13 to November 01, 2019.
20. Muhammad Hassan Ali Biag, Administrator, Institute of Geo Information & Earth Observation attended Training course on one belt and one road Hyperspectral remote sensing and precision agriculture at Sanya, China from November 1-16, 2019.
21. Dr. Muhamamd Amin, Lecturer, Institute of Geo Information & Earth Observation attended AGU fall Meeting at Sans Francisco on December 2019.
22. Prof. Dr. Asif Ahmad, Director, Institute of Food & Nutritional Sciences attended Ist International Ajwa Forum, Madinah, Saudi Arabia at Saudi Arabia from December 1-4, 2019.
23. Dr. Ahmed Imran Hunjra, Assistant Professor, University Institute of Management Sciences Colombage, S. and Rehman, K. U attended mediating role of capital budgeting between uncertainty, corporate social responsibility and stakeholder interest on firm's financial performance at Vietnam Symposium of Banking in Finance (VSBF-2019), Vietnam on October 26, 2019.
24. Dr. Ahmed Imran Hunjra, Assistant Professor, University Institute of Management Sciences attended session chair & discussant 2019 at Vietnam Symposium in Banking and Finance at Banking Academy of Vietnam, Hanoi, Vietnam held on October 24-26, 2019.

NATIONAL

1. Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Science attended Thermographic diagnostic imaging at FV & AS AAUR held on **January 3, 2019**.
2. Prof. Dr. Zammurad Iqbal Ahmed, Dr. Irfan Aziz, Dr. Muhammad Rashid, Dr. Muhammad Ansar, Associate Professors and Dr. Abdul Manaf, Dr. Ghulam Abbas Shah, Dr. Safdar Ali and Dr. Muhammad Naved Tahir, Assistant Professors Department of Agronomy and Dr. Muhammad Tariq, Dr. Asim Gulzar, Assistant Professors, Department of Entomology attended International Seminar on UAV based Precision Agriculture Spraying technology and Field Demonstration at Department of Agronomy, PMAS-Arid Agriculture University Rawalpindi, Pakistan on January 9, 2019.

3. Dr. Muhammad Hassan Ali Baig, Assistant Professor, Institute of Geo-Information & Earth Observation attended Professional training on irrigation modeling using decision support system for agro technology transfer (DSSAT) at NARC Islamabad from January 8-9, 2019.
4. Dr. Rai Muhammad Amir, Assistant Professor, Institute of Food & Nutritional Sciences attended Certificate of participation “Sports Gala 2019” at PMAS-Arid Agriculture University Rawalpindi, Pakistan from January 17-18, 2019.
5. Mr. Naeem Abbas Malik, Lecturer, Institute of Geo-Information & Earth Observation attended workshop on climate data analysis using NCL at PMAS AAUR on January 2019.
6. Prof. Dr. Asif Ahmad, Institute of Food & Nutritional Sciences Presented talk on Nutritional Importance and Value Addition of Pulses in Seminar jointly organized by ACIAR Pulses project, AAUR, NARC and BARI at PMAS-Arid Agriculture University Rawalpindi on January 9, 2019.
7. Dr. Rai Muhammad Amir, Assistant Professor, Institute of Food & Nutritional Sciences attended Certificate of completion “Level 3 Award in HACCP” at Safety World International (Pvt) Limited on January 11, 2019.
8. Dr. Tanveer Ahmad, Associate Professor, Department of Livestock Production & Management attended 5th National training on commercial ostrich farming at PMAS Arid Agriculture University Rawalpindi on January 29, 2019.
9. Dr. Tanveer Ahmad, Associate Professor, Department of Livestock Production & Management attended 2nd National poultry training on ventilation essentials of poultry at PMAS Arid Agriculture University Rawalpindi on January 31, 2019.
10. Dr. Gulnaz Hameed, Assistant Professor, Department of Economics, attended three days training on “Applied Econometrics” at Quaid-i-Azam University, Islamabad on January 4-6, 2019.
11. Dr. Muhammad Javaid Asad, Associate Professor, University Institute of Biochemistry & Biotechnology attended international seminar on UAV based precision agricultural spraying technology and field demonstration at PMAS-AAUR on January 09, 2019.
12. Dr. Rai Muhammad Amir, Assistant Professor, Institute of Food & Nutritional Sciences attended certificate of participation “escon, 2019, International conference on environmental toxicology and health” at Comsats University Islamabad, Pakistan from **February** 25-27, 2019.
13. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology attended international horticulture conference pakistan at Institute of Soil & Environmental Sciences, University of Agriculture Faisalabad, Pakistan, & Pakistan Agricultural Scientists Forum (PAS) from February 26-28, 2019.
14. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology attended conference on innovations in agriculture: nourishing Pakistan in changing climate on February 13-15, 2019.
15. Dr. Tayyaba Zainab, Assistant Professor, University Institute of Biochemistry & Biotechnology attended brain storming session on genome editing and other new breeding technologies” on February 13, 2019.
16. Prof. Dr. Muhammad Naeem, Dr. Muhammad Tariq, Dr. Asim Gulzar, Assistant Professors, Department of Entomology and Dr. Badar Naseem Siddiqui, Associate Professor, Dr. Muhammad Ali, Lecturer, Department of Agricultural Extension attended the 2nd National Agri-Tourism conference at PMAS AAUR from February 18-19, 2019.

17. Dr. Muhammad Moaeen-ud-din, Associate Professor, Department of Animal Breeding & Genetics attended National Livestock Show & IBC 2019 at PC Hotel Lahore from February 18-20, 2019.
18. Ms. Aniq Batool, Lecturer, Department of Environmental Sciences attended On-Farm Watershed Management for Flood & Drought Control at Hill View SAWCRI from February 19-21, 2019.
19. Prof. Dr. Azeem Khalid, Prof. Dr. Tariq Mahmood and Dr. Audil Rashid, Dr. Shahid Mahmood, Assistant Professors, Department of Environmental Sciences and Dr. Aamir Saleem, Dr. M. Irfan Ashraf, Dr. Saeed Gulzar, Dr. Lubna Ansari, Assistant Professors, and Ms. Sabeeqa Usman Malik, Lecturer, Department of Forestry & Range Management attended International Conference on "Olive Orchard Management and Value Chain Development at NARC, Islamabad on February 19-20, 2019.
20. Dr. Gulnaz Hameed, Assistant Professor, and Dr. Muhammad Abdul Rahman, Lecturer, Department of Economics attended Seminar on "Education the way forward" at Aiwan e Saddar, Islamabad on February 25, 2019.
21. Dr. Saad Imran Malik, Assistant Professor, Department of Plant Breeding & Genetics attended Collective action for knowledge economy with technology CAKE-Tech at Allama Iqbal Open University, Islamabad on February 25-26, 2019.
22. Dr. Pakeeza Arzo Shaiq and Dr. Tayyaba Zainab, Assistant Professors, University Institute of Biochemistry & Biotechnology attended International Conference on Advancement in Biotechnology and Biocomputing at International Islamic University Islamabad, Main Campus, Islamabad from February 07-09, 2019.
23. Dr. Sadia Saeed, Assistant Professor, University Institute of Biochemistry & Biotechnology attended International Women Day 2019 held at PMAS-AAUR on **March** 08, 2019.
24. Dr. Aamir Saleem, Chairman, Dr. Saeed Gulzar, Dr. M. Irfan Ashraf and Dr. Lubna Ansari, Assistant Professors, Ms. Sabeeqa Usman Malik, Lecturer, Department of Forestry & Range Management attended seminar on world forest day: forests and education learn to love forests at main seminar room PMAS AAUR on March 21, 2019.
25. Dr. Muhammad Arshad Dahar, Assistant Professor, Department of Education attended seminar on impact on schools environment on the mental health of students at University of Haripur, Haripur from March 20-22, 2019.
26. Dr. Muhammad Javaid Asad, Associate Professor, University Institute of Biochemistry & Biotechnology attended web of science conference on international scholarly publishing from Pakistan, framework for fast-paced progress at CEMB, Punjab University, Lahore on March 11, 2019.
27. Dr. Muhammad Arshad Dahar, Assistant Professor, Department of Education, attended Seminar on Impact of Head Teacher's behavior on teaching learning process at secondary level at University of Haripur, Haripur from March 20-22, 2019.
28. Dr. M. Imran Yousaf, Associate Professor, Department of Education attended comparative study on university teacher's attitude towards weak and bright students held at University of Haripur, Haripur from March 20-22, 2019.
29. Prof. Dr. Ghazala Koukab Raja, Dr. Muhammad Javaid Asad, Dr. Muhammad Sheeraz Ahmad, Dr. Feroza Hamid Wattoo, Associate Professors, Dr. Pakeeza Arzo Shaiq, Dr. Sadia Saeed & Dr. Tayyaba Zainab, Assistant Professors, University Institute of Biochemistry &

Biotechnology attended Workshop on How to Use Digital Library at PMAS-AAUR on March 05, 2019.

30. Dr. Aneela Afzal, Assistant Professor, Department of Sociology attended Workshop on “World Water Day” at PMAS-Arid Agriculture University-Rawalpindi (AAUR) on March 22, 2019.
31. Dr. Aneela Afzal, Assistant Professor, Department of Sociology attended Workshop on “International Woman day” at PMAS-Arid Agriculture University-Rawalpindi on March 8, 2019.
32. Prof. Dr. Asif Ahmad, Institute of Food & Nutritional Sciences Presented talk on Trends in Food Safety: Need for Food Safety in Pakistan at International Islamic University Islamabad, Islamabad on March 6, 2019.
33. Prof. Dr. Asif Ahmad, Institute of Food & Nutritional Sciences attended Workshop on Nutritional Implications at CMH, Rawalpindi Delivered lecture on Concept and Application of nutraceuticals at Combined Military Hospital Rawalpindi on March 21, 2019.
34. Dr. Kashif Sarfraz Abbasi, Lecturer, Institute of Food & Nutritional Sciences attended Agriculture and Biological Sciences” at University of Haripur, Haripur-KPK, Pakistan on March 27-30, 2019.
35. Dr. Muhammad Ansar, Associate Professor, Dr. Ghulam Abbas Shah and Dr. Imran Mehmood, Assistant Professors, Department of Agronomy attended 1st international conference on “Agricultural and Biological Sciences” Focusing Food Security and Climate Change at University of Haripur, Khyber Pakhtunkhwa, Pakistan on March 27-30, 2019.
36. Prof. Dr. Tariq Mukhtar and Dr. M. Usman Raja, Assistant Professors, Department of Plant Pathology attended 1st International Conference on Agricultural and Biological Sciences Focusing Food Security and Climate Change at Faculty of Basic and Applied Sciences the University of Haripur, Haripur, Khyber Pakhtunkhwa, Pakistan on March 27-30, 2019.
37. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology attended 1st Aus-Pak International Conference on Wheat for Food Security at Department of Horticulture, Bahauddin Zakaria University, Multan held on March 25, 2019.
38. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology attended 1st Aus-Pak International Conference on Pulses for Food Security at Institute of Plant Breeding and Biotechnology, MNS University of Agriculture, Multan held on March 27, 2019.
39. Dr. Tariq Mahmood, Associate Professor, Dr. Maqsood Anwar, Subject Expert/Consultant, Dr. Muhammad Rais and Dr. Bushra Allah Rakha, Assistant Professors, Department of Wildlife attended 39th Pakistan Congress of at Government Post Graduate Islamia College University, Peshawar Zoology from March 4-6, 2019.
40. Dr. Bushra Allah Rakha, Assistant Professor, Department of Wildlife attended 1st International Conference on “Agricultural and Biological Sciences” focusing Food Security and Climate Change at Faculty of Basic and Applied Sciences, University of Haripur, Pakistan from March 27-30, 2019.
41. Dr. Muhammad Zubair Anjum, Assistant Professor, Department of Zoology attended World Wildlife Day / Life below water: for people and planet at Margalla Hills National Park, Islamabad on March 01-03, 2019.

42. Dr. Muhammad Tariq, Dr. Imran Bodlah, Dr. M. Asif Aziz, Dr. Asim Gulzar, Assistant Professors, Department of Entomology attended training workshop on Higher Education Commission National digital library resources at PMAS AAUR on March 05, 2019.
43. Dr. Muhammad Tariq, Assistant Professor, Department of Entomology attended National seminar on role of soil in global food supply at PMAS-AAUR on March 4, 2019.
44. Prof. Dr. Humayun Javed, Department of Entomology attended Role of different sowing times in ecological pest management of leucinodes orbonalis in brinjal crop at Islamia College University Peshawar on March 4-6, 2019.
45. Dr. Munir Ahmad, Associate Professor, Department of Entomology attended Teaching with Technology: internet with tools, one-day workshop by Mr. Tahir Mehmood Ch. at Main seminar hall, PMAS AAUR on March 26, 2019.
46. Dr. Asim Gulzar, Assistant Professor, Department of Entomology attended 1st international conference on "Agriculture and biological sciences" focusing food security and climate change at University of Haripur on March 27-30, 2019.
47. Dr. Abid Ghafoor Chaudhry, Associate Professor and Ms. Mahwish Zeeshan, Lecturer, Department of Antropology attended Institution building and strengthening the capacity of grassroots organizations at Pearl continental, Bhurban, Murree on 06-07 March, 2019.
48. Dr. Zuhair Hasnain, Assistant Professor/Project Director (Sub Campus Attock) Department of Agronomy attended 2nd International Conference on water saving and plant production strategies: constraints and implications for sustainable agriculture at Department of Botany, Government College University, Faisalabad, Pakistan on March 26-28, 2019.
49. Dr. Zahid Akram, Associate Professor, Department of Plants Breeding & Genetics attended 1st Aus- Pak International Conference on Pulses for Food Security Science for Growers and Entrepreneurs at MNSUA on March 27, 2019.
50. Dr. Zahid Akram, Associate Professor, Department of Plants Breeding & Genetics attended 1st Aus- Pak International Conference on Wheat for Food Security at MNSUA on March 24-25, 2019.
51. Dr. Mahmood ul Hassan, Assistant Professor, Department of Plants Breeding & Genetics attended ACIAR pulses conference at MNSUA on March 25-27, 2019.
52. Prof. Dr. Zammurad Iqbal Ahmed, Dr. Muhammad Ansar, Dr. Irfan Aziz, Dr. Muhammad Rasheed, Associate Professors, Dr. Abdul Manaf, Dr. Muhammad Naved Tahir, Dr. Ghulam Abbas shah, Dr. Safdar Ali, Assistant Professors, Department of Agronomy and Dr. Saad Imran Mailk, Assistant Professor, Department of Plants Breeding & Genetics attended International Conference on Recent Advances for Crop Productivity Enhancement at Department of Agronomy, PMAS-Arid Agriculture University Rawalpindi, Pakistan on 2nd to 3rd April, 2019.
53. Dr. Ghulam Abbas shah, Assistant Professor, Department of Agronomy, Dr. Rashid Mehmood, Assistant Professors, Department of Plants Bredding & Genetics and Prof. Dr. Tariq Mukhtar, Department of Plant Pathology attended 1st international conference on Sustainable Agriculture: Food Security under Changing Climate Scenarios (ICSA-2019) at Faculty of Agricultural Sciences, Ghazi University, Dera Ghazi Khan on April 3-5, 2019.
54. Dr. Kashif Sarfraz Abbasi, Lecturer, Institute of Food & Nutritional Sciences attended Food safety and Food Bio preservation and Bio hazard management at Nuclear Institute of Food & Agriculture (NIFA), Peshawar on April 17, 2019.

55. Dr. Ahmed Imran Hunjra, Assistant Professor, University Institute of Management Sciences attended Session Chair at 21st International Research Conference at SZABIST Islamabad, Pakistan on April 23, 2019.
56. Ms. Anum Shafique, Lecturer, University Institute of Management Sciences attended Multilevel Analysis at Capital University of Sciences & Technology on April 9, 2019.
57. Dr. M. Imran Yousaf, Associate Professor, Department of Education attended Workshop on NACTE external academic evaluators at QAA, Higher Education Commision, Islamabad on April 24-27, 2019.
58. Dr. Tayyaba Zainab, Assistant Professor, University Institute of Biochemistry & Biotechnology attended International Workshop on “Use of Genomic Editing and Other New Breeding Technologies for Global Food Secutiry” at COMSTECH Islamabad, Pakistan on April 8-10, 2019.
59. Dr. Tariq Mahmood, Associate Professor, Department of Wildlife attended Detailed Ecological and Biodiversity Management Plans for Dasu Hydro Power Project 2019 at Serena Hotel Islamabad on April 09-10, 2019.
60. Dr. Tariq Mahmood, Associate Professor, Dr. Muhammad Rais, Assistant Professor, Department of Wildlife attended Workshop on Standardization of Survey techniques for preparation of Red Data Book at Monal Restaurant, Pir Sohawa, Margalla Hills National Park Islamabad on April 29, 2019.
61. Dr. Muhammad Sajid Nadeem, Associate Professor, Department of Zoology attended DEBMP Stakeholder Consultative/Review Session at Islamabad on April 9-10, 2019.
62. Dr. Muhammad Tariq, Assistant Professor, Department of Entomology attended action on invasive workshop at CABI (Central and west Asia), Pakistan on April 16, 2019.
63. Dr. Muhammad Asif Aziz, Assistant Professor, Department of Entomology attended Dunamics of honeybee APIs mellifera L. queen rearing for stock improvement, IPM medeling and honey Qulaity grading at HBRI, NARC Islamabad on April 15-18, 2019.
64. Prof. Dr. Muhammad Naeem, Dr. M. Asif Aziz and Dr. Asim Gulzar, Assistant Professors, Department of Entomology attended International Entomological congress-2019 at university of agriculture Faisalabad on April 08-10, 2019.
65. Dr. Asim Gulzar, Assistant Professor, Department of Entomology attended Insecticides resistance and its management at University of Sargodha on April 05, 2019.
66. Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Sciences attended 3rd WPSA seminar of role of WPSA in Poultry Education and Information at UAF Faislabad on April 12, 2019.
67. Dr. Abid Ghafoor Chaudhry, Associate Professor, Department of Anthropology attended seminar on CEECC and the Asia foundation at PIDE, Islamabad on April 02, 2019.
68. Prof. Dr. Riaz Ahmed and Ms. Ainee Zafar, Assistant Registrar, Quality Enhancement Cell attended two-day International Conference on Quality Assurance in Higher Education with the theme on "Quality assurance to revolutionize 21st century" at University of Education Lahore on April 23-25, 2019.
69. Prof. Dr. Riaz Ahmad, Director, Quality Control, attended the International workshop on “Establishing and Maintaining a Culture of Quality” organized with the joint collaboration of

- Higher Education Commission of Pakistan, at Pakistan Network of Quality Assurance in Higher Education University of Education and Khyber Medical University on April 23, 2019.
70. Prof. Dr. Riaz Ahmad, Director, Quality Control attended and contributed the International workshop on “KPI’s and Benchmarking-Improving HEI’s Performance” organized with the joint collaboration of Higher Education Commission of Pakistan, Pakistan Network of Quality Assurance in Higher Education University of Education and Khyber Medical University on April 23, 2019.
 71. Dr. Lubna Ansari, Assistant Professor, Department of Forestry & Range Management attended Seminar on International Pangolin Day at Seminar Room, PMAS-AAUR on April 2019.
 72. Dr. Saad Imran Maillk, Assistant Professor, Department of Plants Breeding & Genetics attended International Workshop on “Use of Genome Editing and Other New Breeding Technologies for Global Food Security at COMSTECH Secretariat, Islamabad on April 08-10, 2019.
 73. Dr. Ghulam Hussain Babar, Chairman, Department of Humanities attended workshop on Orientation, capacity building and research planning at IRI, International Islamic University, Islamabad on April 22-26, 2019.
 74. Dr. Muhammad Javaid Asad, Associate Professor, University Institute of Biochemistry & Biotechnology attended One day Workshop on Influence without authority at Islamabad on **May** 01, 2019.
 75. Dr. Abid Ghafoor Chaudhry, Associate Professor, Department of Anthropology attended seminar on “Can the china Pakistan economic corridor (CPEC) be the much needed engine for rapid pro-poor growth in Pakistan?” at PIDE, Islamabad on May 02, 2019.
 76. Dr. Tariq Mahmood, Associate Professor, Dr. Bushra Allah Rakha, Assistant Professor, Department of Wildlife attended International Day for Biological Diversity 2019 at Pakistan Museum of Natural History (PMNH), Islamabad on May 22, 2019.
 77. Dr. Abid Ghafoor Chaudhry, Associate Professor, Department of Anthropology attended discussion on “Urbanization in Pakistan: challenges or opportunity” at PIDE, Islamabad on May 30, 2019.
 78. Dr. Aneela Afzal, Assistant Professor, Department of Sociology attended Physicochemical evaluation of field pea landraces under rainfed conditions of AJ&K. Pakistan Journal of Pure and applied biology ISSN at University of Pooch Rawalakot AJ&K on May,2019.
 79. Dr. Muhammad Javaid Asad, Associate Professor, University Institute of Biochemistry & Biotechnology attended Regional workshop on the ICT Role for Disaster Prediction & Management at PMAS-AAUR on May 02-04, 2019.
 80. Dr. Muhammad Ansar, Associate Professor, Dr. Ghulam Abbas Shah, Assistant Professor, Department of Agronomy and Dr. Zahid Akram, Dr. Ghulam Shabbir, Associate Professors, Department of Plant Breeding & Genetics and Prof. Dr. Tariq Mukhtar, Dr. Abid Riaz, Dr. Farah Naz, Associate Professors, Dr. Gulshan Irshad, Assistant Professor, Department of Plant Pathology attended 6th International conference on sustainable agriculture in changing climate: strategies and management at Faculty of Agriculture, University of the Poonch Rawalakot, Azad Jammu and Kashmir, Pakistan on **June** 19-21, 2019.

81. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology attended 6th International Conference on “Sustainable Agriculture in Changing Climate: Strategies and Management” at Faculty of Agricultural Sciences, Ghazi University, Dera Ghazi Khan on June 19-21, 2019.
82. Dr. Tariq Mahmood, Associate Professor, Department of Wildlife attended Consultative meeting on Biodiversity 2019 at IUCN office, Islamabad on June 12, 2019.
83. Dr. Muhammad Rais, Assistant Professor, Department of Wildlife attended Launch Ceremony-National Academy of Higher Education, at Higher Education Commission Pakistan, Islamabad on June 12, 2019.
84. Prof. Dr. Ghazala Koukab Raja, Dr. Pakeeza Arzo Shaiq, Assistant Professor, University Institute of Biochemistry & Biotechnology attended (Poster Selected as Best Research): 2nd International Conference on Fatty Liver (ICFL). Identification of NAFLD Predisposing Genetic Risk Markers in Pakistani Subjects at Berlin, Germany on June 27-29, 2019.
85. Prof. Dr. Muhammad Naeem, Prof. Dr. Humayun Javed and Dr. Muhammad Tariq, Dr. Muhammad Asif Aziz, Dr. Asim Gulzar, Dr. Farid Asif Shaheen, Assistant Professors, Department of Entomology attended National honey festival at seminar room PMAS AAUR on June 18, 2019.
86. Dr. Abid Ghafoor Chaudhry, Associate Professor, Department of Anthropology attended seminar on “Pakistan through the eyes of a diplomat and her impressions of Pakistan” at PIDE, Islamabad on June 10, 2019.
87. Dr. Ghulam Bilal, Assistant Professor, Department of Animal Breeding & Genetics and Dr. Saima Mustafa, Assistant Professor, Department of Mathematics & Statistics attended Launch conference on “National Academy of Higher Education (NAHE)” at HEC Islamabad on June 12, 2019.
88. Dr. Gulnaz Hameed, Assistant Professor, Department of Economics attended Post budget Forum on “Budget 2019 and Pakistan Agriculture” at Lok Sanjh Foundation Islamabad on June 18, 2019.
89. Prof. Dr. Muhammad Ali Shah, Dr. Murtaz ul Hassan, Associate Professor, Dr. Saif Ur Rehman, Dr. Aayesha Riaz, Assistant Professors, Department of Patho-Biology, attended 6th International seminar on Advances in Vitamin Nutrition for Poultry at PMAS-UAAR on June 19, 2019.
90. Dr. Lubna Ansari, Assistant Professor, Department of Forestry & Range Management attended Seminar on Role of Bench marking in Quality Assurance in Higher Education at UIBB Seminar Room PMAS-AAUR on June 27, 2019.
91. Prof. Dr. Asif Ahmad, Institute of Food & Nutritional Sciences attended 1st Pakistan Food-Nutrition International Summit” at Pak China Friendship Center, Islamabad, Pakistan on **July** 10-11, 2019.
92. Dr. Shahid Mahmood, Assistant Professor, Ms. Anika Batool, Lecturer, Dr. Audil Rashid, Department of Environmental Sciences attended Environmental Reporting to Bridge the Gap between Public and Academia for Achieving Sustainable Developmental Goals at PMAS-AAUR on July 17, 2019.
93. Dr. Shahid Mahmood, Assistant Professor, Department of Environmental Sciences and Dr. Muhammad Tariq, Assistant Professor, Department of Entomology attended Combating Desertification in Pakistan” at PMAS-AAUR held on July 31, 2019.
94. Ms. Anika Batool, Lecturer, Department of Environmental Sciences attended Annual Environment Conference 2019 at Karachi on July 09, 2019.

95. Dr. Badar Naseem Siddiqui, Associate Professor, Dr. Muhammad Ali, Lecturer, Department of Agricultural Extension and Dr. Tayyaba Zainab, Assistant Professor, University Institute of Biochemistry & Biotechnology attended Seminar on “Technical Proposal Writing at PMAS-AAUR on July 24, 2019.
96. Dr. Badar Naseem Siddiqui, Associate Professor, Dr. Muhammad Ali, Lecturer, Department of Agricultural Extension and Dr. Lubna Ansari, Assistant Professor, Department of Forestry & Range Management attended International seminar on Innovative Technologies in Agriculture at PMAS-AAUR on July 23, 2019.
97. Dr. Badar Naseem Siddiqui, Associate Professor and Dr. Muhammad Ali, Lecturer, Department of Agricultural Extension attended Symposium “Environmental reporting to bridge the gap between public and academia for achieving sustainable development goals” at PMAS-AAUR on July 17, 2019.
98. Dr. Muhammad Javaid Asad, Dr. Muhammad Sheeraz Ahmad, Associate Professors, & Dr. Sadia Saeed, Assistant Professor, University Institute of Biochemistry & Biotechnology attended International seminar on Innovative Technologies in Agriculture at PMAS-AAUR on July 23, 2019.
99. Ms. Anum Shafique, Lecturer, University Institute of Management Sciences attended One day workshop on Latex at Capital University of Sciences & Technology, Islamabad on July 17, 2019.
100. Dr. Muhammad Ali, Lecturer, Department of Agricultural Extension attended 1st Pakistan food-nutrition international summit at Pak China Friendship Centre, Islamabad on July 10, 2019.
101. Prof. Dr. Ghazala Koukab Raja, University Institute of Biochemistry & Biotechnology attended International Symposium on Global Biodiversity and Health Big Data at COMSTECH Secretariat, Islamabad on July 18, 2019.
102. Dr. Aamir Saleem, Chairman, Dr. Saeed Gulzar, Dr. Irfan Ashraf and Dr. Lubna Ansari, Assistant Professors and Ms. Sabeeka Usman Malik, Lecturer, Department of Forestry & Range Management attended Seminar on Combating Desertification in Pakistan: Let’s Grow the Future Together at Main Auditorium, PMAS AAUR on July 31, 2019.
103. Dr. Lubna Ansari, Department of Forestry & Range Management and Dr. Gulnaz Hameed, Assistant Professors, Department of Economics attended Seminar on Technical Proposal Writing”, at Seminar Room, PMAS-AAUR on July 24, 2019.
104. Dr. Muhammad Javaid Asad, Associate Professor, University Institute of BioChemistry & BioTechnology attended One Day seminar on scientific proposal writing at PMAS AAUR on July 24, 2019.
105. Dr. Aneela Afzal, Assistant Professor, Department of Sociology attended National consultative workshop on “Hindu Kush Himalaya Assessment on ICIMOD Serena Hotel Islamabad at Serena Hotel Islamabad on July 23, 2019.
106. Dr. Rai Muhammad Amir, Assistant Professor, Institute of Food & Nutritional Sciences Attended Certificate of Participation “1st Pakistan Food-Nutrition International Summit” at Pak China Friendship Center, Islamabad, Pakistan on July 10-11, 2019.
107. Dr. Abid Riaz, Associate Professor, Dr. Gulshan Irshad, Assistant Professor, Department of Plant Pathology attended the Seminar on innovative technologies in Agriculture at PMAS Arid Agriculture University Rawalpindi on July 24, 2019.

108. Dr. Muhammad Sajid Nadeem, Associate Professor, Department of Zoology attended Consultation meeting on "Saving Pangolins in Pakistan-Most trafficked Mammal in the World" at IUCN office Islamabad on July 04, 2019.
109. Dr. Muhammad Moaen-ud-Din, Associate Professor, Department of Animal Breeding & Genetics attended Projects manager's guide for government projects at Pakistan planning and management Institute (PPMI), Pakistan on July 29-31, 2019.
110. Prof. Dr. Amir Saleem, Department of Forestry & Range Management attended Seminar on Combating Desertification in Pakistan: Let's Grow the Future Together at Main Auditorium, PMAS AAUR on July 31, 2019.
111. Dr. Muhammad Sajid Nadeem, Associate Professor, Department of Zoology DEBMP Biodiversity Training Workshop at Islamabad on **August** 30-31, 2019.
112. Prof. Dr. Muhammad Naeem, Prof. Dr. Humayun Javed, Dr. Muhammad Tariq, Dr. Asim Gulzar, Dr. Farid Asif Shaheen, Assistant Professors, Department of Entomology attended dengue preservation and control at seminar room PMAS AAUR on August 27, 2019.
113. Dr. Muhammad Javaid Asad, Dr. Muhammad Sheeraz Ahmad and Dr. Feroza Hamid Wattoo, Associate Professors, University Institute of Biochemistry & Biotechnology attended Preparation of PC-1 at Pakistan Planning and Management Institute Islamabad on August 28-30, 2019.
114. Prof. Dr. Ghazala Kaukab Raja, Dr. M. Javaid Asad, Dr. M. Sheeraz Ahmad, Dr. Feroza Hamid Wattoo, Associate Professors and Dr. Pakeeza Arzoo Shaiq, Dr. Sadia Saeed, Dr. Tayyaba Zainab, Assistant Professors, University Institute of BioChemistry & BioTechnology attended Seminar on Dengue control and prevention at PMAS AAUR on August 27, 2019.
115. Dr. Muhammad Javaid Asad, Dr. Muhammad Sheeraz Ahmad, Associate Professors, and Dr. Sadia Saeed, Assistant Professor, University Institute of BioChemistry & BioTechnology attended Awareness session on Issues related to procurement, finance and audit of research projects at PMAS AAUR on August 20, 2019.
116. Dr. Nasir Mukhtar, Assistant Professor and Dr. Zaib Ur Rehman, Lecturer, Department of Poultry Science attended 4th WPSA technical workshop on flock Health monitoring in poultry at University of Veterinary and Health Sciences, Lahore on August 27, 2019.
117. Dr. Ghulam Hussain Babar, Chairman, Department of Humanities attended Seminar on development and presentation of post doctoral research proposal at IRI, International Islamic University, Islamabad on August 26-27, 2019.
118. Dr. Amjad Rashid Kiyani and Dr. Muhammad Mushtaq, Assistant Professors, Department of Zoology attended Monitoring and Evaluation of Development Projects at Pakistan Planning and Management Institute, Islamabad on **September** 02-05, 2019.
119. Dr. Muhammad Tariq and Dr. Asim Gulzar, Assistant Professors, Department of Entomology and Dr. Lubna Ansari, Assistant Professor, Department of Forestry & Range Management attended climate change impact assessment and adaption strategies for wheat and groundnut production using decision support system at Seminar room PMAS AAUR on September 04-05, 2019.
120. Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Science attended International poultry conference at Expo Center, Lahore on September 13-15, 2019.

121. Dr. Saad Imran Malik, Assistant Professor, Department of Plant Breeding & Genetics, attended European Union ERASMUS+ Programmes at Air University Islamabad on September 19, 2019.
122. Prof. Dr. Ghazala Koukab Raja, University Institute of Biochemistry & Biotechnology attended World Congress of Gastroenterology. Single nucleotide polymorphisms in APLN and FABP2 genes strongly correlate with liver enzymes in Pakistani NAFLD cases at Istanbul, Turkey on September 21-24, 2019.
123. Dr. Muhammad Javaid Asad, Associate Professor, University Institute of BioChemistry & BioTechnology attended Seminar on Youth as Change Maker at UIIT, PMAS AAUR on September 20, 2019.
124. Dr. Pakeeza Arzo Shaiq, Assistant Professor, University Institute of Biochemistry & Biotechnology attended Project Audit and Procurement at Pakistan Planning and Management Institute Islamabad, Pakistan on September 25-27, 2019.
125. Dr. Ahmed Imran Hunjra, Assistant Professor, University Institute of Management Sciences attended Ownership Structure and Investment Decision of Non-Financial Firms in Pakistani Stock Exchanges IBA University, Sukkur, Pakistan, held at Sukkur on September, 27-29, 2019.
126. Dr. Muhammad Javaid Asad, Associate Professor, University Institute of BioChemistry & BioTechnology attended one day Seminar on New Social Development Paradigm at PMAS AAUR on **October** 10, 2019.
127. Dr. Abid Riaz, Associate Professor, Dr. Gulshan Irshad, Assistant Professor, Department of Plant Pathology attended Advances in Plant, soil and microbe interaction at Department of Botany, PMAS-AAUR on October 05, 2019.
128. Dr. Abid Riaz, Associate Professor, Department of Plant Pathology attended Academia-Research –industry linkages for sustainable agriculture at PMAS Arid Agriculture University Rawalpindi on October 16, 2019.
129. Prof. Dr. Muhammad Naeem, Dr. Muhammad Tariq and Dr. Asim Gulzar, Assistant Professors, Department of Entomology attended International workshop on strategies for academia government industry linkages for sustainable agriculture at UAAR on October 19, 2019.
130. Prof. Dr. Ata ul Mohsin and Dr. Muhammad Tariq, Assistant Professor, Department of Entomology attended Enhancing productivity of chickpea and lentil in pothwar region at Seminar hall, FC & FS, PMAS AAUR on October 03, 2019.
131. Prof. Dr. Ata ul Mohsin, Department of Entomology attended Field workshop on sowing of chickpea and lentil for better production and profitability of growers at Attock and Chakwal at PMAS AAUR on October 8-9, 2019.
132. Dr. Zaib Ur Rehman, Lecturer, Department of Poultry Science attended Egg nutrition seminar at PMAS AAUR on October 11, 2019.
133. Dr. Abid Ghafoor Chaudhry, Associate Professor, Department of Anthropology attended convention on “International day of girl child: Advocay and awareness through truck Art” at Lok Virsa, Islamabad on October 11, 2019.
134. Dr. Abid Ghafoor Chaudhry, Associate Professor, Department of Anthropology attended talk on “Pakistan’s new development paradigm” at PIDE, Islamabad on October 16, 2019.

135. Dr. Abid Ghafoor Chaudhry, Associate Professor, Department of Anthropology attended seminar on “FDI, Regional connectivity and research needs” at PIDE, Islamabad on October 29, 2019.
136. Dr. Gulnaz Hameed, Assistant Professor, Dr. Muhammad Abdul Rahman, Lecturer, Department of Economics attended one day International Workshop on “Strategies for Academia-Government-Industry linkages for Sustainable Agriculture at PMAS-AAUR on October 17, 2019.
137. Dr. Saima Mustafa, Assistant Professor, Department of Mathematics & Statistics attended Celebration of Pink Ribbon Day Seminar at UAAR Rawalpindi on October 22, 2019.
138. Dr. Lubna Ansari, Assistant Professor, Department of Forestry & Range Management attended International Workshop on Strategies for Academia- Government-Industry Linkages for Sustainable Agriculture at HEC on October 17, 2019.
139. Dr. Lubna Ansari, Assistant Professor, Department of Forestry & Range Management attended a Seminar on Economic Importance of Hemp at Seminar Room, PMAS-AAUR on October 16, 2019.
140. Dr. Munir Ahmad, Associate Professor, Department of Entomology, International workshop on strategies for academia government industry linkages at PMAS-AAUR on October 17, 2019.
141. Dr. Rashid Mehmood, Assistant Professor, Department of Plants Breeding & Genetics attended DICE-AFS Innovation Event-2019 at MNSUA, Multan on October 09-10, 2019.
142. Dr. Muhammad Ali, Lecturer, Department of Agricultural Extension attended International Conference on “Strategies for Ensuring Food Security in The Changing Climate” at Agriculture University Peshawar (AUP), Peshawar, Pakistan from October 23-24, 2019.
143. Dr. Ms. Anum Shafique and Dr. Afsheen Fatima, Lecturers, University Institute of Management Sciences participated in RTC (Round Table Conference) under HEC thematic Research Grants Project at Committee Room Administration Block, AAUR on October 10, 2019.
144. Prof. Dr. Ghazala Koukab Raja, Dr. Muhammad Javaid Asad, Associate Professor, University Institute of Biochemistry & Biotechnology attended International workshop on Strategies for Academia-Government-Industry Linkage for Sustainable Agriculture at PMAS-AAUR on October 17, 2019.
145. Dr. Muhammad Javaid Asad, Associate Professor, University Institute of Biochemistry & Biotechnology attended International Conference on Recent Advances in Biotechnology at Wali Khan University, Mardan on October 16-18, 2019.
146. Dr. Muhammad Ansar, Associate Professor, Department of Agronomy attended 2nd International conference on climate smart agriculture: The way towards sustainability at Department of Agronomy, MNS University of Agriculture Multan, Pakistan on **November** 26-27, 2019.
147. Prof. Dr. Ghazala Kaukab Raja and Dr. Muhammad Javaid Asad, Associate Professor, University Institute of BioChemistry & BioTechnology attended Seminar on “Opportunities to collaborate in Academics and Research Initiatives” at PMAS AAUR on November 28, 2019.

148. Dr. Muhammad Rashid, Associate Professor, attended Profitable dairy farming workshop on November 2019 at Seminar Room, PMAS-AAUR.
149. Dr. M. Imran Yousaf, Associate Professor, Department of Education attended An experimental study to evaluate the effectiveness of cooperative learning versus traditional learning at University of Kotli, AJ&K on November 15-17, 2019.
150. Dr. Badar Naseem Siddiqui, Associate Professor and Dr. Muhamamd Ali, Lecturer, Department of Agricultural Extension attended Seminar on value added agriculture as a strategy to promote Agri-food export at PMAS-AAUR on November 21, 2019.
151. Dr. Muhammad Ali, Lecturer, Department of Agricultural Extension attended Final consultation of the National awareness programme on the water, energy and food nexus at Marriott Hotel, Islamabad, Pakistan on November 12, 2019.
152. Dr. Muhammad Ali, Lecturer, Department of Agricultural Extension and Dr. Ghulam Abbas shah, Assistant Professor, Department of Agronomy attended 2nd International Conference On “Climate Smart Agriculture: The Way towards Sustainability” at Mian Nawaz Sharif Agriculture University Multan (MNSUAM), Punjab, Pakistan from November 26-27, 2019.
153. Dr. Munir Ahmad, Associate Professor, Dr. Muhammad Tariq and Dr. Imran Bodlah, Assistant Professors, Department of Entomology attended 3rd CPEC consortium of universities at PMAS-AAUR on November 18-19 2019.
154. Prof. Dr. Ata ul Mohsin, Department of Entomology attended Farmers’ field day on harvesting of groundnut with modern harvester at Tamman, Chakwal at PMAS AAUR on November 4, 2019.
155. Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Sciences attended 2nd Training course on meat production at university seminar room AAUR on November 18-19, 2019.
156. Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Sciences attended National seminar on diagnosis & control of poultry diseases at Q’s Hotel Sargodha on November 28, 2019.
157. Dr. Zaib Ur Rehman, Lecturer, Department of Poultry Science attended 7th International layer nutrition seminar at PMAS AAUR on November 26, 2019.
158. Dr. Zaib Ur Rehman, Lecturer, Department of Poultry Sciences, attended 3rd International Workshop on Egg branding and egg quality at PMAS AAUR on November 26, 2019.
159. Prof. Dr. Riaz Ahmad, Director, Quality Control acted as Trainer to the one-day workshop titled “Self-Assessment Report Writing of Academic Programs” organized by University of Management and Technology (UMT), Lahore held on November 28, 2019.
160. Mr. Naeem Abbas Malik, Lecturer, Institute of Geo Information & Earth Observation attended training workshop on GNSS, at Comsats University Islamabad on November 2019.
161. Dr. Aneela Afzal, Assistant Professor, Department of Sociology attended “Flight from marriage, youth transition and social change”, Fatima Jinnah women university at Fatima Jinnah Women University on November 21, 2019.
162. Dr. Lubna Ansari, Assistant Professor, Department of Forestry & Range Management attended a workshop” Mentoring workshop” at QAU, Islamabad Auditorium on November 15, 2019.

163. Ms. Anum Shafique, Lecturer, University Institute of Management Sciences attended Workshop on Academic Writing at CUST on November 2, 2019.
164. Dr. Muhammad Ali, Lecturer, Department of Agricultural Extension attended 3rd Annual conference on CPEC Consortium of Universities at Convention Center, Islamabad, Pakistan from November 18-19, 2019.
165. Prof. Dr. Ghazala Koukab Raja and Dr. Muhammad Javaid Asad, Associate Professor, University Institute of Biochemistry & Biotechnology attended International seminar on value added agriculture as a strategy to promote Agri-Food Export at PMAS-AAUR on November 20, 2019.
166. Dr. Muhammad Ansar, Associate Professor, and Dr. Ghulam Abbas shah, Assistant Professor, Department of Agronomy attended National Conference on “Biochar for Climate Smart Agriculture” at Department of Agriculture, Abdul Wali Khan University Mardan on **December** 17-18, 2019.
167. Prof. Dr. Asif Ahmad, Director, Institute of Food & Nutritional Sciences attended 16th Annual Fulbright Alumni Conference; theme of the conference was “Global Best Practices in a Local Context” at Serena Hotel Islamabad on December 13-16, 2019.
168. Dr. Bushra Allah Rakha, Assistant Professor, Department of Wildlife attended International Mountain Day at the Grand Ambassador Hotel, Islamabad on December 11, 2019.
169. Dr. Muhammad Tariq and Dr. Asim Gulzar, Assistant Professors, Department of Entomology attended Sustainable management of land water resources in Pakistan at seminar room PMAS AAUR on December 9, 2019.
170. Dr. Muhammad Tariq and Dr. Asim Gulzar, Assistant Professors, Department of Entomology attended achieving food security in digitalized world at Margala Hotel on December 4-5, 2019.
171. Dr. Zaib Ur Rehman, Lecturer, Department of Poultry Sciences attended 22nd Sustainable development conference at Margala hotel Islamabad on December 3-5, 2019.
172. Dr. Abid Ghafoor Chaudhry, Associate Professor, Ms. Rabia Jawed and Ms. Shagufta Hamid Ali, Lecturers, Department of Anthropology attended Panel discussion on “Human rights diplomacy” at Marriot Hotel Islamabad on December 09, 2019.
173. Dr. Abid Ghafoor Chaudhry, Associate Professor, Department of Anthropology attended convention on “for every child every right” at Pakistan National Council for Arts, Islamabad on December 12, 2019.
174. Ms. Rabia Jawed and Ms. Shagufta Hamid Ali, Lecturers, Department of Anthropology attended training workshop on “Moral foundation of Education” at Main seminar hall, PMAS AAUR on December 16-20, 2019.
175. Prof. Dr. Riaz Ahmad, Director, Quality Control attended and contributed the International Conference on “Promoting Higher Education Quality through Policies, Standards and Practices” from December 4-5, 2019 organized by Higher Education Commission Islamabad in collaboration with United States Education Foundation Pakistan (USEFP) and Council for Higher Education Accreditation (CHEA), USA at Serena Hotel, Islamabad.
176. Dr. Aneela Afzal, Assistant Professor, Department of Sociology attended Internship program for University graduates by government of Punjab Inspiration and Behavior at Arid Agriculture University Rawalpindi, KOICA Centre on December 2019.

177. Prof. Dr. Naimatullah Hashmi and Dr. Mazhar Hussain Bhutta, Assistant Professor, Department of Sociology attended “Do Parents Matter?” A Study on Female Educational Attainment in Rural Punjab, Pakistan on December 2019 at University of Gujarat.
178. Dr. Muhammad Abdul Rahman, Lecturer, Department of Economics attended one day National DEHQAN Assembly on issue of Climate Change at Hotel Margalla Islamabad on December 10, 2019.
179. Dr. Gulnaz Hameed, Assistant Professor, Department of Economics attended one day seminar on Role of Youth in Peace building in Pakistan on December, 2019 at PMAS-AAUR.
180. Ms. Saima Asad, Lecturer, Department of Economics attended Advances in plant soil and microbe interaction at Department of Botany, PMAS-AAUR on December 06, 2019.
181. Dr. Gulnaz Hameed, Assistant Professor, Ms. Saima Asad and Dr. Muhammad Abdul Rahman, Lecturer, Department of Economics attended three days Conference of SDPI on “sustainable development in digital society at hotel margalla islamabad on December 3-5, 2019.
182. Dr. Muhammad Maroof Ajmal, Dr. Muhammad Asif Zaheer, Assistant Professors, Ms. Anum Shafique, and Dr. Afsheen Fatima, Lecturers, University Institute of Management Sciences attended Teacher’s training workshop, at biochemistry auditorium PMAS AAUR on December 16-20, 2019.
183. Ms. Sidra Akhtar, Lecturer, University Institute of Management Sciences attended Workshop on “Quantitative Research Methodology” at Fazaia Medical College, Air University Islamabad on December 12, 2019.
184. Ms. Sidra Akhtar, Lecturer, University Institute of Management Sciences attended Workshop On “Manuscript Writing And Publications” At Fazaia Medical College, Air University Islamabad On December 13, 2019.

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