



ANNUAL REPORT 2017-2018



**SHAHEED BENAZIR BHUTTO UNIVERSITY
SHERINGAL DIR UPPER KP-PAKISTAN**

ANNUAL REPORT 2017-18

KEEPING YOU UP-TO-DATE ON OUR GOALS AND ACHIEVEMENTS

**WHEN ASKED HOW HE BECAME SO SUCCESSFUL IN INVESTING,
BUFFETT ANSWERED:
WE READ HUNDREDS AND HUNDREDS OF ANNUAL REPORTS EVERY YEAR
(Warren Buffett)**

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List of Abbreviations

The following is the list of abbreviations which are used in this report:

BHU	Basic Health Unit
FPDP	Faculty Professional Development Program
HEC	Higher Education Commission of Pakistan
HUC	Himalayan University Consortium
ICIMOD	International Center for Integrated Mountain Development
KP	Khyber Pakhtunkhwa
LID	Learning Innovation Division
NAHE	National Academy of Higher Education
NBSP	Need Based Scholarship Programme
NCE	National Committee on English
QAA	Quality Assurance Agency
QEC	Quality Enhancement Cell
SBBU	Shaheed Benazir Bhutto University
SEF	Student Endowment Fund
SFAO	Student Financial Aid Office
SHARC	Sheringal High Altitude Research Center
ISO	International Strategic Office
VC	Vice Chancellor

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Message from the Vice Chancellor

It's a matter of immense pleasure to hold this report of Shaheed BB University (SBBU) Sheringal in my hands and write down my message for another active year of SBBU. This document is a brief collection of various activities, based on education, research, trainings and social development, carried out by the SBBU community, its faculty, students and staff, during the fiscal year 2017-18.



Despite the infrastructural and financial challenges, the year ended with many achievements to claim. The QEC SBBU achieved the ever highest ranking category W. The University got enrolled 962 students, which is the highest enrolment in SBBU history. Similarly, while working on another important component of quality, we were able to attract PhD faculty and took its number from 04 to 37. Next, based on the qualification of the PhD faculty, The University got NOC from HEC for launching MS and PhD programs.

Alongside the academic achievements of the University, SBBU secured additional HEC-Need Based and NTS-Need Based Scholarships for its students in addition to the endowment funds already established under the Students Financial Aid Office (SFAO).

During the period under review, SBBU kept on its regular activities such as arranging sports galas, securing national and international memberships, signing MOUs, strengthening the infrastructure, organizing training workshops and all in all, focusing on the overall role of the University for social development of the local community. All this gives me a strong sense of satisfaction that we are heading in right direction which is just a promising start on our epic journey to make it a world class University.

The University successfully launched the mega developmental project costing Rs. 1709.189 Million. The boundary wall and sewerage system of the University are begin in 2018 under this project.

At the end, as head of the institution, for all the present achievements, I would like to congratulate the faculty, students and staff of the University for bringing these laurels to Sheringal. I hope that next year, we'll share more good news on the progress of the University Insha ALLAH.

Prof. Dr. Rahmat Ali Khan
Vice Chancellor, SBBU Sheringal

Executive Summary

University Profile:

1. HEC recognized degree (with W category of SBBU QEC)

2. Faculties:

- | | |
|---|---|
| 1. Faculty of Life Sciences | 2. Faculty of Physical and Numerical Sciences |
| 3. Faculty of Languages and Literature | 4. Faculty of Management and Social Sciences |
| 5. Faculty of Religious and Legal Studies | 6. Faculty of Chemical Sciences |

3. Academic Departments: 19

4. Centers:

1. Resource Center for Forestry and Biological Sciences at Kumrat
2. Sheringal Research Center for Northern languages.

5. Programs:	1. Undergraduates: 22	2. Postgraduates: 13
6. Faculty:	1. PhD: 37	2. MS/Master 113
7. Students:	1. Undergraduates: 2042	2. Graduates/Postgraduate: 799

8. Well Established Student Financial Aid Office:

S.No	Name of Scholarship	No of Student
1	HEC Need Based Scholarship	192
2	HEC-French scholarships	32
3	NTS Scholarships	13
4	Zakat Mora Scholarships	120
5	SBBU Endowment Fund Scholarship	19
6	Under Prime Minister Fee Reimbursement Program	2736

9. International Linkages under ISO Office (Student & Faculty Exchange)

- MOUs signed with foreign Universities: 15
- MOUs signed with indigenous Universities: 12
- Mevlana Exchange Protocols signed with Turkish Universities: 02
- Foreign Universities consortium signed: 01

10. Career Placement/Advisory Services for Internees and Industrial Linkages**11. Anthropological Museum Maintained at Jandri Kumrat**

Each year we publish an annual report to update the community on our activities and outcomes.

Badshah Hussain
Registrar, SBBU Sheringal

About the University

Established in 2009, Shaheed BB University (SBBU) is located in a composed town of Sheringal at a distance of 28 km on the right of Dir City in Khyber Pakhtunkhwa (Pakistan) and 22 km from main Dir Timergara road. Situated on the right bank of river Panjkora, SBBU has a rich array of academic programmes and research facilities to offer. Currently, with a strength of almost 2841 students and above 160 faculty members (with 40+ PhDs), we put forward a wide range of degree programs to the students and researchers.

Moreover, to preserve the local culture of Kohistani people, it has also maintained a museum in the village of Jandri near Thal. Our collection at the museum presents a splendid look into the past life of the local people. Similarly, in order to take the local people in the national mainstream, and to highlight their languages and cultures, the University also established Sheringal Research Cell on Northern Languages.

With an agenda of innovation, in teaching and research, SBBU has signed 27 MOUs with a number of local and international Universities, research centres and technology providers with expertise in its research interest areas. Similarly, the University has also acquired the memberships of various specialized bodies such as ICIMOD (HUC), PCTN, APQN and the Agencies of the Islamic World (IQA).

The University also offers a number of scholarships to the deserving students. Such scholarships include HEC-Need Based Scholarships, NTS-Need Based Scholarships, Mora Scholarships, and various types of scholarships for the students of FATA, Merit Scholarships from the Students Endowment Fund of the University. The following are the vision and mission of the University:

Vision

To provide excellence in academics, research and character, for the uplift of the socio-economic conditions of the area, based on the utilization of the natural resources available.

The University would act as a 'HUB' of high class education for the people of the adjacent areas of the country as well as beyond the boundaries such as Central Asia, China and Afghanistan.

Every member of our University enjoys diverse opportunities for intellectual, personal and professional growth. Learning and working at SBBU will foster quick, well-rounded and well-equipped mind to succeed in our fast-changing world.

Mission

To transform the way people think and do things through **education, research** and **service**. The SBBU mission comprises three mutually reinforcing thrusts:

Transformative education that nurtures thinking individuals who are alive to opportunities to make a difference, are valued members and leaders of society and global citizens, effective in diverse settings.

High-impact research that advances the boundaries of knowledge and contributes to the betterment of society. Dedicated service, as a national University, that adds to social, economic and national development.

CHAPTER 1

ACADEMIC ACTIVITIES

Shaheed Benazir Bhutto University Sheringal has established Academics Directorate to promote quality education and provide services to students. The major responsibilities of the section are the preparation of the admission schedule and academic calendar, launching of new programmes supervise the implementation of the approved curricula, dealing with affiliated colleges and other exam – academic related activities. Semester System of education is being practiced at the University. The academic year is divided into two semesters namely spring and fall. The University offers admissions to its programs in the following Six Faculties.

1.1 Faculties of the University

1. Faculty of Life Sciences
2. Faculty of Physical and Numerical Sciences
3. Faculty of Languages and Literature
4. Faculty of Management and Social Sciences
5. Faculty of Religious and Legal Studies
6. Faculty of Chemical Sciences

1.2 Faculty Departments-Wise Academics Programs of the University

S.No	Name of Faculty	Name of Department	Academic Programs			
1	Chemical Science	Chemistry	BS	M.Sc	M.Phil	Ph.D
2	Physical & Numerical Science	Computer Science	BS	M.Phil	Ph.D	
		Mathematics	M.Sc			
		Geology	BS			
3	Life Science	Biotechnology	BS	M.Phil	Ph.D	
		Botany	BS	M.Sc	M.Phil	Ph.D
		Zoology	BS	M.Sc	M.Phil	
		Environmental Science	BS		M.Phil	
		Animal Science	M.Phil			
		Forestry	BS			
		Pharmacy	Pharm D			
		Agriculture	BS			
4	Management & Social Science	Management Science	BS		M.Phil	
		Sociology	BS		MA	
		Pakistan Study	M.Sc			

		Social Work	BS	MA
		Education	BS	B.Ed M.Ed
5	Religious & Legal Science	LAW	LLB	
		Islamiyat	BS	M.Phil
6	Language & Literature	English	BS	MA M.Phil

Table 1: Faculty Departments-Wise Academics Programs of the University

1.3 Duration of Degree Programs

Following is the duration for diplomas/short course, BS, MA/M.Sc, MS/M.Phil and Ph.D programs

S.No	Programs	Duration (Years)
1	Diploma Course	2
2	BS	4
3	Pharm-D	5
4	LLB	5
5	MA/M.Sc	2
6	MS/MPhil	2-4
7	Ph.D	3-8

Table 2: Duration of Degree Programs

In the year 2017-18 admission to various Bachelor, Master and MPhil programs were conducted. The detail of these admissions is given below:

1.4 Fresh Admission 2017-18

S. No:	Degree program	Number of students
01	Undergraduate BS (4 Years)	574
02	Graduate (MA/MSc)	388
03	Post Graduate (MS/MPhil)	0
Total:		962

Table 3: Fresh Admission 2017-18

By adding up these freshmen to the previous strength of the University, SBBU students have reached the number of 2841. The following is the gender-wise ratio of fresh admission 2017-18.

1.5 Gender-Wise Detail of the Students 2017-18

S. No:	Degree program	Male	Female	Total
01	Undergraduate BS (4 Years)	516	56	574
02	Graduate (MA/MSc)	348	49	388
03	Post Graduate (MS/MPhil)	0	0	0
04	PhD	0	0	0
Grand Total		857	105	962

Table 4: Gender-Wise Detail of the Students 2017-18

If we just have a cursory glance over past years of SBBU, 2017-18 proved as a very attractive year for the students. Table 5 shows the year-wise data of the student-intake for the last five years:

1.6 Year-Wise Enrolment of SBBU

S.No	Year	Students
1	2014-15	433
2	2015-16	474
3	2016-17	421
4	2017-18	962

Table 5: Year-Wise Enrolment of SBBU

When the same is given as a pie-chart (Figure 1), the student strength in 2017-18 is almost double to the total number of students during 2015-16 and 2016-17.

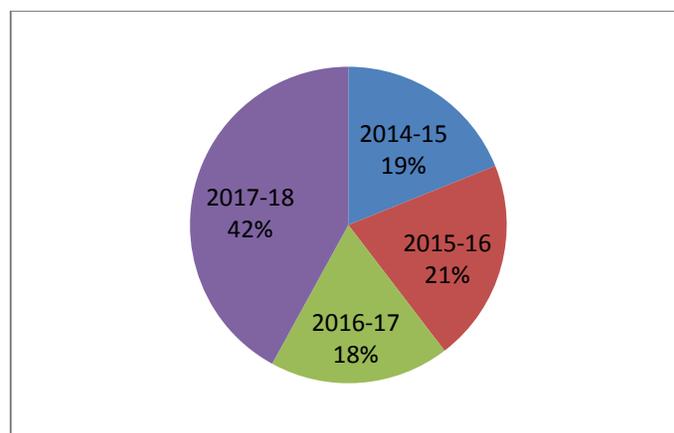


Figure 1: Year-Wise Student Enrollment

This trend is evident of the growing potential of the University. Moreover, if the same growth is maintained, the University will hopefully achieve the targets as set by the University in its five-year

business plan. The next section gives a range of the Undergraduate (UG) and Postgraduate (PG) degree programmes offered by the University.

To compensate the deserving and needy students and financial assistance, Shaheed Benazir Bhutto University Sheringal supported its students in the following ways during the year 2017-18:

1.7 Scholarships Awarded During 2017-18

S.No	Name of Scholarship	No of Student
1	HEC Need Based Scholarship	192
2	HEC-French scholarships	32
3	NTS Scholarships	13
4	Zakat Mora Scholarships	120
5	SBBU Endowment Fund Scholarship	19
6	Under Prime Minister Fee Reimbursement Program	2736

Table 6: Scholarships Awarded During 2017-18

1.8 Undergraduate and Postgraduate Programs

SBBU caters to a variety of students by offering 42 degree programs including BS (4 years), MA/MSc and MPhil/PhD to regular students. These programs are offered in twenty departments of the University in its main and peripheral campus. The University is not only offering the academic programs to on-campus students but also to the students, enrolled in colleges located in the jurisdiction of the University. At present 10 public sectors and 43 private sector colleges are affiliated with SBBU offering various academic programs. The details of the academic departments for under graduate and graduate programmes are given separately below as Table 7 and Table 8.

1.9 Graduate Degree Programs

Duration	Eligibility	Degree	Disciplines
2-Years	14 years of schooling or graduation with relevant combination of subjects	M Sc	Botany
			Zoology
			Chemistry
			Computer Science
			Pakistan Study
	14 years of schooling or graduation with		English

	relevant combination of subjects	MA	Social Work
			Sociology

Table 7: Graduate Degree Programs

1.10 Undergraduate Degree Programs

Duration	Eligibility	Degree	Disciplines
4-Years	12 years of schooling with relevant combination of subjects	BS	Forestry
			Biotechnology
			Botany
			Zoology
			Chemistry
			Environmental Science
			Geology
			Computer Science
			Agriculture
			Sociology
			Islamiyat
			English
			Education
Management Science			
5 Years	12 years of schooling with relevant combination of subjects	Pharm-D	Pharmacy
		LLB	LAW

Table 8: Undergraduate Degree Programs

The University also offers various MS/MPhil and PhD programmes. The next section introduces these programs in detail.

1.11 MS/M Phil and PhD Programs

The University understands the role of research in the development of any society and has put lot of emphasis on the research programs in various fields. These post-graduate programmes are tailored in a way to give the scholars a firm theoretical background of the relevant fields before they are exposed to a particular area of research. During the designing of these programmes, special efforts

have been made by the QEC and academic departments under the guidelines of the then Vice Chancellor (Prof. Dr. Khan Bahadar Marwat) who was himself the member of the HEC committee of HEC for KP and Baluchistan. It was, therefore, the prime focus of the University to make them very relevant to the potential of the University and the area. The detail of such programs is given as Table 9.

MS/M Phil and PhD Degree Programs

Duration	Eligibility	Degree	Disciplines
2-4 Years	16 years of education with specialization in the relevant subjects	MPhil	Botany
		MPhil	Zoology
		MPhil	Chemistry
		MS	Computer Sciences
		MS	Management Sciences
		MPhil	Poultry Sciences
		MPhil	Live Stock Management
		MPhil	Biotechnology
		MPhil	English
3-8 Year	18 years of education (MS/M Phil)with specialization in the relevant subjects	Ph.D	Environmental Sciences
			Zoology
			Botany
			Biotechnology
			Chemistry

Table 9: MS/M Phil and PhD Degree Programs

1.12 Convocation

844 students have completed their BS/Masters and M.Phil degree programs from SBBU in 2017-18. There are many other candidates of various disciplines who are waiting for their final results and will be awarded degrees in the forth-coming (first) convocation, after the completion of the requirements of their programs. The first convocation of the University may be held any time next year at the University.

1.13 Academic Achievements

The number of graduates, produced by an institution of higher education, is considered to be one of the most important achievements because the basic purpose of establishing such institutions is to satiate the requirements of trained and educated manpower. SBBU, as a University, is consistent in meeting this mission. Table 10 shows the pass out students achievements of 2017-18.

Total Pass Out Student (2017-18)

BS	MA/M.Sc	MS/M.Phil	Ph.D
380	437	27	-
Total = 844			

Table 10: Total Pass Out Students (2017-18)

Apart from its achievements in terms of the graduating students, SBBU, as a University, has also established its strong linkages with foreign and national HEIs. In the next section, the foreign academic linkages of the University are given in detail.

1.14 Foreign and Local Academic Linkages

The University intends to establish though informal but very strong linkage with different public and private sector organizations of the country. These institutions range from academia to research, governmental to non-governmental as well as finance/funding related organizations like RAHA, MDP etc. SBBU has established academic linkages with other local and foreign Universities as envisioned to bring the academic and research quality of SBBU at par with these renowned Universities.

The main purpose of these linkages is to create opportunities for split programmes and research collaboration. In this regard, the University has already developed academic linkages with the following reputed international and national Universities:

1.15 Linkages with National and International Universities

S. No	University	Country
1	Bozok University	Turkey
2	Dicle University	Turkey
3	Fatih University	Turkey
4	Gediz University	Turkey
5	Namik Kemal University	Turkey
6	TR Erzincan University	Turkey
7	Trakya Balkan University	Turkey
8	Yildirim Beyazit University	Turkey
9	Al Gobol AL Gharbi	Libya
10	University of Malaya	Malaysia
11	Royal University of Dhaka	Bangladesh
12	Islamic University in Uganda	Uganda
13	Indus University, Karachi	Pakistan
14	Quaid-e-Azam University	Pakistan
15	Karachi University	Pakistan

16	AJK University	Pakistan
17	Khushal Khan Khatak University	Pakistan
18	Punjab University	Pakistan
19	Virtual University	Pakistan
20	Lahore University of Management Sciences (LUMS)	Pakistan
21	Gomal University	Pakistan
22	University of Science and Technology Bannu	Pakistan
23	Comsats University	Pakistan
24	University of Malakand	Pakistan
25	Bejieng Forestry University China	China
26	Senate of Pakistan	Pakistan

Table 11: Linkages with National and International

The signing of MOUs with the above national and international shows the importance of strategic linkage on the part of SBBU. The outcome of these linkages shall have greater impact on the quality of research and academics of the University in long run. The linkage programme with such is to stay updated with the most vibrant community in the academic world for strategic development.

1.16 Honours and Awards

- The Higher Education Commission (HEC) confers the Best University Teacher Award 2018 upon 64 University teachers in recognition of their outstanding performance. Each winner was awarded a certificate and a cash prize of Rs. 100,000. From SBBU, Dr. Shafiq Ur Rehman (Assistant Professor Pharmacy) received this award for the year 2017-18. Dr. Midrar Ullah (Assistant Professor Biotechnology) has received this prestigious award for the year 2016-17.
- Mr. Muhammad Tariq, Lecturer in Chemistry defended his PhD thesis on “Synthesis & mesomorphic studies of some novel azole based liquid crystalline molecules” under the supervision of Prof. Dr. Shahid Hamid from Quaid-i-Azam University Islamabad.
- Miss. Riffat Aziz, Lecturer in Environmental Science defended her M.Phil thesis on “Role of Forest Resources in Livelihood of Local Community. A Case Study of Dir Kohistan” under the supervision of Dr. Allah Ditta from Department of Environmental Science SBBU.
- Miss. Bakht Sheema Bibi, Lecturer in English defended her M.Phil thesis on “Indirectness of Requesting in Pushto Language” under the supervision of Dr. Mian Shah Bacha from Department of English SBBU.

- Mr. Ilyas Ahmad & Mr. Shah Zahoor Ahmad, Lecturers in Islamic Studies defended their M.Phil thesis, under the supervision of Dr. Aftab Ahmad from Department of Islamic Studies SBBU.

CHAPTER 2

RESEARCH AND DEVELOPMENT

Research and development – R&D – is the process by which an organization works to obtain new knowledge that it might use to create new technology, products, services, or systems that it will either use or sell.

2.1 R&D at SBBU-An Overview

In order to strengthen research capacity and increase international recognition through networking and more effective dissemination of research results, Shaheed BB University has been very focused on the component of R&D. This focus underlines the critical need for a restructured and well managed research and development programs. SBBU highlights the importance of research and development in terms of reputation-building and international recognition and enhanced opportunities for research networking. We firmly believe that more research will allow for expanding the number of PhD candidates and professionals to engage in research activities and in publishing research findings under the Shaheed Benazir Bhutto University umbrella.

During 2017-18, SBBU continued to progress by establishing a common mechanism for planning, implementing and monitoring of the research and development process. The policy was to apply to Faculties, Departments, Units and Groups. It started mapping out the process of research needs identification and prioritization, research project identification and initiation, proposal preparation and approval procedures, funding, project control and monitoring, research results dissemination, and evaluation of research effectiveness. Similarly, from the establishment of a research cell for the promotion of northern languages (the languages spoken in Dir and Chitral districts of the country), building a museum for the everyday life of local cultures and strengthening the already established research center (i.e., SHAARC), realizing the local need for the training of farmers on their domestic birds and animal keeping to the publishing of research articles, the focus was on the promotion of the importance of innovative research and using it for the development of the people. The current chapter highlights the activities carried out by SBBU for the promotion of research and development during the years of 2017 and 2018.

2.2 Projects

During these years, SBBU not only completed the already ongoing research projects but also launched a few new ones. The detail is given below:

2.2.1 Completed Projects

- Construction of Girls Student Hostel at SBBU Sheringal Dir Upper, Costing Rs. 100.00 Million, ADP Govt. of KPK funded project.
- Restoration of Flood Damaged Infrastructure, at Shaheed Benazir Bhutto University, Sheringal (KP), costing Rs. 121.734 million.
- Preservation and Research on High Valued Medicinal Plants at High Altitude Research Centre, Sheringal, Costing Rs. 32.808 Million.
- Establishment of Department of Forestry at Sheringal Campus, Costing Rs.28.771 Million.
- Using Inter-language Phonology for the Teaching of English Pronunciation to Pashto LI Speakers
- Sheringal Research Cell for Northern languages

2.2.2 Newly Launched

The newly launched project named “Development of University of Dir, Sheringal costing Rs. 1709.189 Million. The detail of the mega development project is given below.

Development of University of Dir, Sheringal" Dir Upper				
S#	Module Description As Per PC-1	PC-1 Provision		
		Area (sft)	Rate / sft	Cost (MRs.)
Contracts Not Awarded				
1	Academic Block	88816	3000	266.448
2	Administration block-Extension	22863	3200	73.162
3	Multi Purposes Hall	20854	3500	72.989
4	Central Library	25000	3100	77.500
5	Poultry Shed	3670	2000	7.340
6	Sheep & Goat Shed	1290	2000	2.580
7	Dairy Animal Shed	2730	2000	5.460
8	Beef Animal Shed	2730	2000	5.460

External Development				
i	Land Scaping/Horticular Lumpsum			1.000
ii	External Electrification			10.500
Contracts Awarded				
1	External Development			
i	Construction of Boundary wall, Security Check Posts, Earth Filling & Main Gate			97.069
ii	Construction of Overhead Water Tank, Water Supply & Sewerage System			34.101
iii	Construction of Road, Parking Area & Bridge (03 items as per PC-I) Ongoing			32.763
2	Civil Work Buildings			
i	Construction of Boys Hostel (Ongoing)	2,729	3,100	132.460
ii	Construction of Herbarium	18,746	3000/sft	56.238
	Construction of Agriculture Labs	11,745	3200/sft	37.584
iii	Construction of Girls Hostel (New Contract)	42,729	3,100	132.460
iv	Construction of Community Center	21,224	3,200	67.917
v	Consultancy Services			47.126
vi	Cost Escalation of Civil Work			65.112
Total Civil Work				1,225.269
3	Other Components			
i	Micro Hydel Power Station of 200 KVA			45.421
ii	Lab Equipments			74.689
iii	Equipment's for ICT Infrastructure			100.068
iv	Furniture & Fixtures			91.149
v	Books & Journals			35.000
vi	Vehicles Requirements/ Farm Machinery & Animals			102.48
vii	Project Execution Staff and Contingencies			35.113
Grand Total				1,709.189

Table 12: Detail of the Mega Development Project

2.3 Publications

The faculty and scholars of SBBU continued contributing their research findings and getting them published in national and international journals. The following table sums up these publications:

2.3.1 Publications List of 2017

S.No	Author / Co Authors	Name of Journal	Title of the Publication	Vol. No. & Page No.	Year	IF / Category
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1	Farman Ali,	Chiang Mai Journal of Science; (x) : 1-7	Selective biological activities and phytochemical profiling of two wild plant species, Teucrium Polium and Capsicum Annum from Sheringal, Pakistan	44 1-7	2017	0.44, w
2	Farman Ali Khan, et al	Bioorganic & Medicinal Chemistry	Antioxidant and anticholinesterase potential of diterpenoid alkaloids from Aconitum heterophyllum	25, no. 13 3368-3376	2017	2.93 w
3	Farman Ali Khan, et al	Journal of Asian natural products research	Selective dual cholinesterase inhibitors from Aconitum laeve."	DOI: 10.1080/10286020.2017.1319	2017	1.071 w
4	Muhammad Tariq,	Journal of Structural Chemistry	Structural diversities and preliminary antimicrobial studies of 1-((E)-(pentylimino) methyl)naphthalen-2-ol and its metal complexes	58 (2) 297-303	2017	0.47 w
5	Muhammad Tariq	Journal of Materials and Environmental Sciences	Surface and thermodynamic study of micellization of non ionic surfactant/diblock copolymer system as revealed by surface tension and conductivity	8, 4 1161-1167	2017	Nil
6	Saira Nayab	Polyhedron	Synthesis, characterisation and X-ray structure of Cu(II) and Zn(II) complexes bearing N,N-dimethylethylenamine-camphorylimine ligands:	Volume 130, Page No; 23-27	2017	1.926 w
7	Saira Nayab	Journal of Coordination Compounds	Polymerizations of methyl methacrylate and rac-lactide by zinc(II) pre-catalyst containing N-substituted 2-iminomethylpyridine and 2-iminomethylquinoline	doi.org/10.1080/00958972.2017.1416106	2017	1.795 w
8	Saira Nayab	Electrochimica Acta	Highly sensitive and selective electrochemical sensor for the trace level detection of mercury and cadmium	doi.org/10.1016/j.electacta.2017.12.002	2017	4.798 w
9	Saira Nayab	Polyhedron	Synthesis, characterisation, and X-ray structures of Zn(II) complexes containing bis-camphoryldiimine ligands: Application to polymerisation of rac-lactide	Volume 126, Page No; 127-133	2017	1.926 w
10	Saira Nayab	Journal of Electrochemical society	An Electrochemical Sensing Platform for the Trace Level Detection of Copper	Volume 164 Page No. B184-B188	2017	3.26 w
11	Saira Nayab	Bulletin of the Korean chemical Society	Polymerization of rac-Lactide Using Zinc(II) and Copper(II)Complexes of N1,N1-Dimethyl-N2-[(1R)-Myrtenylmethyl] Ethane-1,2-Diamine	10.1002/bkcs.11323	2017	0.602 w

12	Saira Nayab	Polyhedron	Copper(II) complexes containing N,N'-bidentate N-substituted N-(pyridin-2-ylmethyl)amine: Synthesis, structure and application towards polymerization of rac-lactide	Volume 127, Page No; 51-58	2017	1.926 w
13	Noor Rehman, ,	Macromolecular Research	Dynamics of Cellulose Nanocrystals in the Presence of Hexa decyltrimethy lammonium Bromide	25/8 767-771	2017	1.35 w
14	Noor Rehman,	Journal of Materials and Environmental Sciences	Surface and thermodynamic study of micellization of non ionic urfactant/diblock copolymer system as revealed by surface tension and conductivity,	8 /4 1161-1167	2017	Nil
15	Noor Rehman	Sains Malaysiana	Effect of Electrolyte (NaCl) and temperature on the mechanism of cetyl trimethylammonium bromide micelles	45/5 731-739	2017	0.42 w
16	Noor Rehman,	Journal of Materials and Environmental Sciences	Physico-chemical properties of cationic surfactant cetyltrimethylammonium bromide in the presence of electrolyte ,	8/3 1029-1038	2017	Nil
17	Noor Rehman	Science, Technology Development	Chemical Composition and Biological Profile of Essential Oil of Rosmarinus officinalis L.	36/1 1-5	2017	Nil
18	Sher Wali Khan	Journal of materials and environmental sciences	Surface and thermodynamic study of micellization of non ionic surfactant/diblock copolymer system as revealed by surface tension and conductivity	8 1161-1167	2017	Nil
19	Sher Wali Khan	Quimica nova	facile synthesis, characterization and dft calculations of 2-acetyl pyridine derivatives	XY 1-6	2017	0.66 w
20	Nasir Mehmood Khan	Science, Technology Development	Chemical composition and invitro biological screening of essteinal oil from rosmarinus officinalis	36(1)	2017	Nil
21	Amin Ullah Jan	Journal of Food Measurement Characterization	Identification & quantification of phenolic compounds through reversed phase HPLC-DAD method in sunflower seeds under various treatments of potassium nitrate, zinc sulphate & gibberellic acid	https://doi.org/10.1007/s11694-017-9637-8	2017	0.56 w

22	Amin Ullah Jan	International Journal of Horticulture & Agriculture	Role of CBF/DREB Gene Expression in Abiotic Stress Tolerance	2 (1) 1-12	2017	Nil
23	Ayaz Ahamd	Research & Reviews in BioSciences	Phytoextraction and Translocation of Cadmium in Saline Soil by <i>Hemerocallis fulva</i> and <i>Dodonaea viscosa</i> Plants	12(2) 124	2017	Nil
24	Ayaz Ahamd,	Research & Reviews in BioSciences	Phytoextraction and Translocation of Cadmium in Saline Soil by <i>Hemerocallis fulva</i> and <i>Dodonaea viscosa</i> Plants	12(2) 124	2017	Nil
25	Amin Ullah Jan	Journal of Photochemistry Photobiology	Bio-fabrication of catalytic platinum nanoparticles and their in vitro efficacy against lungs cancer cells line	173, 368–37	2017	2.7 w
26	Amin Ullah Jan,	Plant Physiology Biochemistry	Potassium and zinc increase tolerance to salt stress in wheat (<i>Triticum aestivum</i> L.)	116, 139- 149	2017	2.9 w
27	Amin Ullah Jan,	International Journal of Agronomy	Combining ability and correlation studies in 6×6 diallel crosses of sunflower (<i>Helianthus annuus</i> L.)	Vol. 10, No. 5, 9-16	2017	Nil
28	Amin Ullah Jan	Agricultural Research	Analysis of heavy metals (Pb and Cd) in soil, peach fruit and its accumulation in human blood	Vol. 10, No. 4, p. 24-32	2017	Nil
29	Amin Ullah Jan	International Journal of Biosciences	Salinity in soil increased cadmium uptake and accumulation potential of two terrestrial plants	Vol. 10, No. 3 , p. 132-142	2017	Nil
30	Asif Nawaz	Bioprocess & Biosystems Engineering	Chitosan hydrogel microspheres: an effective covalent matrix for crosslinking of soluble dextranase to increase stability and recycling efficiency	451-461	2017	1.87 w
31	Asif Nawaz	Environmental Science and Pollution Research	Production of α -1, 4-glucosidase from <i>Bacillus licheniformis</i> KIBGE-IB4 by utilizing sweet potato peel	24: 4058-4066	2017	2.74 w
32	Asif Nawaz	Biomedicine & Pharmacotherapy	In vivo and in silico sedative-hypnotic like activity of 7-methyljuglone isolated from <i>Diospyros lotus</i> L.	87: 678–682	2017	2.75 w
33	Asif Nawaz	Pure and Applied Biology	Antibacterial and antibiofilm potential of leave extracts of <i>Mirabilis jalapa</i> L. and <i>Ajuga bracteosa</i> wall. against <i>Pseudomonas aeruginosa</i>	6: 605-613.	2017	Nil

34	Asif Nawaz	Catalysis Letters	Role of anionic polysaccharide (alginate) on activity, stability and recycling efficiency of bacterial endo (1→4) β-d-glucanase of GH12 family	147, 1792–1801	2017	2.79 w
35	Asif Nawaz	Life Sciences	Isolation and characterization of a bacteriophage and its utilization against multi-drug resistant <i>Pseudomonas aeruginosa</i> -2995	190: 21-28	2017	2.93 w
36	Asif Nawaz	Journal of the Chinese Medical Association	Bacterial biofilm and associated infections	1-5	2017	1.25 w
37	Ziaul Islam ¹	International Journal of Bioscience	Comparative study of egg quality traits in local breeds and commercial lines of chickens	Vol. 10, No. 2, 1-5	2017	Nil
38	Ziaul Islam	International Journal of Bioscience	Effect of aniseed (<i>Pimpinella anisum</i> L.) Supplementation on milk composition, blood biochemical profile & productive performance of Damani goats	Vol. 10, No. 5, p. 165-171,	2017	Nil
39	Ziaul Islam	International Journal of Bioscience	Prevalence & epidemiological parameters of bovine tuberculosis in cattle and buffaloes in district Peshawar, Pakistan	Vol. 10, No. 4, p. 263-267	2017	Nil
40	Ziaul Islam ⁴ ,	International Journal of Biosciences	Comparative evaluation of Serum Plate Agglutination Test (SPAT) and Rose Bengal Plate Test (RBPT) for diagnosis of <i>Brucella abortus</i> in sera of cattle and human	Vol. 10, No. 5, p. 367-371,	2017	Nil
41	Khan K., S. Khan,	Journal of Animal and Plant Sciences	Production performance of indigenous rabbits under traditional and intensive production system in Northern Pakistan	27(1) 75-81	2017	0.381 W
42	Khan K.	Journal of Animal and Plant Sciences	Nutritive value, fiber digestibility and methane production potential of tropical forages in rabbits: effect of species and harvest maturity	27(4) 1094-1100	2017	0.381, w
43	Dr. Shafiq Co-author	Khyber Medical University Journal	Prescribing Pattern of Drugs for Indoor Diabetic Patients in a Tertiary Care Private Sector Hospital, Peshawar, Pakistan	9 (2), 72-77	2017	X
44	Dr. Shafiq	Records of Natural Products	A new trihydroxy fatty acid and phytoecdysteroids from rhizomes of <i>Trillium govianum</i>	11 (3), 323-327	2017	0.765, w
45	Zul Kamal,	Journal of Traditional Chinese Medicines	Saponins and solvent extracts from <i>Atriplex laciniata</i> L. exhibited high anthelmintic and insecticidal activities	37 (5) 599-606	2017	Nil

46	M. Nawaz Rajpar,	Journal of Biodiversity Management & Forestry	Habitat selection of <i>Dendrocygna javanica</i> in heterogeneous lakes of Malaysia	6:3 DOI: 10.4172/2327-4417.10183	2017	Nil
47	M. Nawaz Rajpar,	Expert opinion Environmental Biology	Avian assemblages at Paya Indah natural wetland reserve, Malaysia	6:3DOI: 10.4172/23225 - 55.1000148	2017	Nil
48	Sami Ullah,	Arabain Journal of Geoscience (Springer)	Evaluating the impact of classification algorithms and spatial resolution on the accuracy of land cover mapping in a mountain environment in Pakistan	10/3 1-11	2017	(0.95) w
49	Sami Ullah,	Forest Biogeosciences and Forestry	Comparing image-based point clouds and airborne laser scanning for estimating forest heights	10 273-280	2017	w (1.67)

Table 13: The Publications of the Faculty and Scholars of SBBU

2.3.2 Publications List of 2018

1. Afzal Shah, Maria Saleem Malik, Gul Shahzada Khan, Erum Nosheen, Faiza Jan Iftikhar; **Farman Ali Khan**, Shyam S. Shukla; Heinz-Bernhard Kraatz "Stimuli responsive peptide based biomaterials as drug delivery systems". Chemical Engineering Journal (Accepted 2018, IF. 6.2).
2. **Ullah, Rahim**, Khalid Pervaiz Akhtar, Peter Moffett, Tawaf Ali Shah, Manzoor Hussain, Muhammad Kashif Riaz Khan, Shahid Mansoor, and Muhammad Saeed. "Analysis of the resistance of *Gossypium herbaceum* to cotton leaf curl kokhran virus strain burewala and cotton leaf curl multan betasatellite." *Journal of Plant Pathology* (2018): 1-4.
3. Ahmad, Hanif, **Shujaat Ahmad**, Syed Adnan Ali Shah, Hidayat Ullah Khan, Farman Ali Khan, Mumtaz Ali, Abdul Latif, Farzana Shaheen, and Manzoor Ahmad. "Selective dual cholinesterase inhibitors from *Aconitum laeve*." *Journal of Asian natural products research* 20, no. 2 (2018): 172-181.
4. Khan, M., M. Irfan, **L. Ahmad**, and W. A. Khan. "Simultaneous investigation of MHD and convective phenomena on time-dependent flow of Carreau nanofluid with variable properties: Dual solutions." *Physics Letters A* (2018).
5. Rahman, Habibur, Haseena Bibi, **MS Abdul Jabar**, and Iftikhar Ahmad. "Cross-Kerr nonlinearity in the surface plasmon polariton waves generated at the interface of graphene and gain medium." *EPL (Europhysics Letters)* 122, no. 5 (2018): 57003.
6. Su, Jing, Geyi Liu, Yumei Lian, **Zul Kamal**, Xiao Que, Yujiao Qiu, and Mingfeng Qiu. "Preparation and characterization of erythrocyte membrane cloaked PLGA/arsenic trioxide

- nanoparticles and evaluation of their in vitro anti-tumor effect." *RSC Advances* 8, no. 36 (2018): 20068-20076.
7. Idrees, M., Sania, B., Hafsa, B., Kumari, S., Khan, H., Fazal, H., Ahmad, I., Akbar, F., Ahmad, N., Ali, S. and Ahmad, N., 2018. Spectral lights trigger biomass accumulation and production of antioxidant secondary metabolites in adventitious root cultures of *Stevia rebaudiana* (Bert.). *Comptes rendus biologiques*.
 8. Imtiaz, Muhammad, Muhammad Ashraf, Muhammad Shahid Rizwan, Muhammad Amjad Nawaz, Muhammad Rizwan, Sajid Mehmood, Balal Yousaf, Allah Ditta . "Vanadium toxicity in chickpea (*Cicer arietinum* L.) grown in red soil: Effects on cell death, ROS and antioxidative systems." *Ecotoxicology and environmental safety* 158 (2018): 139-144.
 9. Khan, Aziz, Muhammed I. Syam, Akbar Zada, and Hasib Khan. "Stability analysis of nonlinear fractional differential equations with Caputo and Riemann-Liouville derivatives." *The European Physical Journal Plus* 133, no. 7 (2018): 264.
 10. Gul, Jaweria, Tamana Bakht, and Saima Kanwal. "INCREASING DENSITIES OF AVENA FATUA AND RUMEX DENTATUS REDUCE THE YIELD OF WHEAT UNDER FIELD CONDITIONS." *Pakistan Journal of Weed Science Research* 24, no. 2 (2018).
 11. Jan, Amin Ullah, Fazal Hadi, Alam Zeb, and Ziaul Islam. "Identification and quantification of phenolic compounds through reversed phase HPLC-DAD method in sunflower seeds under various treatments of potassium nitrate, zinc sulphate and gibberellic acid." *Journal of Food Measurement and Characterization* 12, no. 1 (2018): 269-277.
 12. Inc, Mustafa, Hasib Khan, Dumitru Baleanu, and Aziz Khan. "MODIFIED VARIATIONAL ITERATION METHOD FOR STRAIGHT FINS WITH TEMPERATURE DEPENDENT THERMAL CONDUCTIVITY." *Thermal Science* (2018).
 13. Sadiq, Abdul, Anwar Zeb, Farhat Ullah, Sajjad Ahmad, Muhammad Ayaz, Umer Rashid, and Noor Muhammad. "Chemical Characterization, Analgesic, Antioxidant, and Anticholinesterase Potentials of Essential Oils From *Isodon rugosus* Wall. ex. Benth." *Frontiers in pharmacology* 9 (2018).
 14. Muntaha, Sidratul, Mazhar Iqbal, Madeeha Alamzeb Shamia, Asif Iqbal, Brajendra Parmar, Rabia Mehreen, and Amjad Bilal. "Identification of most important weed species in wheat crop under high altitude in northern Pakistan."
 15. Akhter, Nazish, Zul Kamal, Faiz Ur Rahman, Pinky Sultana, and Zahra Dhurrani. "Awareness and Prevalence of Epilepsy; a Study in Educational Hubs at Sheringal, Khyber Pakhtunkhwa, Pakistan."

16. Ullah, Sami, Muhammad Akram Khan, Shafiq Ur Rahman, Imran Khan, Fazal Akbar, and Anshu Babbar. "Molecular characterization and clinical epidemiology of HCV in District Dir (Lower), Pakistan." *VirusDisease*: 1-6.
17. Perveen, Farzana Khan. "Cave and Karst Protection and Management in Pakistan." *Global Geoheritage-International*: 109.
18. Muhammad, Siraj, Matthew N. Dailey, Imari Sato, and Muhammad F. Majeed. "Handling Specularity in Intrinsic Image Decomposition." In *International Conference Image Analysis and Recognition*, pp. 107-115. Springer, Cham, 2018.
19. Salim, Mohammad. "Bats in Northern Mountain Region of Khyber Pakhtunkhwa, Pakistan." In *Bats*. IntechOpen, 2018. Book chapter
20. han, M., J. Ahmed, and L. Ahmad. "Chemically reactive and radiative von Kármán swirling flow due to a rotating disk." *Applied Mathematics and Mechanics* 39, no. 9 (2018): 1295-1310.
21. Farooq, Naila, Allah Ditta Shamsa Kanwal, Azhar Hussain, Muhammad Naveed, Muhammad Usman Jamshaid, and Muhammad Iqbal. "Comparative efficacy of KCl blended composts and sole application of KCl or K₂SO₄ in improving K nutrition, photosynthetic capacity and growth of maize." *SOIL & ENVIRONMENT* 37, no. 1 (2018): 68-74.
22. Jamal, Muhsin, Saadia Andleeb, Fazal Jalil, Muhammad Imran, Muhammad Asif Nawaz, Tahir Hussain, Muhammad Ali, Sadeeq ur Rahman, and Chythanya Rajanna Das. "Isolation, characterization and efficacy of phage MJ2 against biofilm forming multi-drug resistant *Enterobacter cloacae*." *Folia microbiologica* (2018): 1-11.
23. Jan, Amin Ullah, Fazal Mabood, Fazal Hadi, Ayaz Ahmad, and Nasir Ali. "Analysis of Nickel and Lead contents in some vegetables from selected road sides areas of District Swat." *Asian Journal of Botany* (2018).
24. Mehmood, Sajid, Muhammad Rizwan, Saqib Bashir, Allah Ditta, Omar Aziz, Li Zhe Yong, Zhihua Dai et al. "Comparative effects of biochar, slag and ferrous-Mn ore on lead and cadmium immobilization in soil." *Bulletin of environmental contamination and toxicology* 100, no. 2 (2018): 286-292.
25. Ullah, Waheed, Noor Jehan, Muhammad Faizan Malik, and Adnan Ali. "The Impact of Total Quality Management (TQM) in Higher Education: A Qualitative Insight of Higher Education in ."
26. Rosli, Zamri, M. Zakaria, and M. N. Rajpar. "EDGE EFFECTS ON FORAGING GUILDS OF UPPERSTORY BIRDS IN AN ISOLATED TROPICAL RAINFOREST OF MALAYSIA." *JAPS: Journal of Animal & Plant Sciences* 28, no. 1 (2018).

27. Ullah, Sana, Fazal Hadi, Nasir Ali, and Sikandar Khan. "Foliar Application of Iron (Fe) Improved the Antioxidant Defense and Cd Accumulation Potential of *Ricinus communis* Under Hydroponic Condition." *Water, Air, & Soil Pollution* 229, no. 8 (2018): 284.
28. Khan, Hasib, Cemil Tunc, Wen Chen, and Aziz Khan. "EXISTENCE THEOREMS AND HYERS-ULAM STABILITY FOR A CLASS OF HYBRID FRACTIONAL DIFFERENTIAL EQUATIONS WITH P-LAPLACIAN OPERATOR." *JOURNAL OF APPLIED ANALYSIS AND COMPUTATION* 8, no. 4 (2018): 1211-1226.
29. Bacha, Bakht Amin, and MS Abdul Jabar. "The event cloaking from a birefringent medium via Kerr nonlinearity." *Journal of Optics* 20, no. 9 (2018): 095703.
30. Pervez, Sidra, Muhammad Asif Nawaz, Afsheen Aman, Sadia Qayyum, Faiza Nawaz, and Shah Ali Ul Qader. "Agarose Hydrogel Beads: An Effective Approach to Improve the Catalytic Activity, Stability and Reusability of Fungal Amyloglucosidase of GH15 Family." *Catalysis Letters* (2018): 1-11.
31. Ditta, Allah, Juma Muhammad, Muhammad Imtiaz, Sajid Mehmood, Zheng Qian, and Shuxin Tu. "Application of rock phosphate enriched composts increases nodulation, growth and yield of chickpea." *International Journal of Recycling of Organic Waste in Agriculture* 7, no. 1 (2018): 33-40.
32. Khan, Masood, Latif Ahmad, and Waqar Azeem Khan. "Mathematical modeling and numerical computations of unsteady generalized Newtonian fluid flow with convective heat transfer." *Journal of the Brazilian Society of Mechanical Sciences and Engineering* 40, no. 3 (2018): 166. Maths
33. Khan, Masood, Latif Ahmad, and Muhammad Ayaz. "Numerical simulation of unsteady 3D magneto-Sisko fluid flow with nonlinear thermal radiation and homogeneous–heterogeneous chemical reactions." *Pramana* 91, no. 1 (2018): 13. Maths
34. Khan, Gul Mali, Nasir Mehmood Khan, Zia Ullah Khan, Farman Ali, Abdul Khaliq Jan, Nawshad Muhammad, and Rizwan Elahi. "Effect of extraction methods on structural, physiochemical and functional properties of dietary fiber from defatted walnut flour." *Food Science and Biotechnology*: 1-8.
35. Buşe, C., Khan, Aftab., Nguyen, L.T., O'Regan, D. and Rahmat, G., 2018. Asymptotic behavior of discrete evolution families in Banach spaces. *Applicable Analysis*, 97(2), pp.160-178.

36. Nawab, Javed, Sardar Khan, Wang Xiaoping, Abdur Rahman, Haider Ali, Zahir Qamar, Zar Ali Khan et al. "Spatial distribution of toxic metals in drinking water sources and their associated health risk in district buner, Northern Pakistan." *Human and Ecological Risk Assessment: An International Journal* 24, no. 3 (2018): 615-626.
37. Aziz, Muhammad Abdul, Muhammad Adnan, Amir Hasan Khan, Abdelaaty Abdelaziz Shahat, Mansour S. Al-Said, and Riaz Ullah. "Traditional uses of medicinal plants practiced by the indigenous communities at Mohmand Agency, FATA, Pakistan." *Journal of ethnobiology and ethnomedicine* 14, no. 1 (2018): 2. Botony,
38. Hannan, Abdul, Sobia Arshad, Muhammad Azam, Jonathan Loo, Syed Ahmed, Muhammad faran Majeed, and Sayed Shah. "Disaster management system aided by named data network of things: architecture, design, and analysis." *Sensors* 18, no. 8 (2018): 2431.
39. Shin, Sujin, Hyungwoo Cho, Hyosun Lee, Saira Nayab, and Younghak Kim. "Zinc (II) complexes containing N'-aromatic group substituted N, N', N-bis ((1H-pyrazol-1-yl) methyl) amines: Synthesis, characterization, and polymerizations of methyl methacrylate and rac-lactide." *Journal of Coordination Chemistry* 71, no. 4 (2018): 556-584.

Book chapter

40. Rajpar, Muhammad Nawaz. "Tropical Forests Are An Ideal Habitat for Wide Array of Wildlife Species." In *Tropical Forests-New Edition*. IntechOpen, 2018.
41. Perveen, Farzana Khan. "Introduction to Drosophila." In *Drosophila melanogaster-Model for Recent Advances in Genetics and Therapeutics*. InTech, 2018. Book chapter

2. 4 Conferences, Seminars, Workshops and Trainings (Arranged)

During the years 2017-18, the faculty members, master trainers and the directorate of QEC remained very busy in arranging the trainings, seminars and workshops in the main campus and sub campuses of the University. The detail is given below:

- Celebrating 15 Years of Higher Education Commission in University (18-Oct-17)
- One Day Workshop on Quality Assurance & Revised Criteria of QAA (30-Oct-17)
- Two Days Seminar on Advances in Research, Dissertation and Paper Writing in Biological Sciences (14-Nov-17)
- One Day Work Shop on Self-Review of MS/MPhil & Ph.D Programs (6-Dec-17)

- One Day Workshop on Self-Assessment & Program Accreditations (7-Dec-17)
- One Day Seminar on Enhancing Institutional Competence through efficient leadership (14-Mar-18)
- One Day Training on Internal Quality Assurance Practices (29-Mar-18)
- Two Days Seminar on Enhancing Individual Performance through professional tolerance (11-Apr-18)
- One Day Training on How to Write Self-Assessment Report (12-Apr-18)
- One Day Training Program On The Role of AT Members in Self-Assessment (15-May-18)
- Three Days Teacher Training workshop under Master Trainer Faculty Professional Development Program (MT-FPDP) (26- Jun-18)
- Two Days Workshop on Understanding of Research (27-Jun-18)
- Department of Biotechnology celebrates the 15th anniversary of the land mark of completion of Human Genome Project marked as International DNA Day (July 04, 2018).
- One Day Workshop on “Skill Development Training Course on Cultivation”, processing and preservation of economically important medicinal plant (Aug13, 2018).
- One Day Workshop on “Setting Standards for Clinical Pharmacy” organized by the Department of Pharmacy (July 2018).

2.5 Conferences, Seminars, Workshops and Trainings (Attended)

- Dr. Tamana Ihsan attended Workshop on Wood Identification Techniques & its Role in Wood Industries (21-Apr-17)
- Director QEC attended 1st International Conference on Quality Assurance in Higher Education (ICQAHE) (18-12-17)
- Director QEC attended Training on Pre Visit Preparation of IPE, MS/M.Phil. & Ph.D Program Review (11/4/2017)
- Amin Ullah Jan and Fazal Hadi. attended 1st International Conference on “Digitization and Documentation of Plant Natural Resources in Chitral, Pakistan, 02 April, 2018
- Amin Ullah Jan, Fazal Hadi and Midrarullah, attended 7th National Conference on “Biodiversity Conservation, Livelihood and Sustainable Development”. July 10-12, 2017.
- Dr. Farman Ali, attended “ 1st International Conference on Recent Innovation in Medical Chemistry” at University of Bannu (20-Feb-2018)

2.6 Presentations Made in Scientific Seminars, Trainings, Workshops and Conferences

- Vice Chancellor, SBBU attend a Seminar on Mountain Resources and Livelihood in the Hindu Kush Himalayas: Higher Education Research and Regional Collaboration for sustainable Mountain Development at Chengdu China (29-Oct-2017)
- Dr. Amin Ullah Jan, Assistant Professor avail Travel grant to UK from Higher Education Commission Pakistan, presented a paper at 2nd Euro Global Summit and Expo on title” Potassium and Zinc increase tolerance to salt stress in wheat (*Triticum aestivum* L.)” October (12-13,2017)
- Dr. Akthar Aman, Assistant Professor, Department of Pharmacy, participate in “4th International Congress on Drug Discovery, Designing and Development” at Chicago USA (2-3 Oct, 2017)
- Dr. Akthar Aman, Assistant Professor, Department of Pharmacy, participate in “ Pharmacy Show” at NEC Birmingham United Kingdom (8-9 Oct, 2017)
- Vice Chancellor, SBBU attend Himalayan University Consortium annual meeting, Chengdu China (1 Nov, 20147)
- Dr. Umm-e-Kalsoom , Assistant Professor, Department of Agriculture, present a paper on “ Crop weed competitive interaction in two different years of crop season” in international conference of agriculture at Al Azhar University, Egypt (23 Feb, 2018).
- Mr. Zia Ul Islam, Lecturer, Department of Animal Science, present a paper on “Effect of dietary organic Selenium supplementation on the productivity, Selenium Distribution in Eggs and Blood Hematology of laying quail, at Turkey (2018).
- Dr. Riaz Ahmad, Lecturer, Department of Computer Science, present a paper on “Text-line segmentation of large titles and headings in Arabic like script” in 1st International Workshop on Arabic Script Analysis and Recognition (ASAR) at France (2017).
- Dr. Muhammad Asif Nawaz, Assistant Professor avail Travel grant to Malaysia from Higher Education Commission Pakistan, presented paper at INTERNATIONAL CONFERENCE OF CHEMICAL ENGINEERING AND INDUSTRIAL BIOTECHNOLOGY (ICCEIB 2018) on title; Utilization of Different Polymers for the Improvement of Catalytic Properties and Recycling Efficiency of Bacterial Maltase, 1st – 2 nd August 2018 in Kuala Lumpur, Malaysia.

2.7 Research Journals

Within last two years, Shaheed BB University faculty and researchers have contributed to a number of national and international research journals. They also realized to introduce exclusive research journals in few very important fields. The authorities of the University have proposed to start up the following journals:

- Pakistan Journal of Linguistics
- Sheringal Research Journal of Forestry
- Journal of Islamic Studies (ACTA Islamica)

2.8 Research Collaboration

SBBU considers research collaboration equally important for the promotion of the R&D at the University. Therefore, SBBU entered into MOUs and collaboration with indigenous and foreign . The following two sections show the linkages created by SBBU for the purpose.

2.9.1 Indigenous

SBBU signed the MOUs with the following indigenous with a focus for collaborative research:

1. The University of Azad Jammu and Kashmir, Pakistan
2. The University of Karachi, Pakistan
3. Bannu University of Science And Technology, Bannu
4. Quaid-e-Azam University, Islamabad, Pakistan
5. Virtual University, Pakistan
6. Khushal Khan Khattak University, Charsadda, Pakistan
7. Lahore University of Management Sciences, Lahore, Pakistan
8. Gomal University, DI Khan, Pakistan
9. Indus University, Karachi
10. University of Malakand
11. Senate of Pakistan

2.9.2 Foreign Linkages

1. Bozok University, Turkey
2. Dicle University, Turkey

3. Fatih University, Turkey
4. Gediz University, Turkey
5. Namik Kemal University, Turkey
6. TR Erzincan University, Turkey
7. Trakya Balkan University, Turkey
8. Yildirim Beyazit University, Turkey
9. Islamic University of Uganda
10. University of Malaya, Malaysia
11. Royal University of Dhaka, Bangladesh
12. Al Gobol Al Gharbi University, Libya
13. Bejieng Forestry University China

The University also signed the Mevlana Exchange Protocol with the following Turkish :

1. Erzincan University, Turkey
2. Bozok University, Turkey
3. Decli University, Turkey

The main purpose of these linkages is to develop possibilities for joint academic and collaborative research plans. We hope to create a potential relationship with these and more indigenous and foreign in near future. Recently SBBU has also signed the membership of the Himalyan Consortium (HUC). HUC is a consortium of some 30 from eight countries of the Himalaya and Hindukush region. The headquarters of HUC is in Nepal and it is technically assisted by the International Center for Integrated Mountain Development (ICIMOD).

2.10 Research Collaboration

Department-wise research projects and/or research funding earned by the faculty members of SBBU, Sheringal.

S.No	Name of Faculty	Name of Project	Amount
1	Dr. Habib Ullah Jan	"An investigation into the effect of biological vs. chemical treatments on the feeding value of wheat straw in Northern Pakistan".	50000
2	Dr. Noor Rehman	Chemical Modification of natural chitosan and preparation, characterization of its composites in the presence of nano fillers	4,85300
3	Dr. Sana Ullah	Degradation of Organochlorine Pesticides (OCPs) by	4,19000

		Simple and Efficient Photochemical Processes	
4	Dr. Saira Nayab	Symmetrical, Asymmetrical Schiff Bases and Diamines Based Transition Me Metals Complexes: Synthesis, Characterization and Biological Applications.	26,81158
5	Dr. Nasir Mehmood	Production of Starch Nano Materials and Low Glycaemic Index (GI) Foods by Extrusion Cooking of Native Maiz Starch and Maiz Meal with Lipids.	29,45658
6	Dr. Abdul Khaliq Jan	Phytochemical Investigation on Galium Chitralensis and Galium Campylcotrichum from Pakistan.	37,75471
7	Dr Amin Ullah Jan	Biochemical and Molecular Characterization of Potato (Solanum tuberosum L.) Varieties for Drought and Salt Stress Tolerance	500000
8	Dr. Asif Nawaz	Production of commercially important cellulase from Bacillus species using agricultural wastes	500000
9	Dr. Rahim Ullah	Characterization of Gemini viruses and their associated satellites in Dir Upper	500000
10	Dr. Imran Khan	Start-Up Research Grant Program (SRGP) by HEC Pakistan	500000

Table 14: SBBU Faculty Research Projects

CHAPTER 3

QUALITY ASSURANCE

Quality is the means through which an institution can guarantee, with confidence and certainty, that the standards of its educational provision are being maintained and enhanced (Quality Assurance Agency UK); Quality in higher education is a dynamic entity which is the outcome of interaction among many factors including inter-alia, leadership, quality of faculty and students, infrastructure facilities, research and learning environment, governance, strategic planning, assessment procedures, and market force.

3.1 Impact of Quality Assurance in the University

Quality Enhancement Cell, Shaheed Benazir Bhutto University was established on 25th January, 2011 to monitor and assess academic Programs through a number of instruments provided by the HEC in the shape of manual called Self-Assessment Manual. Assessment is a systematic process of gathering, reviewing and using important quantitative and qualitative data and information from multiple and diverse sources about educational programs, for the purpose of improving student learning, and evaluating whether academic and learning standards are being met.

3.2 Quality Enhancement Cell

QEC at Shaheed BB University, since its inception, is striving for achieving excellence in quality education. QE SBBU has been presenting its Yearly Progress Report (YPR) to QAA, HEC in every year. It has also worked on various issues regarding the assurance of quality education. Director QEC is also the member of various statutory bodies of the University. Some of the important activities are noted down here:

3.3 Memberships of the Association

The QEC of SBBU has got registered with the following international bodies as per QAA HEC requirement.

- Member of Asian Pacific Quality Network (APQN)
- Member of Tallories Network
- Member of Association of Quality Assurance Agencies of the Islamic World (QA-Islamic).

3.4 Director QEC Statutory Bodies Membership

Director QEC got the membership of the following statutory bodies of the University as per QAA HEC requirement.

- Member Board of Studies
- Member Academic Council
- Member Board of Faculty
- Member Finance and Planning Committee
- Member Syndicate
- Member Senate

3.5 QEC Self-Assessment Reports of 2017-18

QEC SBBU completes 07 Self-Assessment Reports including Rubric Reports, Executive Summary and Implementation Plan for the year 2017-18 in the following programs.

- M.Sc Botany
- M.Sc Computer Science
- M.Sc Sociology
- M.Sc Chemistry
- M.Sc Pakistan Study
- M.Sc Zoology
- BS Agriculture

3.6 Awareness Seminars/Conferences/Workshops on QA/SA 2017-18

- One Day Workshop on Quality Assurance & Revised Criteria of QAA (30-Oct-17)
- One Day work Shop on Self-Review of MS/MPhil & Ph.D Programs (6-Dec-17)
- One Day Workshop on Self-Assessment & Program Accreditations (7-Dec-17)
- One Day Training on "Internal Quality Assurance Practices" (29-Mar-18)
- One Day Training on "How to Write Self-Assessment Report" (12-Apr-18)
- One Day Training Program On The Role of AT Members in Self-Assessment(15-May-18)

3.7 Meetings Regarding QA/SA 2017-18

- 1st Meeting on Revised Criteria of QAA, NOCs and Councils Issues (3-Apr-18)
- 2nd Meeting on Formation of PT Members (6-Apr-18)

- 3rd Meeting on Writing of SAR and Further QA/SA Activities (5-Apr-18)
- 4th Meeting on Self-Review of MS/MPhil and Ph.D Programs (3-May-18)
- 5th Meeting on Self-Review of MS/MPhil and Ph.D Programs (17-May-18)
- 7th Meeting on Meeting Regarding Finalization of SAR Reports (28-Jun-18)

3.8 QEC Committees

- Plagiarism Standing Committee
- Student Career Counselling Committee
- Quality Assurance Committee
- Self-Review Committee of MS/MPhil & Ph.D Programs.

3.9 Self-Review of MS/MPhil & Ph.D

As per the newly framed Yearly Progress Report (YPR) SOPs shared by the Quality Assurance Agency (QAA) of the Higher Education Commission (HEC) of Pakistan, the Quality Enhancement Cell (QEC) of Shaheed Benazir Bhutto University conducted the Self-Review of the following ten MS/MPhil & three Ph.D programs offered by the University: The purpose of the self-review of MS/M.Phil/Equivalent & Ph.D Programs' is to check the compliance with the HEC's minimum criteria/guidelines set for these Programs.

MS/MPhil Programs	Ph.D Programs
M.Phil English	Chemistry
M.Phil Zoology	Botany
M.Phil Biotechnology	Biotechnology
M.Phil Chemistry	
MS Computer Science	
M.Phil Islamiyat	
M.Phil Environmental Science	
MS Management Science	
M.Phil Botany	

Table 15: MS/MPhil & PhD Self- Review

3.10 Online Teacher and Course Evaluation

The Online Evaluation was conducted for the year 2017-18 in all Departments in all Programs of the University. Teacher Evaluation by Student, Course Evaluation by Teacher and Students Survey were successfully completed.

CHAPTER 4

FACULTY DEVELOPMENT

Shaheed Benazir Bhutto University has selected scholars for PhD in various departments under the faculty development programs of the project titled “Development of Shaheed BB University”. The details of the scholars, studying in foreign , are as under.

4.1 Faculty Development Programs (PhD Foreign)

Shaheed BB University has selected scholars for PhD in various departments under the project titled “Faculty Development Program of Higher Education Commission. The details of the scholars studying in foreign are as under:

S.No	Names of Faculty Member	Department	Name of Country
1	Bushra Hameed	Management Science	Australia
2	Wajid Raza	Management Science	Belgium
3	Siraj Muhammad	Computer Science	Thailand
4	Javed Iqbal	Forestry	Czech Republic
5	Fazal Haleem	Management Science	Den Mark
6	Alam Zeb	Forestry	Canada
7	Sami Ullah	Biotechnology	Germany
8	Sikandar	Biotechnology	China
9	Alamgir Khan	Forestry	China
10	Ihsan Danish	Environmental Science	China
11	Adnan Ahmad	Forestry	China
12	Zul Kamal	Pharmacy	China

Table 16: SBBU Faculty Members Pursuing their PhD Degrees Abroad

4.2 Faculty Development Programs (PhD Inland)

S.No	Name	Subject	University
1	Hamid Afridi	Pharmacy	University of Malakand
2	Zia Ullah	English	NAMAL Islamabad
3	Ishaq Ahmed	Pak Studies	Peshawar University
4	Abid Ullah	Chemistry	SBBU
5	Haya Hussai	Chemistry	SBBU

6	Asaf Khan	Chemistry	SBBU
7	Kashif Raza	Chemistry	SBBU
8	Muhammad Latif Khan	Mathematics	Quaid-e-Azam University
9	Said Muhammad	Agriculture	Allama Iqbal Open University
10	Khan Sher	Botany	SBBU
11	Javeria Gul	Biotechnology	SBBU
12	Hassena Gulzar	Biotechnology	SBBU
13	Juma Muhammad	Environment Science	Peshawar University
14	Irfan Ullah	Computer Science	Peshawar University
15	Muhammad Naveed	Chemistry	Punjab University
16	Muhammad Amin	Environment Science	Agriculture University
17	Adnan Ali	Management Science	IMS Peshawar
18	Muhammad Inam	Animal Science	Agriculture University

Table 17: SBBU Faculty Members Pursuing their PhD Degrees in the Country

4.3 Returned Scholars

List of the department-wise names of returned scholars who have gone to foreign countries for higher studies completed their degrees.

S.No	Names of Scholar	Department	Country from where the scholar completed his studies
1	Atif Shah	Law	England
2	M.Niqab	Education	Malaysia
3	Riaz Ahmad	Computer Science	Germany
4	Faran Majeed	Computer Science	Thailand
5	Sami Ullah	Forestry	Germany
6	Niaz Ali	Education	Malaysia

Table 18: SBBU Returned scholars

4.4 Present Scholars

Currently there are twelve (12) scholars of the University studying in different European, Asian and Australian , The detail of these scholars is as in Table 16. Eighteen (18) scholars are pursuing their PhD degree in the country. The detail of these scholars is as in Table 17.

4.5 Pre-Service and In-Service Professional Development Program

The University provides two types of pre-service professional development programs. One is orientation and socialization in which a senior employee of the University is assigned the task by the office of the Registrar to take orientation session with the new comers and provide them with maximum information about the University, its structure and procedure of work. In this session it is tried to provide detail information about the University and the job and the questions either asked by the employees or is possibly raised in their minds are satisfactorily answered. After attending this session, the employees feel satisfaction and motivation. In the second type of professional development program the newly hired employees are put in the supervision of the senior employees who can thought them about everything regarding their jobs.

In-service professional development programs including workshops, seminars and different training programs either on-campus or off the campus, are offered to the employees. Employees including faculty and administrative staff are sent abroad for training and for visits of different of the World to learn from different systems and cultures and the exposure of the employees may be broadened.

4.6 Achievements of Foreign Faculty

- Muhammad Faran Majeed, SBBU PhD Scholar won first prize at AIT Career Fair.
- Javed Iqbal, SBBU PhD Scholar in Czech University of Life Sciences Prague, is exempted from his tuition fee for his course of study.

CHAPTER 5

ACCESS

5.1 Basic Enrolment

At present the total number of enrolled students, under different academics program at SBBU, is

2841 as shown in the following table.

5.1 Detail of Students

S.NO	Program	Total
1	Diplomas/Short Course	60
2	Bachelor	1982
3	MA/M.Sc	582
4	MS/M.Phil	207
5	Ph.D	10
Total		2841

Table 19: Detail of Students

5.2 Equity

Admissions to the University are totally on merit basis and all the applicants have a fair and open access to admission process. The students may apply on the normal or reserved s quotas as the case may be. Once admitted, all the students are treated impartially to provide them every type of facilities available without any discrimination

5.3 Gender Wise Detail

As the University is in the remote corner of the country and the overall locations is rural and the society is culturally more conservative compared to other of the country. Therefore the number of female students is comparatively small and the overall gender wise ratio of the students is detailed bellow.

S.No	Program	Male	Female	Total
1	Diplomas/Short Course	60	-	60
2	Bachelor	1899	83	1982
3	MA/M.Sc	554	28	582
4	MS/M.Phil	185	22	207
5	Ph.D	7	3	10

Table 20: Gender Wise Detail of the Students

5.4 Employability

Keeping in view the requirement of society, the University is offering graduate and post graduate programs so that the passing out graduates may have equal chances to be absorbed in different

sectors of the society. The prime sector in this province is education, so graduates of this University may contribute their services in this sector very well after completion of degree. However, specialization are being offered in different faculties, so as to enable the graduates to be absorbed in different public and private sector research/commercial/financial organizations as well as industries and the NGOs where the basic requirement of inductions is Master and BS 4 year degree. Various initiatives are being taken to train the students for self –employment in fields.

5.5 Faculty Students Ratio

The University in the past few years has inducted more highly qualified faculty complimenting with the rapid increase in the students strength. During the year 2017-18 SBBU had the faculty student ratio of 1:17

CHAPTER 6

BUILDING ECONOMIES

A knowledge-based economy is one of the dynamic components of modern economies. In a knowledge-based economy, economic development is subject to the investment on education. Today are becoming aware that higher education plays a vital role in the construction of knowledge-based economies through their research commercialization, innovation, and technology development.

6.1 University-Industry Linkage

Industrial Linkages with academic institutions play an important role in transformation of theoretical knowledge into practical experience and research into potential products that directly drives socioeconomic development. The SBBU, Sheringal accepts the importance of such linkages and thus participates regularly in science and technology exhibitions around the country and invites business leaders, industrialists and community leaders to its premises. After 2013 the Shaheed Benazir Bhutto University, Sheringal started making academia-industry linkages in areas of forest and ecological resources, medicinal plants, geology, hotel and tourism, poultry farming, fisheries, dairy farming.

6.2 New Initiatives

Shaheed BB University is newly established in the year 2009. The University established the Office of Research, Innovation and Commercialization (ORIC) with High Tech Lab. Basic research infrastructure is already constructed and handed over to the departments i.e. Science labs for Pharmacy, Forestry, Chemical Science, Computer Science and Zoology.

6.3 Technology Incubation Centre

After establishment of ORIC, the University will now set up the business and technology incubation centres for SMEs, pharmaceutical plants, dairy farms, forestry plantation etc.

6.4 Patents

There is acute shortage of researchers and Ph.D Professors in the University. The University has made little progress in area of productive publications, product development and patents. Currently 37 PhDs are serving in SBBU. The University intends to hire 25-30 more PhD professors up to June 2019 to expedite the research publications, product development and develop its own patents.

6.5 Internship and Placement Office

The University has planned to establish the Internship and Placements office in 2017-18 for guidance of its graduates. The office will help its graduates to seek internship in highly reputed national and international organizations.

6.6 Student Counseling and Career Guidance

Dr. Mian Shah Bacha (HoD, Department of English) has been appointed as a focal person for Student Counseling and Career Guidance in March, 2018 for the establishment of the office, the TOR for the office shall be framed soon.

CHAPTER 7

STRENGTHENING PHYSICAL INFRASTRUCTURE

The Institutional Strengthening is aimed to strengthen and up-grade the existing infrastructure which includes Laboratories, Libraries, Student Hostels, Academic Blocks and Residential Infrastructure. Strengthening University infrastructures support, enable, and enhance the work of its faculty, staff, and students.

7.1 Development Projects

The aim and goal of Planning & Development section, SBBU, Sheringal is to provide modern academic, research and residential infrastructure and allied facilities which support to conducive learning and research environment. In this regard, it has made a detail review of the existing facilities and chalked out future requirements.

Shaheed Benazir Bhutto University, Sheringal has made rapid growth, both in opening new academic programs and strengthening the existing ones along with required infrastructured development but still it needs to invest more in provision of massive physical facilities. The University has completed several developmental projects while many projects are proposed, approved or on-going as well. Vehicles, furniture & fixtures, ICT, Lab and Office Equipment's etc. are also purchased which directly or indirectly contribute in the development of the University.

7.2 Research Equipments

The following IT and Science Labs are available having minimum essential equipments and chemicals/glassware. Additional equipments, books, chemical/glassware of Rs. 26.469 Million were purchased during FY 2017-18 for enhancing the capacity of existing labs and establishment of new labs.

- 02 Number of Computer Lab
- 12 Labs for Department of Pharmacy.
 - Micro Biology Lab
 - Instrumentation Lab
 - Quality Management/ Quality Control Lab
 - Pharmaceutics Lab

- Pharmacognosy Lab
- Industrial Pharmacy Lab
- Medicinal Chemistry Lab
- Basic Medical Sciences Lab
- Computer Lab
- Seminar Lab
- Animal House
- Lab for Department of Biotechnology
- Lab for Department of Forestry & Environmental Sciences
- Lab Equipment's & Chemical/Glassware.
- Green House Costing
- Cold Room Costing
- Lab for Zoology & Botany
- Forestry Department Lab

7.3 Construction Projects

The construction projects of Shaheed Benazir Bhutto University are divided into three categories which are as following.

- **Projects Completed**
- **Projects On-going**
- **Projects Proposed**

7.3.1 Projects Completed

I. **PC-I: Titled: "Development of Shaheed Benazir Bhutto Campus, Sheringal" Costing Rs. 444.267 Million**

The following academic, research and residential infrastructure have been completed, equipped with furniture & fixture, office equipment's and handed to University in year 2013-14.

❖ **Academic Infrastructure**

- Academic Block measuring 42,863 sft costing Rs. 85.726 million.
- One Building of UPS & College for Boys measuring 11500 sft.
- One Building of UPS & College for Girls measuring 16500 sft Rs. 19.668 million.
- Administration Block (10539 sft), BHU (1021 sft), Video Conference Room (2000 sft) costing Rs.48.655 million.

❖ **Residential Infrastructure**

- Faculty Hostel (6858 sft),
- 1200 sft Flats/Houses measuring 28,800 sft costing Rs.57.600 million.

- 1500 sft and 800 sft Houses/Flats measuring 24,600 sft costing Rs.49.200 million.

II. PC-I Titled: “Construction of Boys Hostel” (100 students), measuring 15427 sft and costing Rs. 34.206 Million

Having 50 residential Rooms, 01 Dining Room, 01 Kitchen, 01 Reception, 01 Common Room, 01 Waiting Room, 01 Reading Room, Recreation Room (Indoor Games), 01 Prayer Hall, 01Canteen, 01 Warden Room, 01 Guard Room,01 Warden Office/ Clerical Staff Room

III.Strengthening and Development of Science Lab under HEC/USAID Funded Project Costing Rs. 5.427 Million

- Purchase of additional equipment’s for Pharmacy Labs Costing Rs. 1.00 Million
- Purchase of additional equipment’s for Biotechnology Lab Costing Rs. 0.80 Million
- Purchase of additional equipment’s for Botany Lab Costing Rs. 0.80 Million
- Purchase of additional equipment’s for Zoology Lab Costing Rs. 0.70 Million
- Purchase of equipment’s for Environmental Sciences Lab Costing Rs. 1.0005 Million
- Chemistry/ Bio/ Physics labs for University Girls College Costing Rs. 0.35 Million

IV. PC-I: Titled: Preservation and Research on High Valued Medicinal Plants at High Altitude Centre, Sheringal, Costing Rs. 32.808 Million

- Equipment’s Rs. 12.252 Million
- Green House Rs. 2.812 Million
- Cold Room Rs. 0.600 Million
- Chemicals Rs. 2.600 Million
- Books/ Journals Rs. 3.000 Million
- Emergency Generator Rs. 1.000 Million
- Environmental Control Room Rs. 1.000 Million
- Furniture & Fixture Rs. 0.2600 Million
- Man Power Rs. 7.650 Million
- Staff Training Rs. 0.434 Million
- Contingencies Rs. 1.200 Million

V. PC-I: Titled: Establishment of Department of Forestry at Sheringal Campus Costing Rs.28.771 Million

- Infrastructure Rs. 7.782 Million
- Equipment’s Rs. 10.326 Million
- Chemical/ Glassware Rs. 0.538 Million
- Furniture Rs. 1.161 Million
- Field Transport Rs 4.30 Million

- Books/ Journals Rs. 1.30 Million
- Faculty Support Staff Rs. 2.364 Million
- Miscellaneous Rs. 1.00 Million

VI. PC-I: Titled: Restoration of Flood Damaged Infrastructure, at Shaheed Benazir Bhutto University, Sheringal (KP) costing Rs. 121.734 Million

The HEC funded project titled as above and approved by CDWP in 2012 costing Rs.121.734 million is in progress. Majority of the civil work has been complete and the remaining is expected to be completed in the year 2015-16. (Structure work completed and finishing is in progress)

- Building of Forestry Department having total covered area 12730 sft. Costing Rs.30.552 Million.
- University Guest House covered area 8586 sft costing Rs.20.606 Million.
- 09 residential flats/houses for lower staff covering 6000 square feet and costing Rs. 13.200 Million.
- Restoration/Refilling of the Eroded Land & Anti-flood walls/spurs costing Rs. 41.112 Million.
- Security Boundary Wall measuring 9000 r.ft costing Rs. 10.800 Million.
- 15 Security posts costing Rs.1.152 Million.
- Provision of furniture and fixture to the Guest house costing Rs.1.812 Million.
- Contingency Rs. 2.5 Million

VII. PC-I: Titled: Construction of Girls Student Hostel at SBBU Sheringal Dir Upper Costing Rs. 100.00 Million

The following infrastructure has been proposed and the contract has been awarded to the Contractor at capital cost of Rs. 1.00 Million, the said project is expected to be complete in the year 2016-17.

- Civil Works measuring 34900 sft having Capacity of 200 Students Rs. 93.00 Million
- Furniture and Fixture 4.00 Million
- Consultancy 3.00 Million

7.3.2 On-going Projects

I. PC-I, Titled: Development of Shaheed BB University Sheringal Dir Upper Costing Rs.1709.189 Million

The newly launched project named “Development of University of Dir, Sheringal costing Rs. 1709.189 Million. The project is a long term project covering a total of 60 months. The said project contain the following infrastructure

Development of University of Dir, Sheringal" Dir Upper				
S#	Module Description As Per PC-1	PC-1 Provision		
		Area (sft)	Rate / sft	Cost (MRs.)
Contracts Not Awarded				
1	Academic Block	88816	3000	266.448
2	Administration block-Extension	22863	3200	73.162
3	Multi Purposes Hall	20854	3500	72.989
4	Central Library	25000	3100	77.500
5	Poultry Shed	3670	2000	7.340
6	Sheep & Goat Shed	1290	2000	2.580
7	Dairy Animal Shed	2730	2000	5.460
8	Beef Animal Shed	2730	2000	5.460
External Development				
I	Land Scaping/Horticular Lumpsum			1.000
Ii	External Electrification			10.500
Contracts Awarded				
1	External Development			
I	Construction of Boundary wall, Security Check Posts, Earth Filling & Main Gate			97.069
Ii	Construction of Overhead Water Tank, Water Supply & Sewerage System			34.101
Iii	Construction of Road, Parking Area & Bridge (03 items as per PC-I) Ongoing			32.763
2	Civil Work Buildings			
I	Construction of Boys Hostel (Ongoing)	2,729	3,100	132.460
Ii	Construction of Herbarium	18,746	3000/sft	56.238
	Construction of Agriculture Labs	11,745	3200/sft	37.584
Iii	Construction of Girls Hostel (New Contract)	42,729	3,100	132.460
Iv	Construction of Community Center	21,224	3,200	67.917
V	Consultancy Services			47.126
Vi	Cost Escalation of Civil Work			65.112
Total Civil Work				1,225.269
3	Other Components			
I	Micro Hydrel Power Station of 200 KVA			45.421
Ii	Lab Equipments			74.689
Iii	Equipment's for ICT Infrastructure			100.068
Iv	Furniture & Fixtures			91.149
V	Books & Journals			35.000
Vi	Vehicles Requirements/ Farm Machinery & Animals			102.48

Vii	Project Execution Staff and Contingencies			35.113
Grand Total				1,709.189

Table 21: Mega Developmental Project SBBU

7.3.3 Proposed Projects

The aim and goal of Planning & Development section, SBBU, Sheringal is to provide modern academic, research and residential infrastructure and allied facilities which support to conducive learning and research environment. In this regard it has made a detail review of the existing facilities and chalked out future requirements and details of which is submitted in the business plan. The P & D Department has submitted the following new projects to various bodies HEC, Islamabad and HED, Peshawar.

- PC-I, Immediate Needs of SBBU, Sheringal at capital cost of Rs. 248.191 Million (Girls Hostel & 155 Kanal Land Acquisition).
- Summary processed as per Senior Minister for Finance, KPK directives for Land Acquisition for Wari Campus, at Wari 500 Kanals.
- Strengthening of SBBU Sheringal Dir Upper. Proposed cost is Rs. 400.00 million

7.4 Other Facilities to be Provided

- Grounds & Gardens
- Horticultural nursery
- Campus Radio Station
- Micro Hydel Power House having 200 KWA electricity generation capacity
- Forest & Olive Tree Nurseries

CHAPTER 8

STRENGTHENING TECHNOLOGICAL INFRASTRUCTURE

The importance of the Information and Communications Technology cannot be denied in today's era and SBBU recognizes the importance of ICT in increasing institutional efficiency and supporting the learning processes through incorporation of ICT in curriculum of students as well as in capacity development programs of the staff members.

The University aims to automate important functions such as admissions, examinations, finance, budgeting, and procurement and quality assessment through the introduction of campus wide ICT network i.e. Campus Management Solution as well provision of Internet facilities by enhancing wireless coverage.

For this purpose the University is introducing E-Governance in the University to improve organizational efficiency and streamline information flow.

8.1 Digital Library

Access to digital Library is available and we are given an I.P address for using HEC digital library but the internet service/ networking at SBBU is in the process of up gradation due to which we can't access the HEC Digital Library. The fiber optics networking has been completed and very soon 16 MB internet will be available in the Main Campus and we will be able to use Digital Library. The University has planned to provide separate infrastructure for digital library in near future. After availing this facility, faculty and students of SBBU will be able to read thousands of books online.

8.2 PERN

DSL facility is available in all the departments and offices. Fiber Optic networking is completed with a cost of Rs. 7.7 million. Cisco switches, local area networking and fiber optic solution have been installed; still PERN is not available in the University campus.

8.3 Video Conferencing

The video conferencing facility was installed in the year 2012-13 which is fully functional. Different types of seminars, conferences and meetings are arranged in it. It can accommodate 250 persons at a time.

8.4 Campus Management Solution

The University is trying to raise funds and has planned to implement Campus Management Solutions in its business plan. The Campus Management Solutions will provide the following facilities.

1. Human Resource Management
2. Financial Management
3. Grants Management
4. Project Management System
5. Student Services System:
6. Admission,
7. Examinations,
8. Fees and fines
9. Results
10. Reports and thesis archival.

8.5 Web Portal

The University has started its web portal which is accessible via www.sbbu.edu.pk which is functional. However in order to improve its performance the University is planning to hire a Web Manager in near future. A consultant will be hired to design a new web portal according to the modern needs.

8.7 Development of Online Admission System

Online admission system is not available. The University will develop its online admission system in 2015-16. However the same need will be fulfilled if Web Portal is developed.

CHAPTER 9

BUILDING COMMUNITIES

Shaheed BB University, by realizing the importance of community linkage and outreach programs, is always interested in programs which are focused on such topics. The present chapter highlights the activities carried out by SBBU for the purpose of creating the University as a hub of community building. Some of these activities were highlighted by the Pakistan Chapter of Taillorise Network (PCTN) newsletter which covers the news of member on civic activities.

9.1 University Community Service

Civic engagement is a key component of higher education institutions in the community in which they are located and play a leadership role in the society. Community service takes many forms including volunteerism, advocacy and education. To preserve the local culture of Kohistani people, the University also maintained a museum in the village of Jandri near Thal. Our collection at the museum presents a splendid look into the life of local people. Similarly, in order to take the local people in the national mainstream, and to highlight their languages and cultures, we have also established the Sheringal Research Cell for Northern Languages.

9.1.1 University -Community Interaction

Shaheed BB University provides complete, accurate, accessible and adequate information to its prospective students, local community, other stake holders and intended audiences to help them in making decisions regarding education. SBBU interact with community through celebrating the various international days, programs, walks, seminars and other social gatherings.

9.1.2 University Role in Building Community

SBBU is committed to building community relationships. The University is making serious efforts to engage their communities and interact with its surrounding community through celebrating the various international days, programs, walks, seminars and other social gatherings. The University civic engagement/ community services will contribute in the civic life of our communities developing. The following is the details of civic engagements and community services/outreach programs of SBBU.

9.2 Various National and International Days Celebration

In order to promote awareness of and action on important political, social, cultural, humanitarian or human rights issues, every year SBBU celebrates National and International Days. The basic and fundamental aim of celebration of these days is to provide a useful means for the promotion of international and national action and to unite people, across the world.

9.2.1 Awareness Campaign

Department of Pharmacy, SBBU celebrated World Thalassemia Day on Jul 8, 2018 in order to improve the Awareness about thalassemia & its management. The walk headed by Dr. Shujaat Ahmad, Head Department of Pharmacy. The Participants includes Registrar SBBU, Mr. Badshah Hussain, Director Academics, Dr. Midrar Ullah, Faculty and Students of SBBU.

9.2.2 Walk for Literacy

As another step for the promotion of education, a special walk was arranged on the occasion of 'International Literacy Day'. Director QEC headed this walk which included participants from faculty, students and local people. The walk started from the academic block of the University and ended at the main playground, SBBU. The participants had placards and posters on the topic.

9.2.3 International Mountain Day at SBBU

On 11th of December 2017, the Department of Forestry, Shaheed Benazir Bhutto University, Sheringal, celebrated the International Mountains Day in Video Conference Room.

9.2.4 Dengue Awareness Walk

Department of Pharmacy organized Dengue Awareness Walk on July 4, 2017 in SBBU. The walk headed by Dr. Shujaat Ahmad, Head Department of Pharmacy. The Participants includes Assistant Commissioner Sheringal Mr. Ali Raza, Registrar SBBU Mr. Badshah Hussain, Faculty and Students of SBBU. The event was organized in collaboration with Health Department Upper Dir.

9.2.5 International Day for Biological Diversity

On 12th of May 2018, the Department of Forestry, Shaheed Benazir Bhutto University, Sheringal, celebrated the International Day for Biological Diversity. The Department of Forestry celebrated this day by arranging lecturers, poster presentation and walk.

9.2.6 National DNA Day

On 25th of April 2018, the Department of Biotechnology, Shaheed Benazir Bhutto University, Sheringal, celebrated the National DNA Day.

9.2.7 International Anti-Corruption Day

On 9th of Dec 2017, Shaheed Benazir Bhutto University, Sheringal, celebrated the International Anti-Corruption Day.

9.3 Plantation at University

Ornamental plants were planted at the Department of Forestry with active participation of students and Forestry Department. The Registrar Mr. Badshah Hussain also participated in this function. Demonstrations on the importance of plantation and its role on Environment were delivered by forest specialist.

9.4 Local MPAs Visited the University

Local Member of the Provincial Assembly, Muhammad Ali visited Shaheed BB University in Feb 20, 2018. They were also accompanied by local elders and met the Vice Chancellor and other authorities of the University. During their visit, MPA inaugurated the Solar Lights System in SBBU.

9.5 Senior Minister & Local MPA at SBBU

The Senior Minister of KP, Mr. Anayat Ullah Khan and MPA Muhammad Ali were at Shaheed BB University on the eve of the inauguration of Girls Hostel in October 2017. They applauded the efforts of the University for the Promotion of higher education in the area and assured them of their support for the community building purposes. They were the source of inspiration and the students were highly excited to have found their leaders very closely among them.

9.6 Blood Camp at SBBU

The Pharmacy Department of SBBU arranged a Blood Camp at the Shaheed BB University on Mar 28, 2018 in collaboration with Fatimid Foundation Pakistan. The Vice Chancellor and the organizers highlighted the importance of donating blood for the needy people and applauded the efforts of Pharmacy Department and Fatimid Foundation for the noble cause of blood donation. They collected 200 bags of blood on the occasion.

9.7 Meena Bazar at SBBU

Department of Forestry organized Two Days Meena Bazar for the female of the community and University on 19th to 20th August, 2017. The female from University as well as from community actively participated. The purpose of this event was to educate local community especially female about entrepreneurship.

9.11 Community Meetings of Forestry Department

Students Department of Forestry, visited the office of DFO at Dir Upper, Along with DFO the student met with local community in field and discussed the participatory approaches made by forestry department on Sep 22, 2017. The students also visited Usheri Forest region and shared their experience with local community. Local people applauded the efforts of Forestry Department.

9.3 Alumni Affairs: Outstanding Achievements

The University plans to set aside adequate resources for students placement and maintaining relationship with her alumni.

CHAPTER 10

SPORTS

Sports play a very vital role in the life of human beings and we are well aware of this fact that it is as important as academic education for the bright future of our youth. Education through sport is one

of the best ways to bring about positive social change within the society and it is universally accepted that sport is a major International platform for the recognition of a nation. Participating in sports also leads to increase youth's self-esteem.

10.1 Intramural Sports Activities/Inter-Departmental Sports

Directorate of Sports, Shaheed Benazir Bhutto University Sheringal is putting in its best efforts to develop and promote Sports and always encourages individuals who make efforts to promote sports actively in the University.

SBBU organized Sports Gala under the banner "Generation For Peace" with collaboration of Pakistan Army which entertained locals, students of different departments and faculty members of the University. Beside these colleges from Upper Dir and Lower Dir also participated in the colorful events. A weeklong festivity including Cricket, football, Volley ball, Athletics and Tug of war were conducted among the competitors.

10.2 Participation in All Pakistan Intersivity Championship 2017-2018

Shaheed Benazir Bhutto University, Dir Upper participated in different games in All Pakistan Intersivity Championship during session 2017-18. Following are the games in which our University participated

- **Athletics:** Held at **Islamabad Sports Complex**, November, 2017
- **Cricket:** Held at **Gomal University DI Khan**, January 2017
- **Football:** Held at **Gomal University DI Khan**, January 2017
- **Tug of War:** Held at **Shaheed BB University, Sheringal**, May 2017
- **Basketball** Held at **Hazara University, Mansehra**, March 2017
- **Archery** Held at **UVAS, Lahore**, May 2017
- **Table Tennis** Held at **University of Harripur**, February 2017
- **Boxing** Held at **Shaheed BB University, Lyari, Karchi**, March 2017
- **Mountaineering** Held at **Quid-e- Azam University, Islamabad**, March 2017
- **Volley Ball** Held at **Hazara University, Mansehra**, March, 2017
- **Badminton:** Held at **KUST, Kohat**

10.3 Achievement at National Level (2017-18)

- **4th Position in All Pakistan Intersivity Archery Championship 2017**

Shaheed Benazir Bhutto University participated in All Pakistan Intervarsity Archery Championship organized by University of Veterinary & Animal Sciences Lahore in May 2017 and secured 4th position against 22 teams from Pakistan.

- **Runner up In All Pakistan Intervarsity Table Tennis Championship Zone A 2017**

Shaheed BB University participated in All Pakistan Intervarsity Zone A Table Tennis Championship Held at University of Hurripur in February 2017 and secured second position in the said event.

- **Shaheed BB University Sheringal Organized All Pakistan Intervarsity Tug of War Championship 2017**

First ever in the history, Shaheed BB University Sheringal organized All Pakistan Intervarsity Tug of War Championship 2017 with the collaboration of Higher Education Commission in May 12, 2017. 14 Universities from different part of the country participated in the event.

- **Winner of Zone A Cricket Champion Held at Islamabad**

First ever in the history, Shaheed Benazir Bhutto University Sheringal, won All Pakistan Intervarsity Cricket Zone A championship held at Quid-e- Azam University Islamabad in February 2018.

- **Won Zone A Football Championship Held at University of Malakand**

Shaheed Benazir Bhutto University Sheringal won All Pakistan Intervarsity Zone A Football Championship organized by University of Malakand in February 2018

- **Won All Pakistan Intervarsity Badminton Championship Zone A Held at KUST**

Our University won All Pakistan Intervarsity Zone A Badminton Championship organized by Kohat University of Science & Technology in March 2018.

- **Zone A Winner of All Pakistan Basketball Championship held at Mansehra**

Shaheed BB University Sheringal won All Pakistan Intervarsity Zone A Championship organized by Hazara University Mansehra in March 2018.

10.4 Incentives and Awards for Players

Directorate of Sports SBBU has awarded all players with Medals, Trophies, Cash Prize, Certificates and Playing kits who took part in Intersarsity Championships. Beside this SBBU also conducts training camps in Peshawar Sports Complex, Peshawar in order to continue routine practice of different games. Due to hard weather in Sheringal the Sports Department annually set a training camp consist of two months during winter vacations in the University. Along with accommodation and Sports facilities, free coaching are also provided to the players in this camps.

CHAPTER 11

BUILDING LEADERSHIP

A University campus is the perfect place to start building leadership and skills for lifetime success. Some of that skill building will happen in the classroom, but even more of your learning will take place outside of it. This is especially true when it comes to leadership skills. University can develop many of the qualities that define great leaders. There are many clubs and organizations at University where you can get involved and run for an officer position. Twelve societies in total have been constituted by SBBU so far.

11.1 Faculty Leadership

Faculty leadership is important factor in higher education as they are the main stakeholders in the University who are committed to enhance the quality education in higher education institutions. Faculty members in one way or another fill the leadership roles to become a formal leaders, Therefore, it's important for them to develop their leadership abilities. SBBU shall have to invest for faculty leadership capabilities to make them fully committed to the core academic values.

- Dr. Muhammad Kamal Khan participated in 2017 APQN (Asia Pacific Quality Network) Conference titled 'New Horizons: Dissolving Boundaries for Quality Region' at Moscow, Russia.
- Dr. Muhammad Kamal Khan attended the Progress Review meeting and IPE/PhD Review Penal training on 11th and 12th May 2017 at HEC.
- Dr. Muhammad Kamal Khan conducted as part of the HEC IPE Penal, the review of Abdul Wali Khan University Mardan
- Director QEC conducted a two-day training workshop on 'Self-Assessment Report (SAR) Writing' at Karakoram International University (KIU), Gilgit.
- Director QEC participated in a three-day training program organized by HEC and IM Sciences at HEC Islamabad on Quality Assurance and Governance from May 18 to May 20, 2017
- Dr. Muhammad Kamal Khan Participates in SUSI Program on Contemporary American Literature in the United States

11.1.1 Memberships of Statutory Bodies

The following faculty members have been elected for a term of three years, for the various statutory bodies of the University.

- Dr. Nasir Mehmood, Assistant Professor, Department of Agriculture, elected is a member of Senate SBBU for a term of three years.
- Mr. Muhammad Inam, Lecturer, Department of Animal Science, elected is a member of Senate SBBU for a term of three years.
- Mr. Shazad Khan, Assistan Professor, Department of Computer Science, elected is a member of Syndicate SBBU for a term of three years.
- Mr. Aatif Shah, Lecturer, Department of LAW, elected is a member of Syndicate SBBU for a term of three years.
- Dr. Midrar Ullah, Assistant Professor, Department of Biotechnology, elected is a member of ASRB SBBU for a term of three years.
- Dr. Sami Ul Haq, Assistant Professor, Department of Islamic Studies, elected is a member of ASRB SBBU for a term of three years.
- Dr. Riaz Ahmad, Lecturer, Department of Computer Science, elected is a member of ASRB SBBU for a term of three years.
- Mr. Muhammad Amin, Assistant Professor, Environmental Science, elected is a member of Finance & Planning Committee SBBU for a term of three years.
- Mr. Rab Nawaz, Lecturer in Management Science, elected is a member of Finance & Planning Committee SBBU for a term of three years.

11.2 Student Leadership

Shaheed BB University is trying to provide quality education to the people of the area (at all three levels i.e., at school, college and University level). Apart from imparting quality education through standard academic procedures and to provide skilled leadership to the society, the University equally takes care of personality building of students by a wide range of co-curricular activities. The Director of the Students' Societies Mr. Bakht Zada Danish, tries his level best to use this platform as a principal vehicle for channelizing their potential for a good end, give vent to their bubbly feelings, broaden their vision in the global context and refine their qualities as national architects. Twelve

societies in total have been constituted by SBBU so far. The names and details of societies are as under.

11.3 SBBU Student Societies

1. Kumrat Islamic Cultural Society
2. Kumrat Literary & Debating Society
3. Social Welfare & Awareness Society
4. Sports Society
5. Dramatic Society
6. Eco Society (Environmental creative organizer)
7. Creative Art Society & Heritage Society
8. Blood Donor's Society
9. Science & Technology Society
10. SBBU Rifle Society
11. Adventure & Hiking Society
12. Character Building Society

11.4 Activities of Student Societies

- Dramatic Society presented a play titled as “ANJAM” written and performed by students
- Science & Technology Society arranged a seminar on “The role of media in current scenario” at Video Conference Room of SBBU.
- Blood Donor Society arranged a free blood camp for Fatimid Foundation
- Sports Society arranged “sports week” for students and employees
- Kumrat Literary and Debating Society Arranged a grand MUSHAIRA at University
- Kumrat Literary and Debating Society arranged a program titled as “Talent hunt” to search and polish new talent among the students.

CHAPTER 12

FINANCE

12.1 Financial Years at a Glance

The university books of accounts were maintained on cash basis using the double entry accounting system. As per recurring revenue /expenditure actuals for the fiscal year 2017-18, the operational position of the university is summarized as under.

12. 2 Detail of Income

S#	Particulars	FY 2017-18 Amount (Rs in Million)	FY 2016-17 Amount (Rs in Million)
1	Opening Balance on 01.07.2017 & 01.07.2016	Rs. 6.059	Rs. 9.396
2	Grants in Aid From HEC	Rs. 265.533	Rs. 259.961
3	Student Related Income		
	Tuition fee	Rs. 41.700	Rs. 38.484
	Other charges	Rs. 29.340	Rs. 39.728
	Hostel Charges	Rs. 8.800	Rs. 4.900
	Sub Total of (3).	Rs. 79.840	Rs. 83.112
4	Income from affiliated/Private students, Exam fee etc.		
	Affiliated/Private students	Rs. 28.924	Rs. 19.581
	External Private College Students	Rs. 28.883	Rs. 26.897
	Sub Total of (4).	Rs. 57.807	Rs. 46.478
5	Other Income	Rs. 0.048	Rs. 10.974
	Total of own income	Rs. 137.695	Rs. 140.564
	Total available Resources	Rs. 409.287	Rs. 409.921
Annual Expenditure			
Year	Approved Budget in Million	Actual Performance	
2017-18	Rs. 569.316	Rs. 400.443	
2016-17	Rs. 519.255	Rs. 403.863	

The increase/decrease in HEC grants & own resources/income as compared to 2016-17 was 5.50% and 2%. The meager decrease in revenue happened due to conversion of sub-campus Chitral into the University of Chitral. However, concerted efforts have been made, to cover that deficiency and achieve around 20-25% annual increase in revenue by considerable increase in students.

12.3 Development Budget

Detail of Development Budget			
S.No	Name of Project	FY 2017-18 Rs in Million	FY 2016-17 Rs in Million
1	Development of University of Dir Sheringal	Rs. 362.708	Rs. 425.903
2	Development of Shaheed BB University Sheringal	Rs. 39.634	Rs. 73.820
3	Construction of Girls Hostel under ADP Scheme KPK	Rs. 14.173	Rs. 50.863
4	Reconstruction of Damaged Infrastructure of SBBU Sheringal.	Rs. 0.000	Rs. 19.561
Total		Rs. 416.515	Rs. 570.147

12.4 Recurring Budget

Detail of Recurring Budget					
	Particulars	Approved Budget (2017-18)	Expenditures (2017-18)	Approved Budget (2016-17)	Expenditures (2016-17)
A	Establishment Charges				
1	Faculty Salary	Rs. 215.258	Rs. 133.726	Rs. 175.863	Rs. 135.286
2	TTS Faculty Salary/ Gratuity	Rs. 0.000	Rs. 8.453	Rs. 0.000	Rs. 10.412
3	Salary of Officers & Staff -Teaching Departments	Rs. 17.022	Rs. 12.236	Rs. 11.900	Rs. 10.687
4	Salary of Officers & staff - Non- Teaching	Rs. 133.861	Rs. 103.375	Rs. 102.894	Rs. 98.632
5	Other Establishment Charges /IPFP Staff Salaries	Rs. 11.200	Rs. 8.349	Rs. 9.343	Rs. 1.004
	Total Establishment Charges	Rs. 377.341	Rs. 266.140	Rs. 300.000	Rs. 256.021
B	Non Salary Expenditure				
1	Fee	Rs. 0.125	Rs. 1.282	Rs. 0.525	Rs. 0.725
2	Communication	Rs. 6.715	Rs. 7.309	Rs. 4.130	Rs. 6.422
3	Utilities	Rs. 8.050	Rs. 8.368	Rs. 7.150	Rs. 7.362
4	Occupancy Costs	Rs. 6.000	Rs. 2.406	Rs. 18.500	Rs. 6.013
5	Operating Leases	Rs. 0.000	Rs. 0.000	Rs. 0.000	Rs. 0.000
6	Motor Vehicles	Rs. 0.500	Rs. 0.067	Rs. 0.200	Rs. 0.442
7	Consultancy & Contractual Works	Rs. 0.300	Rs. 0.030	Rs. 0.300	Rs. 0.000
8	Travel & Transportation	Rs. 11.500	Rs. 8.799	Rs. 12.150	Rs. 6.554
9	General Operating Expenses	Rs. 43.100	Rs. 25.454	Rs. 61.050	Rs. 22.653
10	Employees Retirement Benefits	Rs. 5.000	Rs. 1.687	Rs. 3.000	Rs. 0.000
11	Repairs & Maintenance	Rs. 9.075	Rs. 4.374	Rs. 17.350	Rs. 10.495
12	Feasibility Studies	Rs. 0.000	Rs. 0.000	Rs. 1.400	Rs. 0.000
13	Research Surveys & Exploratory Operations	Rs. 0.700	Rs. 0.005	Rs. 0.750	Rs. 0.035
14	Financial Assistants/Scholarships	Rs. 11.210	Rs. 11.010	Rs. 6.500	Rs. 11.012
15	Technical Assistance	Rs. 0.000	Rs. 0.000	Rs. 0.000	Rs. 0.000
16	Entertainment and Gifts	Rs. 1.200	Rs. 0.457	Rs. 1.800	Rs. 0.707
17	Other Transfer Payments	Rs. 51.500	Rs. 49.223	Rs. 45.000	Rs. 42.833
18	Advances to Employees	Rs. 0.000	Rs. 0.000	Rs. 0.000	Rs. 0.000
19	Expenditures on Acquiring of Physical Assets	Rs. 14.000	Rs. 7.582	Rs. 15.450	Rs. 10.849
20	Civil Works Buildings & Structure	Rs. 23.000	Rs. 6.251	Rs. 24.000	Rs. 21.725
	Total Non- Salary Expenditures	Rs. 191.975	Rs. 134.303	Rs. 219.255	Rs. 147.827
	Total Budget & Expenses	Rs. 569.316	Rs. 400.443	Rs. 519.255	Rs. 403.847

12.5 Self-Generated Income

Our area is the backward/ scattered area with less population as compared to other hilly areas but still considerable increase in our own generated income was achieved. In the year 2014-15, it was Rs 98.532 million which went up to Rs 137.695 million in 2017-18. A part from 10% annual increase in student's admissions /exam fee structure, new attractive programs at BS/MA/MSc and M-Phil has been started to optimize the utilization of available human resources (particularly the faculty/infrastructure) and to increase revenues. In this way we are providing quality education with comparatively low cost and increasing our income as well.

We are in the process of generating further revenue from our own resources like self-constructed shops/markets etc, by now it is meagre amount which will be improved in coming years. In the year 2016-17, our Booni sub-campus closed, due to which some decrease in the University total students happened. However, the major was due to the establishment of University of Chitral in July, 2017, as our around 450 students in the SBBU Sub-Campus Chitral shifted to that University.

Due to concerted efforts, we achieved considerable increase in students at least to keep our revenues at the same level as was for the year 2016-17, there was a decrease of only 2% in 2017-18. For the year 2018-19, we expect enrollment of around 2600 students with an increase of 22% in revenue i.e. Rs. 175.609 million.

12.6 Per Student Spending

Trend of Per Student Spending			
Particulars	2015-16	2016-17	2017-18
Students Enrollment	1897	1791	1909
Annual Expenditure Rs in Million	Rs. 327.849	Rs. 403.873	Rs. 440.443
Per Student Spending (In Million)	Rs 0.173	Rs. 0.225	Rs. 0.231

In the year 2016-17, the Booni sub-campus closed and in the year 2017-18, our Chitral campus was taken over by the University of Chitral. However, we have to keep the Faculty/Administrative staff at the same level (only few faculty/administrative staff relating to Chitral area shifted to the University of Chitral), due to that our cost per student is on increase as very much visible from above table.

12.7 Balance Sheet

BALANCE SHEET (AS ON 30.06.2018)		
SHAHEED BENAZIR BHUTTO UNIVERSITY SHERINGAL DIR UPPER		
ASSETS	FY 2017-18 Amount (In Million)	FY 2016-17 Amount (In Million)
Property And Assets		
Fixed Assets (Land & Building)	Rs. 559.094	Rs. 543.193
Other Fixed Assets	Rs. 232.570	Rs. 196.668
Work in Progress Buildings	Rs. 263.067	Rs. 160.793
Current Assets		
Stocks (Chemical ,Glass wares & Live Stocks)	Rs. 26.000	Rs. 25.000
Investments-pension Funds	Rs. 153.636	Rs. 106.000
Revolving Fund	Rs. 6.082	Rs. 3.082
Bank Balance	Rs. 279.652	Rs. 322.564
TOTAL ASSETS	Rs. 1,520.101	Rs. 1,357.300
FUNDS AND LIBILITIES		
Funds		
Fund Account –Pension	Rs. 153.636	Rs. 106.000
Grants Captilized/ Current Accumulated Balances		
Provincial Govt	Rs. 154.000	Rs. 154.000
Projects(HEC)	Rs. 1,035.775	Rs. 938.821
Universities /Institutes/Centers(Recurring)	Rs. 156.867	Rs. 139.656
Current Recurring Portion	Rs. 19.823	Rs. 18.823
TOTAL FUNDS & LIABILITIES	Rs. 1,520.101	Rs. 1,357.300

CHAPTER 13

UNIVERSITY GOVERNANCE

Shaheed Benazir Bhutto University, Sheringal, Dir Upper is governed under the Regulation 2009. The University Regulation 2009 authorized the University to establish certain authorities to supervise the matters of the University for its smooth functioning. Each of these authorities of the University is briefly introduced here with its key functions and powers:

13.1 Senate

Senate is the supreme governing body of the University. The total numbers its membership is twenty one. All appointments to the Senate, other than ex-officio members, are made by the Chancellor from amongst a panel of three names for each vacancy, recommended by the Representation Committee, set up in terms of section 26 of the Regulation 2009. The Senate meets twice in a calendar year and the service on the Senate is honorary. The Registrar is the Secretary of the Senate. In the absence of the Chancellor, meetings of the Senate are presided over by such member, as the Chancellor may, from time to time, nominate. The quorum for a meeting of the Senate is two-third of its membership, a fraction being counted as one.

The Senate has the powers of general supervision over the University and holds the Vice-Chancellor and the Authorities accountable for all the functions of the University. The Senate has all powers of the University not expressly vested in an Authority or officer by the Regulation 2009 and all other powers not expressly mentioned in this Regulation that are necessary for the performance of its functions. The body has the powers to approve; the proposed annual plan of work, the annual and revised budgets, the annual report and the annual statement of accounts, hold, control over the property, funds and investments, oversee the quality and relevance of the University's academic programs, academic affairs in general, approve the appointment of senior faculty and senior administrators as may be prescribed, institute schemes, directions and guidelines for the terms and conditions of appointment of all officers, teachers and other employees of the University, approve strategic plans, financial resource development plans, consider the drafts of Statutes and Bye-laws on the proposal of Syndicate and the Academic Council, make appointments of members of Syndicate & Academic Council, other than ex-officio members. The Senate may, subject to the

provisions of the Regulation 2009, delegate all or any of the powers and functions of any Authority, officer or employee of the University. The Senate may also make inspection/inquiry, regarding any matter, of the University.

13.2 Syndicate

The Syndicate is the executive body of the University and, subject to the provisions of the Regulation 2009 and the Statutes, exercises general supervision over the affairs and management of the University. The members of the Syndicate, other than ex-officio members, hold office for three years. The quorum for a meeting of the Syndicate is two-third of the total number of its members, a fraction being counted as one. The Syndicate meets at least once in each quarter of the year.

Without prejudice to the generality of the foregoing powers and subject to the provisions of the Regulation, the Statutes and directions of the Senate, the Syndicate has to consider the annual report, the annual and revised budget estimates and to submit these to the Senate, transfer and accept transfer of movable and immovable property on behalf of the University, enter into, vary, carry out and cancel contracts on behalf of the University. Cause proper books of account to be kept for all sums of money received and expended by the University and for the assets and liabilities of the University, invest any money belonging to the University, grants, bequests, trust, gifts, donations, endowments etc, administer any funds, placed at the disposal of the University for specified purposes, provide the buildings, libraries, premises, furniture, apparatus, equipment and other means, required for carrying out the affairs of the University, establish and maintain halls of residence and hostels or approve or license hostels lodgings etc, recommend to the Senate the affiliation or disaffiliation of colleges, arrange for the inspection of colleges and the Departments, institute, create or suspend, abolish teaching/administrative positions, as may be necessary, prescribe the duties of officers, teachers and other employees of the University, report to the Senate on matters with respect to which it has been asked to report, appoint members to various Authorities in accordance with the provisions of this Regulation, propose drafts of statutes for submission to the Senate, regulate the conduct and discipline of the students of the University, take actions necessary for the good administration of the University in general and to this end exercise such powers as are necessary, delegate any of its powers to any Authority or officer or a committee; and perform such other functions as have been assigned to it by the provisions of the Regulation 2009 or the Statutes made there under.

13.3 Academic Council

The Academic Council is the principal academic body of the University and shall, subject to the provisions of the Regulation 2009 and the Statutes, has the powers to lay down proper standards of instruction, research and examinations and to regulate and promote the academic life of the University and the colleges. The Senate appoints the members of the Academic Council, other than the ex-officio members, on the recommendation of the Vice-Chancellor. Members of the Academic Council hold office for three years. The Academic Council meets at least once in six months.

The Academic Council has the powers to approve the policies and procedures, pertaining to the quality of academic programs, approve academic programs, the policies and procedures, pertaining to students related functions, the policies and procedures, assuring quality of teaching and research, recommend the policies and procedures for affiliation of other educational institutions, propose to the Syndicate schemes for the constitution and organization of Faculties, Teaching departments and Boards of Studies, appoint paper setters and examiners for all examinations of the University, after receiving panels of names from the relevant authorities, institute programs for the continued professional development of University Teachers at all levels, recognize the examinations of other or examining bodies as equivalent to the corresponding examinations of the University, regulate the award of studentships, scholarships, exhibitions, medals and prizes, propose, from time to time, Bye-laws to the Senate on the recommendations of the Board of Faculties and the Board of Studies, prescribing the courses of studies, the syllabi and examinations, prepare an annual report on the academic performance of the University; and perform such functions as may be prescribed by Bye-laws.

13.4 Board of Faculties

There is a Board of each Faculty, which consists of:

The Dean; The Professor and the Chairpersons of the Teaching Departments and Directors of Institutes; One Associate Professor, one Assistant Professor, and one Lecturer to be nominated by rotation in order of merit from each Department/Institute constituted in the Faculty; and Three teachers, to be nominated by the Academic Council, by reason of their specialized knowledge of the

subjects which, though not assigned to the Faculty, have in opinion of the Academic Council, important bearing on the subjects assigned to the Faculty.

The Board of each Faculty shall, subject to the general control of the Academic Council and the Syndicate, has the powers to co-ordinate the teaching, publication and research work in the subjects, assigned to the Faculty, scrutinize the recommendations of the Board of Studies, comprised in the Faculty in regard to the appointment of paper setters and examiners, except for research examinations and to forward the panels of suitable paper setters and examiners for each examination to the Vice-Chancellor, consider any other academic matter, relating to the report thereon to the Academic Council; and perform such other functions as may be assigned to it.

13.5 Board of Studies

There is a separate Board of Studies for each subject or groups, as may be prescribed by Bye-laws. The functions of the Board of Studies is to advise the Authorities on all academic matters, concerning instructions, publications, research and examinations in the subjects concerned, propose the curricula and syllabi for all degrees, diploma and certificate courses in the subjects concerned, suggest a panel of names of paper setters and examiners in the subjects concerned; and to perform such other functions as may be prescribed by Bye-laws. The term of office of members of the Board of Studies, other than ex-officio members, shall be three years. The quorum for meetings of the Board of Studies, is one-half of the members.

13.6 Advanced Studies and Research Board

There is a board of Advance Studies and Research. The functions of the Advanced Studies and Research Board is to advise the Authorities on all matters connected with the promotion of Advanced Studies and Research in the University, consider and report to the Authorities on the institution of research degrees in the University, propose Bye-laws regarding the award of research degrees, appoint supervisors for postgraduate research students and to approve titles and synopses of their thesis dissertations, recommend panels of names of examiners for evaluation of their thesis and other research examinations; and perform such other functions as may be prescribed by Statutes.

13.7 Selection Board

There is a Selection Board. The Selection Board, for teaching and other posts, considers the applications, received in response to an advertisement, and recommends to the Syndicate the names of the suitable persons, for appointment to teaching or other posts as the case may be and may also recommends the grant of a higher initial pay in suitable cases for reasons to be recorded, the appointment of an eminent qualified person to a position in the University on terms and conditions other than those prescribed; and cases of award of increments or cash award on the basis of research contribution as prescribed. The members, other than ex-officio members, holds office for three years.

13.8 Finance and Planning Committee

There is a Finance & Planning Committee which shall have to consider the annual statement of accounts and the annual and revised budget estimates and advise the Syndicate thereon, review periodically the financial position of the University, advise the Syndicate on all matters relating to planning, development, finance, investment and accounts of the University; and perform such other functions as may be prescribed.

13.9 Affiliation Committee

There is an Affiliation Committee which have to constitute an inspection committee to inspect the educational institution, seeking affiliation with or admission to the privileges of the University and to advise the Syndicate thereon; provided that the Affiliation Committee may itself inspect the institution concerned and advise the Syndicate accordingly, inquire into the complaints alleging breach of conditions of affiliation by affiliated colleges/affiliated institution and to advise the Syndicate thereon; and perform such other functions as may be prescribed by Bye-laws.

13.10 Discipline Committee

There is a discipline Committee which has to propose Bye-laws to the Academic Council, relating to the conduct of University students, maintenance of discipline and breach of discipline; and perform such other function as may be prescribed.

13.11 Management Structure and Organizational Chart

SBBU has a defined management structure which shows the hierarchic arrangement of the University. The following organogram reflects the management chart of SBBU:

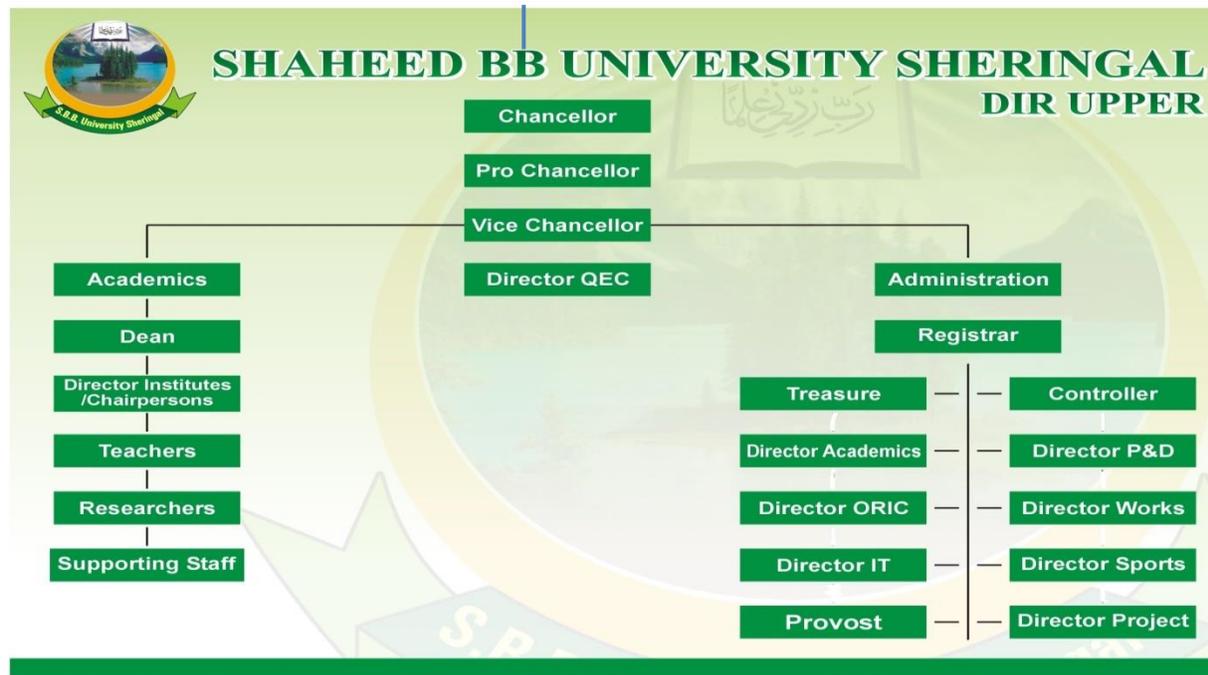


Figure 2: Organogram of SBBU

13.12 Detail of Statutory Bodies Meeting of SBBU

The Senate of SBBU		
S.No	Meeting No.	Meeting Date
1	1 st Meeting of Senate	April 12, 2011
2	2 nd Meeting of Senate	June 21, 2012
3	3 rd Meeting of Senate	December 04, 2012
4	4 th Meeting of Senate	June 23, 2015
5	5 th Meeting of Senate	August 18, 2015

The Syndicate of SBBU		
S.No	Meeting No.	Meeting Date
1	1st Meeting of Syndicate	July 15/16, 2010
2	2nd Meeting of Syndicate	January 22, 2011
3	3rd Meeting of Syndicate	July 26, 2011
4	4th Meeting of Syndicate	October 28, 2011
5	5th Meeting of Syndicate	June 16, 2012
6	6th Meeting of Syndicate	October 24, 2012
7	7th Meeting of Syndicate	April 18, 2013
8	8th Meeting of Syndicate	April 11, 2014

9	9th Meeting of Syndicate	August 11, 2014
10	10th Meeting of Syndicate	December 26, 2014
11	11th Meeting of Syndicate	June 13, 2015
12	12th Meeting of Syndicate	April 12, 2014
13	13th Meeting of Syndicate	August 9, 2016
14	14th Meeting of Syndicate	November 14, 2016
15	15th Meeting of Syndicate	December 16, 2016
16	16th Meeting of Syndicate	July 13, 2018

SBBU Selection Board		
S.No	Meeting No.	Meeting Date
1	1 st Meeting of Selection Board	January 15, 2011
2	2 nd Meeting of Selection Board	July 23/34, 2011
3	3 rd Meeting of Selection Board	September 10/11, 2011
4	4 th Meeting of Selection Board	April 29, 2012
5	5 th Meeting of Selection Board	October 01, 2012
6	6 th Meeting of Selection Board	April 01, 2014
7	7 th Meeting of Selection Board	December 23 to 24, 2014
8	8 th Meeting of Selection Board	August 27, 2016

Finance and Planning Committee		
S.No	Meeting No.	Meeting Date
1	1 st Meeting of F & PC	July 21, 2011
2	2 nd Meeting of F & PC	June 12, 2012
3	3 rd Meeting of F & PC	April 9, 2013
4	4 th Meeting of F & PC	June 25, 2013
5	5 th Meeting of F & PC	April 10, 2014
6	6 th Meeting of F & PC	July 21, 2014
7	7 th Meeting of F & PC	June 13, 2015
8	8 th Meeting of F & PC	December 21, 2015
9	9 th Meeting of F & PC	July 28, 2016
10	10 th Meeting of F & PC	April 27, 2018
11	11 th Meeting of F & PC	June 20, 2018

Advance Study & Research Board		
S.No	Meeting No.	Meeting No.
1	1st ASRB Meeting	June 22, 2015
2	2nd ASRB Meeting	April 11, 2016
3	3rd ASRB Meeting	April 22, 2017
4	4th ASRB Meeting	July 9, 2018

Academic Council Meeting		
S.No	Number of Meetings	Meeting Date
1	1st Meeting	July 18, 2011
2	2nd Meeting	April 06, 2013

3	3rd Meeting	July 27, 2016
4	4th Meeting	June 11, 2018

Board of Studies			
S.No	Departments	Meeting No	Date
1	English	1 st	May 10, 2012
		2 nd	June 09, 2015
		3 rd	March 22, 2017
		4 th	May 31, 2018
2	Zoology	1 st	April 01, 2013
		2 nd	April 08, 2015
		3 rd	December 12, 2016
		4 th	May 17, 2017
		5 th	June 08, 2016
3	Environmental Science	1 st	June 01, 2012
		2 nd	June 04, 2015
4	Forestry	1 st	June 05, 2015
		2 nd	October 10, 2017
5	Management Studies	1 st	August 20, 2014
		2 nd	April 21, 2017
6	Pharmacy	1 st	October 01, 2012
		2 nd	September 19, 2014
		3 rd	December 08, 2015
		4 th	May 10, 2018
7	Animal Sciences	1 st	January 09, 2015
8	Sociology	1 st	September 03, 2015
9	Botany	1 st	September 03, 2015
		2 nd	December 8, 2016
		3 rd	April 4, 2017
		4 th	Jul 17, 2018
10	LAW	1 st	September 9, 2016
11	Islamiyat	1 st	April 20, 2015
		2 nd	March 17, 2017
		3 rd	November 10, 2017
12	Chemistry	1 st	April 04, 2015
		2 nd	April 20, 2017
		3 rd	November 11, 2017
13	Computer Science	1 st	May 28, 2014
		2 nd	June 7, 2017
14	Geology	1 st	November 12, 2014
		2 nd	July 14, 2017
15	Biotechnology	1 st	October 10, 2012
		2 nd	May 31, 2016
		3 rd	April 21, 2017
16	Pakistan Study	1st	June 27, 2018
17	Mathematics	1st	December 21, 2017

		2nd	August 09, 2018
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CHAPTER 14

OFFICE OF RESOURCE GENERATION/DEVELOPMENT

The generation of resources is very important for the Sustainable development of University. The University must concentrate on raising their revenues. SBBU has been active in making serious efforts to reduce its expenditures and increase the revenues for the development of University.

As per HEC directives Office of Research, Innovation and Commercialization (ORIC) has been established at SBBU.

SBBU ORIC Staff

S.No	Name	Responsibility at ORIC
1	Mr. Muhammad Inam	Director ORICE
2	Dr. Farman Ali	Additional Director ORICE
3	Dr. Sher Wali Khan	Manager Research Operation
4	Dr. Muhammad Tariq	Manager Research Development
5	Mr. Ikram Ullah	Research Associate
6	Mr. Intikhab Ullah	Office Assistant
7	Mr. Ismail Khan	Office Boy

14.1 Initiatives and Implementation

The University fully realized the importance of taking initiatives and implementing them for resource generation and development. SBBU has been active in making serious efforts to reduce its expenditures and increase the revenues for the development of University. These are highlighted here.

14.1.1 Students Aid Office at SBBU (Scholarships Program)

SBBU firmly believes in the promotion of the opportunities specifically for young, for young, talented and needy students to be able to pursue higher education at the post-graduate level. The University has established its Students Financial Aid office under the umbrella of Quality Enhancement Cell (QEC). SFAO serves as a catalyst to create resources for various scholarships at the University. This office mainly has the responsibility of scholarships execution, fund raising established public private linkages, providing students internships along with cooperative education program and developing alumni engagement program. To support SFAO Office dedicated fund are allocated in the recurring grant of the University.

Among other scholarships, the HEC- Funded Need Based Scholarships is particularly designed for the needy students from disadvantages backgrounds to pursue their BS or MA/MSc degree at SBBU. The scheme has been initiated at SBBU (among other) in 2012-13 in response to the identified need of young students in the country who are deprived of the resources and opportunities to pursue and continue their education and as a consequence to enable them to contribute positively to their community and society. SBBU currently offers the following scholarship to its students:

- HEC Need Based Scholarship
- French Need Based Scholarship
- FATA Scholarship (FATA Students)
- MORA Scholarships
- Prime Minister Fee Reimbursement Scheme
- Scholarships from the Students Endowment Fund of the University

14.1.2 Poultry Farm

The University has established one poultry farm which will be further extended to a large level in terms of birds and area. Right now the farm is the capacity of 500 birds (Egg-Layers) and 500 chicks. The farm is run by the department of Animal (Poultry) Sciences, it is also used for experiments of the students of zoology and others departments. In future, and SBBU plans to expend this farm to a commercial level as well.

14.1.3 Quail Farm

Alongside the poultry farm, the University has also established a Quail Farm on experimental basis. The capacity of birds in Quail farm is 300, the Quail farm is also kept for the experiments of the students of Zoology and others departments. In future, SBBU plans to expend this farm to a commercial level as well.

14.1.4 Dairy Farm

Alongside the Poultry and Quail farm the University has also established a dairy farm. The capacity of Cows in dairy farm is 20, which on daily basis produce fresh milk up to 100 liters the farm also generate income for the University and also experimental purpose for the students of Zoology, Animal Science and others departments. In future, SBBU plans to expend this farm to a commercial level as well

14.1.5 SAFE Endowment Fund

SBBU have established students Endowment Fund (SEF). University employees contributed Rs. 0.2 Million in initial stage. Overall, SFAO was also established for the benefits of the students of the University under the direction of PEF Foundation US Inc. The foundation has promised to provide funding (worth one Million) and guidelines to SBBU SFAO.

14.1.6 University Guest House

The newly built guest house at SBBU, apart from fulfilling the need of the University can also benefit the University in term of resource generation.

14.2 Future Planes

As per government instruction, are required to increase their own sources and minimize dependency on government funding. To maximize our own sources, we have the following future planes:

1. The Poultry, Quail and Dairy Farm which will be further extended to a larger level.
2. In coming year a trout fish hatchery will be constructed in Kumrat.
3. As we purchase some equipment for forestry and pharmacy, a small furniture factory will be established to utilize the available faculty and equipment's.
4. As we have raw material of sand, stone etc., so a crush plant will be established to utilize the available raw materials for commercial as well as our own purposes

CHAPTER 15

HEALTH CENTRE/MEDICAL FACILITIES

Shaheed BB University established Basic Health Unit (BHU) for the faculty and their families, students, staff and local community. During 2013-14, the BHU started functioning. An amount of PKR 2.5 million was allocated for the purchase of medicines for the BHU.

15.1 Medical Facilities

The medical officer has joined the University. He has also been allocated a residence at the Professor Colony so that he can be approached in the time of emergency at night as well. The Vice Chancellor has approved the following rates for a visit to BHU:

- Rs. 20/- for a member of local community
- Rs. 10/- for a students, staff and faculty.

15.2 BHU Staff

1. Medical Officer
2. Male Nurse
3. Dispenser
4. Office Assistant

15.3 Ambulance Service

In addition to routine check-up we have develop a mechanism to cover trauma and emergency cases on 24/7 basis while critical cases are referred on time, University provide transport and expenses. The University has two well-equipped ambulances in which all the latest facilities are available.

15.4 Programs Regarding Health Issues

Apart from the above mentioned BHU, the University conducted more programs regarding the health issues at the University. The detail is given below:

1. SBBU in collaboration with Fatimid Pakistan organized a major blood camp where more than 200 bags of blood were collected.

2. The Department of Pharmacy organized a campaign against epilepsy. This was the part of Purple Day (March 26) celebrated as World Epilepsy day every year at SBBU.
3. The Department of Pharmacy arranged awareness Session on Thalassemia on Jul 8, 2018 in order to improve awareness & its management.
4. Department of Pharmacy arranged Dengue Awareness Walk on Jul 4, 2018 in order to improve awareness & its management. The event was organized in collaboration with Health Department Upper Dir.

15.5 Future Plan

For the improvement of the BHU, the following points are considered for future action:

1. Extension of BHU
2. Increasing staff of BHU including Lady Doctor, LHV and Female Medical Technetium.
3. State of the art laboratory
4. Modern diagnostic facilities like, Ultra Sound, Digital X-ray, CT scan, etc.
5. The establishment of fund for the BHU so that donations and charities from people may be accepted separately for SBBU BHU.