

# SELF ASSESSMENT REPORT



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**DEPARTMENT OF BOTANY  
KHUSHAL KHAN KHATTAK UNIVERSITY, KARAK  
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## Table of Contents

<b>Introduction.....</b>	<b>1</b>
<b>Criterion 1: Program mission, objectives and outcomes.....</b>	<b>2</b>
Standard 1-1:.....	2
Vision:.....	2
Mission:.....	2
Objectives: .....	2
Standard 1-2:.....	3
Standard 1-3.....	4
Standard 1-4:.....	4
<b>Criterion 2: Curriculum Design and Organization .....</b>	<b>4</b>
Standard 2-1:.....	4
Standard 2-2.....	10
Standard 2-3:.....	11
Standard 2-4:.....	11
Standard 2-5:.....	11
Standard 2-6:.....	12
Standard 2-7;.....	12
<b>Criteria 3. Laboratories and Computer Facilities .....</b>	<b>13</b>
<b>Criteria 4. Student Support and Guidance .....</b>	<b>13</b>
Standard 4-1:.....	14
Standard 4-2:.....	14
Standard 4-3:.....	15
<b>Criterion 5: Process Control.....</b>	<b>15</b>
Standard 5-1:.....	15
Standard 5-2:.....	17
Standard 5-3:.....	17
Standard 5-4:.....	18
Standard 5-5.....	18
<b>Criterion 6: FACULTY.....</b>	<b>19</b>
Standard 6-1:.....	20
Standard 6-2:.....	20
Standard 6-3:.....	20
<b>Criterion 7: INSTITUTIONAL FACILITIES .....</b>	<b>21</b>
Standard 7-1 .....	21
Standard- 7-2:.....	21
Standard- 7-3:.....	21
<b>Criterion 8: INSTITUTIONAL SUPPORT .....</b>	<b>22</b>
Standard 8-1:.....	23
Standard 8-2:.....	23
Standard- 8-3:.....	23
<b>SUMMARY AND CONCLUSIONS .....</b>	<b>24</b>
<b>Annexure A: Faculty Resume .....</b>	<b>26</b>
<b>Annexure B: Courses Evaluation Survey .....</b>	<b>34</b>

<b>Annexure C: Teacher Evaluation Survey.....</b>	<b>47</b>
<b>Annexure D: Teachers Courses Evaluation Survey.....</b>	<b>54</b>

## **Executive Summary**

The Department of Botany, Khushal Khan Khattak University, Karak has been established in September 2019. The Department of Botany aims at promoting an integral understanding for utilization of plants and to explore underlying mechanisms for promoting eco-friendly environment. Particular emphasis is laid on focusing the application of current advances in Genomics, Plant Physiology/Anatomy, Ecology, Mycology, DNA recombinant Technology, Sequencing Methods, Plant Tissue and Cell Culture, Gene Transformation, Genetic Engineering, Applied Botany, Phyto-Medicines, GMOs and climate change impact assessment on flora of Pakistan. The Department strives at its best to boost the diverse applications of plants and their products and to tackle emerging issues of the rapidly growing population. Currently, the Department of Botany is offering BS program (4 years).

### **Criterion 1: Program mission, objectives and outcomes**

#### **Standard 1-1:**

**The program must have measurable objectives to support Mission**

##### **Vision:**

Our vision is to conduct innovative research and teaching on the patterns and processes of life with a focus on plants and their environments.

##### **Mission:**

Our mission is to foster an environment of excellence by attracting and supporting the outstanding students, faculty and staff needed to sustain our vision. We focus on the patterns and processes that enable predictive understanding of plants and their environments at local, regional, and global scales, leading to strengths in the areas of ecology, evolution, and systematics.

##### **Objectives:**

The main objective of developing and launching this department is to develop human resource in the discipline of Botany to achieve sustainable development through appropriate education and training.

#### **Standard 1-2:**

**The program must have documented outcomes for graduating students. It must be demonstrated that the outcomes support the program objectives and that graduating students are capable of performing these outcomes.**

## Learning Outcomes:

Upon successful completion of the degree, students will be able to:

1. Have exposure to the cutting edge technologies in the field of Botany.
2. Have complete knowledge and technical skills pertaining to the plants.
3. Get trained in all areas of the plants sciences as per the curriculum of BS Botany.
4. Be aware about the social and environmental issues regarding plants and significance of the plants and their significance to the national economy.

### Standard 1-3:

**The results of the program's assessment and the extent to which they are used to improve the program must be documented.**

The sample of program's assessment result is given in Annexure B.

### Standard 1-4:

**The department must assess its overall performance periodically using quantifiable measures**

The strength of the present admitted students is as follows:

S.No.	Semester	Number of Students
1	2 <sup>nd</sup>	10 students
2	4 <sup>th</sup>	24 students
3	6 <sup>th</sup>	28 students
4	8 <sup>th</sup>	23 students

Based on the above data, we observed that the student's strength will increase in future. This is due to the following two main reasons

A: Emerging and presently demanded field

B: The University situated in natural resources zone

## **Criterion 2: Curriculum Design and Organization**

### Standard 2-1:

**The curriculum must be consistent and supports the program's documented objectives.**

#### **A: Degree Title: BS Botany**

The curriculum for BS in Botany has been designed by the faculty members of the department.

The curriculum and course contents have been shared with Botany experts in the national

universities. Valuable suggestions put by experts were considered and new courses have been added initially.

### **B: Definition of Credit Hour:**

A “CREDIT HOUR” is the unit of measuring educational credit, usually based on the number of class room hours per week throughout a term.

### **C: Degree Plan**

The department of Botany offers only BS Botany.

Name of Degree	Pre-requisites
BS Botany	Intermediate (Pre – Medical)/A Levels or equivalent (12 years of education) with minimum of 45% marks

### ***Semester-wise Course Break up:***

Semester	Course code	Course Title	Credit. Hrs	PR/CR*
<b>1<sup>st</sup></b>	ENG101	ENGLISH-I (Functional English)	3(3+0)	None
	PS101	PAKISTAN STUDIES	2(2+0)	None
	ZOO101	ZOOLOGY-I	3(2+1)	None
	CHEM101	BASIC INORGANIC CHEMISTRY	3(3+0)	None
	BOT101	DIVERSITY OF PLANTS	4(3+1)	None
	SWS101	Sociology	3(3+0)	None
	<b>Total Credit Hours Per Semester</b>		<b>18</b>	
<b>2<sup>nd</sup></b>	ENG102	ENGLISH-II (Communication Skills)	3(3+0)	None
	MATH100	Mathematics	3(3+0)	None
	ZOO102	ZOOLOGY-II	3(2+1)	None
	CHEM102	Basic Organic Chemistry-I	3(3+0)	None
	BOT102	Plant Systematics, Anatomy And Development/Embryology	4(3+1)	None
	RS101	Islamic Studies	2(2+0)	None
	<b>Total Credit Hours Per Semester</b>		<b>18</b>	
<b>3<sup>rd</sup></b>	ENG211	ENGLISH-III (Technical Report, Writing & Presentation Skill)	3(3+0)	None
	CS101	Introduction to Computer	3(3+0)	None
	ZOO211	ZOOLOGY-III	3(2+1)	None
	CHEM211	BASIC PHYSICAL	3(3+0)	None

		CHEMISTRY-I		
	BOT211	CELL BIOLOGY, GENETICS AND EVOLUTION	4(3+1)	None
	<b>Total Credit Hours Per Semester</b>		<b>16</b>	

Semester	Course code	Course Title	Credit. Hrs	PR/CR*
4 <sup>th</sup>	ENG212	ENGLISH IV	3(3+0)	None
	ZOO212	ZOOLOGY-IV	3(2+1)	None
	CHEM 214	BASIC ORGANIC CHEMISTRY-II	3(3+0)	None
	BOT213	PLANT PHYSIOLOGY AND ECOLOGY	4(3+1)	None
	BOT214	Biodiversity And Conservation	4(3+1)	None
	<b>Total Credit Hours Per Semester</b>		<b>17</b>	
5 <sup>th</sup>	BOT321	BACTERIOLOGY AND VIROLOGY	3(2+1)	BOT101
	BOT322	PHYCOLOGY AND BRYOLOGY	3(2+1)	None
	BOT323	MYCOLOGY AND PLANT PATHOLOGY	3(2+1)	None
	BOT324	DIVERSITY OF VASCULAR PLANTS	3(2+1)	None
	BOT325	PLANT SYSTEMATICS	3(2+1)	None
	<b>Total Credit Hours Per Semester</b>		<b>15</b>	
6 <sup>th</sup>	BOT326	ANATOMY OF VASCULAR PLANTS	3(2+1)	BOT102
	BOT327	GENETICS-I	3(2+1)	None
	BOT328	PLANT BIOCHEMISTRY-I	3(2+1)	FSc BIOLOGY/ CHEMISTRY
	BOT329	PLANT ECOLOGY-I	3(2+1)	None
	BOT330	PLANT PHYSIOLOGY-I	3(2+1)	FSC BIOLOGY, BOTANY
	<b>Total Credit Hours Per Semester</b>		<b>15</b>	



Semester	Course code	Course Title	Credit. Hrs	PR/CR*
7 <sup>th</sup>	BOT431	MOLECULAR BIOLOGY	3(2+1)	None
	BOT432	PLANT BIOCHEMISTRY-II	3(2+1)	None
	BOT433	PLANT ECOLOGY-II	3(2+1)	None
	BOT212	BIOSTATISTICS	3(2+1)	None
	BOT4**	ELECTIVE-I, RESEARCH PROJECT/ INTERNSHIP/ OPTIONAL PAPER	3(3+0)	
	BOT4**	ELECTIVE-II	3(2+1)	
	Total Credit Hours Per Semester		18	
8 <sup>th</sup>	BOT434	PLANT PHYSIOLOGY-II	3(2+1)	None
	BOT435	GENETICS-II	3(2+1)	None
	BOT436	ENVIRONMENTAL BIOLOGY	3(2+1)	None
	BOT4**	ELECTIVE-III, RESEARCH PROJECT/ INTERNSHIP/ OPTIONAL PAPER	3(3+0)	
	BOT4**	ELECTIVE-IV	3(2+1)	
	Total Credit Hours Per Semester		15	
	Total Credit Hours of the Programme		132	

#### List of Elective Courses:

Course codes	Electives	Credit. Hrs	PR / CR
BOT437	ECONOMIC BOTANY	3	None
BOT438	PHARMACOGNOSY AND MEDICINAL PLANTS	3	None
BOT439	PHILOSOPHY OF SCIENCE	3	None
BOT440	PLANT STRESS PHYSIOLOGY	3	None
BOT441	PLANT TISSUE AND CELL CULTURE	3	None
BOT442	PLANT NUTRITION AND SOIL FERTILITY	3	None
BOT443	EMBRYOLOGY OF ANGIOSPERM	3	None
BOT445	SALINITY AND WATER LOGGING	3	None
BOT446	BIOEHTICS	3	None
BOT447	RESEARCH PROJECT	3	None

### Standard 2-2:

**Theoretical background, problems analysis and solution design must be stressed within the program's core material.**

<b>Theoretical background</b>	Plant systematics, anatomy and development/embryology, cell biology, genetics and evolution, plant physiology and ecology, biodiversity and conservation, bacteriology and virology, phycology and bryology, mycology and plant pathology, diversity of vascular plants, plant systematics
<b>Problem analysis</b>	Genetics-I, plant biochemistry-I, plant ecology-I, plant physiology-I
<b>Solution Design</b>	Labs and Research Projects

### Standard 2-3:

**The Curriculum must satisfy the core requirements for the program as specified by the respective accreditation body.**

The curriculum is divided into the following groups regarding credit hours.

<b>Program</b>	<b>Arts &amp; Humanities</b>	<b>Botany</b>	<b>Social Sciences</b>	<b>Maths &amp; Basic Sciences</b>	<b>Elective courses</b>	<b>Others</b>
BS Botany	13 Cr.Hrs	98 Cr.Hrs	Nil	18 Cr.Hrs	6 Cr.Hrs parts of Elective courses	Nil

### Standard 2-4:

**The curriculum must satisfy the major requirements for the program as specified by the respective accreditation body.**

This standard is closely similar to that of above standard 2-3. Both have same requirements and credit hour distribution. For this purpose, we must be concerned about the above standard.

### Standard 2-5:

**The curriculum must satisfy general education, arts and professional and other discipline requirements for the program as specified by the respective accreditation body.**

The detail is given in table 2.1

S.No	Subjects	Remarks
1	Arts and humanities	Satisfactory
2	Basic sciences	Satisfactory
3	Tutorial	Satisfactory
4	Seminars	Satisfactory

### Standard 2-6:

**Information technology component of the curriculum must be integrated throughout the program**

Information technology is very important for education nowadays. Latest technology makes the education updated and distance learning too. Technology is an emerging tool in education. Botany department has the following subject of Information technology.

S.No	IT Courses	Credit Hours
1	Introduction to Computer	03

### Standard 2-7;

**Oral and written communication skills of the student must be developed and applied in the program.**

Oral and written communication is very important in Botany. For the improvement of this technique some weekly seminars are arranged in the Department of Botany. However, some subjects approved by the Departmental Board of Study regarding the improvement of oral and written communication skills are mentioned in the following table:

S.No	Subjects for oral written communication skills	Credit hour
1	ENGLISH-I (Functional English)	03
2	ENGLISH-II (Communication Skills)	03

3	ENGLISH-III (Technical Report, Writing & Presentation Skill)	03
4	ENGLISH IV	03

### **Criteria 3. Laboratories and Computer Facilities**

Currently department has no laboratory. As the department is in the initial phase so the establishment of the labs is being planned.

### **Criteria 4. Student Support and Guidance**

Khushal Khan Khattak University, Karak, encourages students in different curricular and co-curricular activities including sports and participation in literary and cultural societies. Activities are going on in all 08 societies. The names of the societies are as follows

1. Blood donor and medical society
2. Volunteer and social work society
3. Sports and Hiking society
4. Literary society
5. Art and culture society
6. Female student's society
7. Religious affairs society
8. Character building society

Department of Botany appreciates the healthy co-curricular activities arranged by and for the student to heighten their talent in every field of life. The tutorial classes are the part of the attempt to counsel the students in their ethical and social problems which can affect their personality. The faculty members of the department help the students regarding scholarships, career opportunities and counseling of students

#### **Standard 4-1:**

**Courses must be offered with sufficient frequency and number for students to complete the program in a timely manner.**

- Subjects are weekly distributed to cover each topic. Weekly distribution is very effective technique in course completion
- Subjects are distributed in such a way that every subject is taught by subject expert faculty.

- Elective courses are designed according to the industry needs and related to the field of interest of individual student.
- Major courses are taught in applied side.
- Proper time has been arranged for laboratory work.

#### **Standard 4-2:**

**Courses in the major must be structured to ensure effective Interaction between students, faculty and teaching assistants.**

Before commencement of semester, in the meeting chaired by HoD, distribution of the major subjects and the work load among the faculty members is distributed.

- The subjects are distributed on basis of mutual understanding and the interest of faculty members.
- The classroom environment is very suitable for learning as the students are treated politely and encouraged to ask questions during classes. They are also provided with guidance and supervision during office time when required.
- Students are strongly involved in discussion and research ideas.
- Students and faculty members are interacted with each other according to course discussions, latest technology and research.
- Proper time has been arranged for lab in which students and faculty have enough time to discuss ideas.
- Students are encouraged to come to the offices for discussion and for solving their problem regarding the research.

#### **Standard 4-3:**

**Guidance on how to complete the program must be available to all students and access to qualified advising must be available to make course decision and career choice.**

When the student gets admission at the university, all program requirements are communicated to them through prospectus. For full time students' affairs and matters, a coordinator is present at the department to facilitate their issues. Further, it is ensured by the coordinator that students' enrollment is made properly according to program's requirements.

Additionally, tutorial classes have been started on weekly basis to provide academic advising for the students.

## **Criterion 5: Process Control**

### **Standard 5-1:**

**The process by which students are admitted to the program must be based on quantifiable criteria and clearly documented. This process must be periodically evaluated to ensure that it is meeting its objectives.**

A candidate interested in admission for a degree programme shall make an application for admission in response to advertisement by the university, on a prescribed admission form issued by the University within the specified dates. Attested copies of certificates/testimonials and other required documents should be attached to the application form.

2. A candidate may be required to qualify the entrance test to be conducted by the Admissions Committee. The admission to BS program will be on merit to be based on academic performance in intermediate and Metric examinations and other factors as may be prescribed by the competent authority.

3. The admission to a degree programme is normally in the month of September for Fall Semester, January for spring and June for Summer.

4. The candidates seeking admission for the first time in any of the degree courses must complete all admission/enrolment requirements within specified dates, failing which may lead to cancellation of the Admission.

5. Any candidate who has been punished (major penalty) by his parent institution/university, for the act of indiscipline and objectionable activities, will not be allowed admission in the University.

6. A student at the time of first admission/enrolment with any communicable disease or mental or physical disability which may stand in the way of his selected field of study may be denied admission.

8. The candidates and their parents have to give an undertaking to the effect that they will abide by the Rules and Regulations of the University and such other instructions as may be issued by the competent authority from time-to-time.

9. Each student has to submit an affidavit not to take part in political activities detrimental to the academic environment of the University.

10. The final authority of admission is with the respective Dean/Head of the Department or the Registrar. The admission committee is a recommendatory body.

11. The admission of candidates will remain provisional unless all University fees are paid and testimonials/documents verified.

#### **5.1.1. Admission to International Students:**

The credentials of a foreign student who seeks admission in the University are evaluated in accordance with the general regulations related to admission of foreign students as approved by the Ministry of Foreign Affairs and the Ministry of Education, Government of Pakistan. The applications for admission of foreign nationals should come through their embassies in Islamabad to Ministry of Education, Government of Pakistan, and to the University. Foreign students will be admitted only after proper verification of their applications and documents by the University.

#### **5.1 Eligibility criteria for admission;**

A minimum of 12 years of education:

Intermediate (Pre – Medical), A Levels or equivalent (12 years of education) with minimum 45% marks.

#### **5.2 Documents requirements;**

- Matric DMC & Provisional Certificate / Secondary School Certificate
- Intermediate DMC & Provisional Certificate / Higher Secondary School Certificate
- Copy of Computerized National Identity card
- Four Recent Passport Size Photographs- Colored

#### **5.3 Migration/transfer Policy**

A student from other educational institution, who intends to migrate to University, shall meet the following requirements:

- A genuine and plausible reason for migration.
- Production of a certificate of good character from his/her parent institution.
- Production of detailed marks certificate and syllabi of courses he/she studied for equivalence purposes.

#### **5.4 Transfer of Credits:**

- Students desiring to transfer their credits, earned at other institutions, will be accepted under the following conditions:
- Credits have been earned from institutions recognized / accredited by HEC.

- Original transcript is produced along with photocopy.
- Course outlines, duly signed by the institute, are produced for evaluation.
- Credits will be acceptable for undergraduate courses passed with at least 'C' grade / 56% marks / 2.0 out of 4.0 GP or equivalent and at least 'B' at least 60% / 3.0 / 4.0 GP for graduate courses.
- Credits from other institution will be evaluated by the equivalence/evaluation committee on a course-to-course basis with the courses offered by the University.
- Course outlines should match minimum 75% with that of the University.
- Maximum credit equivalent to 40% of the total credits of the degree programme of the University may be accepted.
- Letter grades / grade points of the transferred courses will not be counted towards CGPA of courses of the University.
- The transferred courses will appear in the full transcript of the University.
- Character certificate, from the last attended institution, stating that the student has not been expelled on misconduct, indiscipline, undesirable activities, may be produced.
- Students should not assume that their academic qualifications will allow them transfer of credits till written confirmation has been given.
- In case of acceptance and willingness of the student for admission, he will have to produce migration certificate from the last attended institution.

#### **5.5 Change of subject and adjustment / refund of fee etc.**

- The application for change of subject and adjustment of fee etc. shall be submitted through the respective Heads of Departments to the Registrar of the University.
- The change in subject and adjustment of fee etc. shall be allowed to the student on the following conditions:
- That the admission of the student has been approved by the Vice Chancellor;
- That the Heads of Departments are agreed to the change and the application is submitted to the University Registrar within 15 days (for semester system) and one month (for annual system) of his / her attending the previous Department subject to the fulfillment of the prescribed criteria for desired department.
- In case of change of subject from one Department to another, all fees etc. shall be adjustable.



- The tuition fees shall be refunded in full if the applicant cancels his/her admission within seven days of the commencement of classes and 50% tuition fee within 15 days after the commencement of classes. No tuition fee will be refunded after 15 days.

### Standard 5-2:

**The process by which students are registered in the program and monitoring of students' progress to ensure timely completion of the program must be documented. This process must be periodically evaluated to ensure that it is meeting its objectives.**

#### 5.6 Student Progress Monitoring Procedure;

Regarding monitoring, at the end of the semester, each teacher shall award letter grades for semester and provide master award list to the Controller of Examinations; who shall prepare copies of the award list, retaining a copy himself and sending one each to the concerned Director / Head, Dean of Faculties and Registrar.

#### Examination and Evaluation:

Each subject shall carry 100 marks during a semester. Students shall be assessed for 50% of the grade during the semester and 50% at the end of the semester. Distribution of Marks will be as under:

S.No:	Component	Marks
A	Attendance	05
B	Test, Quiz, Time-constraint, Assignments, Group Assignments, Class participation	15
C	Mid-term	30
D	Final Term	50
<b>Total</b>		<b>100</b>

The University may engage external examiners for the final examinations for quality control purposes. Final examination question papers set by external examiners will be moderated by the teachers concerned. In case the concerned teacher is not available, it can be moderated by Chairperson /Director /HoD or other teacher authorized by the competent authority.

#### 5.7 Enrollment at the Department:

1. All students shall fill the prescribed Registration Form at the beginning of each semester for the courses they will study during that semester and submit the form to the office concerned.

2. At the beginning of each semester, students shall be offered courses of full load (12 or more Credit Hours) but they have the choice to select less courses than the full load. A student registering for less than 12 Credit hours will be a part time student.
3. The enrolment shall be considered incomplete if a student does not make full payment of prescribed fees and submit the prescribed form in the Admission Office.
4. Enrolment and fee payment shall be completed within notified dates unless authority concerned may, under special circumstances, permit a student with late fee to enroll.
5. A student shall enroll himself each semester unless he has completed all the requirements for the degree. In case of non-enrolment in any semester his admission shall stand suspended. The authority may remove suspension from him if he/she applies for regularization. In case, if one fails to enroll for two consecutive semesters, his admission shall be cancelled. Re-admission of such student shall be considered as a fresh admission.
6. When a course, for which a student is enrolled, cannot be offered according to the announced program he/she may take an alternative course. However, this must be done not later than 15 days after the date of enrolment.
7. A student shall be allowed to:
  - a. change a course within 7 days of the commencement of a semester, and
  - b. Withdraw from a course within 4 weeks of the commencement of semester. Withdrawn courses will appear on transcript with letter grade “W”.
  - c. Change his declared specialization / major choice upto 2nd semester for two years Master and 5th semester for Master of 3½ years and Bachelor 4 years after obtaining the advice and approval of the HoD / Dean. A CGPA of 2.00 is required for a change of major.

### **5.8 Attendance:**

1. The educational process at the University depends, to a large extent, on regular classes, make-up classes, laboratory work, in-semester tests, and examinations. Failure to attend any of these can influence academic record, or even lead to dropping from the course, award of “F” grade, or expulsion from the University. A student has to fulfill the following requirements:
2. Students must meet the attendance criterion in every course. Students with less than 75% attendance in theory or practical separately of any course, shall not be allowed to sit in

the final examination of that particular course in a semester, provided that the period of absence in the case of participation in co-curricular/sports activities outside Karak and performing umra / hajj, with the permission of the Competent Authority, may not be counted.

3. The Vice Chancellor may condone absence from classes upto 40% of the total lectures delivered.
4. Attendance counting shall start from the date of resumption of classes.
5. If a student remains absent for one week continuously from all classes without any intimation his/her admission would be suspended by the department concerned.
6. If a student fails to pay registration renewal fee, his / her name may be deleted from attendance list and will not be allowed to attend classes.
7. Students shall take the required number of quizzes / examinations, complete assignments / projects and fulfill other evaluation criteria set by the University, In case a student joins a course after it has started, he/she will be responsible for any missed quizzes, assignments, and lectures. The marks in missed quizzes will be zero while make up tests, assignments, projects, and labs can be arranged in consultation with the teacher / head of department.
8. Leave up to seven days in all degree programs shall be granted by the Chairperson/Director/Head of Department on the recommendation of concerned teachers and 15 days by the Dean in verifiable exceptional cases. Maximum leave shall not exceed 22 days per semester. The production of a medical certificate, in support of leave, shall be compulsory for an ailing student. The student will have to satisfy the Chairperson/Director/Head of Department about the genuineness of his/her request.
9. It is the responsibility of the students to be aware of their attendance status at any given time. Attendance status can be checked from course teacher / Students Service Office / University website.
10. The following marks on the basis of attendance percentage above 75% and class participation may be awarded to a student in the Internal Evaluation result:

<b>Attendance / Participation</b>	<b>Marks</b>
91-100%	5
81-90%	4
76-80%	3
Below 76 %	0

### **5.9 Number of Subjects:**

At the beginning of the semester the subjects are been identified from Prospectus for each respective semesters which are enlisted on the subject list and verified by the Head of the Department. The policy for number of subjects to be taken by the student is six (18 Credit Hours).

### **5.10 Summer:**

Summer Semester is planned each year, only those subjects are offered which has to be taken as reappear. No regular subject is allowed to take during summer semester. Summer semester is comprised of 8 weeks having lectures on daily basis, only two subjects are allowed to take by the students during summer semester according to Higher Education Commission Regulation.

### **5.11 Evaluation of Student Progress Monitoring Procedure:**

Student Progress Monitoring is carried out by quantifying the final GPA. The department takes different measures if a student failed to achieve the desired CGPA.

### **Standard 5-3:**

**The process of recruiting and retaining highly qualified faculty members must be in place and clearly documented. Also processes and procedures for faculty evaluation, promotion must be consistent with institution mission statement. These processes must be periodically evaluated to ensure that it is meeting with its objectives.**

The University follows the following procedure in recruitment of faculty members.

- First of all, posts are advertised in three leading daily newspapers of the region and also uploaded on university website. After the closing date of advertisement, the establishment section of the university scrutinizes the application form and if there is any deficiency in the application form, the applicant is properly informed to overcome the deficiency in the given time.

- After the proper scrutiny by the scrutiny committee, the university conducts the proper selection board.
- After the selection board the case is brought to the syndicate for approval.
- The candidates selected are informed by office orders, and they have to join in specific time.

#### **Standard 5-4:**

**The process and procedures used to ensure that teaching and delivery of course material to the students emphasizes active learning and that course learning outcomes are met. The process must be periodically evaluated to ensure that it is meeting its objectives.**

- Recently the department of Botany has conducted first board of study to approve its curriculum in which the courses for BS Botany program have been finalized as per the HEC criteria.
- Besides the available reference books and course materials, some reference books and course materials have been suggested which will be purchased / arranged for department library.

#### **Standard 5-5:**

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

#### **5.12 Evaluation of Thesis/Project:**

1. Both synopsis and thesis/project report shall have approval of the departmental committee.
2. The thesis/project report shall be evaluated by an External Examiner(s) and Supervisor(s).
3. The student shall give a seminar on his/her thesis/project report before viva-voce examination, where required.
4. The date, time, and venue of examination shall be notified at least one week before the commencement and the faculty and students interested to participate in the oral presentation may be allowed. The notification to this effect may be made by the Head of Department / Chairman / Director of Institute / Controller of Examinations.

5. The Controller of Examinations shall get the thesis/project report evaluated within two months after the date of submission / resubmission of thesis/project report in his Office. Any delay beyond two months shall be brought to the notice of the Vice Chancellor.

6. The thesis/project report shall be evaluated according to the following numerical and letter grades:

- a. The thesis shall be graded in percentage of marks.
- b. The marks so awarded shall be converted into letter grades by the prescribed formula, which shall be A+, A, B+, B, C+, C or F (fail), as the case may be. Average grade on the basis of course work and thesis shall then be worked out to calculate the final CGPA.
- c. Both the Examiner / Supervisor shall sign the thesis/project report after the Viva-Voce Examination, after making necessary corrections and incorporating therein, any suggestions by the Examiners/Supervisor.
- d. Both the Examiner / Supervisor shall sign the result sheet prescribed for this purpose at the end of the examination. The supervisor will submit the result to the Controller of Examinations.
- f. In case of disagreement among the Examiner / Supervisor regarding the acceptance of the thesis/project report, it shall be referred to a third External Examiner, appointed by the Vice Chancellor, whose decision shall be final.
- g. Thesis evaluation fee will be paid by each student.

#### **5.13 *Project / Research and Research Work:***

1. The synopsis approved for thesis / project research shall remain valid only for two semesters.

The Vice Chancellor may extend this period on case to case basis.

2. A student admitted to the course in partial residence shall undertake research/project work in a laboratory or institute approved by the Board of Advance Studies and Research.

#### **5.14 *Failure in Thesis Examination / Submission:***

1. If a candidate fails in the thesis/project report examination, he/she may enroll again and submit a revised thesis/project report on payment of the prescribed examination fee but he/she shall not be entitled to resubmit his thesis/project report before the expiry of six months after the date of declaration of the result of the last thesis/project report examination. He/She can avail of this chance only once.

2. If a student fails to submit his project / thesis on or before prescribed date, he/she shall be granted incomplete grade (I).
3. A student who gets an “I” grade in the project/thesis shall register himself again in the next semester by paying the registration fee until the project/thesis is completed.

**5.15 Requirement for Award of Degree:**

1. It is the responsibility of each student to fulfill the following graduation requirements:
2. The student has earned the requisite credit hours of the degree program.
3. The student’s CGPA on the scale of 4.0 is not less than:
  - a. Bachelor / Master = 2.0
  - b. M. Phil / M.S. = 2.5
  - c. Ph. D = 3.0
4. The student has passed all the core, supporting and compulsory courses of the degree program.
5. The student has met his financial and material obligations towards the university and there is nothing outstanding against him.
6. The student produces clearance certificates from all concerned departments and sections.

**5.16 Award of Degree:**

1. A candidate who passes all the examinations with the prescribed CGPA shall be awarded degree which shall be conferred on him at the subsequent convocation, which is normally held annually.
2. It is mandatory for all students to pay convocation fee and be present at the occasion.
3. The Controller of Examinations will issue Provisional Certificate till issuance of final degree.
4. The character certificate to students will be issued by the Head of the concerned department.

**5.17 Project / Research and Research Work:**

1. The synopsis approved for thesis / project research shall remain valid only for two semesters. The Vice Chancellor may extend this period on case to case basis.
2. A student admitted to the course in partial residence shall undertake research/project work in a laboratory or institute approved by the Board of Advance Studies and Research.

### **5.18 Failure in Thesis Examination / Submission:**

1. If a candidate fails in the thesis/project report examination, he/she may enrol again and submit a revised thesis/project report on payment of the prescribed examination fee but he/she shall not be entitled to resubmit his thesis/project report before the expiry of six months after the date of declaration of the result of the last thesis/project report examination. He/She can avail of this chance only once.
2. If a student fails to submit his project / thesis on or before prescribed date, he/she shall be granted incomplete grade (I).
3. A student who gets an “I” grade in the project/thesis shall register himself again in the next semester by paying the registration fee until the project/thesis is completed.

### **Criterion 6: FACULTY**

#### **Standard 6-1:**

**There must be enough full time faculty who are committed to the program to provide adequate coverage of the program areas/courses with continuity and stability. The interests and qualifications of all faculty members must be sufficient to teach all courses, plan, modify and update courses and curricula. All faculty members must have a level of competence that would normally be obtained through graduate work in the discipline. The majority of the faculty must hold a Ph.D. in the discipline.**

To ensure fully presence of the faculty in all areas of Botany, qualified faculty is hired by the university as per requirement. The qualification and interests of all the faculty members are according to the courses designed and provided by board of studies. Courses are reviewed during BoS to satisfy the requirements for quality education regulated by HEC.

Faculty qualification and designation is mentioned below.

#### **1. Dr. Noor Ul Haq,**

**Designation:** Assistant Professor/Head of Department,

**Qualification:** M.Phil, PhD (Biochemistry/Molecular Biology: Quaid-i-Azam University Islamabad, 2013),

**Post-Doc:** CAS-MPG Partner Institute of Computational Biology, Shanghai Institute for Biological Sciences, Shanghai, China,

**Research Interest:** Plants Molecular Biology, Photosynthesis Evolution

**Email:** noorulhaq@kku.edu.pk, noorqu@gmail.com.



2. **Dr. Inayat ur Rahman**  
**Designation:** Assistant Professor  
**Qualification:** PhD (Botany)
3. **Dr. Kamran Habib**  
**Designation:** Lecturer  
**Qualifications:** PhD Botany, University of the Punjab
4. **Mr. Alam Zeb**  
**Designation:** Lecturer  
**Qualification:** MPhil Botany, University of Science and Technology, Bannu.
5. **Ms. Naila Khatoon**  
**Designation:** Lecturer  
**Qualification:** MPhil Botany, Quaid-i-Azam University, Islamabad, Pakistan.
6. **Ms. Robi**  
**Designation:** Lecturer  
**Qualification:** MPhil Botany, Qurtaba University, Peshawar

#### **Standard 6-2:**

**All faculty members must remain current in the discipline and sufficient time must be provided for scholarly activities and professional development. Also, effective programs for faculty development must be in place.**

The courses are distributed on the basis of relevant expertise and in accordance of existing workload. Faculty members are arranged on the basis of criteria, laid down by HEC.

Currently 2<sup>nd</sup> and 4<sup>th</sup> Semesters are in progress of BS Botany.

#### **Standard 6-3:**

**Results of the faculty survey:**

- Please refer to **Annexure C** for Question's detail.

## **Criterion 7: INSTITUTIONAL FACILITIES**

This criterion describes the facilities provided by institution such as library, classrooms and offices. Several standards are discussed to meet the program objectives through these facilities.

#### **Standard 7-1:**

**The institution must have the infrastructure to support new trends in learning such as E-learning. Supportive Infrastructure and Facilities in learning:**

Khushal Khan Khattak University, Karak, is newly established university but in very short time the University achieved most targets regarding education standard.

- a. KKKUK has established PERN network of HEC.
- b. A video conference room is present to facilitate National and international webinars.
- c. University has PERN internet of 32 MB.

#### **Standard- 7-2:**

**The library must possess an up-to-date technical collection relevant to the program and must be adequately staffed with professional personnel.**

A well-managed central library has been setup at main campus to keep updated the students and faculty members with the latest trends in different Disciplines. A qualified librarian with a well-trained supporting staff is responsible to manage the library in an efficient manner. Approximately 14000 books have been stocked in library.

Library provides support in enhancing the technical knowledge of the students.

#### **Standard- 7-3:**

**Class-rooms must be adequately equipped and offices must be adequate to enable faculty to carry out their responsibilities.**

Classrooms are not equipped with multimedia facilities. Additionally, the faculty offices are not equipped with adequate resources to accomplish their job responsibilities in efficient manner.

### **Criterion 8: INSTITUTIONAL SUPPORT**

Khushal Khan Khattak University, Karak is making best efforts to provide adequate resources to the faculty, library, and laboratories and computing facilities. The following standards explain these resources.

#### **Standard 8-1:**

**There must be sufficient support and financial resources to attract and retain high quality faculty and provide the means for them to maintain competence as teachers and scholars.**

Already discussed in Sections 5-3 and 6-3

Adequate budget is sanctioned each year for research and development, faculty development program, books and research journals for library, to enhance the teachers' and scholars' competency as mentioned below.

### **Standard 8-2:**

**There must be an adequate number of high quality graduate students, research assistants and Ph.D. students.**

Khushal Khan Khattak University is newly established that is why there is no research assistant in the department but M.Phil faculty is working on different research projects. BS students are also engaged in different projects.

### **Standard- 8-3:**

**Financial resources must be provided to acquire and maintain Library Holdings, laboratories and computing facilities.**

#### **Library**

- A well-managed central library has been setup having Bioinformatics related books at main campus to keep updated the students and faculty members.

#### **Laboratory**

Describe the resources available for the laboratories.

- Currently department has no lab.
- Department still needs research labs.

#### **Computing Facilities**

Describe the resources available for computing facilities.

- There is no computer lab in the department.

## **Annexure A**

## **Faculty Resumes**

### **Dr. Noor ul Haq**

Name	<i>Noor ul Haq</i>
<i>Personal</i>	<i><b>Designation:</b> Assistant Professor/Head of Department, <b>Qualification:</b> M.Phil, PhD</i>

	<p><i>(Biochemistry/Molecular Biology: Quaid-i-Azam University Islamabad, 2013),</i>  <b>Post-Doc:</b> CAS-MPG Partner Institute of Computational Biology, Shanghai Institute for Biological Sciences, Shanghai, China,  Email: noorulhaq@kkuk.edu.pk,  noorqu@gmail.com.</p>
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### **Dr. Inayat Ur Rahman**

Name	<b>Dr. Inayat Ur Rahman</b>
Personal	<p><b>Designation:</b> Assistant Professor  <b>Qualification:</b> PhD Botany, Hazara University, Mansehra.</p>

### **Dr. Kamran Habib**

Name	<b>Dr. Kamran Habib</b>
Personal	<p><b>Designation:</b> Lecturer  <b>Qualification:</b> PhD Botany, University of the Punjab, Lahore.</p>

### **Ms. Naila Khatoon**

Name	<b>Ms. Naila Khatoon</b>
Personal	<p><b>Designation:</b> Lecturer  <b>Qualification:</b> MPhil Botany, Quaid-i-Azam University, Islamabad, Pakistan.</p>

### **Mr. Alam Zeb**

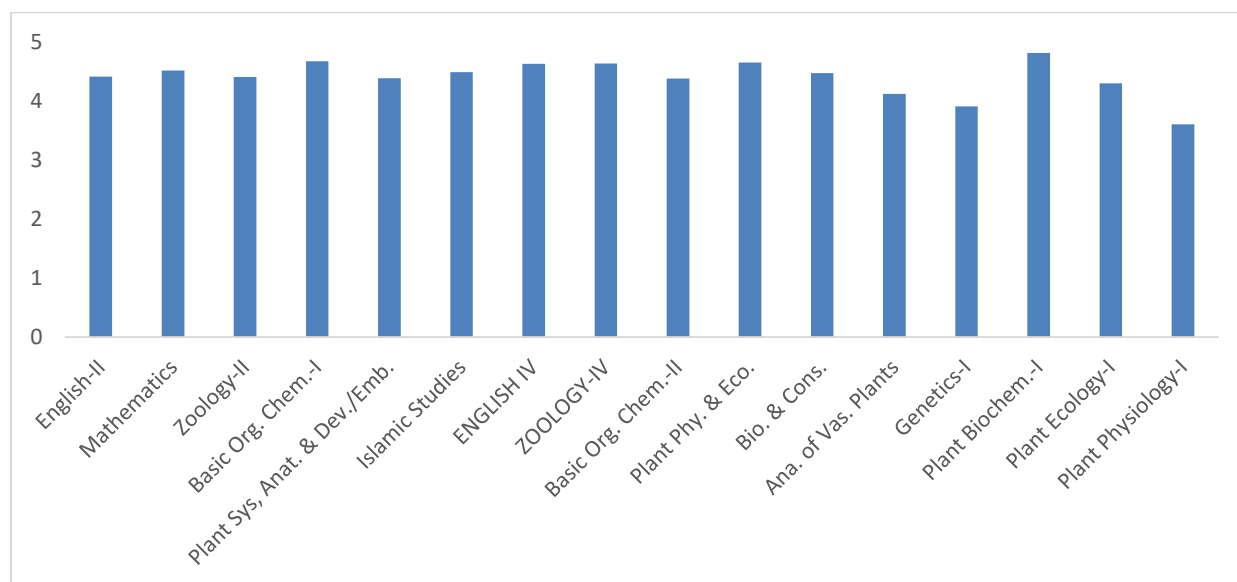
Name	<b>Mr. Alam Zeb</b>
Personal	<p><b>Designation:</b> Lecturer  <b>Qualification:</b> MPhil Botany, University of Science and Technology, Bannu, KPK, Pakistan.</p>

## Ms. Robi

Name	<b>Ms. Robi</b>
Personal	<i>Designation: Lecturer</i> <i>Qualification: MPhil Botany, Qurtaba University, Peshawar.</i>

## Annexure B

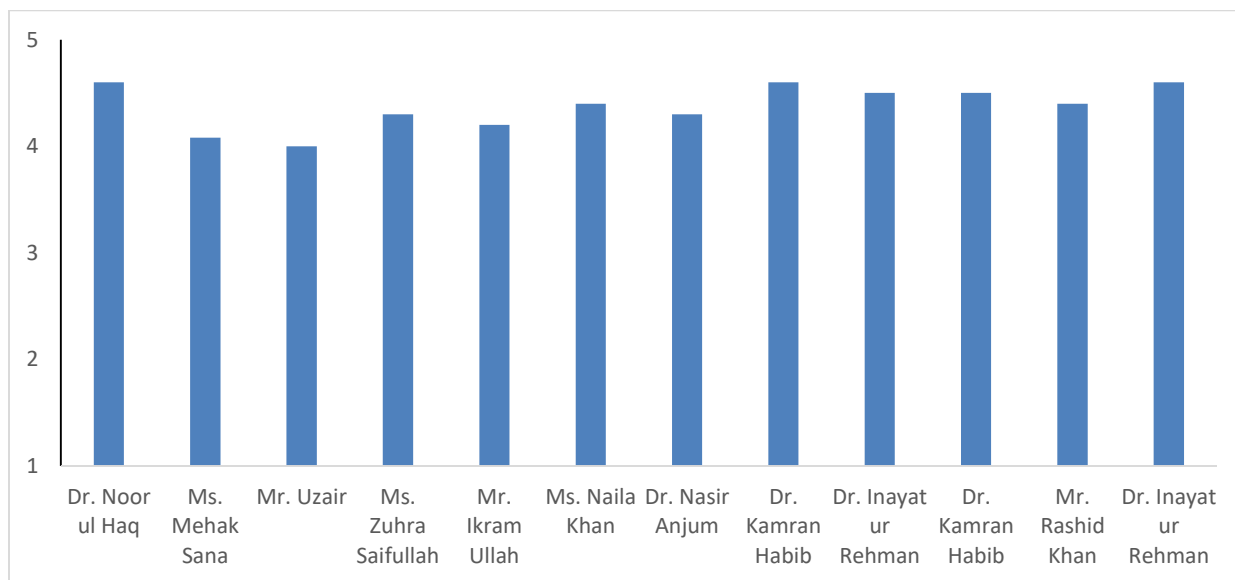
## Courses Evaluation Survey



Subject	Course Code	Mean
ENGLISH-II (Communication Skills)	ENG102	4.411111
Mathematics	MATH100	4.510526
ZOOLOGY-II	ZOO102	4.405
Basic Organic Chemistry-I	CHEM102	4.666667
Plant Systematics, Anatomy And Development/Embryology	BOT102	4.38
Islamic Studies	RS101	4.485714
ENGLISH IV	ENG212	4.625
ZOOLOGY-IV	ZOO212	4.630769
BASIC ORGANIC CHEMISTRY-II	CHEM 214	4.375275
PLANT PHYSIOLOGY AND ECOLOGY	BOT213	4.646667
Biodiversity And Conservation	BOT214	4.47
ANATOMY OF VASCULAR PLANTS	BOT326	4.118182
GENETICS-I	BOT327	3.907692
PLANT BIOCHEMISTRY-I	BOT328	4.807692
PLANT ECOLOGY-I	BOT329	4.292857
PLANT PHYSIOLOGY-I	BOT330	3.6

## Annexure C

## Teacher's Evaluation Survey



Course	Teacher	Mean
BOT447	Dr. Noor ul Haq	4.6
ENG101	Ms. Mehak Sana	4.08
PS101	Mr. Uzair	4
ZOO101	Ms. Zuhra Saifullah	4.3
CHEM101	Mr. Ikram Ullah	4.2
BOT101	Ms. Naila Khan	4.4
SWS101	Dr. Nasir Anjum	4.3
BOT431	Dr. Kamran Habib	4.6
BOT433	Dr. Inayat ur Rehman	4.5
BOT432	Dr. Kamran Habib	4.5
BOT212	Mr. Rashid Khan	4.4
BOT438	Dr. Inayat ur Rehman	4.6