



**AIC Report**

**Dr. M. Tahir Siddiqui**

**April 29, 2014**

**Department of Forestry  
University of Sargodha, Sargodha**

SUBJECT: **ACCREDITATION REPORT REGARDING DEPARTMENT OF FORESTRY, UNIVERSITY OF SARGODHA**

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**ABSTRACT**

University of Sargodha is a reputed academic institution striving for excellence in education. College of Agriculture is a vital constituent of the University with its independent campus building. Forestry discipline is an integral part of agricultural sciences. Forestry subject is taught as an introductory course to all undergraduate students of Faculty of Agriculture. Department of Forestry is growing gradually by developing infrastructure and inducting qualified faculty. Presently, there are 5 faculty members; three of them are Ph.D. and one is abroad for higher studies under faculty development programme of HEC. Curriculum developed is at par with the existing ones taught in other universities of the country. It is hoped that Department will make its place as there are reasonable number of students enrolled at undergraduate level.

**INTRODUCTION**

University of Sargodha is an established institution of higher learning comprising of Agriculture Commerce, Medical, Information Technology, etc. degree programs. Agricultural education both directly and indirectly plays a pivotal role in the agrarian economy of the country. College of Agriculture under the auspices of university of Sargodha with its well designed independent campus and well sought after degree programs is commendable feather in the cap of the University.

Department of Forestry was visited by a team of NAEAC on 29-4-2014 to examine and assess the infrastructure available, faculty profile and students interaction. The committee is of the view that department have adequate space for teaching about 50 students as well as for lab work. Library, computer and analytical labs are shared by sister departments of the faculty. Resultantly, undergraduate students were found satisfied with academic facilities as well as field work and study tours. As Forestry is a field oriented discipline, therefore, field tours have been given due emphasis in the study program of the department. University provides logistics for conducting such study tours which, of course, is a welcome step. Faculty comprises of three Ph.Ds. one M.Sc (Hons) and one is abroad for Ph. D studies under faculty development program of the HEC. Laboratory is equipped with modern and sophisticated equipments like Atomic absorption spectrophotometer, electron microscope, digestion apparatus, etc and library has reasonable number of books and journals.

### **ACTIONABLE RECOMMENDATIONS**

Following are the actionable recommendations:-

- Induction of at least one Professor, two Associate Professors and four lecturers are required to strengthen the department.
- Four to five office places for teachers
- One more laboratory with relevant instruments and two more lecture rooms
- Independent computer lab and GIS lab, department library.
- Sitting place for students and one seminar room
- Courses be revisited and updated according to the guidelines of the HEC.
- Addition of latest books and journals in the library
- Establishment of herbarium for identification of forest trees and range grasses.

- Development of watershed model for student demonstration in the experimental area of the department.
- Adequate budget allocation for running the department in a befitting manner.
- In time but performance based promotion / selection of the existing staff may please be ensured

### **CONCLUSION**

Department of Forestry meets the minimum requirements for award of degree in Forestry. Although, there is plenty of room for improvement, both in faculty induction/development and infrastructure development which hopefully, will be taken care of in due course of time.

## Evaluation Criteria Weightage for Agriculture Degree Programs

Sr. No.	Program Evaluation Criteria	Points Assigned	Points Awarded
			M.Sc (H) & B.Sc (H)
<b>Major Criteria</b>			
1	Strength and Quality of Faculty	200	148
2	Curriculum Design and Development	150	144
3	Infrastructure and Learning Resources	200	130
4	Students Support and progression	150	138
<b>ub - Total (a)</b>		<b>700</b>	560
<b>Minor Criteria</b>			
5	Research and Consultancy Activities	150	54
6	Governance and Leadership	100	95
7	Recent Innovations and Best practices	50	38
<b>Sub - Total (b)</b>		<b>300</b>	187
<b>Grand Total (a+b)</b>		<b>1000</b>	747

\_\_\_\_\_  
Name and Designation

\_\_\_\_\_  
Signature of Program Evaluator

**Criteria I: Strength and Quality of Faculty 200**

(Please consult standards (S1-S14) at page#18)

**1.1 Full -Time and Part - Time Faculty 40**

Regular and full-time faculty, teaching core subjects.

<u>Designation</u>	<u>Full Time</u>	<u>Part Time</u>	<u>Total</u>
Professor	_____	_____	_____
Associate Professor	_____	_____	_____
Assistant Professor	3	_____	_____
Lecturer	1+1 (Teaching assistant)	_____	_____
		<b>Total</b>	5 (One Lecturer on study leave)

**1.1.1 Status of Faculty**

	6		4
Full time Faculty required	_____	Full time Faculty in position	_____
			Nil
Visiting faculty required	_____	Visiting Faculty in position	_____

**1.2 Faculty Qualifications and Teaching Experience 15**

Status of Faculty qualification and experience.

<u>Qualification</u>	<u>Number</u>	<u>Average Teaching Experience (Years)</u>
Post Doctorate	_____	_____

	2	8 + 1 = 9	12
Doctorate			
	3	7	
M. Phil/M.Sc(Hons)			

**1.3 Teaching Work Load 15**

Number of credit-hours teaching per week, based on actual number of different categories of teachers.

Designation	Existing Teaching Load	
Professors		15
Associate Professors		
Assistant Professors	27 (9 for each assistant professor)	
	9 (of teaching assistant)	
Lecturers		

**1.4 Faculty Course Review Reports 15**

Preparation and submission of Course Review Reports (CRR) by each Faculty member at the time of course evaluation.

**Course Review Reports (CRR) submitted: 15**

Regularly \_\_\_  \_\_\_ Occasionally \_\_\_\_\_ CRR submitted Rarely \_\_\_\_\_

(Evidence of course review reports may be ensured)

**1.5 Degree Program Monitoring System 10**

Adequate program monitoring system exists at the department level. \_\_\_Yes\_\_\_

Monitoring system exists but not implemented \_\_\_\_\_ 10

Inadequate monitoring system \_\_\_\_\_, Monitoring system does not exist\_\_\_\_\_

**1.6 Training of Newly Inducted Faculty Members 15**

In order to become an effective teacher, all newly inducted faculty members are to receive 4-6 weeks training suitably designed to encompass the important aspects of teaching.

Systematic teachers training plan in place \_\_\_\_\_

Some orientation but no formal training plan\_\_\_√\_\_\_ 10

No system of teachers training in place\_\_\_\_\_

**1.7 Faculty Development and Career Planning 15**

Improvement plan of faculty qualification leading to PhD and Post-Doc etc. 15

Well planned and implemented\_\_\_√\_\_\_ Poorly planned and rarely implemented\_\_\_\_\_ Not planned at all\_\_\_\_\_

**1.8 Salaries and Fringe Benefits of the Faculty 10**

Attractive \_\_\_\_\_ Reasonable \_\_\_√\_\_\_ Low \_\_\_\_\_



Evidence of implementation of incentives (if any)\_\_\_\_\_ 8

**1.9 Environment at workplace of Teaching Faculty 05**

Very Good \_\_\_√\_\_\_ Good\_\_\_\_\_ Satisfactory\_\_\_\_\_ Unsatisfactory\_\_\_\_\_ 5

**1.10 Faculty Stability Computed Index 05**

Very Good \_\_\_\_\_ Good\_√\_\_\_ Satisfactory\_\_\_\_\_ Unsatisfactory\_\_\_\_\_ 5

**1.11 Awards/Recognitions received by the Faculty Members 10**

Sufficient awards\_\_\_\_\_ Insufficient awards \_\_\_√\_\_\_ No awards \_\_\_\_\_ 5

**1.12 Participation of Faculty in Seminars/Conferences during Last 3 years 05**

Adequate Participation\_\_\_√\_\_\_ Inadequate Participation\_\_\_\_\_ No Participation \_\_\_\_\_ 5

**1.13 Textbooks/Chapters of Books Written by the Faculty Members 10**

Text books written \_\_\_\_\_nil\_\_\_\_\_ Chapters of books written\_\_\_\_\_nil\_\_\_\_\_

Conference proceedings \_\_\_\_\_ 3 \_\_\_\_\_ 3

**1.14 Graduate Research Supervision 10**

Average No. of PhD Students supervised by each HEC approved Professor \_\_nil\_\_

Average No. of M.Sc Students supervised by each Faculty Member \_\_nil\_\_ 0

**1.15 Job Satisfaction 05**

Very much Satisfied \_\_v\_\_ Moderately Satisfied \_\_\_\_\_ Least Satisfied \_\_\_\_\_ 5

Reasons for Satisfaction/Dissatisfaction \_Good working environment, good salary package and opportunities to flourish as a good researcher and teacher\_

**1.16 Opportunities to Faculty for Academic Progress 05**

Adequate Opportunities \_\_\_\_\_v\_\_\_\_\_ Inadequate Opportunities \_\_\_\_\_ 5

**1.17 Faculty Perception About on-going degree Programs 05**

Performing well \_\_\_\_\_v\_\_\_\_\_ Not performing well \_\_\_\_\_

Degree Programs need up-gradation Yes \_\_\_\_\_v\_\_\_\_\_ No \_\_\_\_\_ 5

Reasons for not performing well \_\_\_\_\_

**1.18 Faculty/Students Computer Ratio 05**

	3		5
Computers for Faculty		Computers for Students	1 for each student
	_____		_____
Computers for M.Sc (Hons)	1 for each student	Internet Facility	Available
	_____		

**Criteria II: Curriculum Design and Development 150**

(Please consult standards (S15-S22) at page#18)

**2.1 Curriculum Objectives of Degree Programs 20**

Well defined \_\_\_\_\_ v \_\_\_\_\_ Vaguely defined \_\_\_\_\_ Not defined \_\_\_\_\_

	<u>Fully</u>	<u>Partially</u>	20
Curriculum objectives supportive to degree programs	Yes	_____	
	_____	_____	

Objectives examined and found relevant \_\_\_\_\_ v \_\_\_\_\_ Objectives are achievable Yes/ \_\_\_\_\_

**2.2 Curriculum Contents are: 15**

	<u>Fully</u>	<u>Partially</u>	<u>None</u>	
• Well-structured and rich in contents.	Yes	_____	_____	
• Compatible with emerging needs.	Yes	_____	_____	15
	_____	_____	_____	

- |  |       |       |       |
|--|-------|-------|-------|
| • Information technology integrated into the curriculum. | _____ | _____ | _____ |
|  | Yes   |       |       |
| • Able to achieve students learning outcomes.            | _____ | _____ | _____ |
|  | Yes   |       |       |
| • Flexible to offer sufficient choices for the students. | _____ | _____ | _____ |
|  |       | Yes   |       |
|  | _____ | _____ | _____ |

### 2.3 Curriculum Revision 20

Curriculum revision in the light of National, HEC and International requirements and on the demand of the market.

Revised regularly (every 2-3 years), Revised occasionally \_\_\_\_\_ No revision \_\_\_\_\_ 20

### 2.4 Textbooks, Reference Books and Journals etc 15

Prescribed textbooks/reference books may be examined in the light of International practices.

- |                      |       |   |              |    |
|----------------------|-------|---|--------------|----|
|                      | ✓     |   | Yes          |    |
| • Highly recommended | _____ | • Available in the uni/deptt. library   | _____        | 12 |
|                      | Yes   |   | New editions |    |
| • Acceptable         | _____ | • Old Edition/New Edition               | _____        |    |
|                      |       |   | Available    |    |
| • Sub-standard       | _____ | • Available/Not available in the market | _____        |    |
| • Inadequate         | _____ |   |              |    |

### 2.5 Course Contact Hours 10

Total contact hours committed to theory and practical work for effective teaching of different courses.

• More than HEC guidelines	_____	• Average Contact hours for theory course	2	hrs	
			1		10
• Sufficient	yes	• Average Contact hours for practicals	3	hrs	
• Insufficient	_____	• Total Contact hours for a course	_____	hrs	

**2.6 Completion of Courses 10**

Completion of theory courses during the prescribed period as per official record (To be verified by the Program Evaluators/Experts).

Very good \_\_\_√\_\_\_, Satisfactory \_\_\_√\_\_\_, Unsatisfactory \_\_\_\_\_ 10

**2.7 Course Registration & Withdrawal Policy 10**

Policy with adequate details \_\_\_\_\_√\_\_\_\_\_ Policy with inadequate details \_\_\_\_\_

Policy not available \_\_\_\_\_ policy is well spelled \_\_\_√\_\_\_ 10

Policy adequately disseminated to the students \_\_\_\_\_√\_\_\_\_\_

**2.8 Admission Policy 10**

• Well documented and notified \_\_\_√\_\_\_ Documented but not notified \_\_\_\_\_

• Appropriately documented \_\_\_√\_\_\_ Not documented. \_\_\_\_\_ 10

**2.9 Maintenance of Course Files (To be verified) 15**

The practice of maintaining course file is adopted internationally to monitor as how effective the course has been taught. A course file may include all relevant data (such as given below) which could become the basis of evaluation.

- Lecture breakdown for entire semester.
- Schedule of monthly/mid-term tests and final examination and daily attendance record.
- Breakdown of laboratory experiments pertaining to the course and record of successful conduct.
- Listing of textbooks and other reference books pertaining to the course. 12
- Recommendations and suggestions related to the course for the next session.

Maintained and well organized **Yes/**  **Not properly organized**  **Not maintained**

(The Program Evaluators may examine a few course files for the Faculty Members the previous and on-going semesters.)

**2.10 Meetings of Board of Studies/Faculty (Evidence of the meetings held) 25**

Held regularly  **v**  Held occasionally  Never held

Regular and frequent meetings of Board of Studies  **v**  25

Changes/updating the curriculum during the last 2-3 years  **v**

Stakeholders feedback is solicited and incorporated in the curricula  **v**

Mechanism of stakeholders feedback exists  **v**

**Criteria III: Infrastructure and Learning Resources 200**

(Please consult standards (S23-S53) at page#18)

**3.1 Labs and their Capacity 45**

No. of Research Labs   1   No. of Teaching Labs   1   20

Working capacity of Research Labs.  10  Working capacity of Teaching Labs.  25 

**3.2 Adequacy and Quality of Lab Equipment 25**

	Yes		Yes		Yes	
• Adequate	<u>        </u>	• Fully operational	<u>        </u>	• Good quality	<u>        </u>	20
• Inadequate	<u>        </u>	• Partially operational	<u>        </u>	• Average quality	<u>        </u>	
• Not available	<u>        </u>	• Not operational	<u>        </u>	• Poor quality	<u>        </u>	

**3.3 Lab Equipment Utilization 10**

	Yes		Yes
• Properly utilized	<u>        </u>	Reasons for inadequate utilization	<u>        </u>
• Inadequately utilized	<u>        </u>	Reasons for poor utilization	<u>        </u>
• Poorly utilized	<u>        </u>	Apparatus/Equipment out of order	<u>        </u>

10

**3.4 Availability and Qualification of Lab. Staff 15**

	Yes	√		
• Available	Partly Available		Not Available	
	_____	_____	_____	10
	√	Yes		
• <sup>1</sup> Trained for the job	Partly Trained		Not Trained	
	_____	_____	_____	
		Yes		
• Highly Experienced	Moderately Experienced		Least Experienced	
	_____	_____	_____	
			No	
• Lab Staff with professional qualification		_____	_____	

**3.5 Lab Safety Measures 10**

• Availability & use of Lab manual & Protocols		Yes		
	Available		Not Available	
		_____	_____	8
		√	Yes	
• Lab safety equipment & manual				
	Available		Not Available	
		_____	_____	

**3.6 Annual Budget Allocation for Maintenance and Operation of Labs 10**

More than Adequate		Adequate		
	_____		Yes	
Inadequate		Amount Allocated	_____	8
	_____		_____	

<sup>1</sup> Qualified & Trained as Lab Technician, Lab assistant and Lab attendant



**3.7 Library Annual Budget 10**

Main Lib. Annual budget Rs. \_\_\_ Department Lib. Annual budget Rs. 0.3 million\_ 8

More than Adequate \_\_\_\_\_ Adequate \_\_\_√\_\_\_ Inadequate \_\_\_\_\_

**3.8 Subject Books: Total and Purchased (during Past two years) 20**

**Main Library**

	<u>Text Books</u>	<u>Ref. Books</u>	<u>Total</u>
Total No. of books	<u>400</u>	<u>1000</u>	<u>1400</u>
Books purchased Last two years	_____	_____	_____
No books purchased	_____	_____	_____

15

**Department Library**

	<u>Text Books</u>	<u>Ref. Books</u>	<u>Total</u>
Total No. of books	50	150	200
Books purchased Last two years	_____	_____	_____
No Books purchased	_____	_____	_____

**3.9 Subscription to Foreign Journals during last two years (Rs. \_\_\_\_\_) 15**

Adequate number of magazines and journals for each program may be subscribed through hard copies.

Number of Foreign Journals Subscribed \_\_\_\_ >10 (including online subscription through HEC digital lib. \_\_\_\_\_

**3.10 Local and Foreign Journals 05**

Local Journals \_5/year\_ Foreign Journals \_2/year\_ **3**

Sufficient and variety available \_\_\_\_\_ Sufficient but variety not available \_\_\_\_\_

Insufficient \_\_\_\_\_ Non – existing \_\_\_\_\_

**3.11 Website of the Institution/Department 05**

Maintained and updated regularly \_\_\_√\_\_\_ Maintained but not updated \_\_\_√\_\_\_

No Website \_\_\_\_\_ **5**

**3.12 Buildings and Total Covered Area 05**

Departmental building infrastructure as per academic and administrative requirements. Total Covered area (Sq.ft) \_\_\_\_60,000 sq.ft\_\_\_\_ **5**

**3.13 Class Rooms and Faculty Offices 10**

No. of Class rooms \_\_\_2\_\_\_ Covered area (sq. ft) \_\_\_834 ft<sup>2</sup>\_\_\_

Class rooms with multimedia \_\_\_2\_\_\_ No. of Faculty offices \_\_\_\_\_3\_\_\_\_\_ **6**

Faculty offices Covered area (sq.ft)\_\_\_748\_\_\_ Faculty offices with internet \_All the offices have internet facility\_\_\_\_\_

Computer lab \_\_\_1\_\_\_ Common room \_\_\_1\_\_\_

**3.14 Experimental Area and Farm Machinery 15**

Total Farm area (acres)	72 acres	Distance from the Department	500 m	
Buildings at the Farm	-			12
Adequate Research facilities for post-graduate students			Yes	
Details of Farm Machinery & Equipment (List)			List attached	

**Criteria IV: Students Feedback 150**

**4.1 Use of Students Assessment Instruments by Faculty 15**

Assessment Instruments (Tick)	Adequately used	Inadequately used	Not used at all	
	Yes			
• Quizzes				
• Assignments	Yes			15
• Projects/seminars	Yes			
• Sessional tests	Yes			
• Mid-term	Yes			



**4.5 Labs. and Lab Practicals 05**

Conduct of Practicals	Coverage of Course practicals	
Yes		
• Regular	All practicals arranged	Yes
_____		_____
• Irregular	Some of practicals arranged	
_____		_____
	<u>Yes</u>	
Practical Note-books complete and maintained		
	_____	_____
(Evidence to ensure Please)		

5

**4.6 Book Bank 05**

Availability of discipline textbooks and reference books in the central library for borrowing by the students for the whole session.

√		
Sufficient	Total No. of books in book bank	
_____		_____
Exist but insufficient	Books purchased for the last two years	
_____		_____
√		
Does not exist		
_____		

5

**4.7 Library Equipment 05**

Equipment in the central library such as computers, photocopiers, typewriters, scanners, video and audio equipment, CD Writer, computerized search etc (please give number).

Computers\_\_20\_\_\_\_ Photocopiers\_\_3\_\_\_\_ Typewriters\_\_\_\_ Scanners\_4\_\_\_\_\_

Video & Audio Equipment\_\_2\_\_\_\_ CD Writer\_\_\_\_\_

5

**4.8 Library Space/environment 05**

No. of Chairs/Seats \_\_80\_\_\_\_ Peace of mind \_\_\_\_\_complete\_\_ Lack of least noise \_\_\_\_\_

**4.9 Students opinion about the quality of services provided by the library 05**

**Comments:**\_\_\_\_\_ Students are satisfied with facilities provided by the department. Library contains latest and course oriented books and journals. Network and digital access to various online books and journals is available to the students.

\_\_\_\_\_

5

\_\_\_\_\_

\_\_\_\_\_

**4.10 Students Access to various Facilities 05**

	<u>Sufficient</u>	<u>Insufficient</u>
Computer seating capacity	<u>v</u>	_____
	_____	_____
Online surfing capacity	<u>v</u>	_____
	_____	_____

5

	<u>Yes</u>	<u>No</u>
Students Access to Library Facilities	_____	_____

**4.11 Financial Support to Students 05**

Various scholarships and interest-free loans, the students received from various sources last year.

Scholarships awarded by the University

	<u>Merit Based</u>	<u>Need-Based</u>
B.Sc (Hons)	Yes _____	Yes _____
M.Sc (Hons)	yes _____	Yes _____

**Availability of Interest- free Loans 05**

Adequate  Inadequate \_\_\_\_\_ Not Available \_\_\_\_\_ 5

**Scholarships opportunities other than university 05**

• Adequate	yes			
	_____	Scholarships	1	
• Inadequate	_____	Sources	2	5
	_____		3	
			_____	

**4.12 Availability of Hostel(s) Accommodation 05**

	√			
Adequate	_____	Inadequate	_____	
	3			5
No. of Hostels	_____	Capacity For Housing students	200 students/hostel	
			_____	

**4.13 Sports Facilities (swimming pool, gym, play grounds, Indoor games etc) 05**

Adequate  Inadequate \_\_\_\_\_ Does not Exist \_\_\_\_\_ 5

**4.14 Transport facilities 05**

Adequate	<input checked="" type="checkbox"/>	No. of university buses	5 buses & 1 van	
	_____		_____	
			300	5
Inadequate		Total Seating capacity	_____	
	_____			
Not available				
	_____			

**4.15 Medical Facilities 05**

Adequate  Inadequate \_\_\_\_\_ Not Available \_\_\_\_\_ 5

**4.16 Academic Counseling 05**

Guidance available to the students from discipline teachers beyond teaching hours.

Well organized  Unarranged & occasional \_\_\_\_\_ No counseling at all \_\_\_\_\_ 5

**4.17 Internship/Project Training 05**

Eighth semester Undergraduates internship/project training carrying (5) credit hours or Engagement of students in practical training.

Compulsory  Reasonable provision \_\_\_\_\_ No provision \_\_\_\_\_ 5



Evidence/verification of internship (reports with emphasis on quality) from department\_\_checked\_

**4.18 Students Perception about Degree Programs 10**

Best Aspects of the degree programs being offered

Market oriented with full field exposure

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Aspects of the degree programs that could be improved.

- 
- Regular updating of course contents
- 
- Induction of new compulsory and elective courses
- 
- Options for taking variety of elective courses
- 

**4.19 Opportunities/resources for students to participate in seminars/conferences/field tours  
10**

Sufficient opportunities to attend on campus conferences as well as through video link

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**4.20 Involvement of students in the community welfare activities by organizing university  
students club/ association 05**

Occasional participation

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3

**4.21 Alumni's Profile 05**

The Department is encouraged to develop a database of outgoing graduates to receive their feedback through establishment of a placement bureau and form an alumni's association.

Satisfied\_\_\_\_\_Unsatisfied\_\_\_\_\_Not available\_\_v\_\_\_\_\_

0

**4.22 Calendar of Activities of Degree Programs 05**

Annual Calendar prepared regularly in consultation with Faculty and Support Staff

Annual calendar is available  Not available  Not prepared  5

**4.23 News Bulletin/Magazine 05**

Department regularly issues the followings: 5

Newsletter  News Bulletin  Magazine

**Criteria V: Research and Consultancy Activities 150**

(Please consult standards (S65-S68) at page#19)

**5.1 Total Annual Research funds received from HEC and other sources 30**

Total Research fund during Past three years Rs. \_\_\_\_\_ Nil \_\_\_\_\_

Regular/Irregular \_\_\_\_\_ Occasional \_\_\_\_\_ 0

**5.1.1 Utilization of Annual Research Grant 15**

Faculty Research Rs. \_\_\_\_\_ Graduate Research Rs. \_\_\_\_\_ Both Activities \_\_\_\_\_ 0

**5.2 Faculty Publications (Other than Student Thesis) during last 3 years 20**

Each faculty member is expected to publish at least 1-2 good papers in a reputed referred journal.

	12		
Impact Factor Journals		HEC approved Journals	9
	10		9
Other Journals		All Types of Proceedings etc	6
	10		6
			18

**5.3 Continuity of Faculty Research 10**

Adequate \_\_\_√\_\_\_ Inadequate \_\_\_\_\_ Does not exist \_\_\_\_\_ 7

**5.4 Academic Collaboration (Meetings, Seminars, Journals, Research Projects) 10**

The collaboration can be quite effective if the objectives of the collaborative programs are clearly defined.

<u>Collaborating agencies</u>	
1. Biofuels & Magnetic Energies (Pvt) Ltd [in process]	2. _____
_____	_____
3. _____	4. _____
_____	_____
	6

**5.6 Budgetary Allocations for Seminars and Conferences, etc (last 3 years) 20**

Amount Allocated Rs. \_\_\_Nil\_\_\_\_\_ 0

**5.7 Funded Research Projects underway and completed during last 3 years 20**

Projects Completed \_\_\_\_\_ Projects Underway\_\_1\_\_\_ Projects in pipeline\_\_1\_\_\_ 10

**5.8 Advisory Services rendered to other Organizations 05**

Organization receiving services

- |   |                        |   |
|---|------------------------|---|
| <p>1. Farmers (through outreach program)</p> <p>_____</p> | <p>2.</p> <p>_____</p> | 3 |
| <p>3.</p> <p>_____</p>                                    | <p>4.</p> <p>_____</p> |   |

**5.9 Dissemination and Use of Research Results 05**

Evidence of Publication and dissemination of completed research (e.g. booklets, brochures, leaflets, flyers, etc for the end users) \_\_\_\_\_ not published \_\_\_\_\_ 0

**5.10 Organized the following during Last 3 Years 15**

<u>Activity</u>	<u>Yes</u>	<u>No</u>	<u>Number</u>	
• Farmers Field Days	_____	_____	_____	
• Zari Mella Stall	<b>Yes</b>	_____	<b>5</b>	
• Farmers Moot	_____	_____	_____	10
• Farmers Colloquia	_____	_____	_____	
• International Day of Forests	<b>Yes</b>	_____	<b>1</b>	

**Criteria VI: Governance and Leadership of the Institution 100**

(Please consult standards (S69-S71) at page#19)

**6.1 Administrative Authority/Governance 15**

Clearly defined  vaguely defined \_\_\_\_\_ Status not defined \_\_\_\_\_ 15

**6.2 Organizational Setup 20**

Organizational Setup of financial and academic infrastructure.

Well laid out  Overlapping \_\_\_\_\_ Weak \_\_\_\_\_ 20

**6.3 Rules and Procedures Documented 15**

Well documented  Not appropriately documented \_\_\_\_\_ Not documented \_\_\_\_\_ 15

**6.4 Administrative Control 15**

Academic and administrative powers delegated to essential organs.

Powers clearly delineate  Not clearly delineated \_\_\_\_\_ not delineated \_\_\_\_\_ 15

Highly Centralized \_\_\_\_\_ Moderately Centralized \_\_\_\_\_ Decentralized \_\_\_\_\_

**6.5 Financial Resources 15**

Financial resources available to the Department from various sources. Stability of Financial Resources:

Highly stable  Stable \_\_\_\_\_ Existing but unstable \_\_\_\_\_ 15

**6.6 Operational Budget 10**

Allocated current budget compared with the required budget of the Department.

Total operational budget requirement Rs. \_\_\_\_\_ 7

Available Operational Budget Rs. \_\_\_\_\_ 65 million \_\_\_\_\_

**6.7 Development/ Research Budget 05**

Budget available to department for Research, development & administrative functions for last 3 years. \_\_\_ Research Budget available as per requirement

\_\_\_\_\_

3

**6.8 Placement Bureau 05**

Each teaching department should have placement bureau and maintain record of students' employment, assist the students in placement and interact with relevant employers.

Exists and operative \_\_v\_\_ Exists but not operative \_\_\_\_\_ Does not exist \_\_\_\_\_ 5

**Criteria VII: Adoption of Good Practices 50**

**7.1 Please describe at least two good practices adopted related to Curriculum Review and Development and Faculty Development. 20**

1. Curriculum is well conceived and reviewed and updated regularly according to HEC instructions and peer consultations.

\_\_\_\_\_

\_\_\_\_\_

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2. The program of faculty development is in place and teachers are on PhD studies abroad.
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**7.2 Please indicate at least two good practices adopted pertaining to quality instructions and teaching methods by the faculty. 10**

1. Use of multimedia for lectures
- 
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- 
2. Use of video interactive lab for online lectures, discussions and Ph.D. viva voce
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**7.3 Good Practices adopted for Students – Teachers Assessment 10**

1. Teacher evaluation proforma are filled in for each course in every semester by the students under the supervision of Quality Enhancement Cell of the university.
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2. Feed back of students is being conveyed to the teachers
- 
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**7.4 Good Practices adopted for Knowledge Acquisition and Skill Development in Graduate Students 10**

1. Practical field operations and field visit oriented assignments

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Study tours

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7

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2. Internship program of one semester mandatory in final semester of the degree.

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**Standards/Criteria for Degree Awarding teaching Department**

Standards	Parameter	Criteria /Standard
<b>Strength and Quality of Faculty</b>		
S1.	Faculty Strength	Minimum 6 teachers per department
S2.	Visiting faculty	20% of teaching staff
S3.	PhD Qualified Faculty	At-least 5 PhD
S4.	Faculty composition	1:1:2:2
S5.	Teacher student ratio	1:20
S6.	Support staff vs. Teaching staff ratio	1:2
S7.	Teaching load (Credit Hrs/Week)	Prof-8, Associate-8, AP- & Lecturer-12
S8.	Research Publications	At least 1-2 Research papers/year by each faculty member
S9.	Submission of course review reports at the end of semester	Essential
S10.	Training of newly inducted faculty	Must be in place
S11.	Environment at workplace	Good
S12.	Participation in seminars/conferences	Adequate
S13.	Opportunities for academic progress	Adequate opportunities
S14.	Job satisfaction	Essential
<b>Curriculum Design and Development</b>		
S15.	Revision/updating of curriculum	After Every 2-3 years
S16.	Feedback on curriculum	Essential from all stakeholders



S17.	Completion of courses (Theory)  Practical:	Unsatisfactory (< 75% coverage)  Satisfactory (> 75% coverage)  Excellent (100% coverage)  Unsatisfactory (< 75%)  Satisfactory (> 75%)
S18.	Eighth semester internship for B.Sc(Hons)	Internship project report (evidence) essential
S19.	Objectives of curriculum	Mandatory to highlight as preamble to curriculum
S20.	Meeting of BOS and BOF	Regular, essential
S21.	Maintenance of course files	Essential
S22.	Admission and withdrawal policy	Well document and transparent
<b>Infrastructure and Learning Resources</b>		
S23.	Maintenance of course files by the teachers	Mandatory to maintain an updated and complete file of each course offered by a faculty member (evidence)
S24.	Meetings of Board of Faculty and Board of Studies	Regular meetings with minutes and follow-up actions (evidence)
S25.	Text books/Reference books	One set of textbooks/reference books in department library
S26.	Department library	Essential. HOD maintains a small department library of text books and theses.
S27.	Library space for students	30-35 sq. ft per student
S28.	Availability of required library facilities (as per Evaluation Manual)	Essential
S29.	Books in the main library	At least 100 text books/reference books from major international/national publishers
S30.	Computers	1 for 5 students
S31.	Internet service	Access should be provided to at-least graduate students
S32.	Access to online journals	Essential for all graduate students

**Faculty Views**

- (i) Please describe 2-3 strengths of your degree programs of Forestry.
- (ii) Please describe 2-3 weaknesses (Areas that require improvement) of your degree programs.

**Strengths of B.Sc.(Hons.)Agriculture major Forestry**

- 1. Highly qualified and able teaching faculty in major courses of Forestry and in all the general courses of Agriculture.
- 2. Field visits / study tours is a major focus in Forestry Department to keep aware the students with practical knowledge.

**Weaknesses of B.Sc.(Hons.)Agriculture major Forestry**

- 1. More infrastructures are required e.g. place for offices, labs, departmental library, etc.
- 2. Although a good number of books are available to the students in the Forestry section of the Library, yet more books are to be purchased.
- 3. More teaching faculty is required especially to start programs in MSc.(Hons) and PhD.

**Criterion II Infrastructure and Learning Resources**

**1. Number of class rooms with students capacity of each class room.**

Class room-1 (Forestry)	20 students capacity
Class room-2 (General)	50 students capacity

**2. Class rooms with white board and multi-media facility.**

All the class rooms are available with white board and multi-media facility  
One video interactive lab fitted with latest equipment is also available for online lectures and discussions for the students

**3. Capacity of each Lab with list of equipment in each Lab with brief (one line) specifications.**

Forestry department is sharing lab with Department of Horticulture at University College of Agriculture. Following is the list of equipment and facilities available to the students of Forestry:

S.N.	Name of Equipment / Facility	S.N.	Name of Equipment / Facility
1	Refrigerator- Freezer combination	31	Liquid nitrogen
2	Laminar flow cabinet	32	Leaf area meter
3	Autoclave	33	Conductivity meter
4	Water distillery	34	PH meter
5	Hot plate	35	Soil sampling set

6	compound microscope	36	Portable photosynthesis apparatus
7	Heavy duty electronic field balance-60kg	37	Binocular research microscope
8	Electronic field balance	38	Trinocular stereozoon microscope
9	Electronic field balance -5000-6000 gm	39	Ice flake maker
10	Electronic balance 420-500gm	40	Water deionizer
11	Electronic balance-300 gm	41	Digital research microscope
12	Electronic oven	42	Trinocular inverted research microscope
13	Digital orbital shaker	43	Grain moisture tester
14	Ultra low temperature freezer	44	Light microscope (MC-20)
15	Polarizing microscope	45	Dissecting microscope (MZ-1280)
16	Plant sample grinder	46	Autoclave (SX-500)
17	Electrophoresis apparatus	47	Camera SLR nikon
18	Gel documentation	48	Centrifuge (EBA-20)
19	Micro centrifuge	49	Rotary shaker (KS-15A)
20	Refrigerated centrifuge machine	50	Field balance (EB-20)
21	flame photometer	51	Ph meter (Stater-300)
22	Lux meter	52	Light microscope (MC-20)
23	Humidity meter	53	Autoclave (SX-500)
24	Cooled incubator	54	Field balance
25	CO <sub>2</sub> incubator	55	Vortex (ZX-3)
26	Climate test chamber	56	Hot plate (ARE)
27	Vacuum desicator	57	Light microscope (MC-20)
28	Kjeldhal distillation apparatus	58	Camera SLR nikon
29	water bath	59	Weather station
30	Rotary evaporator	60	

4. **Qualification and relevant experience of Lab Staff.**
5. **Specimens of practical notebooks of students of 4<sup>th</sup> and 7<sup>th</sup> semester. (To be seen during the visit)**
6. **List of text books/Reference books in the Lib. as per recommendations in the scheme of studies/curriculum of HEC.**

About 1400 books on different disciplines of Agriculture are available in the library of university college of Agriculture; including 80 books in Forestry whose list is as follows:

<b>S.N.</b>	<b>Author's Name</b>	<b>Name of Book</b>
1	<i>Ed by:-A.Amaro</i>	Modelling forest systems
2	<i>P.S Pathak</i>	Agroforestry:Potential & opportunities
3	<i>Kailash Chandra Bebart</i>	Forest resources & sustainable development : Principles & Practices
4	<i>Ed:- P.S Pathak</i>	Agroforestry:Potential & opportunities
5	<i>Ed by:-Sanjeev K. Chauhan</i>	Agroforestry in 21st century
6	<i>Gary L. Rolfe</i>	Forests and forestry 6th Ed
7	<i>J.E.M Arnold</i>	Managing forests as common property
8	<i>Reginald D. Forbes</i>	Forestry Hand book
9	<i>Andrew M. Gordon</i>	Temperate Agroforestry systems
10	<i>Dr. Subhadra Menon</i>	Trees of India
11	<i>Marcia Lambert</i>	Commercial Forest Plantations on saline lands
12	<i>Nico Marcar</i>	Trees, Shrubs & Grasses for salt lands
13	<i>Ed:-G.Lemaire</i>	Grass Land Ecophysiology & Grazing Ecology
14	<i>John Arden Ferguson</i>	Farm Forestry
15	<i>Bertram Husch</i>	Forest Mensuration 4th Ed
16	<i>Robert J. Morley</i>	Origin & Evolution of tropical rain forests
17	<i>Raymond A. Young</i>	Introduction to forest Ecosystem Science & Management 3rd Ed
18	<i>Stephen R. Gliessman</i>	Field and Laboratory Investigations in Agro Ecology
19	<i>M. Sehrer.L</i>	Forest Diversity & Function
20	<i>Kurian Juseph</i>	Essential of Environmental Studies

21	<i>Gary L. Rolf</i>	Forests & Forestry
22	<i>Andrew M. Gordon</i>	Temperate Agroforestry Systems
23	<i>D.V. Reddy</i>	Fodder Production & Grassland Management for Veterinaries
24	<i>David Clements</i>	New Dimensions in Agroecology
25	<i>B.N. Pandey</i>	Biodiversity & Environment
26	<i>D. V. Reddy</i>	Fodder Production & Grassland Management for Veter.
27	<i>L.N Singh</i>	Grassland Technology and Management
28	<i>L.N Singh</i>	Grassland Techniques and Management
29	<i>Hoselti</i>	Concepts in Worldlife Management 2nd Ed
30	<i>Hoselti</i>	Concepts in Worldlife Management 2nd Ed
31	<i>Hoselti</i>	Concepts in Worldlife Management 2nd Ed
32	<i>Hoselti</i>	Concepts in Worldlife Management 2nd Ed
33	<i>Hoselti</i>	Concepts in Worldlife Management 2nd Ed
34	<i>D. V Reddy</i>	Fodder Production & Grassland Management
35	<i>D. V Reddy</i>	Fodder Production & Grassland Management
36	<i>D. V Reddy</i>	Fodder Production & Grassland Management
37	<i>D. V Reddy</i>	Fodder Production & Grassland Management
38	<i>D. V Reddy</i>	Fodder Production & Grassland Management
39	<i>S. K. Singh</i>	Wildlife Management
40	<i>S. K. Singh</i>	Wildlife Management
41	<i>S. K. Singh</i>	Wildlife Management
42	<i>S. K. Singh</i>	Wildlife Management
43	<i>S. K. Singh</i>	Wildlife Management
44	<i>Singh M.P</i>	Forest Environment & Biodiversity
45	<i>Vyrs G. P.</i>	Community Forestry 2nd Ed
46	<i>Smith P. H.</i>	Forestry & Climate Change

47	<i>Sunil Pure</i>	Agro Forestry System and
48	<i>Michacla. Dirr</i>	Manual of Woody Landscape Plants
49	<i>Frederick Franklin</i>	Elements Of Forestry
50	<i>Frederick Franklin</i>	Elements Of Forestry
51	<i>G.P.D. Vyas</i>	Community Forestry
52	<i>S.S. Purohit &amp; Dushyant</i>	Trends in Organic Farming
53	<i>Pankj Panwar</i>	Handbook of practical forestry
54	<i>K.P.Nautiyal</i>	Research methodology in plant sciences
55	<i>K.P.Nautiyal</i>	Research methodology in plant sciences
56	<i>ramesh Umrani</i>	Agroforestry systems and practices
57	<i>ramesh Umrani</i>	Agroforestry systems and practices
58	<i>V.K.Sharma</i>	Trees and protection of environment
59	<i>Najma Dharani</i>	Field guide to common trees and shrub of east africa
60	<i>Najma Dharani</i>	Field guide to common trees and shrub of east africa
61	<i>M.P.Singh</i>	Essentials of forest sciences
62	<i>M.P.Singh</i>	Essentials of forest sciences
63	<i>Bryan G Bowes</i>	Tree and forest : a Colour Guide
64	<i>Bryan G Bowes</i>	Tree and forest : a Colour Guide
65	<i>Paveen Taank</i>	Forest product and their utilization
66	<i>Paveen Taank</i>	Forest product and their utilization
67	<i>Paveen Taank</i>	Forest product and their utilization
68	<i>Bernard A Mascus</i>	Tropical Forest
69	<i>Bernard A Mascus</i>	Tropical Forest
70	<i>Anil Kumar Singh</i>	Forages and Fodder
71	<i>S. S. Kundu</i>	Encironment Agroforestry & Livestock Management

72	<i>B. R. Vashishta</i>	Botany for Degree Students Fungi
73	<i>Annika Kanagas</i>	Forest Inventory Methodology and Applications
74	<i>Anne M. Larson</i>	Forests for People Community Rights and Forest Tenure Reform
75	<i>C. S. Dange</i>	Forestry Research Extension
76	<i>Dr. B. P. Pandey</i>	Botany For Degree student B.Sc first Year
77	<i>Gerald Cubitt</i>	Wild India the Wildlife and Landscapes of India
78	<i>Dr. K. R. Nair</i>	Intergrated Production and Pest Management
79	<i>R. K. Goel</i>	Laboratory Techniques in Sericulture

Apart from the above mentioned books, four volumes of Encyclopedia in Forestry are also available to the students for consulting various topics in Forestry. Moreover books on Statistics and Biochemistry are also available.

**7. Scheme of studies and courses offered by each faculty member.**

**SCHEME OF STUDIES**

**B.Sc.(Hons.) Agriculture****SEMESTER-I**

<b>Course No.</b>	<b>Title of the Course</b>	<b>Credit Hours</b>	<b>Foundation/ Supporting/ Compulsory</b>
SS-301	Introduction to Soil Science-I	3(2-1)	Foundation
AS-301	Introduction to Animal Husbandry	3(2-1)	Supporting
Agro-301	Basic Agriculture	3(2-1)	Compulsory
Bio-301/ Math-301	Biology (for Pre-Engineering students)/ Mathematics (for Pre-Medical students)	3(2-1)/ 3(3-0)	Compulsory
CS-301	Computer Science and Information Technology	3(2-1)	Compulsory
Eng-301	Study Skills	3(3-0)	Compulsory
IS-301/ SSH-301	Islamic Studies/ Ethics (for Foreigner or Non-Muslims)	2(2-0)/ 2(2-0)	Compulsory
<b>Total credit hours</b>		<b>20(15-5) / 20(16-4)</b>	

**Annexure – II****11. Access to HEC digital Lib and list of subscribed local and foreign Journals.**

Access to HEC digital Lib is available. The journals related to Forestry and allied disciplines are being subscribed by Springer Link, Taylor & Francis, Science Online, McGraw Hill and



Wiley-Blackwell. Following is a list of Forestry related journals subscribed by Wiley-Blackwell and Taylor & Francis:

**Wiley-Blackwell Journals**

African Journal Of Ecology  
Agricultural And Forest Entomology  
Applied Vegetation Science  
Aquatic Conservation: Marine And Freshwater Ecosystems  
Australian Journal Of Entomology  
Botanical Journal Of The Linnean Society  
Conservation Biology  
Ecological Entomology  
Ecological Management & Restoration  
Forest Pathology  
Functional Ecology  
Grass & Forage Science  
Grassland Science  
Hydrological Processes  
Insect Conservation And Diversity  
Journal Of Animal Ecology  
New Phytologist  
Pest Management Science  
Plant Cell & Environment  
Plant Species Biology  
The Plant Journal  
Water And Environment Journal  
Weed Biology And Management  
Weed Research

**Taylor & Francis Journals**

African Journal of Range & Forage Science  
Annals of GIS  
Biodiversity  
Forest Science and Technology  
Forests, Trees and Livelihoods  
International Journal of Biodiversity Science, Ecosystem Services & Management  
International Journal of Green Energy  
International Journal of Water Resources Development  
Journal of Sustainable Forestry  
Scandinavian Journal of Forest Research  
Southern Forests: a Journal of Forest Science  
Strategic Planning for Energy and the Environment

**Annexure - III**

**Courses offered by each Faculty member during Spring Semester 2014**

<b>Sr.</b>	<b>Name of</b>	<b>Course Title, Course Code along with credit hours</b>
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Teacher		B. Sc. (Hons.)				Total credit hours of the teacher
	Code	Course Title	Credit H.	Semester		
1	<b>Dr. Muhammad Sajjad Haider</b> (Assistant Professor / Incharge)	FRW-302	Introduction to Forest and Watershed Management	3(2-1)	II B.Sc.(Hons.)Agriculture (Sec. A)	9
		FRW-508	Range Management	3(2-1)	VI B.Sc.(Hons.)Agriculture major Forestry	
		FRW-510	Wildlife Management	3(2-1)	VI B.Sc.(Hons.)Agriculture major Forestry	
2	<b>Mr. Tariq Mahmood</b> (Assistant Professor)	FRW-302	Introduction to Forest and Watershed Management	3(2-1)	II B.Sc.(Hons.)Agriculture (Sec. B)	9
		FRW-504	Forest Management	3(2-1)	VI B.Sc.(Hons.)Agriculture major Forestry	
		FRW-506	Watershed Management	3(2-1)	VI B.Sc.(Hons.)Agriculture major Forestry	
3	<b>Dr. Farooq Azhar</b> (Assistant Professor)	FRW-302	Introduction to Forest and Watershed Management	3(2-1)	II B.Sc.(Hons.)Agriculture (Sec. C)	9
		FRW-302	Introduction to Forest and Watershed Management	3(2-1)	II B.Sc.(Hons.)Agriculture (Sec. D)	
		FRW-502	Silviculture-II	3(2-1)	VI B.Sc.(Hons.)Agriculture major Forestry	
4	<b>Mr. Khurram Shahzad</b> (Teaching	FRW-302	Introduction to Forest and Watershed Management	3(2-1)	II B.Sc.(Hons.)Agriculture (Sec. E)	9

Assistant)

FRW-302	Introduction to Forest and Watershed Management	3(2-1)	II B.Sc.(Hons.)FST (Regular)
FRW-302	Introduction to Forest and Watershed Management	3(2-1)	II B.Sc.(Hons.)FST (Self Support)

**Total Credit Hours 36  
(Spring 2014)**

**8. Evidence of BOS meetings and action on the decision of BOS and BOF meetings.**

The meetings of BOS and BOF are regularly held. Evidence is available in the admin office.

**9. Last two years faculty publications (Number) in impact factor Journals \_\_\_\_\_ and HEC recognized Research journals \_\_\_\_\_.**

Publications in impact factor Journals = 7

Publications in HEC recognized Research Journals = 5

**10. Seating capacity and other available facilities (photocopier, scanner) in the Lib.**

Seating capacity in the Library = About 80 students can sit at a time