

G. Name of the Programme: Ph. D. in Biochemistry

6.4.1. Brief History of the Programme:

Inception

- Since the establishment of the Department in 1998 through dissociation from the parent department of Agricultural Chemistry and Soil Science, the Degree programme was initiated
- The earlier nomenclature of the degree programme in ‘Agricultural Biochemistry’ has been modified as ‘Biochemistry’ in compliance with that proposed by the BSMA Committee for basic sciences – ICAR

Objectives

- Caters teaching and research, even with its limited number of faculties, aiming at
 - generation of trained resource persons being able to contribute the field of academics and research with novel ideas and findings
 - training students with the cutting-age technologies so as to serve both the public and private sectors
 - equip students to be capable of being self-employed (job-givers instead of job-seekers)

Accomplishment

- **Four (4)** students have successfully completed PhD programme during last 5 years.
- **Nine (9)** research papers have been published so far of which five (5) being solely from the Ph D dissertation work during the period (2016—2021) by the students pursuing the PhD programme; **One (1)** communicated and under review
- **One (1)** has been provided job of ARS scientist, one (1) is serving under Chhattishgad Govt.
- **Two (2)** have been engaged in Private sector.
- Nearing 50% of the total number of Ph D students admitted in the last year are girls.



6.4.2. Faculty Strength

SL. No.	Type of Faculty	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR
1.	Professor	1	0	1	0
2.	Associate Professor	2	1	1	0
3.	Assistant Professor	3	0*†	3	1

*One Asst. Professor was in service (as a Professor) till March 2021; Another Asst. professor, superannuated in 2013, was continuing till August 2018.

†One Retd. Guest Professor. catering classes and continued to be engaged, in addition.

Documentary evidence against appointment of Guest Faculty:

The dearth of teachers in Biochemistry has been duly recognised and continually being addressed by the University in the past through providing with guest Faculty(ies) from time to time. Some documentary evidences have been appended below for reference, the base file is lying with the Department office:

The collage consists of six documents:

- Document 1 (Top Left):** An order dated 22.08.2012 regarding the appointment of Miss Nilima Karmakar as a part-time teacher. It mentions a budget sanction of Rs. 250.00 (Rupees two hundred fifty) per lecture.
- Document 2 (Top Middle):** A notice dated 12.08.18 regarding the appointment of a Guest Professor. It states that the department is facing a shortage of faculty and that the proposed appointment is subject to budget approval.
- Document 3 (Top Right):** A notice dated 06.10.2018 regarding the appointment of a Guest Professor. It mentions that the department has been approved to engage a part-time teacher for various courses.
- Document 4 (Middle Left):** A copy of an order dated 22.08.2012, similar to Document 1, but with handwritten notes and signatures.
- Document 5 (Middle Right):** A notice dated 02.11.18 regarding the appointment of a Guest Professor. It includes a list of courses and a budget of Rs. 500.00.
- Document 6 (Bottom):** A notice dated 14.05.20 regarding the appointment of a Guest Professor. It mentions that the department has been approved to engage a part-time teacher for various courses.

6.4.3. Technical and Supporting staff

SL. No.	Type of Staff	Sanctioned Staff	Staff in place	Vacant position	No. of Staff recommended by ICAR
1.	Technical Assistant	3	0	3	1
2.	Office Assistant	1	0	1	1
3.	Lab. Attendant	3	1	2	
4.	Helper (Laboratory)- Grade I		1		
5.	Record keeper		1		

6.4.4. Classrooms and Laboratories:

6.4.4.1. Number of Classroom: 1 with dimension of 476 sq. ft. and having 20 sitting capacity

6.4.4.2. Number of Functional Laboratories: 4

SI No.	Name of Laboratory/ Facility	Area (Square-metre)	No. of Supporting Staff Attached
1	Instrumentation Laboratory	40.88 (4 students)	One as additional duty
3	Ph.D. Laboratory	55.74 (8-10 students) 52.95 (8-10 students)	One
4	Enzyme laboratory	44.96 (5 Students)	
5	Inoculation chamber	9.29 (one student)	

6.4.4.3. List of equipment, laboratories, farm facilities, workshops and other instructional units

Category	Total Number	Space (sq. m)	Facilities	Instruments with specifications
Instrumentation Room	1	40.88	Sophisticated Instrumental facilities for the PG/PhD students of the Department	<ul style="list-style-type: none"> Refrigerator LG double door Visible spectrophoto-meter: <i>Two</i> nos. (Systronics Models -166 & 104 UV-Visible spectrophotometer (Jasco, V630) HPLC (Jasco 'MD2010 plus' with PDA detector, 'PU-2080 plus') Computer+Printer
Ph D Practical and research lab (Two)	PhD Lab-1	55.74	For working of 5-6 PhD students in each room	<ul style="list-style-type: none"> BOD incubator Refrigerator LG double door Air oven Digital balance Heating mantel for soxhlet apparatus – set of five units Temperature controlled water bath Borosil brand all-glass water distillation unit Double distillation unit



6.4.4.3. Cont..List of equipment, laboratories, farm facilities, workshops and other instructional units

Category	Total Number	Space (sq. m)	Facilities	Instruments with specifications
	PhD Lab-2	52.95		<ul style="list-style-type: none"> • Kjeldahl Digestion-distillation unit • One Deep freezer • Cold Centrifuge Remi C20 • Centrifuge Remi R24 – <i>Two</i> nos. • Shaker water bath • Air oven • Muffle furnace
Enzyme lab	1	44.96	For working of 6-8 research students	<ul style="list-style-type: none"> • Computer+printer+scanner • Godrej double door freezer • Kelvinator single door freezer • Borosil brand dist. water plant • Controlled temperature water bath • An AC cubicle with <ul style="list-style-type: none"> – Digital balance; Shimadzu – Electrophoresis power pack, Systronics
Inoculation chamber		~9.29	For One student at a time	<ul style="list-style-type: none"> • Laminar Air flow machine

1.4.9.1. Justify whether these facilities are sufficient to meet the course curricula requirement:

Five seats have been allotted for admission to Ph. D. programme till date. Successfully catering most of the practicals and Masters research as per the recommended syllabus with this available facility.

6.4.4.5. Number of theory batches for the Degree Programme - 1

6.4.4.6. Number of Practical Batches for the Degree Programme-1

6.4.5. Conduct of Practical and Hands-on-Training:

With the available infrastructural facilities, it is possible to cater almost 80% of the practicals and are being done.

Practical Manual published:

Course No.	Title
ABC-702	Practical Manual on Plant Biochemistry-II



6.4.6. Supervision of students in PhD Programme:

6.4.6.1. Total Number of Students pursuing the Degree at Present: 7

6.4.6.2. Total Number of faculties supervising the Students: 2

	2016-17	2017-18	2018-19	2019-20	2020-21
No of students in PhD Degree Programme	3	2	2	1	7
No of Eligible Teachers for supervision**	2	3	3	3	3*

* No. of eligible teachers for supervision decreased by one due to retirement of one teacher in March 2021; so presently Two teachers supervising 7 students

** One teacher from Burdwan Campus is also eligible for supervising Ph D students as per the university rule

Eligible Criteria to become a PhD Advisor:

(Clause 6.03 of the BCKV Regulations regarding Doctoral Degree Programme, 2019)

6.03. Recognition of chairperson / Member of Advisory Committee

- (i) A teacher of the Viswavidyalaya as defined in the Act having at least three (3) years of research and/ or teaching experience after a doctoral degree and at least seven (7) publications after the doctoral degree or joining in service as applicable in the NAAS/ UGC rated journals and /or peer reviewed journals with impact factor as approved by the Board of Studies of the concerned department and subsequently by the PG-UG Council of the respective Faculty, if required, may be recognised as chairperson / member of the Advisory Committee of a student under doctoral degree program.
- (ii) A teacher of the Viswavidyalaya without Doctorate degree but having at least 10 years research / teaching experience and at least seven (7) publications in the NAAS/ UGC rated journals and /or peer reviewed journals with impact factor as approved by the Board of Studies of the concerned department and subsequently by the PG-UG Council of the respective Faculty, if required, may be recognised as chairperson /member of Advisory committee of a student under doctoral degree program.
- (iii) The teachers of the Viswavidyalaya who have registered themselves for the doctoral degree programme shall not be eligible as the Chairman / Member of the Advisory committee of a student.

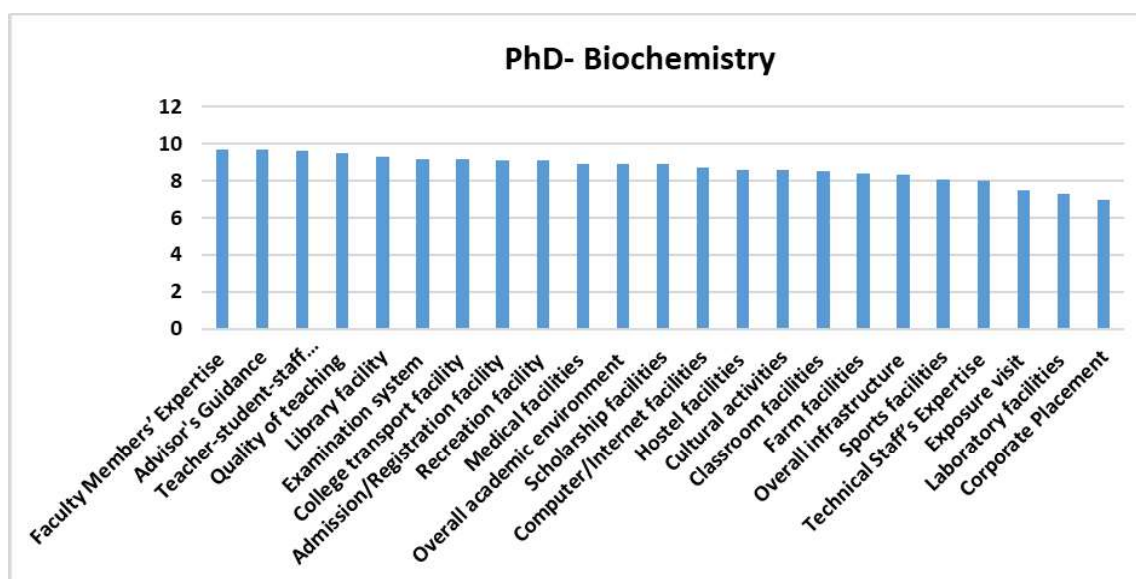
* Documentary evidence attached as annexure I



6.4.7. Feedback of stakeholders:

6.4.7.1. Mention the feedback mechanism

Feedback from the students was conducted in Google Forms using standard questionnaire (24 questions) developed on the basis of comprehensive dimension of Agricultural Education in BCKV campus. The dimension covered all the physical and academic facilities provided by the University. The responses were collected on a 10-point scale (1 denotes poorest facility and 10 denotes excellent facility) from the students of this programme. Individual responses were analyzed statistically (by computation of weighted average of every facility as perceived by the students) for the programme and the result was graphically presented in the SSR. As a documentary evidence, individual responses collected from the students' email ID through Google Forms have been stored in our computer (Google Drive). On demand, of ICAR Peer Review Team, the link for the individual responses can be shared.



Comment: Doctoral students of PhD-Biochemistry Programme are extremely happy with nearly all the facilities provided by the University. Though, facilities like Laboratory and Corporate Placement can be improved.

6.4.7.2. What action the University has taken to address the issues raised in the feedback?

Action taken

The feedback reports were shared with concerned sections of the university. Students responded very positively with regards to majority of the facilities provided by the university. However, with respect to timely publication of results and corporate placement, there are ample scopes of improvement. Considering this feedback, the university has taken administrative



actions for publication of results within stipulated period as reflected in the circulars of the concerned authorities. As corporate placement, to a great extent, is beyond the purview of the university itself, the Placement Cell continuously in touch with the potential employers to utilize the vacancies in favour of BCKV.

Impact

We are expecting very positive impacts in near future on these issues as some steps have already been taken in recent times as mentioned above.

6.4.8. Student intake and attrition in the programme for last five years:

Academic Year	Sanctioned strength	Actual intake	Attrition (%)	Students awarded with the degree
2016-17	7	2		0
2017-18	0	0		0
2018-19	0	0		0
2019-20	1	1		2
2020-21	6	6		0

Note: Students can submit their thesis from 6th semester onwards. Hence, working out attrition cannot be possible. Therefore, the number of the students awarded with the Ph D in different academic session are included in the table.

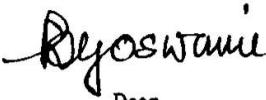
6.4.9. ICT Application in Curricula Delivery:

One LCD Projector and computer – is sufficient to deliver the curricula in Ph. D. theory classes; Practical classes and most part of dissertations are being run successfully with the available equipment and laboratory facilities.

I, the **Dean, Prof. Subhendu Bikash Goswami**, Faculty of Agriculture, hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university.

Place: Mohanpur

Date: 02-11-2021


 Dean
 Faculty of Agriculture
 Bidhan Chandra Krishi Viswavidyalaya
 Mohanpur, Nadia, West Bengal

(Signature of Dean of the Faculty with Date & Seal)

