

Say No to Drugs and Yes to Life



COLLEGE OF BASIC SCIENCES
CSK Himachal Pradesh Krishi Vishvavidyalaya
Palampur (H.P.)-176 062



**ANNUAL PROGRESS
REPORT
2019-20**

College of Basic Sciences,
CSK Himachal Pradesh Krishi Vishvavidyalaya
Palampur HP 176062

ANNUAL REPORT

(For the year 2019-20)

**COLLEGE OF BASIC SCIENCES
CSK HP KRISHI VISHVAVIDYALAYA
PALAMPUR – 176 062**

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Preface

Basic Science is the mother of all inventions and it is now being given its due importance at ICAR and National level. The faculty of College of Basic Sciences, CSKHPKV Palampur is striving hard to fulfill the mandate through quality education with research and extension support in the University and to generate good human resources to help the rural masses of the State.

During the period under report i.e. 2019-20, the College of Basic Science offered 532 credit hours of teaching to the Undergraduates and 236 credit hours to the Postgraduate Students of all the constituent colleges of the university during the period of report. Ninety seven undergraduate and eleven post graduate students completed their degrees during the academic year 2019-2020. Merit scholarships were awarded to 27 students and 3 students were awarded Amar Shaheed Captain Saurabh Kalia scholarship. Educational tour of 2nd year students was successfully conducted to North India. An income of Rs.56,900/- was generated by various departments of the College.

Teachers of the College were actively involved in various research activities. Seven research projects funded by different agencies were in operation and four new projects were submitted during the period under report. Numerous research papers were published and presented in National/International Conferences during the period under report. Students and staff actively participated in Independence Day (15.08.2019), Sadbhawana Diwas (20.08.2019), Sanitization Program-cum- workshop on Drug Abuse (23.08.2019), Talk on “Women’s Health and Wellness” (03.09.2019), Teacher’s Day (05.09.2019), *Parthenium* Eradication Programme (13.09.2019), 150th birth Anniversary of “Father of Nation” (26.09.2019 to 01.10.2019), Vigilance Awareness Week-2019 (28.10.2019 to 02.11.2019), Prevention of Drug Abuse Rally (29.10.2019), Legal Awareness Camp (01.11.2019), Pledge Against Drug Abuse (15.11.2019), Nukkad Natak : Anti-Drug Abuse Campaign (22.11.2019), Anti-Drug Abuse Campaign one day Lecture on “How to be successful in Academic Life” (25.11.2019), Workshop on “Awareness of Drug Abuse” (06.12.2019), Van Mahotsava (03.09.2019), Declamation Contest (06.12.2019), Republic Day (26.01.2020), World Environment Day (05.06.2020). The College has a vibrant presence on Social Media and the information actively maintained by the faculty designated as Social Media Champion of the COBS under AISHE mandate.

The guidance, facilities and continued encouragement provided by the Hon'ble Vice Chancellor, Professor H. K. Chaudhary in various activities of the college are gratefully acknowledged. I express my sincere thanks to Dr. D. K. Vatsa, Director of Research, and Dr. Madhumeet Singh, Director of Extension Education for providing valuable guidance and taking keen interest in the various research and extension activities at the College. This college receives its financial assistance through various agencies in the form of short/long term projects and I thankfully acknowledge the financial assistance provided by them.

Dr. Radhika Sharma, Dr. Abhishek Walia, Dr. Manjula Sharma and Sh. Vaibhav Kalia, deserve appreciation for meticulous work of compilation and shaping this report into its final and presentable form.

Palampur

**Dean
College of Basic Sciences**

1. ADMINISTRATIVE REPORT

1.1 Establishment

The College of Basic Sciences is one of the four constituent colleges of the Chaudhary Sarwan Kumar Himachal Pradesh Krishi Vishvavidyalaya, Palampur. Initially conceived as the Department of Basic Sciences and Humanities in the then College of Agriculture in 1978, it was elevated to the rank of College of Basic Sciences in May, 1991. It comprises of four departments and one Centre namely; Biology and Environmental Sciences, Chemistry and Biochemistry, Physical Sciences and Languages and Microbiology, and Centre for Geoinformatics Research and Training. The College has the following mandate:

1.2 Mandate

1. To impart quality education to Under-graduate and Post-graduate students in Basic Sciences leading to B. Sc., M. Sc. and Ph.D.Degrees.
2. To provide support in teaching and basic research to other constituent colleges of the university.
3. To create trained manpower in different disciplines of Basic Sciences.
4. To carry out research work in relation to the state needs for the upliftment of rural masses of the State.

1.3 Current Degree Programmes

1. **Undergraduate Programme**
B.Sc. Physical Sciences & Life Sciences (Three Years)
2. **Postgraduate Studies & Research (Masters Programmes)**
 - i Master of Science in Biochemistry (Two years)
 - ii Master of Science in Environment Sciences (Two years)
3. **Postgraduate Studies & Research (Doctorate Programmes)**
Doctorate of Philosophy in Biochemistry (Three Years)

1.4 Academic Departments/Centre

Sr. No.	Name of Department/Centre
1.	Department of Biology and Environmental Sciences
2.	Department of Chemistry and Biochemistry
3.	Department of Microbiology
4.	Department of Physical Sciences and Languages
5.	Centre for Geo-Informatics Research and Training

1.5 Department-wise Faculty position in the College

Sr. No.	Name of the Faculty	Designation
I. DEPARTMENT OF BIOLOGY AND ENVIRONMENTAL SCIENCES		
1.	Dr.(Mrs.) Anita Singh	Professor
2.	Dr. Ramesh C. Chauhan	Professor (Retired on 31.12.2019)
3.	Dr.Virendra Singh	Principal Scientist
4.	Dr.(Mrs.) Usha Rana	Associate Professor
5.	Dr. Radhika Sharma	Assistant Professor
6.	Dr Rakesh Kumar	Assistant Professor (transferred to Dept. of Organic Agriculture w.e.f. 16.10.2019)
II. DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY		
1.	Dr.(Mrs.) Neelam Sharma	Professor and Head
2.	Dr. Suman Sharma	Assistant Professor
3.	Dr. Nageswer Singh	Assistant Scientist (Ad-hoc)
4.	Dr Manish Kumar	Assistant Professor (Left college on 16.01.2020)
III. DEPARTMENT OF MICROBIOLOGY		
1.	Dr. S.S. Kanwar	Professor Emeritus(ICAR) (upto 18.10.2020)
2.	Dr. Rishi Mahajan	Assistant Professor
3.	Dr. Abhishek Walia	Assistant Professor
IV. DEPARTMENT OF PHYSICAL SCIENCES AND LANGUAGES		
1.	Dr. Kamlesh Singh	Professor Emeritus(ICAR)
2.	Dr.(Mrs.) Sheela Thakur	Assistant Professor (Ad-hoc)
3.	Sh. Kapil Sharma	Assistant Professor
4.	Dr. Manjula Sharma	Assistant Professor
5.	Dr. Shweta Pathania	Assistant Professor
V. CENTRE FOR GEOINFORMATICS RESEARCH AND TRAINING		
1.	Dr. (Mrs.) Sharda Singh	Professor and Programme Director
2.	Dr. R.S. Rana	Sr. Scientist
3.	Sh. Vaibhav Kalia	Assistant Professor

1.6 Department-wise staff position in the College

Sr.No	Name	Designation
DEAN OFFICE		
Ministerial Staff		
1.	Sh.Kalyan Chand	Section Officer (Retired on 31.10.2019)
2.	Sh. Ajay Sharma	Personal Asstt. (Joined on 25.07.2019)
3.	Sh. Sanjay Kumar	Sr. Assistant w.e.f. 15.03.2019 to 15.07.2019
4.	Sh. Vinod Kumar	Jr. Assistant (Transfer to Registrar Office on 14.03.2019 and joined COBS on 11.07.2019)
5.	Sh. Manohar Lal	Clerk
6.	Sh. Sanjeev Kumar	Clerk (w.e.f. 14.3.2019 on half days basis during 2 nd half of the day)
Class – D		
1.	Sh. Hari Singh	Peon (Transfer to RSS Nagrota Bagwan on 01.07.2019)
2.	Sh. Sansar Chand	Beldar
3.	Smt. Kamlesh Kumari	Sweepress
LAND SCAPPING SECTION (COBS)		

Class-D		
1.	Sh. Kuldeep Kumar	Beldar
DEPARTMENT OF BIOLOGY AND ENVIRONMENTAL SCIENCES		
Ministerial Staff – Nil		
Technical Staff- Nil		
Class-D Staff		
1.	Sh. Subhash Chand	Peon
2.	Sh. Anup Singh	Beldar
DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY		
Ministerial Staff-Nil		
Technical Staff		
1.	Sh. Shakti Chand	Jr. Technician
2.	Sh. Trilok Chand	Lab Attendant
DEPARTMENT OF MICROBIOLOGY		
Ministerial Staff - Nil		
Technical Staff:		
1.	Sh. Jai Raj	Jr. Technician
Class-D Staff		
1.	Sh.Manohar Lal	Peon (Upto 14.3.2019)
DEPARTMENT OF PHYSICAL SCIENCES AND LANGUAGES		
Ministerial staff-Nil		
Technical Staff		
1.	Sh. Surjeet Singh	Jr. Technician (Retired on 31.08.2019)
Class-D staff- Nil		
CENTRE FOR GEO-INFORMATICS RESEARCH AND TRAINING		
Ministerial staff-Nil		
Technical Staff-Nil		

1.7 Students Intake during the Academic Year

Total number of 100 students admitted to undergraduate programme and 05 students were admitted to postgraduate programmes during the Academic Session are as below:

Students Intake			
Programme	Boys	Girls	Total
B. Sc. (Undergraduate programme)	42	58	100
M. Sc. (Biochemistry)	Nil	Nil	Nil
M. Sc. (Environment)	NIL	Nil	Nil
Ph.D. (Biochemistry)	Nil	Nil	Nil

1.8 Total Students Strength during the Academic Year

In total 273 UG students and 5 PG students were registered during the academic year and the break-up is:

Programme	Boys	Girls	Total
Total Students B. Sc.(UG)	108	165	273
Total Students M.Sc. & Ph.D(PG)	03	08	10
M. Sc. (Biochemistry)	-	06	06

Ph.D. (Biochemistry)	02	02	04
M. Sc. (Environment)	1	2	3

At present teachers from other colleges are also associated for teaching in some of the disciplines.

1.9 Students Passed Out during the Academic Year

The degrees were awarded to 97 UG and 7 PG students as given below:

Programme	Boys	Girls	Total	First Division	%
Total B. Sc.(UG)	29	68	97	88	90
Total M. Sc. &Ph.D.	01	06	07	07	100
M. Sc. (Biochemistry)	01	07	08	08	100
Ph.D. (Biochemistry)	01	01	02	02	100
M. Sc. (Environment)	1	2	3	3	100

1.10 Total Credit Hours offered during the Academic Year

The faculty of the college was engaged in the following teaching programmes of Under-graduate and Post-graduate studies:

Compulsory courses were offered to the students of (i) B.Sc. (Life Sciences) (ii) B.Sc.Hons (Agri.) (iii) B.Sc. Home Science. (Hons.) and (iv) B.V.Sc. & A.H. of all the constituent colleges. Postgraduate courses: Major, minor and supporting courses were also offered to the students of M.Sc. and Ph.D. of this college and other constituent colleges. The detail of the total teaching credit hours undertaken by the faculty is given in the Table as below:

Name of the Department	Over all		COBS		COA		COHS		COVAS	
	UG	PG	UG	PG	UG	PG	UG	PG	UG	PG
Total	532	236	418	225	32	6	80	5	2	0
Biology and Environmental Sciences	149	76	125	76	10	0	12	0	2	0
Chemistry and Biochemistry	152	110	138	110	8	0	6	0	0	0
Microbiology	35	19	0	14	2	0	33	5	0	0
Physical Sciences and Languages	194	25	155	25	10	0	29	0	0	0
C.G.R.T.	2	6	0	0	2	6	0	0	0	0

Some of these courses were offered jointly for different colleges wherever it was required.

1.11 Scholarships Awarded

UG Programme:

College Merit Scholarship and Amar Shaheed Capt. Saurabh Kalia Scholarship were awarded to the following Undergraduate students:

B.Sc.1st year

Sr. No.	Name of the student	Admission. No.	Amount
1	Shalini Thakur	S-2019-04-090	Rs.600/-per month
2.	Ridhi Sood	S-2019-04-076	Rs.600/-per month
3.	Anchal Kumari	S-2019-04-016	Rs.600/-per month
4.	Kriti Sharma	S-2019-04-053	Rs.600/-per month
5.	Sahil Kumar	S-2019-04-083	Rs.600/-per month
6.	Devyani Dogra	S-2019-04-040	Rs.600/-per month
7.	Gaurav Kumar Guleria	S-2019-04-043	Rs.600/-per month
8.	Pallavi	S-2019-04-067	Rs.600/-per month
9.	Arun Kumar Rana	S-2019-04-026	Rs.600/-per month
10	Naina Pathania	S-2019-04-060	Rs.600/-per month

B.Sc.2nd year

Sr. No.	Name of the student	Admission. No.	Amount
1.	Akriti	S-2018-04-014	Rs.600/-per month
2.	Isha Prashar	S-2018-04-033	Rs.600/-per month
3.	Medha Kumari Rana	S-2018-04-043	Rs.600/-per month
4.	Nisha Kumari	S-2018-04-048	Rs.600/-per month
5.	Mehak Sharma	S-2018-04-045	Rs.600/-per month
6.	Samriti	S-2018-04-070	Rs.600/-per month
7.	Sonia Thakur	S-2018-04-080	Rs.600/-per month
8.	Akanksha	S-2018-04-011	Rs.600/-per month
9	Radha Bharti	S-2018-04-060	Rs.600/-per month

B.Sc.3rd Year

Sr. No.	Name of the student	Admission. No.	Amount
1	Akshita Thakur	S-2017-04-013	Rs.600/-per month
2	Kavita Devi	S-2017-04-041	Rs.600/-per month
3	Riya Soni	S-2017-04-073	Rs.600/-per month
4	Ritika Gautam	S-2017-04-072	Rs.600/-per month
5	Deeksha Sharma	S-2017-04-028	Rs.600/-per month
6	Bishkha	S-2017-04-023	Rs.600/-per month
7	Mukul Rana	S-2017-04-046	Rs.600/-per month
8.	Aksheta	S-2017-04-011	Rs.600/-per month

Amar Shaheed Capt. Sourbh Kalia memorial scholarship:

Sr. No.	Name of the student	Admission. No.	Amount
1 st Year	Ayush	S-2019-04-034	Rs.600/-per month
2 nd Year	Samriti Sharma	S-2018-04-071	Rs.600/-per month
3 rd year	Shruti Saklani	S-2017-04-082	Rs.600/-per month

**Scholarships Awarded for Post Graduate Programme:
Department of Chemistry and Biochemistry**

Sr. No.	Name of Student	Admission No.	Period	Rate	Amount
Merit Scholarship					
M.Sc. (Biochemistry)					

1.	Ms . Sunidhi	S-2017-30-004	28.07.2018 to 27.07.2019	2000/-PM	24000.00
2.	Ms. Shamli Sharma	S-2018-30-002	27.07.2018 to 24.07.2019	2000/-PM	23871.00
Ph.D (Biochemistry)					
1.	Ms. Neerja Kharwal	S-2017-40-001	09.01.2019 To 07.01.2020	2500/-PM	29919.00
Inspire Fellowship			Nil		

1.12 Representation to various University Bodies from the College

Academic Council	
Dr. A. K. Basandrai (01.06.19 to 30.05.20) Dr. P. N. Sharma (w.e.f.01.06.20)	Dean
Dr. Neelam Sharma	Professor & Head, Dept. of Chemistry & Biochemistry
Dr. (Mrs.) AnitaSingh	Professor & Head, Dept. of Biology & Environmental Sciences
Dr. (Mrs.) Sharda Singh	Professor (Mathematics)& Programme Director, Centre For Geo-Informatics Research and Training
Research Council	
Dr. A.K. Basandrai (01.06.19 to 30.05.20) Dr. P. N. Sharma (w.e.f.01.06.20)	Dean
Dr. Manoj Bhargava	Professor & Head, Physical Sciences and Languages
Dr. Anita Singh	Professor & Head, Biology and Environmental Sciences
Extension Council	
Dr. A. K. Basandrai (01.06.19 to 30.05.20) Dr. P. N. Sharma (w.e.f.01.06.20)	Dean
Dr. Manoj Bhargava	Professor & Head, Physical Sciences and Languages
Dr. R.C. Chauhan	Professor , Biology and Environmental Sciences
Educational and Resident Instructions Advisory Committee	
Dr. A. K. Basandrai (01.06.19 to 30.05.20) Dr. P. N. Sharma (w.e.f.01.06.20)	Dean
Dr. Manoj Bhargava	Professor & Head, Physical Sciences and Languages
Dr. (Mrs.) Anita Singh	Professor & Head, Biology and Environmental Sciences

1.13 Constitution of the Board of Studies of College

Dr. A. K. Basandrai (01.06.19 to 30.05.20) Dr. P. N. Sharma (w.e.f.01.06.20)	Dean	Chairman
Dr. Neelam Sharma	HOD, Chemistry & Biochemistry	Secretary
Dr. Anita Singh	HOD, Biology and Environmental Sciences	Member
Dr. Manoj Bhargava	HOD, Physical Sciences & Languages	Member
Dr. A.K. Basandrai	HOD, Microbiology	Member
Dr. Sharda Singh	Programme Director, CGRT	Member
Dr. Raj Pal Sharma	Secretary, Board of Studies, COA	Member
Dr.(Mrs.) Anupam Sandal	Secretary, Board of Studies, COHS	Member

1.14 COBS-NAAC/AISHE Committees

Sr. No.	Activity	Team
1.	Curricular Aspects	Dr. Manoj Bhargava - Convener Dr. Sheela Thakur Dr. Shweta Pathania
2.	Teaching-Learning and Evaluation	Dr. Anita Singh- Convener Dr. Virendra Singh Dr. Radhika Sharma Dr. Rakesh Kumar
3.	Research, Consultancy and Extension	Dr. Neelam Sharma- Convener Dr. Nageswer Singh Dr. Manish Kumar
4.	Infrastructure and Learning Resources	Sh Kapil Sharma- Convener Dr. Manjula Sharma
5.	Students Support and Progression	Dr. Suman Sharma- Convener Dr. Abhishek Walia
6.	Governance, Leadership and Management	Dr. Ranbir Singh Rana- Convener Dr. Rishi Mahajan
7.	Innovation and Best Practices	Dr. R.C. Chauhan- Convener Dr Usha Rana
8.	Extended Profile Template	Dr Abhishek Walia- Convener Dr Rishi Mahajan
9.	COBS AISHE Committee	Dr Sheela Thakur- Convener Dr Manjula Sharma
10.	Technical Coordinator	Sh. Vaibhav Kalia
11.	Nodal Officer	Dr. Sharda Singh

1.15 Internal Quality Assessment Cell (IQAC)

1	Dean	Chairperson
2	Head, Department of Biology and Environmental Sciences	Member

3	Head , Department of Physical Sciences and Languages	Member
4	Head , Department of Microbiology	Member
5	Programme Director, Centre for Geo-informatics	Member
6	NAAC Nodal Officer – Dr Sharda Singh	Member
7	NAAC Technical Coordinator – Sh. Vaibhav Kalia	Member
8	IQAC Coordinator – Dr. Rishi Mahajan	Member Secretary

1.16 Grievance Redressal Committee

Sr. No.	Name	
1.	Dr. Usha Rana	Nodal Officer
2.	Dr. Suman Sharma	Member
3.	Sh Kapil Sharma	Member
4.	Dr. Rishi Mahajan	Member

1.17 Sports, Games Cultural and Literary Committees

The in-charges for various activities:

1.	Teacher Incharge (Games & Sports)	Dr. Virender Singh
2.	Athletic	Sh. Vaibhav Kalia and Dr. Suman Sharma
3.	Football	Sh. Kapil Sharma
4.	Basketball	Dr. Usha Rana
5.	Volley-ball	Sh. Vaibhav Kalia
6.	Weight Lifting, and best physique	Dr. Rakesh Kumar
7.	Badminton	Dr. Abhishek Walia
8.	Table-Tennis	Dr. Neelam Sharma, Dr. Manish Kumar
9.	Chess	Dr. Rishi Mahajan
10.	Mountaineering & Hiking	Dr. Nageswer Singh
11.	Cultural Activities	Dr Shweta Pathania and Dr.Manjula Sharma
12.	Literary Activities	Dr. Radhika Sharma

1.18 Anti-Ragging Monitoring Committee:

The following anti ragging committee was formed to monitor anti ragging measures around the college and also ensure timely conduct of classes of first year students.

Squad No.	Name and Designation		Contact No.
Squad No. 1	Dr. R.C. Chauhan	Convener	94180-64454
	Sh. Kapil Sharma	Member	94184-62229
	Dr. Rishi Mahajan	Member	94185-79118
	Mr. Nageswar Singh	Member	70188-44622
Squad No. 2	Dr. Virendra Singh	Member	94180-45229
	Sh. Vaibhav Kalia	Member	94184-73248
	Dr. Virendra Singh	Member	82196-59912

	Dr. R.S. Rana	Member	94194-76735
Squad No. 3	Dr. Sharda Singh	Convener	94180-10737
	Dr. Usha Rana	Member	94184-14393
	Dr. Rakesh Kumar	Member	96252-11838
	Dr. Abhishek Walia	Member	98153-58847

Students were also apprised by Dean COBS with regard to anti-ragging measures. All the registered students in first year were registered online to have the declaration by students and his/her parents with regard to Anti Ragging measures etc(www.amanmovement.org)

1.19 NSS and NCC Incharges of College

1.	NSS InCharge	Sh. Kapil Sharma
2.	NCC InCharge (University Level)	Dr. Ankur Sharma

1.20 Budget for Teaching Schemes

The budget expenditure incurred during the year 2019-2020 is given below:

Sr.No.	Scheme No.	Sponsoring Agency	Total Amount (Rs)
College of Basic Sciences			
1.	APL-011-25 (Agri.)(i,ii,iii)	State Govt.	3,83,80,527/-
2.	APL-009-25 (Agri.)	-do-	62,63,684/-
3.	APL-06-25	-do-	8,46,847/-
4.	APL-19-25	-do-	13,55,670/-
5.	APL-011-27	-do-	24,65,000/-
6.	APL-043-25	-do-	42,223/-
Total			4,93,53,951/-

1.21 Courses Offered during Academic Year

Following under graduate, Post Graduate and Post Graduate Minor/Supporting Courses were actually offered during the academic year 2019-20 by the College.

Semester I of Academic Year 2019-2020 (UG courses)

Courses for B.Sc. Programme			
(Chemistry, Physics and Mathematics Combination)			
Course No.	Title	Cr. Hrs	Name of Teacher
B.Sc. (First year)			
Phys. 111	Mechanics	4+2	Dr. Sheela Thakur
Math.111	Differential Calculus	5+1*	Dr. Shweta Pathania
Chem112	Atomic Structure, Bonding, General Organic Chemistry & Aliphatic Hydrocarbons	4+2	Dr. Manish Kumar
Eng.111	English communication	2+0	Dr. Pallavi Bhardwaj
Ort.111	Orientation	1+0(NC)	Dr. Virendera Singh
NCC/NSS	National Cadet Corps/National Service Scheme	0+2(NC)	NCC Officer/NSS Programmer Officer
Total		20+3(NC)	
B.Sc. (Second Year)			

Chem.212	Solutions, phase Equilibrium, Conductance, Electrochemistry & Functional Group organic Chemistry-II	4+2	Dr. Suman Sharma
Phys.211	Thermal Physics and Statistical Mechanics	4+2	Dr. Sheela Thakur/Manjula Sharma
Math.211	Real Analysis	5+1*	Dr. Shweta Pathania
Comp. 211	Computer Application	2+1	Sh. Vaibhav Kalia/ Sh. Kapil Sharma
NCC/NSS	National Cadet Corps/National Service Scheme	0+2(NC)	NCC Officer/NSS Programmer Officer
Total		21+2(NC)	
B.Sc. (Third Year)			
Phys.312	Elements of Modern Physics	4+2	Dr. Manjula Sharma
Math.311	Matrices	5+1*	Dr. Sharda Singh
NCC/NSS	National Cadet Corps/National Service Scheme	0+2(NC)	NCC Officer/NSS Programmer Officer
Any one of the following			
Chem.313	Chemistry of Main Group Elements, theories of Acids and Bases	4+2	Dr. Rishu Katwal
Chem. 314	Quantum Chemistry, spectroscopy & Photochemistry	4+2	Dr. Manish Kumar
Any one of the following			
Chem.315	Chemistry of Cosmetics and Perfumes	2+1	Dr. Suman Sharma
Phys.313	Weather Forecasting	3+0	Dr. Manjula Sharma/Dr. Rajendra Prasad/Dr. R.S.Rana
Total		21+2(NC)	
Course No.	Title	Cr. Hrs	Name of Teacher
(Chemistry, Botany and Zoology Combination)			
B.Sc. (First year)			
Bot.111	Biodiversity (Microbes, Algae, Fungi and Archegoniate)	4+2	Dr. Usha Rana, Dr. Abhishek Walia, Dr. Anita Singh & Dr. Arun Sood
Zoo.111	Animal Diversity	4+2	Dr. Radhika Sharma
Chem.111	Conceptual Organic Chemistry	4+2	Mrs. Sashi Kiran Angiras
Eng.111	English communication	2+0	Dr. Pallavi Bhardwaj
Ort.111	Orientation	1+0(NC)	Dr. Virendera Singh
NCC/NSS	National Cadet Corps/National Service Scheme	0+2(NC)	NCC Officer/NSS Programmer Officer
Total		20+3(NC)	
B.Sc. (Second Year)			
Chem.211	Chemical Bonding, Transition Metal & Coordination Chemistry	4+2	Mrs. Sashi Kiran Angiras
Bot.211	Plant Anatomy and Embryology	4+2	Dr. Usha Rana
Zoo.211	Physiology and Biochemistry	4+2	Dr. Madhu Sharma & Dr. Nageswer Singh
Comp. 211	Computer Application	2+1	Sh. Vaibhav Kalia/ Sh. Kapil Sharma
NCC/NSS	National Cadet Corps/National Service Scheme	0+2(NC)	NCC Officer/NSS Programmer Officer
Total		21+2(NC)	
B.Sc. (Third Year)			

NCC/NSS	National Cadet Corps/National Service Scheme	0+2(NC)	NCC Officer/NSS Programmer Officer
Zoo. 311	Applied Zoology	4+2	Dr. Rakesh Kumar
Chem.311	Analytical Methods in Chemistry	4+2	Dr. Rishu Katwal/Dr. Neelam Sharma
Bot. 312	Cell and Molecular Biology	4+2	Dr. Radhika Sharma
Any one of the following			
Bot. 313	Medicinal Botany	2+1	Dr. Anita Singh
Chem.315	Chemistry of Cosmetics and Perfumes	2+1	Dr. Suman Sharma
Total		21+2(NC)	
Courses for other undergraduate programmes			
Course No.	Title	Cr. Hrs	Name of Teacher
College of Agriculture			
Eng.111	Comprehension and Communication Skills in English	1+1	Dr. Pallavi Bhardwaj
Math. 111	Elementary Mathematics	2+0	Dr. Shweta Pathania
Stat. 231	Statistical Methods	1+1	Dr. Satvinder Kour
Bio. 111	Introductory Biology	1+1	Dr. Rakesh Kumar
Crop. Physiol 231	Crop Physiology	1+1	Dr. R.G. Upadhayay
Biochem. 351	Biochemistry	2+1	Dr. Nageswer Singh
Micro 121 (Old)	Agricultural Microbiology	2+1	Dr. Rishi Mahajan
Env.111	Environmental Studies & Disaster Management	2+1	Dr. Rajesh Uppal
College of Home Science			
Micro. 231	Fundamental of Food Microbiology	2+1	Dr. S.S. Kanwar
Micro. 311	Techniques in Clinical Microbiology	2+1	Dr. Rishi Mahajan and Dr. Abhishek Walia
Env. 111(HHM)	Environmental Studies & Disaster Management	2+1	Dr. Virendera Singh
Env.111(HHM) & BSc. Home Science	Introduction to Environmental Sciences	2+1	Dr. R.C. Chauhan
Comp. 115 (HHM)	Application of Computers	2+2	Sh. Kapil Sharma
Stat.231	Elementary Statistics	2+1	Dr. Kamlesh Singh/Manoj Bhargva
Eng. 111	General English	1+1	Dr. Pallavi Bhardwaj
Zoo.351	Elementary Human Physiology	2+1	Dr. Rakesh Kumar
FT-112	General Microbiology	2+1	Dr. Abhishek Walia
FT-111	English Language	1+1	Dr. Pallavi Bhardwaj
FT-233	Industrial Microbiology	2+1	Dr. Rishi Mahajan
FT 238	Environmental Sciences & Disaster Management	1+1	Dr. Virendera Singh
FT.237	Statistical Methods and Numerical Methods	1+1	Dr. Manoj Bhargava/Dr. Sharda Singh/ Sh. Vaibhav Kalia
FST (Old)	Biochemistry	2+1	Dr. Nageswer Singh
FST.353(Old)	Food Biotechnology	2+1	Dr. Rishi Mahajan
FST. 358	Food Safety and Microbial Standards	2+1	Dr. Abhishek Walia
Env.111	Environmental Studies & Disaster Management	2+1	Dr. Rajesh Uppal
College of Veterinary Science			
Env.321 (B.VSc.)	Introduction to Environmental Sciences	2+0	Dr. R.C. Chauhan
Old Syllabus/Repeat Courses			

Bot. 212	Systematic of Angiosperms	2+1	Dr. Usha Rana
Bot.311	Plant Physiology	2+1	Dr. Anita Singh
Bot.313	Biotechnology	1+1	Dr. R. K. Chahota
Zoo. 211	Chordata-1	3+1	Dr. Radhika Sharma & Dr. Rakesh Kumar
Zoo/Biochem. 212	Biochemistry	2+1	Dr. Nageswer Singh
Zoo.311	Mammalian Physiology-I	2+1	Dr. Rakesh Kumar
Zoo.312	Applied Zoology	2+1	Dr. Radhika Sharma
Env. 311	Introduction to Environmental Sciences	2+0	Dr. R.C. Chauhan
Chem.111 (old)	States of Matter, Colloids and Chemical Kinetics	3+0	Dr. Suman Sharma
Chem. 213 (old)	Chemistry of functional Groups	2+1	Dr. Manish Kumar
Chem. 313 (old)	Natural Products, Synthetic Polymers and Dyes	3+0	Dr. Manish Kumar
Chem.322 (Odd)	Advanced Inorganic Chemistry-II	3+0	Dr. Neelam Sharma
Eng. 111 (old)	Communicative and Functional English	2+0	Dr. Pallavi Bhardwaj
Eng. 121	Comprehension, Composition and Translation	2+0	Dr. Pallavi Bhardwaj
Comp.121	Principles of Computers-II	1+1	Sh. Vaibhav Kalia
Math. 121	Differential Equations	5+1*	Dr. Shweta Pathania
Math.122	Geometry	3+0	Dr. Shweta Pathania
Math. 121	Ordinary Differential Equations and Vector Analysis	3+0	Dr. Shweta Pathania
Stat. 221	Elements of Statistics	2+1	Dr. Manoj Bhargava

Semester II of Academic Year 2019-2020 (UG Courses)

B.Sc. (First year)			
Course No	Title	Cr. Hrs.	Name of Teacher
Phys. 121	Electricity and Magnetism	4+2	Dr. Sheela Thakur
Math.121	Differential Equations	5+1	Dr. Sharda Singh
Chem122	Chemical Energetics, Equilibria & Functional Group Organic Chemistry-I	4+2	Dr. Suman Sharma
Env. 121	Environmental Studies	3+0	Dr. Virendera Singh
NCC/NSS	National Cadet Corps/National Service Scheme	0+2(NC)	NCC Officer/NSS Programmer Officer
Tutorial	Tutorial Class	1+0	Advisor of the students
Total		21+3(NC)	
B.Sc. (Second Year)			
Chem.222	Transition Metal & Coordination Chemistry, States of Matter and Chemical Kinetics	4+2	Dr. Suman Sharma / Rishu Katwal
Phys.221	Waves and Optics	4+2	Dr. Manjula Sharma
Math.221	Algebra	5+1*	Dr. Shweta Pathania
NCC/NSS	National Cadet Corps/National Service Scheme	0+2(NC)	NCC Officer/NSS Programmer Officer
Tutorial	Tutorial Class	1+0	Advisor of the students
Any one of the following			
Stat.221	Elements of Statistics	2+1	Dr. Manoj Bhargava/Dr. Kamlesh Singh
Comp.222	Computer Programming using C Language	2+1	Sh. Vaibhav Kalia

Total		21+3(NC)	
B.Sc. (Third Year)			
Phys.321	Nuclear and Particle Physics	5+1*	Dr. Manjula Sharma
Math.321	Numerical Methods	5+1*	Dr. Shweta Pathania
NCC/NSS	National Cadet Corps/National Service Scheme	0+2 (NC)	NCC Officer/NSS Programmer Officer
Chem. 323	Organometallics, Bioinorganic Chemistry Polynuclear Hydrocarbons and UV,IR Spectroscopy	4+2	Mrs. Shashi Kiran Angiras
Math.323	Vector Calculus	3+0	Dr. Shweta Pathania
Tutorial	Tutorial Class	1+0	Advisor of the students
Total		21+3(NC)	
B.Sc. (First year)			
Bot.121	Plant Ecology and Taxonomy	4+2	Dr. Virendera Singh and Dr. Usha Rana
Zoo.121	Comparative Anatomy and Developmental Biology of Vertebrates	4+2	Dr. Rakesh Kumar
Chem.121	Molecules of Life	4+2	Dr. Rishu Katwal and Dr. Nageswer Singh
Env. 121	Environmental Studies	3+0	Dr. Virendera Singh
NCC/NSS	National Cadet Corps/National Service Scheme	0+2(NC)	NCC Officer/NSS Programmer Officer
Tutorial	Tutorial Class	1+0	Advisor of the students
Total		21+3(NC)	
B.Sc. Second year			
Chem.221	Physical Chemistry for the Biosciences	4+2	Mrs. Shashi Kiran Angiras
Bot.221	Plant Physiology and Metabolism	4+2	Dr. Usha Rana and Dr . R.G. Upadhyay
Zoo.221	Genetics and Evolutionary Biology	4+2	Dr. D.P. Pandey/Dr. Radhika Sharma
NCC/NSS	National Cadet Corps/National Service Scheme	0+2(NC)	NCC Officer/NSS Programmer Officer
Tutorial	Tutorial Class	1+0	Advisor of the students
Any one of the following			
Stat.221	Elements of Statistics	2+1	Dr. Manoj Bhargava
Comp.221	Database with AS access	2+1	Sh. Kapil Sharma
Total		21+3(NC)	
B.Sc. Third year			
Bot. 322	Economic Botany and Biotechnology	4+2	Dr. R.K. Chahota, R. Sharma and Dr. Anita Singh
Chem. 321	Bioinorganic and Environmental Chemistry	4+2	Dr. Rishu Katwal
Tutorial	Tutorial Class	1+0	Advisor of the students
Any one of the following			
Zoo. 321	Immunology	4+2	Dr. Madhu Sharma
Zoo. 322	Reproductive Biology	4+2	Dr. Rakesh Kumar
Any one of the following			
Zoo. 323	Public Health and Hygiene	2+1	Dr. Radhika Sharma
Bot. 323	Ethnobotany	2+1	Dr. Anita Singh

NCC/NSS	National Cadet Corps/National Service Scheme	0+2 (NC)	NCC Officer/NSS Programmer Officer
Total		21+3(NC)	
Courses for other undergraduate programmes			
Course No.	Title	Cr. Hrs	Name of Teacher
College of Agriculture			
Ag. Micro-121	Agricultural Microbiology	1+1	Dr. Abhishek Walia
PB. 121	Plant Biochemistry	1+1	Dr. Rajan Katoch (Theory) Dr. Nageswer Singh (Practical)
Stat. 231	Statistics Method	1+1	Dr. Manoj Bhargava
Odd/Repeat Courses			
Stat. 351 (Old)	Statistics	1+1	Dr. Manoj Bhargava
Math. 111	Elementary Mathematics	2+0	Dr. Shweta Pathania
College of Community Science			
FT.122	Food Microbiology	2+1	Dr. Rishi Mahajan
FT-124	Computer Programming & Data Structure	2+1	Sh. Vaibhav Kalia
Comp. 121	Agricultural Informatics	1+2	Sh. Kapil Sharma
FST. 246	Food Biotechnology	2+1	Dr. Rishi Mahajan
Biochem. 121	Principles of Biochemistry	2+1	Dr. Nageswer Singh
Odd/Repeat Courses			
Phys.111	Mechanics	4+2	Dr. Sheela Thakur
Bot. 111	Biodiversity (Microbes,Algae,Fungi and Archeboniate)	4+2	Dr. Anita Singh and Dr. Abhishek Walia

1.22 Department-wise Faculty and Staff

1.22.1 Teaching Faculty

I. Department of Biology and Environmental Sciences

Sr. No.	Name of the Faculty	Designation	Remarks
1.	Dr. Anita Singh	Professor & Head	
2.	Dr. Ramesh C. Chauhan	Professor	Retired on 31.12.2019
3.	Dr. Virendra Singh	Professor	
4.	Dr. Usha Rana	Associate Professor	
5.	Dr. Rakesh Kumar	Assistant Professor	Transferred to organic agriculture w.e.f. 16.10.2019
6.	Dr. Radhika Sharma	Assistant Professor	

II. Department of Chemistry and Biochemistry

Sr.No.	Name	Designation	Remarks
1.	Dr.(Mrs.) Neelam Sharma	Professor and Head	Posted outside COBS
2.	Dr. Suman Sharma	Assistant Professor	
3.	Dr. Nageswer Singh	Scientist (Ad-hoc)	
4.	Dr Manish Kumar	Asstt. Professor (on contract basis)	Left college 16.01.2020
5.	Dr. Manoj Acharya	Scientist	Posted outside COBS

6.	Dr. Rajan Katoch	Scientist	Posted outside COBS
7.	Dr. Rishu Katwal	Contact Hr.	
8.	Dr. S K Angiras	Contact Hr.	

III. Department of Microbiology

Sr.No.	Name	Designation	Remarks
1.	Dr. S.S. Kanwar	ICAR-Emeritus Professor	-
2.	Dr. Rishi Mahajan	Assistant Professor	
3.	Dr. Abhishek Walia	Assistant Professor	
4.	Sh. Rajinder Kumar	Assistant Professor	Posted in Agricultural Engineering

IV. Department of Physical Sciences and Languages

Sr.No.	Name	Designation	Remarks
1.	Dr Manoj Bhargava	Prof. & Head	
2.	Dr. Kamlesh Singh	ICAR-Emeritus Professor	
3.	Dr (Mrs) Sharda Singh	Professor	Redeployed in CGRT
4.	Dr (Mrs) Shweta Pathania	Assistant Professor	
5.	Dr(Mrs) Sheela Thakur	Assistant Professor	Ad-hoc appointment
6.	Dr (Mrs) Manjula Sharma	Assistant Professor	
7.	Sh Vaibhav Kalia	Assistant Professor	Redeployed in CGRT
8.	Sh Kapil Sharma	Assistant Professor	

V. Centre for Geoinformatics

Sr.No.	Name	Designation	Remarks
1.	Dr (Mrs) Sharda Singh	Professor	
2.	Dr. Ranbir Singh Rana	Scientist	
3.	Sh Vaibhav Kalia	Assistant Professor	

1.22.2 Technical

I. Department of Biology and Environmental Sciences- Nil

Project Staff

- Ms.Neha Rana (Project fellow under DEST project)
- Mr Anuj (Project fellow under DEST project)

II. Department of Chemistry and Biochemistry

Sr.No.	Name	Designation	Scheme	Remarks
1.	Sh. Trilok Chand	Lab.Attendant		
2.	Sh.Shakti Chand	Jr. Technician		

III. Department of Microbiology

Sr.No.	Name	Designation	Scheme	Remarks
1.	Sh. Jai Raj	Jr. Technician	APL-011-25	

Project Staff

- Mrs Pooja (YP II under NAHEP CAAST Project)
- Sh. Anoop (Outsorse worker under NAHEP CAAST Project)
- Sh. Rajinder (Outsorse worker under NAHEP CAAST Project)

IV. Department of Physical Sciences and Languages

Sr.No.	Name	Designation	Scheme	Remarks
1.	Sh Surjit Singh	Lab. Assistant	APL-011-25	Retired on 31.08.2019

V. Centre for Geoinformatics

Project Staff

- Mr. Kunal Sood (GIS/MIS Expert)
- Mr. Arun Kaushal (GIS/MIS Operator)
- Mr. Shashi Kumar (Field Investigator)
- Mr. Rajan Kumar (Project Assistant)
- Mr. Sandeep Barwal (Project Assistant)

1.22.3 Ministerial and Supporting

I. Department of Biology and Environmental Sciences

Sr.No.	Name	Designation	Remarks
1.	Sh. Subhash	Peon	
2.	Sh. Anup Singh	Beldar	

II. Department of Chemistry and Biochemistry-Nil

III. Department of Microbiology-Nil

IV. Department of Physical Sciences and Languages-Nil

V. Centre for Geoinformatics-Nil

1.23 Summary of Visits Abroad, VIP Visits, Workshop etc. organised

S.No	Particulars	
1	Name of faculty members/employees who visited abroad	Nil
2	Name of VIP Visitors (with date and purpose)	Nil
3	Name of faculty members/employee who has brought honour to the	Dr Neelam Sharma • Best Presentation Award • Co-ordinator, ISAB, Palampur Chapter

	University in the form of awards and honours	Dr. Nageswer Singh: <ul style="list-style-type: none"> · Awarded a Certificate of Excellence in Reviewing by Chief Managing Editor, Archives of Current Research International, 2020. · Elected Executive Committee Member of Indian Society of Agril. Biochemists
4	Success Story, if any	Nil
5	Workshop/Seminar/Symposia /Conference Organized	One (Academic Management System in collaboration with IASRI, COMP2 NAHEP, ICAR New Delhi on 7-8 February, 2020)

2. TEACHING

2.1 Courses Offered

Following UG and PG courses were offered by the various departments:

Department of Biology and Environmental Sciences

Sr. No.	Course No.	Course title	Credit Hours	Name of Instructor
Semester-I				
A. Undergraduate Courses				
	Bot 111	Biodiversity(Microbes, Algae, fungi and Archeogoniate)	4+2	Drs Usha Rana, Abishek Walia, Anita Singh
	Zoo 111	Animal Diversity	4+2	Dr. Radhika Sharma
	Bot 211	Plant Anatomy and Embrology	4+2	Dr. Usha Rana
	Zoo211	Physiology and Biochemistry	4+2	Dr. Madhu and Dr. Nageswar
	Bot 312	Cell and Molecular Biology	4+2	Dr. Usha Rana, Dr. R.G. Upadhyay and Dr. Anita Singh
	Bot 313	Medicinal Botany	4+2	Dr. Anita Singh
	Zoo311	Applied Zoology	4+2	Dr. Rakesh Kumar
B.Sc. Agriculture				
	Bio 111	Introductory Biology	1+1	Dr. Rakesh kumar
	Crop Physiol 231	Crop Physiology	1+1	Dr. R.G. Upadhyay
B.Sc. Home Science				
	Env 111	Environmental Science and disaster management	2+1	Dr. Virendra Singh
	Env.111(BSc HHA)	Introduction to Environmental Sciences	2+1	Dr. R.C. Chauhan
	Zoo 351	Elementary Human Physiology	2+1	Dr. Rakesh Kumar
	B. Tech. (Food Technology)			
	FT.238(B.techFood tech)	Environmental Science and disaster management	1+1	Dr. Virendra Singh
B. Postgraduate Courses				
	ENV.591	Master's Seminar	1+0	Dr. R.G. Upadhyay
	Env.599	Master's Research	1+20	Respective Advisors

Semester-II				
A. Undergraduate Courses				
Bot 121	Plant Ecology and Taxonomy	4+2	Drs. V.Singh and U. Rana	
Zoo 121	Comparitive Anatomy and Developmental Biology of Vertebrates	4+2	Dr. Rakesh Kumar	
Env.121	Environmental Studies	3+0	Dr. Virendra Singh	
Bot. 221	Plant Physiology and Metabolism	4+2	Dr. U. Rana and Dr. R.G. Upadhyay	
Zoo.221	Genetics and Evolutionary Biology	4+2	Drs. D.P. Pandey and Radhika Sharma	
Bot 322	Economic Botany and Biotechnology	4+2	Drs. R.K. Chahota,R. Sharma and Anita Singh	
Zoo 321	Immunology	4+2	Dr. Madhu Sharma	
Zoo 322	Reproductive Biology	4+2	Dr. Rakesh Kumar	
Bot 323	Ethnobotany	2+1	Dr. Anita Singh	
Zoo 323	Public Health and Hygiene	2+1	Dr. Radhika Sharma	
B. Postgraduate Courses				
Bio531/PP501	Cellular Physiology and Plant water relations	2+1	Dr. R.G. Upadhyay	
Bio532/PP508	Mineral Nutrition	2+1	Dr. R.G. Upadhyay	
Bio 533/PP504	Hormonal Regulation of plant growth and development	2+1	Dr. Usha. Rana	
Bio536/PP506	Physiology of crop plants:Specific case studies	2+0	Dr. Usha. Rana	
PP591	Masters Seminar	1+0	Dr. Usha. Rana	
Env.599	Masters Research	1-20	Respective Advisors	

Department of Chemistry and Biochemistry

Sr. No.	Course No.	Course title	Credit Hours	Name of Instructor
Semester-I				
A. Undergraduate Courses				
	Chem111	Conceptual Organic Chemistry	4+2	Mrs. Sashi Kiran Angiras
	Chem112	Atomic Structure, Bonding, General Organic Chemistry & Aliphatic Hydrocarbons	4+2	Dr.Manish Kumar
	Chem211	Chemical Bonding,Transition Metal & Coordination Chemistry	4+2	Mrs. Sashi Kiran Angiras
	Chem212	Solutions, Phase, Equilibrium, Conductance,	4+2	Dr.(Mrs.) Suman Sharma

	Electrochemistry and Functional group Organic Chemistry –II		
Chem311	Analytical Methods in Chemistry	4+2	Dr.(Mrs.) Rishu Katwal/ Dr.(Mrs.) Neelam Shamra
Chem313	Chemistry of Main Group Elements, Theories of Acids and Bases	4+2	Dr.(Mrs.) Rishu Katwal
Chem314	Quantum Chemistry, Spectroscopy & Photochemistry	4+2	Dr.Manish Kumar
Chem315	Chemistry of Cosmetics and Perfumes	2+1	Dr.(Mrs.) Suman Sharma
Chem-111 (O)	States of Matter, Colloids and Chemical Kinetics	3+0	Dr.(Mrs.) Suman Sharma
Zoo/Biochem-212	Biochemistry	2+1	Dr. Nageswer Singh
Chem-213(O)	Chemistry of Functional Groups	2+1	Dr.Manish Kumar
Chem-313(O)	Natural Products, Synthetic Polymers and Dyes	3+0	Dr.Manish Kumar
*Odd Semester Course			
Chem-322(O)	Advanced Inorganic Chemistry-II	3+0	Dr.(Mrs.) Neelam Sharma
College of Home Sciences			
FST-111 (Old)	Biochemistry	2+1	Dr. Nageswer Singh
College of Agriculture			
Biochem-351	Biochemistry	2+1	Dr. Nageswer Singh
B. Postgraduate Courses			
Biochem-501	Basic Biochemistry	3+1	Dr. Rajan Katoch
Biochem-551	Techniques in Biochemistry	1+3	Dr. Nageswer Singh/ Dr.(Mrs.) Neelam Sharma
Biochem-591	Master's Seminar	1+0	Dr.(Mrs.) Neelam Sharma
Biochem-599	Master Research	0+20	Respective Advisor
Biochem-699	Doctoral Research	0+45	Respective Advisor
Semester-II			
A. Undergraduate Courses			
Chem-121	Molecules of Life	2+1 2+1	Dr.Rishu Katwal/ Dr. Nageswer Singh
Chem-122	Chemical Energetics, Equilibria Functional Organic Chemistry-I	4+2	Dr. Suman Sharma
Chem-221	Physical Chemistry for the Biosciences	4+2	Mrs. S. K. Angiras
Chem-222	Transition Metal & Coordination Chemistry, States of	4+2	Dr. Manish Kumar

		Matter & Chemical Kinetics		
Chem-321		Bioinorganic & Environn Chemistry	4+2	Dr.Rishu Katwal
Chem-322		Quantum Chemistry, Spectroscop: Photochemistry	4+2	Dr.Manish Kumar
Chem.-323		Organometallics, Bioinor Chemistry, Polynuclear Hydrocarbons and UV, Spectroscopy	2+1 2+1	Mrs. S.K.Angiras / Dr.Rishu Katwal
Chem-324		Analytical Methods in Chemistry	4+2	Mrs. S.K.Angiras
Chem-325		Analytical Clinical Biochemisitry	2+1	Dr. Nageswer Singh
College of Agriculture				
PB-121		Plant Biochemistry	1+1	Dr.Rajan Katoch(Theory) Dr. Nageswer.Singh(Practi cal)
College of Home Science				
Biochem-121		Principles of Biochemistry	2+1	Dr.Nageswer Singh
Courses offered by other departments in sharing				
ELP-478		Experiential Learning	0+10	Dr.(Mrs.) Suman Sharma*/ Dr.B.R.Thakur Dr.Pankaj Chopra Dr.J.D.Sharma
B. Postgraduate Courses				
Chem-512		Analytical Chemistry	2+1	Dr.(Mrs.) Neelam Sharma
Chem-521		Electronic Spectroscopy	1+1	Dr. Suman Sharma
Biochem-502		Plant Biochemistry	3+0	Dr.Nageswer Singh
Biochem-531		Molecular Biology	2+1	Dr.Nageswer Singh
Biochem-599		Master's Research	0+20	Respective Advisors
Biochem-602		Advanced Molecular Biology	2+0	Dr.Rajan Katoch
Biochem-699		Doctoral Research	0+45	Respective Advisors
Biochem-591		M.Sc. Seminar	1+0	Dr.(Mrs.) Neelam Sharma

Department of Microbiology

Sr. No.	Course No.	Course title	Credit Hours	Name of Instructor
Semester-I				
A. Undergraduate Courses				
	Micro-231	Fundamentals of Food Microbiology	2+1	Dr. S.S. Kanwar
	FT-112	General Microbiology	2+1	Dr. Abhishek Walia
	FT-233	Industrial Microbiology	2+1	Dr. Rishi Mahajan
	FST-353	Food Biotechnology	2+1	Dr. Rishi Mahajan
	FST-358	Food Safety and Microbial Standards	2+1	Dr. Abhishek Walia

BOT-111	Biodiversity (Microbes, Agale, Fungi and Archegoniate)	4+2	Dr. Abhishek Walia (Sharing)
MICRO-311	Techniques in Clinical Microbiology	2+1	Dr. Rishi Mahajan & Dr Abhishek Walia
Ag. Micro-121	Agricultural Microbiology	1+1	Dr. Abhishek Walia
Ag. Micro 121 (R)	Agricultural Microbiology	2+1	Dr. Rishi Mahajan & Dr Abhishek Walia
B. Postgraduate Courses			
GP-508	Cell Biology and Molecular Genetics	2+1	Sh. Rajinder Kumar (Sharing)
Semester-II			
A. Undergraduate Courses			
FT-122	Food Microbiology	2+1	Dr. Rishi Mahajan
FT-246	Food Biotechnology	2+1	Dr. Rishi Mahajan
Ag. Micro-121	Agricultural Microbiology	1+1	Dr. Abhishek Walia
BOT-111	Biodiversity (Microbes, Agale, Fungi and Archegoniate)	4+2	Dr. Abhishek Walia (Sharing)
B. Postgraduate Courses			
Micro-505	Lab Techniques in Microbiology	2+1	Dr. Rishi Mahajan & Dr. Abhishek Walia
Micro-501	Principles of Microbiology	2+1	Dr. Abhishek Walia
Micro-591	Master's Seminar	1+0	Dr. S.S. Kanwar
Micro-691	Doctoral Seminar	1+0	Dr. S.S. Kanwar

Department of Physical Sciences and Languages

Sr. No.	Course No.	Course title	Credit Hours	Name of Instructor & Co-Instructors
Semester-I				
A. Undergraduate Courses				
	Phys 111	Mechanics	4+2	Dr (Mrs) Sheela Thakur
	Math 111	Differential Calculus	5+1*	Dr (Mrs) Shweeta Pathania
	Eng 111	English Communication	2+0	Dr (Mrs) Pallvi Bhardwaj
	Phys 211	Thermal Physics and Statistical Mechanics	4+2	Dr (Mrs) Sheela Thakur/ Dr (Mrs) Manjula Sharma
	Math 211	Real Analysis	5+1*	Dr (Mrs) Shweta Pathania
	Comp 211	Computer Application	2+1	Sh Vaibhav Kalia/ Sh Kapil Sharma
	Phys 312	Elements of Modern Physics	4+2	Dr (Mrs) Manjula Sharma
	Math 311	Matrices	5+1*	Dr Sharda Singh
	Phys 313	Weather Forecasting	3+0	Dr (Mrs) Manjula Sharma/ Dr Rajender Prashad/ Dr R S Rana
B.Sc. (Hons.) Agriculture				
	Eng 111	Comprehensive and Communication Skills in English	1+1	Dr (Mrs) Pallvi Bhardwaj
	Stat 231	Statistical Methods	1+1	Dr Satvinder Kaur
	Math 111	Elementary Mathematics	2+0	Dr (Mrs) Shweta Pathania
B.Sc. (Hons.) Community Science				
	Eng 111	General English	1+1	Dr (Mrs) Pallvi Bhardwaj

Stat 231	Elementary Statistics	1+1	Dr Kamlesh Singh/ Dr Manoj Bhargva
B.Sc. (Hospitality and Hotel Management)			
Comp 115	Application of Computers	2+2	Sh Kapil Sharma
B.Tech. (Food Technology)			
FT-111	English Language	1+1	Dr (Mrs) Pallvi Bhardwaj
FT 237	Statistical Methods and Numerical Methods	1+1	Dr Manoj Bhargva/ Dr(Mrs) Sharda Singh/ Sh Vaibhav Kalia
Odd Syllabus/ Repeat courses			
Eng 111 (Old)	Communicative and Functional English	2+0	Dr (Mrs) Pallvi Bhardwaj
Eng 121	Comprehension, Composition and Translation	2+0	Dr (Mrs) Pallvi Bhardwaj
Math 121	Ordinary Differential Equations and Vector Analysis	3+0	Dr (Mrs) Shweta Pathania
Math 121	Differential Equations	5+1	Dr (Mrs) Shweta Pathania
Math 122	Geometry	3+0	Dr (Mrs) Shweta Pathania
Comp 121	Principles of Computer – II	1+1	Sh Vaibhav Kalia
Stat 221	Elements of Statistics	2+1	Dr Manoj Bhargva
B. Postgraduate Courses			
Stat 511	Statistical Methods for Applied Sciences	3+1	Dr Kamlesh Singh
Comp 501	Computer Fundamental and Programming	2+1	Sh Kapil Sharma
Semester-II			
A. Undergraduate Courses			
Phys 121	Electricity and Magnetism	4+2	Dr (Mrs) Sheela Thakur
Math 121	Differential Equations	5+1*	Dr Sharda Singh
Phys 221	Waves and Optics	4+2	Dr Manjula Sharma
Math 221	Algebra	5+1*	Dr Shweta Pathania
Comp 221	Databases with MS Access	2+1	Sh Kapil Sharma
Comp 222	Computer Programming using C Language	2+1	Sh Vaibhav Kalia
Stat 221	Elements of Statistics	2+1	Dr Manoj Bhargava/ Dr Kamlesh Singh
Phys 321	Nuclear and Particle Physics	5+1*	Dr(Mrs) Manjula Sharma
Math 321	Numerical Methods	5+1*	Dr Shweta Pathania
Math 323	Vector Calculus	3+0	Dr Shweta Pathania
B.Sc. (Hons.) Agriculture			
Stat 231	Statistical Methods	1+1	Dr Manoj Bhargva
Odd / Repeat Courses			
Stat 351 (Old)	Statistics	1+1	Dr Manoj Bhargva
Math 111	Elementary Mathematics	2+0	Dr Shweta Pathania
B.Sc. (Hons.) Community Science			
Comp 121	Agricultural Informatics	1+2	Sh Kapil Sharma
B.Tech. (Food Technology)			
FT 124	Computer Programming & Data Structure	2+1	Sh Vaibhav Kalia
Odd Semester Course/ Repeat Course			

Phys 111	Mechanics	4+2	Dr (Mrs) Sheela Thakur
B.Sc. (H.H.A.)			
Comp.115	Application of Computers	2+2	Sh Vaibhav Kalia
B. Postgraduate Courses			
Stat 511	Statistical Methods for Applied Sciences	3+1	Dr Kamlesh Singh
Comp 501	Computer Fundamental and Programming	2+1	Sh Kapil Sharma

* Course with Tutorial

Centre for Geo-informatics

Sr. No.	Course No.	Course title	Credit Hours	Name of Instructor
Semester-I				
A. Undergraduate Courses				
.	GIS-351	Geo-informatics, Nano-technology and Precision Farming	1+1	Dr. R.S. Rana / Sh. Vaibhav Kalia/ Dr Sanjay Sharma
B. Postgraduate Courses				
	GIS-501	Geographic Information System and its Applications	2+1	Dr. R.S. Rana / Sh. Vaibhav Kalia
Semester-II				
A. Postgraduate Courses				
	GIS-501	Geographic Information System and its Applications	2+1	Dr. R.S. Rana / Sh. Vaibhav Kalia

2.2 Thesis Completed

Department of Biology and Environmental Sciences

M. Sc. (*Environmental Sciences*)

Sr. No.	Name of student & Admission No.	Title of Thesis	Name of Major Advisor
1.	Shilpa Rani (S-2018-30-004)	Association of vegetation with Seabuckthorn in Mayar valley, Lahaul, Himachal Pradesh	Dr. Virendra Singh
2.	Neha Awasthi (S-2018-30-003)	Impact of Environmental change and organic farming on growth and quality parameters of <i>Jalneem Bacopamonnieri</i> (L) Pennel undermid hill conditions of Himachal Pradesh	Dr. R.G. Upadhyay
3.	Vani Pathania (S-2018-30-005)	Comparison of soil fertility status under Seabuckthorn plantation and natural stand in Lahaul (H.P.)	Dr. Virendra Singh

Department of Chemistry and Biochemistry

M.Sc. (*Biochemistry*)

Sr. No.	Name of student & Admission No.	Title of Thesis	Name of Major Advisor
1.	Ms. Ushma Devi (S-2016-30-005)	Evaluation of biochemical constituents in promising soybean (Glycine wax) genotypes developed in Himachal Pradesh	Dr. Kamal Mohini
2.	Ms. Shaila Sapehia (S-2017-30-002)	Biochemical and residue studies of tembotrine in maize	Dr. Neelam Sharma
3.	Shivani Sharma (S-2017-30-003)	Nutritional Status of <i>Chenopodium ambrosioides</i> grown in Kangra Valley	Dr. Nageswar Singh
4.	Ms. Sunidhi (S-2017-30-004)	Biochemical evaluation of organically grown Wheat-genotypes	Dr. Neelam Sharma
5.	Ms. Kanik (S-2018-30-001)	Bioactive attribute of herbal supplement fermented milk from indigenous cattle	Dr. Gorakh Mal

Ph. D. (Biochemistry)

Sr. No.	Name of student & Admission No.	Title of Thesis	Name of Major Advisor
1.	Ankur Tripathi (S-2015-40-001)	Isolation and characterization of leetin gene from rice bean (<i>Vigna umbellata</i> Thunb)	Dr. Rajan Katoch
3.	Shipra Singh (S-2016-40-001)	Phytochemical studies of virus infected capsicum and molecular characterization of viral pathogen"	Dr. Neelam Sharma

Department of Microbiology

PG program in the Department of Microbiology is in abeyance.

Department of Physical Sciences and Languages

This department does not have any post-graduation programme. However, faculty in the discipline of Statistics is involved in guiding the post-graduate students (Master and Doctoral programme) in their research projects as member on their advisory committees. During the period under report, faculty, as minor advisor, has guided more than 5 Doctoral level students.

Centre for Geo-informatics- Nil

2.3 Member of Students' Advisory Committee (PG Programme)

Department of Biology and Environmental Sciences

Sr. No.	Name of Member of Student Advisory Committee	Name of the Student	Admission No.
1.	Dr. Usha Rana	Mr Ankur Tripathi	A-2015-40-001
		Ms Parul Sharma	A-2015-40-010
		Mr Ravi Sharma	A-2015-40-018
		Ms Tanvi Sood	A-2015-40-019
		Mr Sanchit Thakur	A-2016-40-013
		Mr Shubhanshu	A-2016-40-016
		Ms Himali Bijani	A-2019-40-029
		Ms Himani	A-2019-30-053

		Mr Tariq Sajjad	A-2019-30-063
		Mr Himanshu Kamboj	A-2019-30-025
		Ms B. R. Sinchana	A-2019-30-062

Department of Chemistry and Biochemistry

Sr. No.	Name of Member of the Students' Advisory Committee	Name of the Student	Admission No.
1.	Dr. Neelam Sharma	Ankur Tripathi	S-2015-40-001
		Parul Pathania	A-2019-40-022
		Deepika Suri	A-2018-40-027
		Devanshi Baghla	A-2018-40-028
		Neha Chauhan	A-2018-40-029
		Kanik	S-2018-30-001
		Rahul Sharma	A-2018-30-023
		Pooja	A-2018-30-022
		Shamli Sharma	S-2018-30-002
		Parita	A-2018-40-006
		Parveen Thakur	A-2017-40-024
		Anjali	A-2017-40-022
		Shivani Sharma	S-2017-30-003
		Anuj Sharma	A-2017-30-020
		Akhil Sharma	A-2017-30-042
		Mohini Sharma	A-2017-30-007
		Sahin Kumar	A-2017-40-010
		Gurpreet	A-2016-40-004
		Ajay Kumar	A-2016-40-018
		Gourav	A-2016-40-020
		Abha Anand	H-2016-40-002
		Garima Thakur	A-2016-30-051
		Shivanshu Garg	S-2016-30-002
		Rajneesh	A-2016-40-021
Ajay Sharma	A-2016-40-019		
Anju Rani	H-2016-40-004		
Priyanka	A-2015-30-032		
Rekha	H-2015-40-001		
Samridhi	H-2018-30-003		
Prathibha Sharma	A-2018-30-065		
2.	Dr. Nageswer Singh	Surbhi Mali	A-2019-30-003
		Nirupma Kumari	A-2019-30-002
		Shivani Thakur	A-2019-30-032
		Praveen Kumar A	A-2019-30-045
		Vishva Deepak Chaturvedi	A-2018-40-018
3.	Dr. Suman Sharma	Anjali Thakur	A-2019-40-027
		Sakshi Vishvamitera	A-2019-40-031

Department of Microbiology

Sr. No.	Name of Member of the Students' Advisory Committee	Name of the Student	Admission No.
1.	Dr. Abhishek Walia As Minor Advisor	Raveena	A-2019-40-006
		Deeksha Choudhary	A-2019-40-028
		Karthik R.	A-2020-40-011

		Isha Thakur	A-2020-40-026
		Diksha Sharma	H-2021-40-001
		Gaytri Hetta	A-2020-40-003

Department of Physical Sciences and Languages

During the period under report, faculty, as minor advisor, has guided more than 18 Masters' students.

Centre for Geo-informatics

Sr. No.	Name of Member of the Students' Advisory Committee	Name of the Student	Admission No.
1.	Dr. Sharda Singh	Mr. Navjot Singh Dhillon	A-2016-40-023
		Mr. Abhishek Rana	A-2016-40-007#
		Ms. Manju Chottani	A-2017-40-003#
		Ms. Shivalika Sood	A-2017-40-005#
		Ms. Ankita	S-2017-30-001
		Mr Arun Thakur	A-2017-30-045
		Ms. Nikita	A-2018-30-064
		Ms. Mamta	Fresh Student
		Ms. Oshin	A-2016-30-032*
		Ms. Madhavi Sharma	A-2016-30-031*
		Ms. Heena Sharma	A-2016-30-029*
		Mr. Pavitra Singh	A-2016-30-033*
		Ms. Rashmi	A-2016-30-034*
		Ms. Arati Priyadarshini	A-2016-30-026*
		Ms. Deeksha Kumari	A-2016-30-027*
Ms. Diksha Sethi	A-2016-30-028*		
*Nominated in place of Dr. Manoj Bhargva, Prof (Stat) vide letter No. QSD.11-10/CSKHPKV/Acad /- 31372 dated 4 th July 2018 & dated 17.07.18, 19.07.18, 16.02.19 and others			
#Nominated in place of Dr. Manoj Bhargva, Prof (Stat) vide letter No. QSD/A-2016-30-007/CSKHPKV/DPGS/ Acad/-1847-48			

2.4 Short Trainings

Nil

2.5 Laboratory Manual

Department of Chemistry and Biochemistry

- Laboratory Manual on Principles and Techniques in Biochemistry Vol.1 -2019 by RajanKatoch. Published by Department of Chemistry and Biochemistry ,COBS,CSKHPKV,Palampur
- Laboratory Manual on Principles and Techniques in Biochemistry and Molecular Biology Vol.2 -2019 by RajanKatoch. Published by Department of Chemistry and Biochemistry,COBS,CSKHPKV,Palampur

Department of Microbiology

- Laboratory Manual on Basic and Applied Techniques in Microbiology-2019 by SS Kanwar, Abhishek Walia, Rishi Mahajan. Published by Department of Microbiology, College of Basic Sciences, CSKHPKV Palampur.

2.6 National Eligibility Test (NET)

-Nil-

2.7 Scholarships/Fellowships

INSPIRE FELLOWSHIP

-Nil-

ICAR - SRF

-Nil-

2.8 Awards

-Nil-

3. RESEARCH

3.1 Ongoing Research Projects

Department of Biology and Environmental Sciences

Sr. No.	P.I./Co-P.I.	Title of the Project	Budget outlay (in lakhs)	Funding Agency	Duration of the Project
1.	PI-Dr. Anita Singh Co-PI -Dr Usha Rana	Identification of genetically superior Bamboo species for propagation and demonstration	13* (for first year) *Budgetary provision on yearly basis	Dept. of Agriculture, HP	3 years
2.	PI-Dr. Anita Singh	Establishment of Big Nursery under National Bamboo Mission	16* (for first year) *Budgetary provision on yearly basis	Dept. of Agriculture, HP	3 years
3.	PI-Dr. Virendra Singh	Mass propagation and cultivation of high yielding sea buckthorn cultivars for livelihood improvement in tribal areas of Himachal Pradesh	37	DST	3 years
4.	PI-Dr. Virendra Singh	Introduction and Evaluation of improved Russian Seabuckthorn Varieties in Lahaul-Spiti, Cold deserts of Himachal Pradesh	5	DRDO	1 Year
5.	PI-Dr. Radhika Sharma	Termites as prospective solution for solid waste management	7.5	DEST, Shimla	2 years

Department of Chemistry and Biochemistry

Sr. No.	P.I./Co-P.I.	Title of the Project	Budget outlay (in lakhs)	Funding Agency	Duration (year)
1	PI- Dr. Neelam Sharma	All India Coordinated Research Programme on Weed Control ICAR-06-16	73.4	ICAR	continuing
2	Co-PI- Dr. Neelam Sharma	All India Coordinated Research Programme on underutilized crops: Evaluaton of nutritionally important biochemical constitutes of promising B., chenopodium and Ad juki bean genotypes ICAR-044-25---	1.00 (Annual)	I CAR	2014-Continuing
3	Co-PI- Dr. Neelam Sharma	Enhancing farm income through the ecological restoration of farmers' resource base by managing obnoxious vegetation in participatory made in Himachal Pradesh State Adhoc Misc. 2240-16-	21.500	RKVY	2019-20 (2 Yrs.)
4	Co-PI- Dr. Neelam Sharma	Doubling farm income through remunerative and eco-friendly production system in farmers' participatory approach in the rainfed ecosystems of Himachal Pradesh State Adhoc Misc. 2216-16	30.0	RKVY	2018-20(2 Yrs.)
5	PI- Dr. Neelam Sharma	Bio-efficacy and Phytotoxicity analysis of WCPL29 and OAH 56 on tea crop against target weeds (State Adhoc Misc. 4069-16)	8.10	Willowood chemicals Pvt Ltd, Mumbai	2018-20 (2 Yrs.)
6	Co-PI- Dr. Neelam Sharma	Evaluation of ethalflurlin 36% EC against weeds in soybean Adhoc Misc.4070-16	5.00	Saraswati Agro Chemicals (India) Pvt. Ltd. Jammu	2018-20 (2 Yrs)
7	Co-PI- Dr. Neelam Sharma	Bio-efficacy and phytotoxicity of GPH 315 against weed flora in Tea A10.dhoc Misc.4073-16	5.80	M/S UPL, Ltd. Mumbai	2018-20 (2 Yrs)
8	Co-PI- Dr. Neelam Sharma	Studies on bio-efficacy and Phytotoxicity of Godrej Bountee (Homobrassinoloide 0.04% EC/w/w) in Tea Adhoc Misc.4072-16	4.10	M/S Godrej Agrovet, Ltd. Mumbai	2018-20 (2 Yrs)
9	Co-PI- Dr. Neelam Sharma	Studies on bio-efficacy on Non cropped area and residue effects	4.10	M/S Godrej Agrovet,	2018-20 (2 Yrs)

		phytotoxicity of GOD-H007 43% SG Adhoc Misc.4080-16		Ltd. Mumbai	
10	Co-PI- Dr. Neelam Sharma	Efficacy evaluation of ethalfluralin 36% EC against Weeds in Potato Adhoc Misc.4077-16	5.00	Saraswati Agro Chemicals (India) Pvt. Ltd.	2018-20 (2 Yrs)
11	Co-PI- Dr. Neelam Sharma	Evaluation of Glyphosate salt formulations for their weed control efficacy/residue in tea Adhoc Misc.4077-16	5.10	M/S Monsanto India Ltd.	2019-21 (2 Yrs)
12	Co-PI- Dr. Neelam Sharma	Bio-efficacy evaluation of UPH 1118 herbicide against weed flora in tea Adhoc Misc.4081-16	5.50	M/S UPL, Ltd. Mumbai	2019-21 (2 Yrs)
13	PI- Dr Nageswer Singh	All India Coordinated Research Programme on underutilized crops: Evaluaton of nutritionally important biochemical constitutes of promising B., chenopodium and Ad juki bean genotypes ICAR-044-25---	1.00 (Annual)	I CAR	2014- Continuing

Centre for Geo-informatics

Sr. No.	P.I./Co-P.I.	Title of the Project	Budget outlay (in lakhs)	Funding Agency	Duration of the Project
1.	PI-Dr. Sharda Singh Co-PI- Dr. Ranbir Singh Rana Co-PI -Sh. Vaibhav Kalia	Establishment of GIS & MIS and Monitoring System –HP Crop Diversification Project, JICA, ODA	69.04	JICA- HPCDP	June 2012- March 2020
2.	PI- Dr. Ranbir Singh Rana Co-PI- Dr. Sharda Singh Co-PI- Sh. Vaibhav Kalia	Climate Change Impact on Productivity of Food grain and Plantation crops in North Western Himalaya funded by ISRO through IIRS Dehradun	39.45	IIRS, Dehradun	2014-
3.	PI- Dr. Ranbir Singh Rana Co-PI- Dr. Sharda Singh Co-PI- Sh. Vaibhav Kalia	Mapping of Geographical distribution and identification of new invasive spp. of insects pest and diseases, simulated futuristic crop water footprints scenarios for major crops in Himachal Pradesh	51.57	DST, New Delhi	March 2019-

3.2 Research Projects Sanctioned

Department of Biology and Environmental Sciences

Sr. No.	P.I./Co-P.I.	Title of the Project	Budget outlay (in lakhs)	Funding Agency
1.	Dr. Virendra Singh	Adhoc research project "Characterization and Performance Trials of Russian Seabuckthorn varieties in Cold desert Himalayas".	9.88	DRDO

Department of Microbiology

Sr. No.	P.I./Co-P.I.	Title of the Project	Budget outlay (in lakhs)	Funding Agency
1.	Co-PI- Dr Rishi Mahajan (Microbiology Component PI)	"Protected Agriculture and Natural Farming (PANF) under National Agriculture Higher Education Project-Centre for Advanced Agricultural Science and Technology" (NAHEP-CAAST programme).	40	ICAR and World Bank
2.	Co-PI- Dr. Abhishek Walia (Microbiology Component Co-PI)			

3.3 Research Projects Completed

Department of Chemistry and Biochemistry

Sr. No.	P.I./Co-P.I.	Title of the Project	Budget outlay (in lakhs)	Funding Agency
1.	Co-PI -Dr. Neelam Sharma	Cross-sectional Studies on Department of Antibiotic Residues in Bovine milk and Assessment of Potential Risks to Public Health in H.P.	11.00	RKVY
2	PI -Dr. Neelam Sharma	Training Programme Adhoc Misc-4025-25	0.60	Chandigarh

Centre for Geo-informatics

Sr. No.	P.I./Co-P.I.	Title of the Project	Budget outlay (in lakhs)	Funding Agency
1.	PI-Dr. Sharda Singh, Co-PI -Dr. R.S. Rana, Co-PI-Mr. Vaibhav Kalia	Establishment of GIS & MIS and Monitoring System –HP Crop Diversification Project, JICA, ODA [Adhoc 2083-34]	69.04	JICA- HPCDP
2.	PI-Dr. R.S. Rana,	Climate Change Impact on Productivity of Food grain and	39.45	IIRS, Dehradun

	Co-PI -Dr. Sharda Singh,	Plantation crops in North Western Himalaya funded by ISRO through IIRS Dehradun		
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3.4 Research Projects Submitted

Department of Biology and Environmental Sciences

Sr.No.	P.I./Co-P.I.	Title of the project	Budget outlay Lakhs	Funding Agency
1.	PI -Dr Usha Rana	D Agrotechniques for cultivation of under exploited important medicinal plants in relation to organic manures under mid-hill conditions of Western Himalayas	9.87	HIMCOSTE, Shimla
2.	Co-PI- Dr. Radhika Sharma	c In a proposal of University entitled, "Setting up of a CENTRE OF EXCELLENCE (CoEas part of National Mission for Sustaining the Himalayan Ecosystem (NMSHE)" one objective namely, "Biodiversity awareness program for its conservation Mapping of fisheries biodiversity in Mountains" was submitted.	120	Department of science and technology(DST)

Department of Chemistry and Biochemistry

Sr.No.	P.I./Co-P.I.	Title of the project	Budget outlay Lakhs	Funding Agency
1.	PI -Dr Nageswer Singh as Co-PI -Dr. Neelam Sharma	Studies on phytochemical, antioxidant properties and free radical-scavenging activity of Cadmium and Foxglove species	10.75	HIMCOSTE, Shimla
2.	Co-PI -Dr. Neelam Sharma	Degradation of Dyes using Green synthesized metal nanoparticles from industrial waste water in Himachal Pradesh	9.67	HIMCOSTE, Shimla

3.	Co-PI -Dr. Neelam Sharma	Bio-efficacy & Phytotoxicity studies on Flumioxazin 50% SC against mixed weed flora (broad leaved, sedges and grassy weeds) in Tea and non-crop area	10.50	SUMITOMO CHEMICAL INDIA LTD
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Department of Microbiology

Sr.No.	P.I./Co-P.I.	Title of the project	Budget outlay Lakhs	Funding Agency
1.	PI-Dr Abhishek Walia	Biodegradability of low-density polyethylene by using indigenous bacteria isolated from dumping sites of Himachal Pradesh.	10.02	DEST-Shimla (HP)
2.	PI-Dr Rishi Mahajan	Indigenous microbial biotechnology with antifreeze properties for cold temperature stress adaptations in agricultural and horticultural crops	9.97	DEST-Shimla (HP)
3.	Co-PI-Dr Abhishek Walia	Efficacy of indigenous cow based formulations as soil inoculants and pesticides in agriculture.	48.02	DBT
4.	Co-PI-Dr Abhishek Walia & Dr Rishi Mahajan	COVID-19 Testing Facility Lab in CSKHPKV, Palampur.	1100	DBT
5.	Co-PI-Dr Abhishek Walia	Centre Of Excellence On Climate Change Impacts, Assessment And Adaptations In Mountain Agriculture In North Western Himalaya.	1000	CoE/MRDP under NMSHE to DST, New Delhi

Centre for Geo-informatics

Sr.No.	P.I./Co-P.I.	Title of the project	Budget outlay Lakhs	Funding Agency
1	PI-Dr Ranbir Singh Rana	Centre of Excellence on Climate Change Impacts, Assessment and Adaptations in Mountain Agriculture in North Western Himalaya	11.56	DST , New Delhi

3.5 Research Highlights

Department of Biology and Environmental Sciences

Research Highlight-1:

Bamboo Nursery was raised for the species namely *Dendrocalamus hamiltonii*, *Dendrocalamus strictus*, *Dendrocalamus hookeri*, *Bamboosa bamboos* and *Phyllostachys nigra*. In addition to above mentioned saplings a total of 8500 bamboo saplings were sold to different agencies for distribution to farmers.



Establishment of Big Bamboo Nursery

Research Highlight-2:

Under research project on solid waste management using Termites along with termite diversity analysis and morphological identification of 11 species of termites in Palampur region, potential of 3 termite species namely *Heterotermes gertrudae*, *H. indicola* and *Odontotermes bhagwatii* in solid waste management was determined by setting *in-situ* and *ex situ* experiments using different parameters.

Department of Chemistry and Biochemistry

Research highlight-1

On cumulative grading of wheat genotypes both grown under organic and inorganic production system for nutritionally desirable characters, inorganically grown AB-1 genotype ranked first and organically grown genotype HPW-980 ranked second.

Research highlight-2

Multi-purpose/versatile collections of the leaf samples *Chenopodium ambrosioides* collected from twelve locations of Kangra valley were identified based on cumulative rating as Dehra, Harchkiyan, Jaswan, Palampur and Daroh followed by Thural for proximate composition, mineral content and phytochemical constituents excelling in that order of preference.

Research highlight-3

Dissipation of tembotrione herbicide in the soil at three rates of application i.e tembotrione 60g/ha, tembotrione 120g/ha and tembotrione 240g/ha followed first order kinetics and the half –lives ranged from 9 to 14 days. Residues of tembotrione were below detectable levels i.e. $\leq 0.025 \mu\text{g/g}$ in maize grain and maize stover.

Research highlight-4

The mature seeds of four potentially superior genotypes/varieties each of the nine selected crops viz. barley, oats, wheat (cereals); linseed, sesame, soybean (oilseeds) and kidney bean, horsegram, moth bean (pulses) were evaluated for relevant biochemical constituents by following standard procedures. Significant statistical differences were observed for the biochemical constituents in the four genotypes each of all crops and the three crops of each group. Differences among the three groups were also apparent. The results from this study were utilized for carrying out the cumulative grading based on desirable quality parameters for identifying the best genotype in each crop i.e. Dolma/ VLB-118 in barley, TP-40 in oats, Saptdhara in wheat, Himani in linseed, Nurpur in sesame, Hara Soya in soybean, Mandi in horsegram, Kanchan in kidney bean and Jadia in moth bean. The potentially superior genotypes/varieties thus identified can be used for further developmental research by the plant breeders and cultivation on a large scale by the farmers of H.P and others. The information regarding the identification of best crop for nutritionally important individual quality parameter will prove highly beneficial for the consumers.

Centre for Geo-informatics

Research Highlight-1

The geo tagging of the assets created under the Pradhan Mantri Krishi Sichayi Yojna (PMKSY)- Other interventions components shall be carried as per the guidelines set under Bhuvan based PMKSY app. The assets generated under PMKSY program can be grouped into movable and Non movable assets. The geo-graphic location of non- movable assets like infrastructure shall be taken on priority basis to access the first cut information of such assets created during the past several years using funds from PMKSY program. Geotagging of movable assets also generated using funds from PMKSY program like Pumpsets, powertillers, generators, implements etc. shall also be covered. The assets created are to be geo-tagged using Bhuvan-PMKSY app and uploading to Bhuvan PMKSY web portal developed by National Remote Sensing Centre (NRSC), ISRO, and Hyderabad.

Research Highlight-2

The Validated InfoCrop and DSSAT models were used for simulated yield prediction for Wheat and Rice. The yield predicted for wheat which showed deviation of 21.7 and 16 % for F1 and F2 phase whereas for rice two dates of 10th and 20th July with 20 and 40 Kg N was used for prediction and two fertilizer. The yield showed deviation from 0.7 for 10th July with 20 kg N 20.5 with 45 kg N and 18.5 % and 55.6 % for 20th July with 20 and 45 kg N.

Research Highlight-3

The Net Irrigation requirement of crops varied from 218 to 334 mm and 110 to 247 mm in Lahaul & Spitti and Kinnaur districts respectively with an Increase of 16-47 % CWR in Lahaul & Spitti and 8- 39 % in Kinnaur under climatic grids of 1 to 3 0C and 10 and 20 % decrease in crop season rainfall. In Wet temperate agro-climatic region of HP comprising Kullu, Shimla, Solan and Major parts of Mandi districts indicated the Net Irrigation requirement of crops in Kullu, Solan and Mandi districts varied between 51 to 137 mm in Solan, 42 to 132 mm in Kullu and 4 to 75 mm in Mandi districts of HP with an average increase of crop water requirement from 9 to 29 % under normal and projected climatic conditions of 10C, 20C and 0C and 10 and 20 % rainfall scenarios

The Net Irrigation requirement (NIR) in Mid Hills Sub-Humid and Sub-Mountain & Low Hills Sub Tropical agro-climatic zones varied between 21 to 96 mm in Hamirpur, 158 to 244 in Sirmaur, 107 to 169 mm Una , 53 to 132 mm in Bilaspur with an increase of 5 to 35 % NIR under normal weather condition to projected climatic scenarios of 1,2, and 3oC and 10 and 20 % decrease in rainfall. Whereas, Kangra and Chamba districts have more effective rainfall than crop water requirement of crops during kharif season.

Research Highlight-4

The five days forecasts on different weather parameters viz. rainfall, temperature, cloud cover, relative humidity and weekly cumulative rainfall based Agro-advisory bulletins for our study districts (Chamba, Kangra, Hamirpur and Una) were validated and weather based agro-advisory prepared.

Published The total 96*4=384 in English and in Hindi prepared and 368 published IMD website (92 AAS Bulletins, during July 1, 2019 to June 30th, 2020 for Chamba, Una, Hamirpur and Kangra districts of H.P. and published in university website www.hillagric.ac.in/ kisan ke leye and www.imdagrimet.gov.in. Kisan Portal (www.farmers.gov.in; www.weathershimla.gov.in and mkisan.gov.in and www.cropweatheoutlook.com of CRIDA (ICAR) websites. Agro-advisory

bulletins and weather information were published in local news papers punjab kesari/ Amar Ujala etc.

Uploaded the advisory content for Chamba, Una, Hamirpur and Kangra districts of H.P in “MEGHDOOT APP” published twice in a week since January, 20

24 SMS to 2.79 lakhs registered farmers sent during June 15,2019 to June30, 2020 as per quota were sent to farmers of Chamba, Una , Hamirpur and Kangra through MKisan Portal of MOA, GOI , New Delhi and 24 SMS delivered to farmers totalling about 63. 48 lakhs farmers.

The total reads/hits of Agro-advisory bulletins in IMD website (www.imdagrimet.gov.in) for June , 2019 to June 25, 2020 are 1.30184 lakhs for four districts (As per website report)

Research Highlight-5

Experiments planted for Kharif crops, Equipment purchase process as per STEP completed for this and payment pending processed. Variety Evaluation under Protected and Natural farming inputs prepared, Soil Nutrient index prepared under protected and natural Farming. Workshop/ Training organized under COMP-2

Research Highlight-6

The study sites were mapped using the GPS and contours were developed to estimate the total watershed areas and water collection in the revival of pond

3.6 Research Publications

Summary Statistics of Publications

Department of Biology and Environmental Sciences		
a.	Total Nos of publications (only Published)	6
i)	Research Publication (Nos)	6
ii)	Extension Publications (Nos)	-
iii)	Other Publications (Nos)	-
b.	Book Published (only book)	1
i)	Name of Book	Cell Biology
ii)	Name of Author	Dr. Radhika Sharma
iii)	Name of Publishers	Vikas Publications

Department of Chemistry and Biochemistry		
a.	Total Nos of publications (only Published)	15
i)	Research Publication (Nos)	6
ii)	Extension Publications (Nos)	9
iii)	Other Publications (Nos)	-
b.	Book Published (only book)	-
i)	Name of Book	-
ii)	Name of Author	-
iii)	Name of Publishers	-

Department of Microbiology		
a.	Total Nos of publications (only Published)	7

i)	Research Publication (Nos)	1
ii)	Extension Publications (Nos)	0
iii)	Other Publications (Nos)	6
b.	Book Published (only book)	0
i)	Name of Book	-
ii)	Name of Author	-
iii)	Name of Publishers	-

Department of Physical Sciences and Languages		
a.	Total Nos of publications (only Published)	-
i)	Research Publication (Nos)	-
ii)	Extension Publications (Nos)	-
iii)	Other Publications (Nos)	-
b.	Book Published (only book)	-
i)	Name of Book	-
ii)	Name of Author	-
iii)	Name of Publishers	-

Centre for Geo-informatics, Research & Training		
a.	Total Nos of publications (only Published)	11
i)	Research Publication (Nos)	2
ii)	Extension Publications (Nos)	2
iii)	Other Publications (Nos)	7
b.	Book Published (only book)	0
i)	Name of Book	-
ii)	Name of Author	-
iii)	Name of Publishers	-

3.6.1 Paper Published

Department of Biology and Environmental Sciences

- Saklani, S., H.R. Sharma and Virendra Singh (2020). Chemical constituents and sensory acceptability of ready to serve seabuckthorn beverage. *Progressive Horticulture* 52 (1) 2020: 53-57.
- Priya And Usha Rana (2019). Evaluation of interaction effect of drought stress with boric acid, salicylic acid and cobalt chloride on some physiological and yield parameters in common bean (*Phaseolus vulgaris* L.) genotypes". *Journal of Environment and Bio-Sciences*, 33(2), 257-261.
- Sharma, R., Battu, P., Singla, M., Goyal, N., & Sharma, V. L. (2019). Expression profile of markers of oxidative stress, injury and apoptosis in anti-tuberculosis drugs induced nephrotoxicity. *Nephrology*, 24(7), 689-695.
- Sharma, R., Goyal, N., Singla, M., & Sharma, V. L. (2019). Berberis aristata ameliorates testicular toxicity induced by combination of first-line tuberculosis drugs (rifampicin+ isoniazid+ pyrazinamide) in normal Wistar rats. *Journal of Dietary Supplements*, 16(4), 417-430.

Department of Chemistry and Biochemistry

- Rana Ankit, Rana M.C., Rana S.S., Sharma Neelam, Kumar Suresh. 2018. Weed control by pyrazosulfuron-ethyl and its influence on yield and

economics of transplanted rice. *Indian Journal of Weed Science* 50(4): 309-314.

- Rana S.S., Singh Gurdeep, Rana M.C., Sharma Neelam, Kumar Suresh, Singh Gurpreet and Badiyala D. 2019. Impact of imazethapyr and its readymix combination with imazamox to contro weeds in blackgram. *Indian Journal of Weed Science* 51(2): 151–157. [DOI: 10.5958/0974-8164.2019.00033.9]
- Thakur Nitasha, Sharma Neelam and Kumar Suresh. 2019. f Metsulfuron-methyl residues in soil and wheat under North-Western midhill conditions of Himalaya *Indian Journal of Weed Science* 51 (3):252-256
- Singh Gurpreet, Kumar Suresh, Rana S.S and Sharma Neelam 2019. Long-term effect of herbicides on weed diversity indices in rice-wheat cropping system. *Himachal Journal of Agricultural Research* 45 (1&2): 20-24.
- Rana S.S., Kumar Rajinder, Kumar Sachin, Sharma Neelam, Badiyala Dinesh. 2020. Evaluation of glyphosate against weeds and phytotoxicity, productivity and soil quality parameters in tea (*Camellia sinensis* O. kuntze). *Journal of Research in Weed Science* 3(1): 90- 100. DOI: 10.26655/JRWEEDSCI.2020.1.9
- Reetu, Nageswer Singh, Nilamani Dikshit and Maharishi Tomar (2019) Phytochemical Analysis of Wild Meethi Neem [*Murraya koenigii* (L.) Spreng] Collections of Himachal Pradesh. *Int .J. Curr. Microbiol. App.Sci* (2019) 8(12): 89-96 <https://doi.org/10.20546/ijcmas.2019.812.014>

Department of Microbiology

- Sharma V, Attri S, Mahajan Rishi & Goel G. 2019. Microbial Profiling of Malera and Phab: Starters Used for Preparing Traditional Fermented Foods and Beverages in Himachal Pradesh, India. *Current Nutrition & FoodScience* 15(7): 707-711.
- Sharma Kriitka and Walia Abhishek. 2019. Human Immunodeficiency Virus. *Acta Scientific Microbiology* 2 (3): 24-26.

Centre for Geo-informatics, Research & Training

- Ranu Pathania, Rajendra Prasad, Ranbir Singh Rana and S. K. Mishra. Heat unit requirement and yield of wheat (*Triticum aestivum* L.) varieties under different growing environment in mid hill conditions of Himachal Pradesh. *Journal of Agrometeorology* 21 (3) : 282-287 (September 2019)
- Ranbir Singh Rana, S. Kumar, V. Kalia, S. Salaria and B.Parekh. Assessment of crop water requirement and irrigation scheduling of potato using weather models under sub temperate climatic condition of north-western Himalaya (Presented & Submitted) *Journal of Agrometeorology* (Special Issue)
- Rana R.S., Sandal S.K., Thakur Shivani. Singh Sharda 2020. Research paper presented on “Climate change implications and simulated adaptations in raifed rice production under sub humid climate of North Western Himalaya” in National Symposium on ‘Agrometeorology Interventions for enhancing Farmers’ Income (AGMET-2020), 20-22 January, 2020 at KAU, Thrissur, Kerela.
- Kunal Sood , Sharda Singh, Ranbir Singh Rana, and Vaibhav kalia, 2020. Research Paper presented on Spatial Assessment of Crop Season, water uses at village level using geospatial technologies in H.P. in National Symposium

on 'Agrometeorology Interventions for enhancing Farmers' Income (AGMET-2020), 20-22 January, 2020 at KAU, Thrissur, Kerala. (*Extended Summaries/Abstracts of above mentioned papers have been published in Abstract Compendium published by Association of Agro-meteorologist and KAU, Thrissur 128-129*)

- Sheetal Rana*, Abha Sharma and Ranbir Singh Rana, (2019); Microbial clean up strategy for eating garbage. In book Microbial Diversity, Interventions and Scope Published by Springer Book: 87036645

3.6.2 Papers Presented in Conferences and Workshops

Department of Biology and Environmental Sciences- Nil-

Department of Physical Sciences and Languages

- Dr. Shweta Pathania presented (Oral Ppt.) research paper entitled "Study of circular plate partially in contact with liquid" in National Seminar on Analytical Aspects of Mathematics (NSAAD-2019), organized by Department of Mathematics, Central University of Himachal Pradesh, TAB Shahpur, Kangra HP from 22-23 November 2019.
- Dr. Shweta Pathania presented (Oral Ppt.) research paper entitled "Analysis of plate in contact with a liquid under effect of varying temperature" in International Conference on Mathematics in Space & Applied Sciences (ICMSAS-2019), organized by Department of Mathematics, Netaji Subhash Chander Bose Memorial Govt. College, Hamirpur, HP from 29-30 November 2019.

Department of Chemistry and Biochemistry

Invited Guest Lecture:

- Sharma Neelam, Singh Siddhartha and Sondhia Shobha Recent advances in mitigation methods for herbicide residues in the soil Indian Society of Weed Science Biennial Conference on "Weed Management for Enhancing Farmers' Income and Food Security", ICAR - Central Coastal Agricultural Research Institute, Goa (India); 5-7 February, 2020

Oral Presentation:

- Kumar Atul, Sharma Neelam and Panda AK. 2019. Validation of HPLC DAD method for determination of antibiotic residues in bovine milk and human health risk assessment: 9th IMSACON & International Symposium on "Advances in Production, Processing and Quality Assurance of Muscle Foods for Improved Health and Nutritional Security" at CSKHPKV, Palampur on 6-9th November 2019,
- Sharma Neelam and Sapehia Shaila. 2019. Harvest time residues of tembotrione herbicide in soil and maize crop: National conference on "Himalayan Biodiversity and Bioresource Utilization" at Department of Biosciences, Himachal Pradesh University, Summer Hill, Shimla held on 10-12 October, 2019,

Poster Presentation:

- Parita, Kumar Suresh, Rana S.S., Sharma Neelam and Bhalla Tamanna Evaluation of ethalfluralin 36% EC against weeds in soybean Indian Society of Weed Science Biennial Conference on "Weed Management for Enhancing Farmers' Income and Food Security", ICAR - Central Coastal Agricultural Research Institute, Goa (India); 5-7 February, 2020.
- Kumar Sachin, Rana S.S. and Sharma Neelam Effect of microwave treatment on the distribution of weed seed bank in conservation agriculture Indian Society of Weed

Science Biennial Conference on "Weed Management for Enhancing Farmers' Income and Food Security", ICAR - Central Coastal Agricultural Research Institute, Goa (India); 5-7 February, 2020. Department of Agronomy, Forages and Grassland Management CSK HPK

- Kumar Suresh, Rana S.S., Sharma Neelam, Singh Navdeep and Bhalla Tamanna Bio-efficacy of indaziflam for weed management in tea Indian Society of Weed Science Biennial Conference on "Weed Management for Enhancing Farmers' Income and Food Security", ICAR - Central Coastal Agricultural Research Institute, Goa (India); 5-7 February, 2020.

Department of Microbiology-Nil-

Centre for Geo-informatics

Dr. Sharda Singh

- Delivered Invited Lecture entitled ‘ Use of Geo-Spatial Products for Water Resource Management’ delivered on 4th December, 2019 in 10 days ICAR Short course on advances in Micro-irrigation and fertigation for improving water use efficiency and crop productivity w.e.f. 02-11 December, 2019 vide letter no. 1516-91 dated 29.10.2019
- Delivered Invited Lecture on 11.11.19 in a Refresher Course organised by DEE, CSKHPKV-Palampur

Dr. Ranbir Singh Rana

- Lead Lecture on “Climate change vis-a-vis Organic and Natural Farming” National Conference on Organic and natural Farming –A tool for sustainable agriculture and Economic Development, organized by Department of Organic Agriculture, CSKHPKV, Palampur and Organic Agricultural Society of India at CSKHPKV, Palampur dated: 28-29 May, 2019

3.6.3 Books/ Book Chapters

Department of Biology and Environmental Sciences

- Radhika Sharma, Ramneek kaur, Seema seokhand, Mandeep Kaur and Neha Goyal, 2019. “Cell biology” Vikas Publications, New Delhi. **ISBN** No-978-93-5338-904-8

Department of Microbiology

- Sharma Pooja, Arora Priya, Kapoor Dhriti, Khanna Kanika, Atri Pardeep, Bali Ravinder Singh, Kaur Rupinder, Walia Abhishek, Bhardwaj Renu. 2020. The Role of Sugars in Improving Plant Abiotic Stress Tolerance. **In:** Improving Abiotic Stress Tolerance in Plants. M. Iqbal R. Khan, Amarjeet Singh, Péter Poór (eds.), Boca Raton: CRC Press. **ISBN:** 978-0-429-02750-5.
- Putatunda Chayanika, Walia Abhishek, Sharma Rashmi, Solanki Preeti. 2020. Current Trends and Aspects of Microbiological Biogas Production. **In:** Microbial Biotechnology: Basic Research and Applications. Environmental and Microbial Biotechnology. Singh J, Vyas A, Wang S, Prasad R (eds). Springer, Singapore. pp. 265-297. **ISBN:** 978-981-15-2817-0.

- Putatunda Chayanika, Walia Abhishek, Sharma Rashmi, Thakur Abhishek, Mehta Rahul. 2020. Fungal Metabolites- A Potential Source of Anti-Viral Compounds. *In: Recent Advances in Application of fungi and fungal metabolites: Application of fungi and fungal metabolites in Healthcare.* Singh, J and Gehlot, P (eds). Elsevier Science Publishing. pp. 157-173. **ISBN:** 978-012-82-1006-2.
- Keshani Bhushan and SS kanwar (2020) The negative sense RNA Hanta virus- A threat to the modern world. *Asian Pac.J.Health Sci.* 7(2):42-47.
- Mahajan, Rishi, Chandel, S., & Chatterjee, S. (2019). Environmental Fate of Organophosphate Residues from Agricultural Soils to Fresh Farm Produce: Microbial Interventions for Sustainable Bioremediation Strategies. In *Microbes and Enzymes in Soil Health and Bioremediation* (pp. 211-224). Springer, Singapore. https://doi.org/10.1007/978-981-13-9117-0_9

Department of Chemistry and Biochemistry-Nil
Department of Physical Sciences and Languages-Nil
Centre for Geo-informatics-Nil

3.6.4 Extended Summary/Abstract Published in Compendium

Department of Chemistry and Biochemistry

- Sharma Neelam, Singh Siddhartha and Sondhia Shobha Recent advances in mitigation methods for herbicide residues in the soil Indian Society of Weed Science Biennial Conference on "Weed Management for Enhancing Farmers' Income and Food Security", ICAR - Central Coastal Agricultural Research Institute, Goa (India); 5-7 February, 2020
- Kumar Atul, Sharma Neelam and Panda AK. 2019. Validation of HPLC DAD method for determination of antibiotic residues in bovine milk and human health risk assessment: 9th IMSACON & International Symposium on "Advances in Production, Processing and Quality Assurance of Muscle Foods for Improved Health and Nutritional Security" at CSKHPKV, Palampur on 6-9th November 2019.
- Sharma Neelam and Sapehia Shaila. 2019. Harvest time residues of tembotrione herbicide in soil and maize crop: National conference on "Himalayan Biodiversity and Bioresource Utilization" at Department of Biosciences, Himachal Pradesh University, Summer Hill, Shimla held on 10-12 October, 2019.
- Parita, Kumar Suresh, Rana S.S., Sharma Neelam and Bhalla Tamanna Evaluation of ethalfluralin 36% EC against weeds in soybean Indian Society of Weed Science Biennial Conference on "Weed Management for Enhancing Farmers' Income and Food Security", ICAR - Central Coastal Agricultural Research Institute, Goa (India); 5-7 February, 2020. p-116
- Kumar Sachin, Rana S.S. and Sharma Neelam Indian Society of Weed Science Biennial Conference on "Weed Management for Enhancing Farmers' Income and Food Security", ICAR - Central Coastal Agricultural Research Institute, Goa (India); 5-7 February, 2020. Effect of microwave treatment on the distribution of weed seed bank in conservation agriculture P-216
- Kumar Suresh, Rana S.S., Sharma Neelam, Singh Navdeep and Bhalla Tamanna Bio-efficacy of indaziflam for weed management in tea Indian Society of Weed Science Biennial Conference on "Weed Management for Enhancing Farmers' Income and Food Security", ICAR - Central Coastal Agricultural Research Institute, Goa (India); 5-7 February, 2020. P-203

Centre for Geo-informatics

- Sheetal Rana*, Abha Sharma and Ranbir Singh Rana, (2019); Microbial clean up strategy for eating garbage. In book Microbial Diversity, Interventions and Scope Published by Springer Book: 87036645

3.6.5 Technical Reports Submitted

Department of Biology and Environmental Sciences

- Dr. Radhika Sharma submitted six monthly progress report on research project Termites as prospective solution to solid waste management to DEST, Shimla as PI

Department of Chemistry and Biochemistry

- Sharma Neelam and SS Rana 2019. Report on *Parthenium* Awareness Week (August 14-22, 2019), Department of Agronomy, CSKHPKV, Palampur.

Centre for Geo-informatics

- Dr. Sharda Singh Online publishing of Projects' outputs on Web GIS Portal <http://14.139.224.135/myapp/cgrportal/index.html>
- Dr. Sharda Singh supplied Salient Achievements along with maps/photos for Agricultural Officers' Workshop on Rabi Crops 19-20 to Director of Research, CSKHPKV-Palampur
- Dr. Sharda Singh supplied Salient Achievements along with maps/photos for Agricultural Officers' Workshop on Kharif Crops 19-20 to Director of Research, CSKHPKV-Palampur
- Dr. Sharda Singh -Convener for COBS Annual Report 19-20
- Ranbir Singh Rana 2019-20. Presented the annual report of Forecasting Agricultural Output using space, Agro-meteorology and land-based observations (FASAL) project during 9th ARM. As PI
- Ranbir Singh Rana, 2019-20 Annual progress report of project entitled "Seventh Annual Review Meeting of Integrated Agromet Advisory Services project As PI
- Ranbir Singh Rana, 2019-20 Annual progress report, Mapping of geographical distribution and identification of new invasive spp. of insects-pest and diseases, simulated futuristic crop water footprints scenarios for major crops, in Himachal Pradesh.
- Ranbir Singh Rana and Team, 2019-20 Annual progress report CAAST, NAHEP- AS PI
- Impact of Climate Change on Agriculture & Horticulture Sector in District Shimla, Himachal Pradesh AS COPI (Collaborative Project with HIMCOSTE under MOUs)

3.6.6 Workshops/Conference/ Seminars/ Training Programmes Attended

Department of Biology and Environmental Sciences

Sr. No.	Name of Faculty Member/Team	Name of the Event Date Place	Title of the Event
1.	Dr. Anita Singh	Organised by IASRI, New Delhi & NAHEP CAAST, CSKHPKV, Palampur on 7-8 Feb 2020.	Sensitization workshop on Academics Management System under NAHEP component -2

2.	Dr Usha Rana	Organised by IASRI, New Delhi & NAHEP CAAST, CSKHPKV, Palampur on 7-8 Feb 2020.	Sensitization workshop on Academics Management System under NAHEP component -2
3.	Dr. Radhika Sharma	Ramanujam College (Delhi University) from May 18 th to June 3 rd 2020 in online mode	2 weeks faculty development programme(FDP) on “Managing online classes and co-creating MOOCS :2.0
		JNU April 18-19, 2020 in online mode	Attended First JNU Workshop for Empowering Teaching through Online Mode (JNU-WETOM)
		BSVS-Educational learning center on 18/5/2020	Attended one day workshop on “Creation and use of HTML based Quiz for E-Content and open educational Resource development(OER)”
		PG Government College for Girls-42 Chandigarh on May 22 nd , 2020.	Participated in virtual National Seminar on ‘Role of Biodiversity during COVID-19’ on the eve of International Day for Biological Diversity
		School of life sciences, central university of Himachal Pradesh on 20-21 May 2020.	Attended Online conference on “Environmental Pollutants and Cancer”
		PG Government College for Girls-42 Chandigarh on May 22 nd , 2020.	Participated in virtual National Seminar on ‘Role of Biodiversity during COVID-19’ on the eve of International Day for Biological Diversity

Department of Chemistry and Biochemistry

Sr.	Name	Name of the Event Date Place	Title of the Event
1	Dr. Suman Sharma	Special Counseling workshop for Hostel Management held in CSKHPKV, Palampur on 20th Feb. 2020	Special Counseling workshop for Hostel Management
		Training Programme on Students Counselling and Capacity Building held in CSKHPKV, Palampur w.e.f 17-02-2020 to 08 -02-2020.	Students Counselling and Capacity Building
		Sensitization Programme cum Workshop on Drug Abuse held in the University Auditorium on 23.08.2019.	Sensitization Programme cum Workshop on Drug Abuse”
		Online Webinar on “Turn the challenges to opportunities: COVID-	Turn the challenges to opportunities: COVID-19 Pandemic and measures

		19 Pandemic and measures to combat by Higher Education Institutions of India” by Dr. Ramesh Pokhriyal ‘Nishank’ on 28th May,2020	to combat by Higher Education Institutions of India
		Webinar on Reflection of Higher Education Scenario –Post Covid -19 by Sh. Tathagata Roy on June 13th,2020	Reflection of Higher Education Scenario –Post Covid -19
		Legal Awareness Camp on 2.11.2019, Dr. Daisy Thakur, Chairperson,H.P. State Commission for Women in CSKHPKV,Palampur	Legal Awareness Camp

Department of Microbiology

Sr. No.	Name of Faculty Member/Team	Name of the Event Date Place	Title of the Event
1.	Dr. Abhishek Walia	Five days Training program organized by National Institute of Plant Health Management, Hyderabad (Telangana) from 19th-23rd August, 2019	Production Protocol for Biofertilizers
		Two days training programme organized by HRD and Placement cell of CSKHPKV, Palampur held on 17th -18th February, 2020.	Students Counselling and Capacity Building
		Attended Quality Assurance Strategic Planning and Institutional Research (QASPIR) Online Course in June, 2020.	Developing Digital Practitioners
		Attended Seminar organized by PP Savani University, Surat, Gujarat on May 15, 2020.	International Webinar on Advanced Methods For Recombinant Protein Expression & Purification
		Attended Seminar organized by PP Savani University, Surat, Gujarat on MAY 22, 2020.	International Webinar on “Approaching Life’s Questions With Mass Spectrometry-Based Proteomics”
		Attended Seminar organized by PP Savani University, Surat, Gujarat on July, 4, 2020.	International Webinar on Molecular markers: Tools for identification in Biology

		Attended Online conference organized by Central University of Himachal Pradesh, School of Life Sciences on 20 th and 21 st May, 2020.	Environmental Pollutants and Cancer
		Attended Workshop under NAHEP Component-2 by IASRI, New Delhi NAHEP CAAST on 7 th and 8 th , Feb, 2020.	Academic Management System
		National Online Webinar on “NAAC Awareness Program - Affiliated / Constituent Colleges” organized by National Assessment and Accreditation Council (NAAC) held on 11th May, 2020	NAAC Awareness Program - Affiliated / Constituent Colleges
2.	Dr Rishi Mahajan	Training on “Academic Management System” at CSK Himachal Pradesh Krishi Vishvavidyalaya Palampur; sponsored by Indian Agricultural Statistics Research Institute, New Delhi w.e.f. 7-8 February, 2020	Academic Management System
		“Training Programme on Students Counselling and Capacity Building” CSK Himachal Pradesh Krishi Vishvavidyalaya Palampur w.e.f. 17-02-2020 to 18-02-2020	Training Programme on Students Counselling and Capacity Building
		National Online Webinar on “NAAC Awareness Program - Affiliated / Constituent Colleges” organized by National Assessment and Accreditation Council (NAAC) held on 11th May, 2020	NAAC Awareness Program - Affiliated / Constituent Colleges
		International Online Webinar on “Genome-wide changes under microgravity” organized by Central University of Himachal Pradesh held on 15th May, 2020	Genome-wide changes under microgravity
		Three day virtual event: International Symposium on “Understanding the Corona Pandemic & its Implications” organized by Faculty of Applied Sciences and Biotechnology, Shoolini University held on 23rd to 25th May, 2020	Understanding the Corona Pandemic & its Implications
		National Online Webinar on “Turn the Challenges to Opportunities: COVID-19 Pandemics and measures to combat by Higher Education of India” organized by Ministry of Human Resource	Turn the Challenges to Opportunities: COVID-19 Pandemics and measures to combat by Higher Education of India

		Development, Govt. of India, New Delhi, National Assessment and Accreditation Council (NAAC) held on 28th May, 2020	
		National Online Webinar on "World Environment day 2020" organized by Himachal Pradesh Council for Science Technology and Environment held on 4th June 2020	World Environment day 2020
		National online Webinar on "E-Education in Agricultural Sciences in the age of Social Distancing: Opportunities, Challenges and Strategies" organized by Department of Agricultural Biotechnology and National Agricultural Higher Education Project, Assam Agricultural University, held on 8th June 2020	E-Education in Agricultural Sciences in the age of Social Distancing: Opportunities, Challenges and Strategies
		National online Webinar on "Reflections of Higher Education Scenario-Post COVID-19" organized by Ministry of Human Resource Development, Govt. of India, New Delhi, National Assessment and Accreditation Council (NAAC) held on 13th June, 2020	Reflections of Higher Education Scenario-Post COVID-19

Department of Physical Sciences and Languages

Sr. No.	Name of Faculty Member/Team	Name of the Event Date Place	Title of the Event
1.	Mr. Kapil Sharma	Training programme on students counseling and capacity building on 17-18 February, 2020 at CSKHPKV	Students Counselling and Capacity Building
2.	Dr. Sheela Thakur	Training programme on students counseling and capacity building on 17-18 February, 2020 at CSKHPKV	Students Counselling and Capacity Building
3.	Dr. Manjula Sharma	Training programme on students counseling and capacity building on 17-18 February, 2020 at CSKHPKV	Students Counselling and Capacity Building
		Attended Webinar on "Nuclear and Particle AstroPhysics" organized by Department of Physics, MCM DAV College, Kangra (HP) on 17-06-2020.	Nuclear and Particle AstroPhysics
		Attended workshop on "Special counseling workshop" on 20-02-2020 at	Special Counseling workshop for Hostel Management

		Parvati Hostel, SWO, CSKHPKV, Palampur	
		Attended and completed the online course “Developing as an Online Practitioner” organized by QASPIR in June 2020	Developing Digital Practitioners
4.	Dr (Mrs) Shweta Pathania	IKG Punjab Technical University from 25.12.2019 to 30.12.2019.	TEW-Computational Methods for Solving Differential Equations (2019) organized by Department of Mathematics, IKG Punjab Technical University from 25.12.2019 to 30.12.2019.

Centre for Geo-informatics

Sr. No.	Name of Faculty Member/Team	Name of the Event Date Place	Title of the Event
1.	Dr Sharda Singh	Role of NEP-2020 in Transforming Higher Education 7th September 2020 Online	Role of NEP-2020 in Transforming Higher Education
		NAAC Awareness Program - Affiliated / Constituent Colleges 11/05/2020	NAAC Awareness Program - Affiliated / Constituent Colleges
		Turn the Challenges to Opportunities: COVID-19 Pandemics and measures to combat by Higher Education of India 28/05/2020 Online	Turn the Challenges to Opportunities: COVID-19 Pandemics and measures to combat by Higher Education of India
		10 days ICAR Short course on advances in Micro-irrigation and fertigation for improving water use efficiency and crop productivity 04.12.2019	Use of Geo-Spatial Products for Water Resource Management
		Refresher Course organised by DEE, CSKHPKV 11.11.19	Refresher Course organised by DEE, CSKHPKV
		Attended Webinar of Union Human Resource Development Minister Dr. Ramesh Pokhriyal ‘Nishank’ ji on the topic “Turn the Challenges to Opportunities: COVID-19 Pandemics and measures to combat by Higher Education of India” on 28/05/2020 hosted by National Assessment and Accreditation Council, Bengaluru.	
		Academic Management System (AMS) Sensitization workshop on 07-	Academic Management System (AMS) Sensitization workshop

		02-2020 and 08.02.2020 at CSKHPKV Palampur	
2.	Dr. R.S. Rana	Academic Management System (AMS) Sensitization workshop 08.02.2020 CSKHPKV Palampur	Academic Management System (AMS) Sensitization workshop
		Role of NEP-2020 in Transforming Higher Education 7th September 2020 Online	Role of NEP-2020 in Transforming Higher Education
		National Symposium on “Agrometeorological Interventions For Enhancing Farmers’s Income” (AGMET-2020)b 20-22 January, 2020 KAU, THRISSUR, Kerala	National Symposium on “Agrometeorological Interventions For Enhancing Farmers’s Income” (AGMET-2020)
3.	Mr. Vaibhav Kalia	NAAC Awareness Program - Affiliated / Constituent Colleges 11/05/2020 Online	NAAC Awareness Program - Affiliated / Constituent Colleges
		Role of NEP-2020 in Transforming Higher Education 7th September 2020 Online	Role of NEP-2020 in Transforming Higher Education
		Academic Management System (AMS) Sensitization workshop 08.02.2020 CSKHPKV Palampur	Academic Management System (AMS) Sensitization workshop

3.6.7 Conferences/Workshops/ Colloquiums/ Short Courses/ Project Review Meets Organized

Department of Biology and Environmental Sciences- Nil

Centre for Geo-informatics

Sr. No.	Name of Faculty Member/Team	Name of the Event Date Place	Title of the Event	No. of Participants
1	Dr Ranbir Singh Rana (Coordinator) Mr. Vaibhav Kalia (Co-cordinator) Dr. Sharda Singh	Academic Management System in collaboration with IASRI, COMP2 NAHEP, ICAR New Delhi on 7-8 February, 2020	Academic Management System	Faculty and Students
2	Dr Ranbir Singh Rana (as PI)	World Environment Day under Environment Sustainability Plan, CAAST, NAHEP Project on 5th June, 2020	World Environment Day	Faculty and Students

4. EXTENSION

4.1 Extension projects

-Nil-

4.2 Popular Articles

-Nil-

4.3 Organization of Extension Activity/One day Awareness programme

Department of Chemistry and Biochemistry

Sr. No.	Name of programme	Period	No. of lectures delivered	No. of trainees/ participants
As Course Director <i>Parthenium</i> Awareness week August 14-22, 2019				
1.	PowerPoint Presentation and weed science quiz for the PG students of Department of Agronomy, CSKHPKV Palampur Lecture and practical demonstration on uprooting of <i>Parthenium</i>	14.08.2019	2	50
2.	Exhibition, lecture and video film was organized for NSS volunteers of COBS & CSK HPKV, Palampur	16.08.2019	2	180
3.	Exhibition, lecture and video film was organized for NSS volunteers of COHS, CSK HPKV, Palampur	16.08.2019	2	60
4.	Exhibition, lecture, practical demonstration and video film was organized for the farmers of village Dhakrehar, Gram Panchayat Punner	19.08.2019	2	40
5.	Exhibition, lecture, video film show, rally and practical demonstration on uprooting of <i>Parthenium</i> was organized for the students, staff and farmers at Govt. school Malag	20.08.2019	2	80
6.	Exhibition, video film show in Hindi, lecture and practical demonstration on uprooting was organized at Govt. Sen. Sec. School Dehan	21.08.2019	2	175
7.	Exhibition, lecture, video film show and practical demonstration on uprooting of <i>Parthenium</i> by the students of Govt. School Thandol.	22.08.2019	2	80
8.	Exhibition, lecture, practical demonstration and video film was organized for the farmers of village Malahnu, Gram Panchyat Office Malahnu	22.08.2019	2	50
9.	<i>Parthenium</i> Eradication Day was organised for Staff & Students of COBS, CSKHPKV, Palampur	13.09.2019	2	200
As Training Incharge				
1.	One day off-campus training programme on Weed Management for the farmers of District Kangra under SCSP head in the project All India Co-ordinated Research project on Weed Management at Dadh (Tamber)	18.02.2020	2	50
2.	One day off-campus training programme on Weed Management for the farmers of District Kangra under SCSP head in the project All India Co-ordinated Research project on Weed Management at Jhickly Bhate (Tassi Jong)	24.02.2020	2	50

3.	One day off-campus training programme on Weed Management for the farmers of District Kangra under SCSP head in the project All India Co-ordinated Research project on Weed Management at Bandla	25.02.2020	2	50
4.	One day off-campus training programme on Weed Management for the farmers of District Kangra under SCSP head in the project All India Co-ordinated Research project on Weed Management at Nagrota Bagwan (Near)	27.02.2020	2	50
As training Co-ordinator				
1.	One day off-campus training programme for the farmers of District Hamirpur under the project entitled “Enhancing farm income through the ecological restoration of farmers’ resource base by managing obnoxious vegetation in participatory mode in Himachal Pradesh” to be held at Tauni Devi	12.12.2019	2	100
2.	One day off-campus training programme for the farmers of District Kangra under the project entitled “Enhancing farm income through the ecological restoration of farmers’ resource base by managing obnoxious vegetation in participatory mode in Himachal Pradesh” at Bandla	03.01.2020	2	100
3.	One day off-campus training programme on Weed Control for the farmers of District Mandi under the project entitled “Enhancing farm income through the ecological restoration of farmers’ resource base by managing obnoxious vegetation in participatory mode in Himachal Pradesh” at Badwara (Mohan Ghati)	13.03.2020	2	100

4.4 Lectures delivered by the Faculty Members

Department of Biology and Environmental Science

- Dr. Anita Singh and Dr. Radhika Sharma delivered lecture on “Vermicomposting Technology” to the NSS students of Govt. Sen. Sec. School, Banuri on 21st October, 2019.

Department of Chemistry and Biochemistry

- Dr Neelam Sharma-----32

Department of Microbiology

- Dr Abhishek Walia delivered lecture on “Biofertilizer Technology” to the NSS students of Govt. Sen. Sec. School, Banuri on 21st October, 2019.

Centre for Geo-informatics

Dr Ranbir Singh Rana

- Invited Lecture STARTUPS in GIS and Remote Sensing services delivered on dated 29.10.2019 in Training on Agri-entrepreneurship Orientation-cum-Incubation Programme

under Him Palma _R-ABI Project (16 September to November 11, 2019) at Soil Science, COA

- Invited expert lecture on Climate Change adaptation initiatives in Agriculture Sector for Panchyat Representatives of Chamba HP in workshop on Capacity Building Programme under Climate change adaptations in Rural areas of India (CCA-RAI) for community representatives of District Chamba at Chowari on 6th November, 2019” organized by DEST Shimla under Ministry of Environment' Forests and Climate Change (MoEF'&CC), Government of India and Federal Government of Germany (GIZ) on Climate Change Adaptation 'in- Rural Areas of India (CCA-RAI) in Himachal Pradesh.
- Invited Lecture entitled” Modeling irrigation water scheduling to reduce water foot prints” delivered on 4th December, 2019 in 10 days ICAR Short course on advances in Micro-irrigation and fertigation for improving water use efficiency and crop productivity w.e.f. 02-11 December, 2019 vide letter no. 1516-91 dated 29.10.2019)
- Invited Lecture entitled “Impact Of Climate Change In Agriculture And Adaptations Strategies For Sustainable Mountain Agriculture ” In International Workshop On “Impact Of Crop Diversification On Farmers Income And Food Security” organised by H.P. Crop Diversification Promotion Project-JICA-ODA & Department of Agriculture, Himachal Pradesh and co organised by Ministry of Agriculture & Farmers Welfare DAC & FW, Govt. of India and Japan International Cooperation Agency (JICA) February 10-12, 2020 at Dharamshala, Distt. Kangra, HP, India

4.5 Pamphlets prepared

Department of Chemistry and Biochemistry

- Kumar A. Sharma N and Panda A.K. 2019. Extension folder in Hindi: Dood mein antibiotics aur manav svasthaya par unka prabhav. COVAS, CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur 176062, HP, India
- Kumar S, Kumar N, Sharma N, Rana SS, Manuja S, Chopra P and Raina A 2020 Safeyd phulnu (Erigeron) ka neyantran P 1-3
- Kumar S, Kumar N, Sharma N, Rana SS, Manuja S, Chopra P and Raina A 2020 Neela phulnu (Ageratum) ka neyantran P 1-3
- Kumar S, Kumar N, Sharma N, Rana SS, Manuja S, Chopra P and Raina A 2020 Lal phulnu (Lantana) ka neyantran P 1-3
- Kumar S, Kumar N, Sharma N, Rana SS, Manuja S, Chopra P and Raina A 2020 Geyhu main kharpatwaron ki samashya v roktham P 1-3
- Kumar S, Kumar N, Sharma N, Rana SS, Manuja S, Chopra P and Raina A 2020 Kali basuti (Chromolena) ka neyantran P 1-3
- Kumar S, Kumar N, Sharma N, Rana SS, Manuja S, Chopra P and Raina A 2020 Gajarghas (Parthenium) ka neyantran P 1-3
- Kumar S, Kumar N, Sharma N, Rana SS, Manuja S, Chopra P and Raina A 2020 Dhan main kharpatwaron ki samashya v roktham P 1-3
- Kumar S, Kumar N, Sharma N, Rana SS, Manuja S, Chopra P and Raina A 2020 Maka main kharpatwaron ki samashya v roktham P 1-3

5. MISCELLANEOUS ACTIVITIES

5.1 Income Generation

Department	Income Generated (approx.)
Department of Biology & Environmental Sciences	Rs. 50000
Department of Chemistry and Biochemistry	Rs. 5400
Department of Physical Sciences and Languages	Rs. 1,500
Department of Microbiology	-Nil-
Centre for Geoinformatics Research and Training	-Nil-

5.2 Paper setter/evaluator/external examiner

Department of Biology and Environmental Sciences

Faculty Name	Institution Name
1. Dr. Anita Singh	<ol style="list-style-type: none"> 1. Paper setter for HPU 2. Evaluated Comprehensive exam papers of Botany of DrY S ParmarUHF,Nauni 3. Paper setting for Botany for PAU Ludhiana. 4. Paper setting for Botany for CS Azad University, Kanpur. 5. Evaluated 4 PhD Thesis 6. Evaluated 6 MSc. Thesis
2. Dr Usha Rana	<ol style="list-style-type: none"> 1. Acted as paper setter of question paper for written objective type examination for the post of Junior Technician (Laboratory) & Technical Assistant for UHF, Nauni, Solan. 2. Evaluated Comprehensive exam papers of Plant Physiology of DrY S ParmarUHF,Nauni 3. Evaluated the answer books of Crop Physiology course of COA, CSKHKV, Palampur. 4. Evaluated the answer books of re-examination of Crop Physiology course of COA, CSKHKV, Palampur. 5. Acted as member of the experts' interview committee for the selection of candidates for the post of Professor and Associate professors in Plant Sciences at Central University, Dharamshala.
3. Dr. Radhika Sharma	<ol style="list-style-type: none"> 1. Evaluation of End Term Answer Sheets for ZOO-351(Elementary Human Physiology), College of Home Science

Department of Chemistry and Biochemistry

Faculty Name	Institution Name
1. Dr Neelam Sharma	1. Paper setter & Evaluator of MSc Chemistry paper, Central University, Dharamshala 2. Paper setter M.Sc. (Chemistry), HPU, Shimla 3. Paper setter M. Phil. (Chemistry), HPU, Shimla 4. PhD Oral Comprehensive, Skaust, Jammu -- 1 5. MSc Chemistry-3 rd Semester practical examiner, HPU, Shimla 6. MSc Chemistry-2 nd Semester practical examiner Thakur PG College of Education, Dhaliara 7. MSc Chemistry-3 rd Semester practical examiner Thakur PG College of Education, Dhaliara 8. M.Sc. (Chemistry) Viva Voce at PAU, Ludhiana (16-09-2019) 9. M.Sc. (Chemistry)-3 rd semester Practical Examination at MLSM, Sunder Nagar in December 2019 10. Selection Committee (Chemical Sciences) member for Ph.D. admissions under AcSIR at CSIR- IHBT in December 2019 11. Ph.D. Viva Voce at CSIR- IHBT, Palampur in February 2020 12. Comprehensive Examination Board of Ph. D. student under AcSIR at CSIR- IHBT, Palampur on March 6, 2020 13. Ph.D. (Chemistry) Viva Voce at HPU, Shimla on March 21, 2020 14. MSc (Biochemistry) Viva Voce Exam. PAU, Ludhiana 15. MSc (Chemistry), Viva Voce Exam PAU, Ludhiana 16. M.Phil. (Chemistry), Viva Voce Exam, HPU, Shimla 17. Written comprehensive examination- 12 18. Oral comprehensive examination- 10 19. Viva-voce exam- 14
2. Dr Suman Sharma	1. Paper setter for Dr. Y.S. Parmar University of Horticulture and forestry
3. Dr Nageswer Singh	1. Paper setter for Dr. Y.S. Parmar University of Horticulture and forestry

Department of Microbiology

Faculty Name	Institution Name
1. Dr. S.S. Kanwar	1. External examiner for setting up of question paper of Course: Micro-5C12 (Recombinant DNA Technology), Himachal Pradesh University, Shimla 2. External Paper setter for course: BSM-111 (Introductory Microbiology) Y.S. Parmar

	<p>University of Horticulture and Forestry, Nauni, Solan (HP)</p> <ol style="list-style-type: none"> 3. Evaluated two Ph.D theses of Punjab Agricultural University, Ludhiana and conducted viva voce examination 4. Evaluated one Ph.D thesis of Panjab University, Chandigarh. 5. Evaluated three M.Sc theses of Punjab Agricultural University, Ludhiana and conducted viva voce examination of all 6. Evaluated two M.Sc thesis of Dr Y.S.Parmar University of Horticulture and Forestry, Nauni, Solan (HP) and conducted viva voce examination. 7. Member selection committee (Advisor) Union Public Service Commission, New Delhi on 16th December, 2019.
2. Dr. Abhishek	1. Himachal Pradesh University, Shimla: Paper Setting of MICRO 4 SEC 05 (Management of Human Microbial Diseases) of UGC (CBCS)-Microbiology-IV Semester
3. Dr. Rishi Mahajan	1. Paper setting for Central University of Himachal Pradesh

Centre for Geoinformatics

Faculty Name	Institution Name
1. Dr. Ranbir Singh Rana	1. SKUAST Jammu UG Course
2. Mr. Vaibhav Kalia	1. External Evaluator for HPU, Practical Examination of BCA 1 st , 3 rd , 5 th Sem. At GGDSD College Rajpur (November 2019)

5.3 Faculty as referee/reviewer for Scientific Journals

Faculty Name	Details
1. Dr Anita Singh	1. Journal of Scientific & Applied Research
2. Dr. S.S. Kanwar	<ol style="list-style-type: none"> 1. South Asian Journal of Research in Microbiology 2. Journal of Food Science and Technology 3. Archives of Microbiology 4. Journal of Advances in Microbiology 5. Proceedings of National Academy of Sciences, India: Biological Section 6. Asian Food Science Journal 7. African Journal of Microbiology Research
3. Dr. Rishi Mahajan	<ol style="list-style-type: none"> 1. Biological Control 2. Food Research International
4. Dr. Abshishek Walia	<ol style="list-style-type: none"> 1. Editorial Board Member: International Journal of Microbiology and Biotechnology (IJMB) 2. Review Editor: Pantnagar Journal of Research 3. Brazilian Archives of Biology and Technology 4. Journal of Basic Microbiology 5. International Journal of Biological Macromolecules.

	6. Chiang Mai University Journal of Natural Sciences 7. Biocatalysis and Agricultural Biotechnology 8. Agriculture & Food Security 9. Environmental Science and Pollution Research 10. Biotechnologia 11. Heliyon 12. Journal of Parasitology Research
5. Dr. Neelam Sharma	1. Indian Journal of Weed Science 2. Pesticide Research Journal
6. Dr. Nageswer Singh	1. Archives of Current Research International
7. Dr. Ranbir Singh Rana	1. Journal of Agrometeorology 2. Mausam 3. Acted as Editor in Souvenir & Abstracts Conference on Doubling Farmers' Income: Challenges and Strategies 4. Member of Indian Society of Agro-meteorologist. 5. Member of Meteorologist Society of India 6. Member of GIS Development 7. Member of Himachal Journal of Agricultural Society 8. Member of Indian Society of Agro-physics.
8. Dr. Radhika Sharma	1. Reviewed research paper for Biomedical and Pharmacology Journal
9. Dr. Manjula Sharma	1. Reviewed Research Paper for Journal of Alloy and Compounds, Science Direct. 2. Reviewed Research Paper for Defence Technology, Science Direct

5.4 Other Activities of Faculty

Department of Biology and Environmental Sciences

Dr. Usha Rana

- Acted as overall in-charge of the college for the centenary celebration of Father of Nation Mahatma Gandhi and conducted number of events like Painting, Declamation contest, Essay writing & Quiz competition. The concluding function was presided by Chief Guest Hon'ble Vice-Chancellor, Prof. Ashok Kumar Sarial ji and cash prizes and participation certificates were distributed amongst the students.
- Executive member from the College of Basic Sciences in the Indian society of Agricultural Biochemist Palampur-Chapter.
- Member of the internal complaint committee (ICC) constituted at University level for implementation of code of conduct for women at work place.
- Member in the committee constituted for checking and scrutinizing the original documents & rendering help to the admission committee of COBS.
- Committee member in preparing documents for NAAC accreditation of Criterion VII
- Prepared various documents of the department for College accreditation from NAAC
- Compiled monthly progress reports of the Department
- Member of the College Grievances Redressal Committee
- Nominee of Dean COBS for standing purchase Committee in CPDU

- Member of the store verification committee of CGRT, Physical Sciences & Languages and the Department
- Convener of College Canteen Management Committee
- Member of Committee to inspect/check the renovation work of Lecture theatre and Examination Hall
- Member in Anti Drug Vigilance committee on drug abuse
- Compiled the information of the Department for Hon'ble Vice Chancellor address, for 26th ICAR Regional committee meeting
- Compiled the College report for 24th Annual meeting of Senate & for Teacher's Day
- Compiled the College report for 117th meeting of the Board of Management
- Acted as one of the Judge to select 1st and 2nd best candidates for state level declamation contest Organized by Vivekananda trust on Swami Vivekananda
- Committee member to frame rules/criteria for deciding the medals at college level.

Dr. Radhika Sharma

- Member of declamation/debate competition committee in the college for celebration of 150th birth anniversary of Mahatma Gandhi.
- Member of debate, elocution and extempore (Literary events) committees for conduct of the youth festival 2020.
- Joined as additional warden on 03/12/2019 and performed duties for Parvati Hostel.
- Registration duty during Ist semester in Parvati Hostel
- Drug awareness lecture on 1/12/2019 in Parvati Hostel
- Member of Date-sheet and seating plan committee for year 2019-20.
- Member of sale, purchase and inspection of store articles committee for the year 2019-20
- Member of College accreditation committee (NAAC) Teaching-learning and Evaluation (criteria 2)
- Advisory for students of BSc-1st Year(S-2019-04-041 TO S-2019-04-060) from 20/1/2020 onwards.
- Performed duty for collection of information of old students of session 2013-14 for NAAC.
- Assisted in NAAC Executive summary preparation
- Incharge of undergraduate Laboratory
- Incharge of Departmental web page.
- Member of report writing committee of department
- Member of counseling team and Performed duty in admission committee for academic year 2019-20 on 12/7/2019, 26/8/2019 and 19/09/2020.
- Performed registration duty for students on 24th, 26th and 30th July 2019.
- Performed the duty to monitor the proper cleaning of college premises.
- Compiled major achievements of COBS since August 2016.

Department of Microbiology

Dr. Abhishek Walia

- Member of Students Educational Tour for Academic Year 2019-20.
- Committee Member-To ensure the presence of B.Sc 1st year students in "Parthenium Eradication" from the vicinity of College on 11.09.2019.
- Committee Member of Activity- Essay Writing competition for celebration of 150th birth anniversary of "Father of Nation" Mahatama Gandhi held on 28.09.2019.
- Incharge of Badminton in College of Basic Sciences.
- Member of Match conduct and Selection committee of Badminton Men and Women in 26th Annual Inter College Matches, 2019-20 held during 23rd September to 28th September.

- Manager of University Team Badminton (Men) Tournament 2019-20 held at Lovely Professional University, Phagwara, Punjab (India) from 6th to 10th October, 2019.
- Member of Anti-ragging Squad of College of Basic Sciences and Girls Hostel.
- Tutorial Advisor of Students Advisory Committee of 20 students (Admission No. S-2019-04-021 to S-2019-04-40).
- Committee Member for sale, purchase and inspection of store articles of COBS during financial year 2019-20
- Performed Duty as Invigilator for Mid Term and End Term Examinations of COA, COBS and COCS
- Member of Student Progression in NAAC Committee
- Convener of Extended Profile Template of NAAC Committee
- Member of the store verification committee of Microbiology
- Treasurer and handling the Registration of Alumni and other activities related to College Alumni Association of Basic Sciences (CAABS)
- Treasures of Science Club of COBS
- Member in Merit Scholarship & Amar Saheed Capt. Saurabh Kalia Memorial Scholarship Committee
- Admission Committee Member for on spot list of students (Category wise) after counselling and drawing Merit List.
- Registration Team for preparing List of Students for I-Card required for NAAC.
- Member of Registration Committee of workshop on “Academic Management System” at CSKHPKV, Palampur under NAHEP CAAST on 7-8 Feb, 2020.
- Committee Member of Physical Verification of the Store articles of Department of Chemistry and Biochemistry for the period of 2019-20.
- Committee Member to gather information of COBS passed out student’s w.r.t admissions and placements in various universities required for NAAC criteria III.
- Invigilator for conduct of written test for the post of Constables- 2019 on 08, Sep, 2019.
- Invigilator to conduct written examination of Non-teaching Posts held on 12.07.2019 and 13.07.2019.

Dr. Rishi Mahajan

- Performed Duty for End Term Answer Sheets –Re-examination, College of Community Sciences and College of Agriculture CSKHPKV.
- Performed Duty as Invigilator for the Mid-Term Examinations of 1st Semester, Academic year 2019-2020 in College of Agriculture, College of Community sciences and College of Basic Sciences CSKHPKV, Palampur.
- Performed Duty as Invigilator for the End-Term Examinations of 1st Semester, Academic year 2019-2020 in College of Basic Science, and College of Community sciences CSKHPKV, Palampur.
- Performed Duty as examiner evaluate End Term Examination Answer Sheets in the College of Community Sciences, CSKHPKV, Palampur
- Performed Duty of Invigilator for the conduct of Written Examination of Non-Teaching posts held on 13-07-2019.
- Performed Duty of Invigilator for the conduct of Written Examination of Non-Teaching posts held on 21-07-2019.
- Performed Duty of Invigilator for the conduct of Written test for Constables 2019 on 8th September, 2019 .

- Performed Duty as Invigilator for the Mid-Term Examinations of 2nd Semester, Academic year 2019-2020 in College of Basic Sciences, College of Community sciences, CSKHPKV, Palampur.
- Performed Duty as Invigilator for the Re-examination (External Examination) of courses offered 2nd Semester, Academic year 2019-2020 in College of Community sciences, CSKHPKV, Palampur.
- Performed Duty as member of Chess Men & Women Committee for the smooth conduct of 26th Annual Inter College Matches, 2019 at CSKHPKV Palampur.
- Performed Duty as member of the Time Keeping committee for the smooth conduct of Inter College Youth Festival 2019-20 at CSKHPKV Palampur.
- Performed Duty as Team Manager, to accompany CSKHPKV University Chess Team for participation in North Zone Inter University Chess (Men& Women) Championship 2019-20 held at Chandigarh University, Mohali (Punjab) we.f. 5th November to 09th November, 2019
- Performed Duty as member to conduct Quiz on the eve of 150th birth anniversary of “Father of the Nation”.
- Performed Duty as member for the Selection of students from College of Basic Sciences for participation in Declamation contest, organized by Vivekananda Trust.
- Performed duty as member in the Canteen Management Committee for the re-opening of the Canteen by inviting quotations/tender in the College of Basic Sciences.
- Performed Duty as a member of anti-ragging committee of the College of Basic Sciences.
- Performed duty as member of the committee, to submit proposals in order to recommend rules/criteria for deciding the Gold medals of the University, at the college level.
- Performed duty as member of the Grievances Redressal Committee of the College of the Basic Sciences, CSKHPKV.
- Performed duty as member of the “Committee of College of Basic Science” and “Committee of Postgraduate students” to take care of day to day needs of differently abled students, as well as implementing new schemes existing and to be devised in the future
- Performed duty for compiling the departmental data for the College Annual report 2018-2019.
- Performed duty as member of the Committee for NAAC report preparation (Criteria: Governance, Leadership and Management).
- Performed duty for the work specific interaction under the DBT funded project in the Department of Biology and Environmental Sciences, COBS, CSKHPKV
- Performed duty for compilation of Departmental data for All India Survey on Higher Education 2019-2020.
- Performed duty as member, to inspect the “renovation work” and “Electrical renovation work” by the Estate organization in respect of Lecture Theatre and Examination Hall and other buildings of the College of Basic Sciences
- Performed duty for work specific interactions under the project PANF under “NAHEP-CAAST Project.
- Visited SCVB College Palampur under the Chairmanship of Dean College of Basic Sciences regarding NAAC accreditation on 7th March, 2020
- Performed duty as member of the store verification committee of the department of Physical Sciences and Languages, College of Basic Sciences, CSKHPKV
- Performed duty as a member of the “Meeting Hall Arrangement Committee” for smooth conduct of One Day State Level Review Meeting of ICAR Regional Committee No. 1 held on July 30, 2019.

- Performed duty as member of the admission, registration and committee for preparing on the spot list of students committee for the academic year 2019-20

Department of Chemistry and Biochemistry

Dr. Neelam Sharma

- Member, Management committee of Palam Institutional Society at SCVB Govt. College Palampur.
- Expert, Board of Studies of SRI SAI UNIVERSITY, Palampur
- Member, Technical Committee of Central Purchase and Disposal Unit, CSKHPKV, Palampur
- Member, Steering Committee/ Task Force COBS, CSKHPKV, Palampur
- Member of Selection Committee, for the post of Assistant Professor/equivalent (Chemistry) CSKHPKV Palampur
- Member, Assessment cum-Evaluation Committee for considering the cases of teachers/scientist/ for promotion to the next higher rank. CSKHPKV, Palampur (22/07/2019)
- Member of Selection Committee, for the teaching posts (Chemistry) at Central University, Dharamshala
- Member of Selection Committee Project Scientist at CSIR-IHBT, Palampur
- Member, Selection committee of Research Associate at CSIR-IHBT, Palampur
- Member, Selection committee of Project Fellows at CSIR-IHBT, Palampur

Dr. Suman Sharma

- Secretary of Science Club.
- Involved with Alumni Association of College of Basic Sciences as President.
- Warden of Vageeshwari UG Girls' Hostel.
- Organized Rangoli Competition in Vageeshwari UG Girls' Hostel on October 5, 2019.
- Member of anti-ragging committee at Hostel level.
- Member of anti-ragging committee at Student's Welfare Organization level.
- Member of Discipline committee as Hostel Warden for the Inter College Youth Festival 2019-20 held on 23rd-24th January, 2020.
- Member of Warden's committee constituted by the Students' Welfare Officer.
- In charge, Athletics for the current academic year for College of Basic Sciences.
- Member of Literary Event Committee for the Inter College Youth Festival 2019-20 held on 23rd-24th January, 2020.
- Convener for Criterion 5 in Committee for NAAC registration of College of Basic Sciences.
- Member of committee for assisting admission of FRESH students (First year) in UG classes at College level.
- Accompanied the Team as Team Manager for participation in XX All India Inter Agricultural Universities Sports and Games Meet, 2019-20 held from 1st March to 5th March, 2020 in Sri Venkateswara Veterinary University, Tirupati.
- Involved in organisation of the Declamation contest for the celebration of 150th birth anniversary of Father of Nation Mahatma Gandhi at College level.

Dr. Nageswar Singh

- Member Counseling for admission of B.Sc. Basic Science as Counseling Team for verification of documents for the year 2019-20
- Committee member of Celebration of Van-Mahotasav, 2019
- Committee member of on-spot quotations team of the college
- Committee member of anti-ragging squads of the college
- Incharge - Store of the department.

- Incharge- Mountaineering and hiking of COBS, CSK HPKV, Palampur
- Incharge - Central Instruments Laboratory of the College.
- Member purchase and inspection of store articles of the College.
- Member store verification as Convener of the department and also of Dept. Microbiology
- Member of Research, Consultancy and Extension for NAAC Committee of the College
- Treasurer , ISAB, Palampur Chapter

Department of Physical Science and Languages

Dr Manoj Bhargava

- Dr. Manoj Bhargava, Professor and Dean: Academic Council, Research Council, Extension Council and Educational and Resident Instructions Advisory Committee upto 08.01.2019.
- In addition to the departmental duties as Head of the Department, Dr. Manoj Bhargava has also been assigned the duties of Nodal Officer (Statistics) by the University which is being performed timely. The main responsibility of the Nodal Officer is in collecting, compiling the information related to Higher Education from various offices of the University and supplying the same to UGC, New Delhi and other Governmental organizations which is a continuous process. The major work during the period was to complete the assignments for All India Survey on Higher Education for 2018-19.
- The data analysis related to the research of five (05) postgraduate students was done using statistical software available in the department.
- Statistical helps were also provided to the postgraduate students and research scientists of the University in their research problems.

Dr. (Mrs.) Sheela Thakur

- Carred out the duties of Warden, Parvati Girls Hostel (upto 28-08-2020).
- Acted as the Academic Incharge of the Department.
- Performed the duty as Member for the verification of store articles of the Department of Chemistry and BioChemistry of the College of Basic Sciences for the year 2019-20.
- Performed the duty as member of Prize distribution committee for the conduct of youth festival held on 23-24 Jan. 2020
- Performed the duty as member of sitting arrangement and discipline committee for the conduct of youth festival held on 23-24 Jan. 2020
- Organised a counseling programme of Dr. M.S Vignesh in Parvati Girls Hostel on 20 th Feb.2020 for all the wardens, additional wardens and office staff of the Hostels.
- Performed the duty for the preparation of Date Sheet and Seating Arrangement for the Mid -Term Examination of the 2nd semester and Re- Examination of the 1st semester 2019-20.
- Performed the duty as a Member of Committee for auction of unserviceable Store/Stock articles in respect of Sports Wing of Students' Welfare Organization on dated 15.10.2019.
- Acted as Dean's nominee for opening the quotations for the purchase of Physics Lab. equipments on dated 2.11.2019
- Worked as Warden of the PG Vageeshwari Hostel during the Covid-19 Pandemic on dated 13.6.2020 and 14.6.2020.
- Performed the duty as Convener for the verification of store articles of the Chamundeshwari Girls Hostel for the year 2019-20.
- Organized a lecture of Dr. Priyanka Rana, Medical Officer of CSKHPKV on 'Drug Abuse' for the students of Parvati Girls Hostel on dated 1.12.2019.

Sh. Kapil Sharma

- Performed the duties of Incharge, Store, College of Basic Sciences.
- Carried out the duties of N.S.S. Programme Officer of the College of Basic Sciences.

- Managed e-Resources in the University Library.
- Incharge of University Network System
- Handled Online Application System for Admission to Entrance Test Based Admissions to the University for Academic year 2019-20.
- Acted as Database Administrator for post-examination processing of result of Entrance Examination-2019 for admission to Entrance test based admission for various programmes of the University.
- In-charge of College Badminton team.
- Member of Editorial Board for up-loading e-Newsletter of the University. Wherein he is responsible for HTML/CSS based designing the eNewsletter.
- Updated the database to keep record of personal Information of students admitted in the College of Basic Sciences and to generate their Identity cards.
- Re-generated VBA based semester reports for the students of College of Basic Sciences newly admitted under CBCS.
- Generated QR codes for degrees awarded during the 15th convocation of the University.
- Performed duty as Centre Supervisor at Anuradha Public School, Maranda, Palampur for the conduct of Entrance Test (ET-2019) for undergraduate courses of CSKHPKV, Palampur
- College Coordinator, Student Counseling & Placement.
- Member of Screening Committee for scrutinize the applications for the post of Junior Office Assistant (IT).
- Member of Canteen Management Committee of the College.
- Advisor to 26 undergraduate students of the College.
- Member of the Committee formed for the Assistance of College Admission Committee during counselling for admission to the UG programme of the College for the Academic Year 2018-19.

Dr. (Mrs.) Manjula Sharma

- NSS Programme incharge in absentia of Sh. Kapil Sharma (Assistant Professor- cum- NSS Programme Officer of COBS)
- Social Media Champion of the COBS under AISHE nodal officer to upload information (photographs, story and activity details) of various activities of College on the COBS Facebook and Twitter accounts.
- Performed Duty as Returning officer, COBS for the formation of Students Association of College of Basic Science, CSKHPKV, Palampur.
- Prepared Time Table for COBS as member of time table committee for 1st and 2nd semester of the academic year 2019-2020.
- Performed Duty in counseling team 1 as Member of registration/admission (counseling team) committee for admission to B. Sc. Programme for year 2019-2020.
- Incharge of Cultural activities in College of Basic Science, CSKHPKV Palampur for academic session 2019-2020.
- Performed duty as cultural and program incharge of the Fresher's party of College of Basic Sciences celebrated on 06-09-2019.
- Performed Duty of Invigilator for the conduct of Written Examination of Non-Teaching posts held on 13-07-2019.
- Performed Duty of Invigilator for the conduct of Written Examination of Non-Teaching posts held on 21-07-2019.
- Performed duty as NSS programme officer COBS in Parthenium Eradication programme organized by ACRIP Weed Management on 13-09-2019.

- Cultural and overall incharge (along with other members) of the 150th centenary celebrations of birth anniversary of Mahatma Gandhi, celebrated in COBS during 26-09-2019 to 02-10-2019.
- Organized Nukad Natak on 22-11- 2019 at COBS, regarding the Special Anti-Drug Abuse Campaign of Government of Himachal Pradesh.
- Performed Duty as member for the Selection of students from College of Basic Sciences for participation in Declamation contest, organized by Vivekananda Trust.
- Performed duties of Cultural incharges of COBS at Inter College Youth Festival-2019-2020.
- Carried out the duties of Additional Warden, Vageeshwari UG Girls Hostel from 29-11-2019.
- Carried out the duties of Warden, Vageeshwari UG Girls Hostel from 02-06-2020.
- Member of Cultural events committee of Inter College Youth Festival 2019-2020, organized in University auditorium On 23-24 January 2020.
- Member of Contact person team for the Inter College Youth Fest event- Theatre organized in University auditorium On 23-24 January 2020.
- Performed the duty of Team Manager for the participation of University Team in 20th All India Inter Agricultural University Festival 2019-2020 held at Indira Gandhi krishi Vishwavidyalaya, Krishak Nagar, Raipur – 492012.
- Member of the Anti-Ragging Squad at the university level for the Academic year 2019-2020
- Member of committee for uploading information of activities of COBS on University Activity Monitoring Portal (UAMP) of UGC.
- Member of NAAC Accreditation committee for Infrastructure and Learning Resources
- Member of AISHE College (COBS) level committee.
- Advisor to 19 students of B. Sc. 1st year.

Centre for Geo-informatics

Dr. Sharda Singh:

- Programme Director, Centre for Geo-informatics , Research and Training
- Member, Academic Council, CSKHPKV-Palampur
- Academic Incharge, College of Basic Sciences
- Member, Board of Studies, College of Basic Sciences
- Attended Meeting of Board of Studies, COBS, CSKHPKV, Palampur [*Prepared and submitted Agenda Item: B.Sc. Physical Sciences (Physics, Chemistry & Mathematics) and B.Sc. Life Sciences (Botany, Zoology & Chemistry) as two separate UG programmes under CBCS (RUSA) in COBS as defined in NAAC Proforma & UGC regulations [Two separate Programmes w.e.f. academic session 2020-21 have been approved by academic council as per UGC specification of degree Regulation 2014.]*]
- Had submitted BOS Agenda for a Course on Professional Ethics and Human Values as per requirement in NAAC Criteria [*It has been approved by Academic Council*]
- UGC Nodal Officer, CSKHPKV-Palampur w.e.f. 1st June 2020
- Single Point of Contact (SPOC), Association of Indian Universities (AIU) , CSKHPKV-Palampur
- Member Academic Council (COBS), CSK HPKV-Palampur
- Member Research Council (COBS), CSK HPKV-Palampur
- Member Extension Council (COBS), CSK HPKV-Palampur
- Member of Sub Committee constituted during the meeting of Statutory Officers held on 09.03.2020 to integrate the suggestions given by the Hon'ble Governor of Himachal Pradesh

- Nodal Officer, National Assessment & Accreditation Council (NAAC) for College of Basic Sciences
- Steered all the Criteria Teams to prepare, augment and correct their respective Criteria through awareness presentation, various e-mails for Manuals, Standard of Procedures (SOPs), Extended Profiles from time to time, then revised documents as per changes by NAAC were provided to all teams in time bound manner.
- Prepared /organized General documents for NAAC (Sanctioned & In Position Strength of Teaching/Non-teaching, Affiliation Certificate from Registrar, Self Declaration from Dean, COBS, COBS RTI Committee, Grievance Committee, Anti-ragging Committee, Internal Complaint Committee, Teachers Information for the last five years, Students Information for the last five years, Examinations Results, Scholarships, Hostels, Staff Quarters, COBS Area.
- Conducted meetings of all Criteria teams at College level and individual Criterion level number of times for getting the data prepared, corrected, updated, and evaluation/ re-evaluations being done till now
- Got conducted visit to SCVB Govt College Palampur of all COBS NAAC Team led by Dean, COBS to know-how about NAAC Process and assets required
- Attended Meetings with Registrar and Hon'ble Vice-Chancellor organised by Dean, COBS regarding clarifications sought by NAAC regarding submitted IIQA.
- UGC-AISHE College Nodal Officer (CNO), College of Basic Sciences
- Prepared and submitted AISHE data for the year 19-20 to MHRD, New Delhi
- Got prepared list of students of all the years of B.Sc programme for their preference of scholarship by convening number of meetings with the students in reference to letter No. QSD.3-14/2019-CSKHPKV (COBS-Acad)-4516-17 dated 02-01-2020) for Merit Scholarship & Amar Shaheed Captain Saurav Kalia Memorial Scholarship
 - Chairman/Member of Project Formulation and Screening Committee, CGRT
 - Chairman of Project's work specific Interaction for GIS Expert and GIS Operator in research Project in Feb 2020
 - Member Screening Committee for hiring teachers, College of Basic Sciences. Attended meetings on 29.09.17, 22.07.2017, 12.03.18.
 - Member of Enquiry Committee constituted regarding 'marking absent of students of Biology and Env. Sciences in Credit Seminar ENV591'
 - Member College Merit Scholarship & Amar Shaheed Captain Saurav Kalia Memorial Scholarship (Got prepared list of students of all the years of B.Sc programme for their preference of scholarship by convening number of meetings with the students)
 - Prepared COBS write-up in Merit based Prospectus for COBS for the year 20-21
 - Compiled salient achievements from COBS to Hon'ble Vice-Chancellor on New Year
 - Information for Teachers Day Address of Hon'ble Vice-Chancellor from COBS
 - President, Science Club, College of Basic Sciences
 - Overall Incharge of Registration of B.Sc. (Physical Sciences) COBS for academic year 2019-2020
 - Incharge for rendering help for Walk-in-Admission on 26.08.19 for Counseling & Registration
 - Counseling of B.Sc. Final year students for M.Sc. JAM Test
 - Attended Meeting for Gold Medal for PG students on 14.10.19 as nominee from Dean, COBS
 - Committee member for Date of joining –regarding
 - Member Conversion Formula for OCGPA, COBS
 - Member for sale, purchase and Inspection of store articles of COBS
 - Member College Merit Scholarship & Amar Shaheed Captain Saurav Kalia Memorial Scholarship

- Member Screening Committee for hiring teachers, College of Basic Sciences.
- Member of the Committee to ensure adherence to the constitutional legal requirements for generating awareness about legal rights of women among the students
- Formed Whatsapp Advisees Group and sent Special Anti-drug Abuse Campaign to Advisees and ensured their full attendance
- Attended Talk on Women' Health and Wellness, its awareness and hygiene
- Attended 'Legal Awareness Camp' in Auditorium on 1.11.19
- Attended Intearction of His Excellency Governor of HP and Chancellor of CSKHPKV on 06.11.19
- Attended Agricultural Officers' workshop on 30th Oct 2019 in DEE for MOU with Department of Agriculture (DOA)
- Checked rough sketches of degrees including QR coding and drafts of degrees after printing as Member of Committee
- Member Physical Verification Committee, Deptt of Biology and Env. Sciences
- Attended Inauguration ceremony of 2nd block of VIP Guest House, CSKHPKV
- Monthly Reports & Annual Report of CGRT (19-20) to Dean, COBS, CSKHPKV-Palampur
- Annual Report of CGRT to Registrar/Director of Research/COBS/SWO, CSKHPKV-Palampur
- Attended Inaugural and Concluding Function of Inter-College Games 23-28th Sep 2019
- Attended Inaugural and Concluding Function of Youth Festival 23-24th Jan 2020
- Attended Students' Fresher's Day Programme on 07.09.20
- Member Anti-Ragging Committee/Squads, at College & University level
- Raised funds through Communal harmony Stamps and Red Cross Flags to students as Tutor for 2017 batch of Physical Sciences & Life Sciences and deposited with COBS
- Mid-term & Tutorial Examination/Evaluation for the courses taught
- Evaluation of End-Term Examination MATH111 of B.Sc. (Hons)Agriculture
- Attended Synopsis Seminar, Thesis viva-voce Exam, Oral Comprehensive Exam of students of Admission Nos.: S-2015-30-001, A-2018-30-064, A-2017-30-045, A-2017-30-001, A-2016-30-032, A-2016-30-031, A-2016-30-029, A-2016-30-033, A-2016-30-034, A-2016-30-026, A-2016-30-027, A-2016-30-028, A-2016-40-007, A-2017-40-005, A-2017-40-003

Dr. Ranbir Singh Rana

- Convener of Invitation committee Youth festival on 23-24. January, 2020
- Convener of Invitation committee Annual 26th Inter college games on 23-28 th September, 2019
- Convener of NAAC, COBS for VI chapter
- Nominated as expert in DST INSPIRE Fellowship Review Meet w.e.f. 11 to 13th October, 2019 at Sri Mata Vaishno Devi Gurukul, Katra J&K
- Continued _ Appointed as Expert member of Research advisory group of HIMALAYAN FOREST RESEARCH INSTITUTE , Conifer Campus Panthaghathi, Shimla-171013 by The Director general Indian council of Forestry Research and Education (ICFRE) Vide letter no 3-1 (30)HFRI/2019/-3066 dated 9th August , 2019
- Member of ISO, COBS vide letter no ISO/06-CSKHPKV (COBS-Estt.)/1730-33 dated 12.7.2017- Continuing
- Member of Formulation and screening Committee of COBS, vide letter no. 2288 dated 5.8.2017- Continuing
- Involved as in administrative work as PIs of the Adhoc Research projects
- Involved as PI &Nodal Officer, NAHEP (CAAST)
- Examination duty 2019-20 for both semester in PG, COBS and COA midterm and Final Exam
- Acted as Chairman of Interview Committee for RAs-3, JRF-6, YPI-5, YPII-4 in CAAST, NAHEP Project

- Acted as Chairman cum PI of Interview Committee for, JRF-2in DST Project
- Acted as Chairman of Agromet Observer posts in DEE, CSKHPKV, Palampur held on 26.6.2020

Mr. Vaibhav Kalia

- RKVY Data Entry on RKVY MIS National Portal (<http://rkvymis.dacnet.nic.in/>)
- Nodal Officer for UGC Scholarships - Uploaded data of various scholars of the University on UGC Scholarships Portal..
- Nodal Officer National Fellowship for Higher Education for ST Students – uploaded student data.
- Assisted in the admission process of COBS and CSKHPKV, Palampur.
- Member of various purchase committees
- Team manager for CSKHPKV Volleyball (W) team for North Zone Inter University Volleyball (Women) Championship held at Kurukshetra University, Kurukshetra (10-14, December 2019).
- Conducted IIRS RS and GIS in Urban and Regional Planning during December 09, 2019 to December 20, 2019
- Attended and organized Academic Management System 7-8 February 2020 as CO-Coordinator under CAAST project.
- NKN Security Officer for University Internet & COBS LAN Segment In-charge

Software Development:

1. [Web-Application] Web based academic Student System for COBS

The web application and server is in maintenance mode and is worked upon as needed (creating new users, editing / updating information submitted by faculty), generating reports for use in office of Dean COBS.

One major update was released on 07/07/2019 Ver. 5.1.4 - Minor Update (PDF Outputs and help link).

2. [Application] Completely Randomized Design

Completely Randomized Design

CSK HPKV Palampur (<http://hillagric.ac.in>) **Completely Randomized Design** Report bugs/feedback at: vaibhav@hillagric.ac.in

A: Input Data B: Analysis of variance

Step-1: Experiment Setup

Treatments: 5 Replicas: 3 Prefill with sample data

Step-2: Input Data

Isolates	Mycelial growth	Mycelial growth	Mycelial growth	Treatment total (Ti)	Treatment mean
	Repl. 1	Repl. 2	Repl. 3		
1	25	28.8	38.6	92.4	30.8
2	32.3	32.6	25.1	90	30
3	26.1	30.8	35.8	92.7	30.9
4	38.5	47.3	50.8	136.6	45.5333
5	34.9	39	48.4	122.3	40.7667
Grand Total	156.8	178.5	198.7	534	35.6
• Grand Mean	31.36	35.7	39.74	35.6	

Calculate Grid Totals

Output Text

2	32.3	32.6	25.1	90	30
3	26.1	30.8	35.8	92.7	30.9
4	38.5	47.3	50.8	136.6	45.5333
5	34.9	39	48.4	122.3	40.7667
Grand Total	156.8	178.5	198.7	534	35.6
Grand Mean	31.36	35.7	39.74	35.6	

3. Application Split Plot Design

Split Plot Design

CSK HPKV Palampur (http://hillagric.ac.in) **Split Plot Design** Report bugs/feedback at: vaibhav@hillagric.ac.in

A: Input Data B: Replication X Seed Rate C: ANOVA for SPD

Step-1: Experiment Setup

Replications [R] 3 Factor-A (main plot treatments) [S] 3 Factor-B (sub plot treatments) [N] 4 Prefill with sample data

Step-2: Input Data

Type data as Rn#Sn#Nn#Value e.g. R3#S2#N0#11.7

Factor Comb.	R1	Factor Comb.	R2	Factor Comb.	R3	Total	Mean
S1N0	18.6	S1N0	16	S1N0	14.8	49.4	16.4667
S1N1	18.3	S1N1	21.2	S1N1	22	61.5	20.5
S1N2	22.8	S1N2	23	S1N2	29.7	75.5	25.1667
S1N3	26.2	S1N3	22.2	S1N3	25.3	73.7	24.5667
S2N0	10.2	S2N0	16.8	S2N0	9.6	36.6	12.2
S2N1	10	S2N1	17.3	S2N1	12	39.3	13.1
S2N2	10.8	S2N2	18.7	S2N2	19.9	49.4	16.4667
S2N3	14.8	S2N3	17.2	S2N3	14.8	46.8	15.6
S3N0	9.7	S3N0	4.5	S3N0	8.3	22.5	7.5
S3N1	15.3	S3N1	6	S3N1	11.3	32.6	10.8667

Parse Input Text Calculate Grid Totals Proceed to Step 3

Output Text

S2N3	14.8	S2N3	17.2	S2N3	14.8	46.8	15.6
S3N0	9.7	S3N0	4.5	S3N0	8.3	22.5	7.5
S3N1	15.3	S3N1	6	S3N1	11.3	32.6	10.8667
S3N2	6.6	S3N2	3.5	S3N2	14.3	24.4	8.1333
S3N3	7	S3N3	3.9	S3N3	11.7	22.6	7.5333
Total	170.3	170.3	193.7				
Grand Total	534.3						

4. [Application] Latin Square Design

Latin Square Design

CSK HPKV Palampur (http://hillagric.ac.in) **Latin Square Design** Report bugs/feedback at: vaibhav@hillagric.ac.in

A: Input Data B: Format Data C: ANOVA

Step-1: Experiment Setup

Variety 5 Prefill with sample data

Step-2: Input Data

R\C	1	2	3	4	5	Total
1	6.900B	4.900E	7.800C	5.900A	9.700D	35.2
2	6.800E	8.500D	8.900B	6.800C	6.800A	37.8
3	6.400C	8.000A	6.800D	8.400B	5.400E	35
4	7.200A	7.800C	5.700E	7.500D	7.600B	35.8
5	5.800D	9.000B	6.200A	4.600E	6.500C	32.1
Total	33.1	38.2	35.4	33.2	36	175.9

Calculate Grid Totals Proceed to Step 2

Output Text

R\C	1	2	3	4	5	Total
1	6.900B	4.900E	7.800C	5.900A	9.700D	35.2
2	6.800E	8.500D	8.900B	6.800C	6.800A	37.8
3	6.400C	8.000A	6.800D	8.400B	5.400E	35
4	7.200A	7.800C	5.700E	7.500D	7.600B	35.8
5	5.800D	9.000B	6.200A	4.600E	6.500C	32.1
Total	33.1	38.2	35.4	33.2	36	175.9

5.[Application] North Carolina Design – 1 (NCD-1)

North Carolina Design - 1

CSK HPKV Palampur (http://hillagric.ac.in) **North Carolina Design - 1** Report bugs/feedback at: vaibhav@hillagric.ac.in

A: Input Data B: ANOVA

Step-1: Experiment Setup

Set 2 Replications 2 Males 3 Females 2 Progenies 3 Prefill with sample data **Generate Grid**

Step-2: Input Data

Set	Male	Progeny	REP. 1	REP. 1	REP. 2	REP. 2	Total	Total	Total
			1	2	1	2	1	2	
1	1	1	2.8	3.1	3.2	4.2			
		2	4.1	3.9	3.4	3.6			
		3	3.2	3.5	3.1	3.3			
		Total:	10.1	10.5	9.7	11.1	19.8	21.6	41.4
	2	1	4.5	3.6	4.2	3.1			
		2	5.2	3.1	3.5	3.8			
		3	4.9	4.6	5.2	3.2			
		Total:	14.6	11.3	12.9	10.1	27.5	21.4	48.9
	3	1	4.2	5.4	4.8	4.9			

Calculate Grid Totals **Proceed to Step 3**

Output Text

= 2.4414

Sum of Squares due to ERROR :

= (Total SS) - (SS due to Replications x Females in Sets) - (S.S. due to Females in Males in Sets) - (S.S. due to Males in Sets) - (S.S. due to Males in Sets) - (S.S. due to Replications in Sets) - (S.S. due to Sets)

= 45.8388 - 2.4414 - 9.9992 - 9.1944 - 0.0636 - 0.0735

= 24.0667

6. [Application] North Carolina Design – 3 (NCD-3)

North Carolina Design - 3

CSK HPKV Palampur (http://hillagric.ac.in) **North Carolina Design - 3** Report bugs/feedback at: vaibhav@hillagric.ac.in

A: Input Data B: ANOVA

Step-1: Experiment Setup

Set 3 Replications 2 Males 4 Females 2 Prefill with sample data **Generate Grid**

Step-2: Input Data

Set	Male	REP. 1	REP. 1	REP. 2	REP. 2	Total	Total	Total
		1	2	1	2	1	2	
1	1	10.8	9.9	17.3	12.8	28.1	22.7	50.8
	2	12.1	12.9	13.6	18.3	25.7	31.2	56.9
	3	10.4	14.8	15.3	13.7	25.7	28.5	54.2
	4	12.4	16.3	18.6	19.8	31	36.1	67.1
	Total:	45.7	53.9	64.8	64.6	110.5	118.5	
Total-1:			99.6		129.4			229
2	1	17.2	14.1	8.7	11	25.9	25.1	51
	2	16.8	12.6	11.7	14.5	28.5	27.1	55.6
	3	18.5	11.4	9.8	13.8	28.3	25.2	53.5
	4	9.4	10.6	11.4	14.3	20.8	24.9	45.7

Calculate Grid Totals **Proceed to Step 3**

Output Text

= 61.9075

Sum of Squares due to ERROR :

= Total S.S. - (S.S. due to sets + S.S. due to replications + S.S. due to inbreds + S.S. due to F2 parents + S.S. due to F2 parents x inbreds)

= 375.2267 - (19.6217 + 71.6475 + 4.1125 + 72.025 + 61.9075)

= 145.9125

7. [Application] Factorial Experiment 2X2

Factorial Experiment 2X2

CSK HPKV Palampur (http://hillagric.ac.in) **Factorial Experiment 2X2** Report bugs/feedback at: vaibhav@hillagric.ac.in

A: Input Data | B: ANOVA for treatments | C: ANOVA for SPD

Step-1: Experiment Setup

Replications [R] 3 | Factor-A (Nitrogen) [N] 2 | Factor-B (Phosphorous) [P] 2 | Prefill with sample data |

Step-2: Input Data

Type data as Rn#Nn#Pn#Value, e.g. R3#N2#P0#11.7

R1#N0#P0#54.6
R1#N0#P1#76.9
R1#N1#P0#81.8
R1#N1#P1#110.4
R2#N0#P0#48.9
R2#N0#P1#74.8
R2#N1#P0#83.8
R2#N1#P1#108.7
R3#N0#P0#52.8
R3#N0#P1#80.9
R3#N1#P0#89.6
R3#N1#P1#116.2

Treat. Comb.	R1	Treat. Comb.	R2	Treat. Comb.	R3	Total	Mean
N0P0	54.6	N0P0	48.9	N0P0	52.8	156.3	52.1
N0P1	76.9	N0P1	74.8	N0P1	80.9	232.6	77.5333
N1P0	81.8	N1P0	83.8	N1P0	89.6	255.2	85.0667
N1P1	110.4	N1P1	108.7	N1P1	116.2	335.3	111.7667
Total	323.7		316.2		339.5	979.4	81.6167

Parse Input Text | Calculate Grid Totals | Proceed to Step 3

Output Text

```

=====
Treat. Comb.  R1  Treat. Comb.  R2  Treat. Comb.  R3  Total  Mean
NOP0  54.6  NOP0  48.9  NOP0  52.8  156.3  52.1
NOP1  76.9  NOP1  74.8  NOP1  80.9  232.6  77.5333
N1P0  81.8  N1P0  83.8  N1P0  89.6  255.2  85.0667
N1P1  110.4  N1P1  108.7  N1P1  116.2  335.3  111.7667
Total  323.7  316.2  339.5  979.4  81.6167
=====

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8. COBS NAAC Technical Coordinator

Working as NAAC technical Coordinator. Responsibilities are:

1. Preparation of Support website for NAAC (<http://hillagric.ac.in:999/cobspage/naacgeninfo.html>) . This website contains detailed category wise links for eight NAAC criteria, alongwith support documents. The portal approximately hosts 2000 web-links of support documents of various information required in NAAC Criteria.
2. Redesigned COBS Webpage as Webmanager of COBS
3. Attend review meetings in presence of NAAC Coordinator, to discuss various submissions.
4. Work with NAAC Coordinator to provide technical support to submission of AISHE data and IQA of COBS.

SSR - College of Basic Sciences

Not secure | hillagric.ac.in:999/cobspage/naacssr.html

College of Basic Sciences
CSK Himachal Pradesh Agriculture University, Palampur, HP India

NAAC Self Study Report

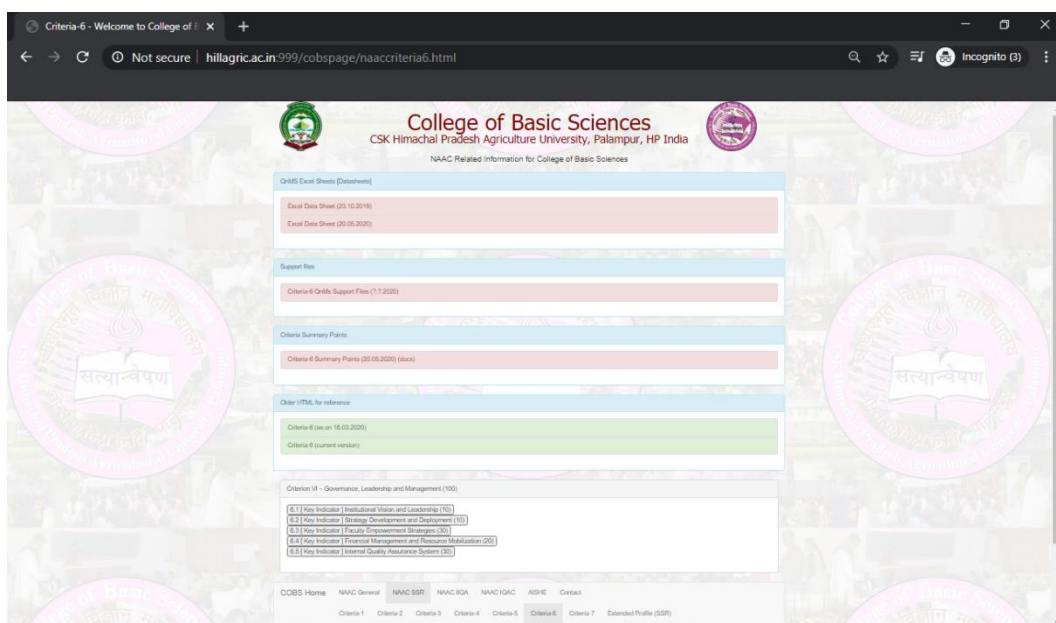
NAAC Self Study Report

Executive Summary

- Criteria - 1
- Criteria - 2
- Criteria - 3
- Criteria - 4
- Criteria - 5
- Criteria - 6
- Criteria - 7
- Extended Profile

COBS Home | NAAC General | NAAC SSR | NAAC IQA | NAAC IQAC | AISHE | Contact

Criteria-1 | Criteria-2 | Criteria-3 | Criteria-4 | Criteria-5 | Criteria-6 | Criteria-7 | Extended Profile (SSR)



COBS NAAC Support Website describing criteria wise information
(<http://hillagric.ac.in:999/cobspage/naacgeninfo.html>)

5.5 National Science Day Celebrations

-Nil-

5.6 National Service Scheme Activities

Sh. Kapil Sharma, Assistant Professor is sharing the responsibility of NSS Programme Officer, COBS Unit during the period under report. (Dr. Manjula Sharma is the alternative Programme Incharge when Sh. Kapil Sharma is on leave)

Main activities were:

Seven days NSS camp was organized at Village Ghuggar, Tehsil Palampur Distt. Kangra by NSS (National Service Scheme) Unit of COBS, CSKHPKV, Palampur, Distt. Kangra (H.P.).

In addition to this the following are few of the activities carried out by NSS volunteers during the report period:

- Regular College Campus cleanliness drives under Swatchh Bharat Abhiyaan.
- Student interactions and discussions on Women Empowerment and other current issues.
- Awareness of NSS volunteers of the college on social issues.
- Celebration/observing of various important days in NSS:
 - Swachhta Pakhwara observation (01.08.2019 to 15.08.2019)
 - Celebration of Independence Day at University level (15.08.2019)
 - Celebration of Sadbhawana Diwas to mark the birth anniversary of Late Sh. Rajiv Gandhi (20.08.2019)
 - National Nutrition Month (01-09-2019 to 30-09-2019)
 - Literacy Day (07-09-2019)
 - Prakram Parv Celebrations (28-09-2019)
 - Communal Harmony Day (02.10.2019)

- Communal Harmony Week (19.11.2019 to 25.11.2019)
- World AIDS Day (01.12.2019)
- Celebration of National Youth Day (12-01-2020)
- Celebration of Republic Day at University level with seven Volunteers participating in the Parade (26.01.2020)
- Martyr's Day (30.01.2019) - A two-minute silence was observed on Mahatma Gandhi's Martyer's Day on 30-01-2020.
- International Women's Day with active discussion on gender roles, gender parity and gender discrimination. (08-03-2020)
- Celebration of World TB Day (23-03-2020)
- Participation in Blood Donation Camp being organised by NCC (28-03-2020)
- Awareness programme for First Time Voters (29-03-2020)

6. GLIMPSES

RESEARCH Center for Geoinformatics



MoU with Directorate of Agriculture, Govt. of HP and CGRT for Research Project collaboration

College Activities

Educational Tour - 2019





**7th National level Evaluation Meeting of Development of framework for
Networking Programme on Village Information System at CGRT COBS
CSKHPKV on 24-25 September 2019**



National Service Scheme (NSS) / College Activities



Van Mahotsav (03-09-2019)



Parthenium Awareness Day (13-09-2019)



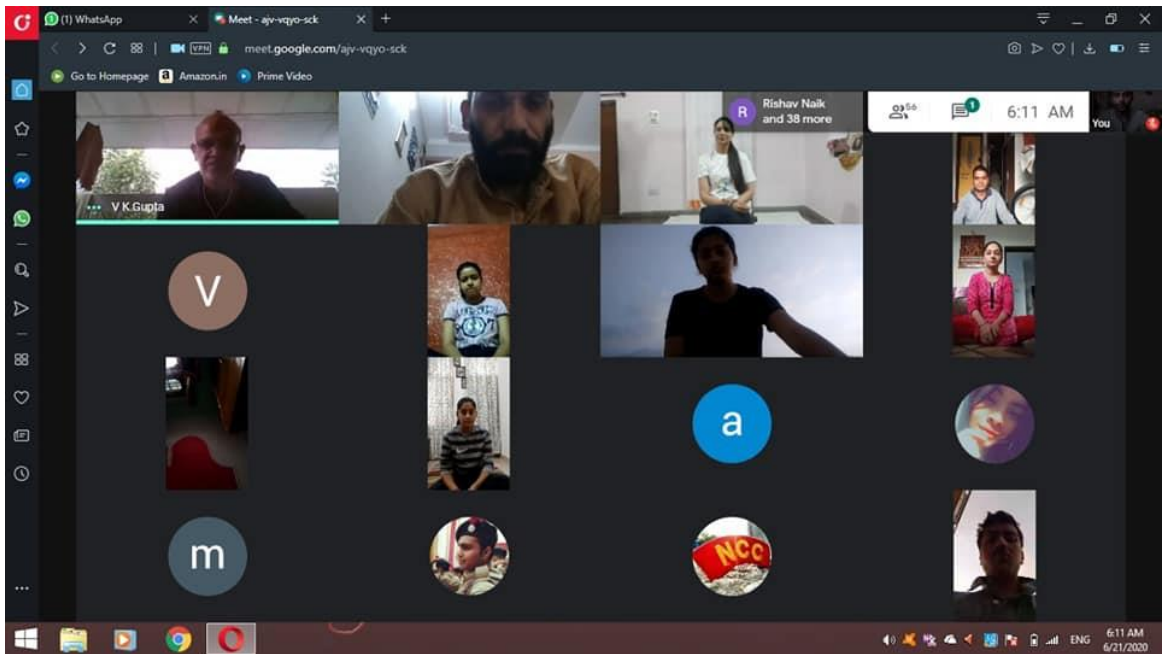
Celebrations of 150th Birth Anniversary of Mahatma Gandhiji



NSS Camp



World Environment Day(5-6-2020)



Online Virtual Interactions on Yoga Day

