

"Say No to Drugs and Yes to life"



COLLEGE OF BASIC SCIENCES

CSK Himachal Pradesh Krishi Vishvavidyalaya
Palampur(H.P.)-176062



Annual Progress Report 2021-22

COLLEGE OF BASIC SCIENCES
CSK Himachal Pradesh Krishi Vishvavidyalaya
Palampur(H.P.)-176062

ANNUAL REPORT

(For the year 2021-22)

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

TABLE OF CONTENTS

1.	ADMINISTRATIVE REPORT	1
1.1	Establishment	1
1.2	Mandate	1
1.3	Current Degree Programmes	1
1.4	Academic Departments/Centre	1
1.5	Department-wise Faculty position in the College	2
1.6	Department-wise staff position in the College	2
1.7	Students Intake during the Academic Year	3
1.8	Total Students Strength during the Academic Year	4
1.9	Students Passed Out during the Academic Year	4
1.10	Total Credit Hours offered during the Academic Year	4
1.11	Scholarships Awarded	5
1.12	Representation to various University Bodies from the College	6
1.13	Constitution of the Board of Studies of College	7
1.14	Grievance Redressal Committee	7
1.15	Sports, Games Cultural and Literary Committees	7
1.16	Anti-Ragging Monitoring Committee:	8
1.17	NSS and NCC Incharges of College	8
1.18	Science Club of College	8
1.19	Budget for Teaching Schemes	8
1.20	Alumini Association of COBS(CAABS)	9
1.21	Infrastructure Development during the Academic Year 2021-22	9
2.	TEACHING	9
2.1	Courses Offered	9
2.2	Thesis Completed	17
2.3	Member of Students' Advisory Committee (PG Programme)	17
2.4	Short Trainings	20
3.	RESEARCH	20
3.1	Ongoing Research Projects	20
3.2	Research Projects Sanctioned	22
3.3	Research Projects Completed	23
3.4	Research Projects Submitted	23
3.5	Research Highlights	25
3.6	Research Publications	37
3.6.1	Paper Published	38
3.6.2	Papers Presented in Conferences and Workshops	41
3.6.3	Books/ Book Chapters	41
3.6.4	Extended Summary/Abstract Published in Compendium	42
3.6.5	Technical Reports Submitted	42
3.6.6	Conferences/Workshops/ Colloquiums/ Short Courses/ Project Review Meets Organized	44
3.6.7	Workshops/Conference/ Seminars/ Training Programmes Attended	47
3.6.8	Name of faculty members/employee who has brought honour to the University in the form of awards and honours	52
4.	EXTENSION	51
4.1	Extension projects	51
4.2	Popular Articles	52
4.3	Organization of Extension Activity/One day Awareness programme	52
4.4	Lectures delivered by the Faculty Members	52

4.5	Pamphlets prepared	53
5.	MISCELLANEOUS ACTIVITIES	53
5.1	Income Generation	53
5.2	Paper setter/evaluator/external examiner	53
5.3	Faculty as referee/reviewer for Scientific Journals	54
5.4	Other Activities of Faculty	54
5.5	Events/ Celebrations during Academic Year	72
5.6	National Service SchemeActivities	72
6.	GLIMPSES	73



Preface

Basic Science is the mother of all inventions and it is now being given its due importance at ICAR and National level. The vision of the college is to nurture intellectually competent, morally upright, socially committed and spiritually inspired individuals, at the service of India and the world of today and tomorrow, by imparting holistic and personalized education. We aim to educate highly qualified candidates through research-oriented teaching and through a strong commitment to society. The faculty and staff 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.

During the period under report i.e. 2021-22, the College of Basic Science offered 418 credit hours of teaching to the Undergraduates and 93 credit hours to the Postgraduate Students of all the constituent colleges of the university during the period of report. 83 undergraduate and 2 post graduate students completed their degrees during the academic year 2021-22. Merit scholarships were awarded to 30 students and 3 students were awarded Amar Shaheed Captain Saurabh Kalia scholarship. An income of Rs.9,04,000/- was generated by various departments of the College.

Teachers of the College were actively involved in various research activities. 16 research projects funded by different agencies were in operation, 2 projects were completed, 2 research projects were sanctioned and 11 new research projects were submitted during the period under report. Numerous research papers were published and presented in National/International Conferences during the period under report. I heartily appreciate the efforts of all the faculty members as even during pandemic they performed all their duties in excellent manner. Students were also encouraged to participate in the online activities organized by the university. Students and staff actively participated in many events like Independence Day celebrations, Sadbhawana Diwas, Gandhi Jyanti Celebrations, National Mathematics Day, National Science Day, No Tobacco Day and World Environment Day. 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. 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. Sheela Thakur, Dr. Abhishek Walia and Dr. Banti Kumar deserve appreciation for meticulous work of compilation and shaping this report into its final and presentable form.

Palampur

**Dean
College of Basic Science**

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, 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
 - i. B.Sc. Physical Sciences (Three Years)
 - ii. B.Sc. 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)
 - iii. Master of Science in Microbiology (Two years)
3. Postgraduate Studies & Research (Doctorate Programmes)
 - i. 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 and Dean
2.	Dr.(Mrs.) Usha Rana	Professor & Head
3.	Dr. R.G. Upadhyay	Professor (Retired on 31.01.2022)
4.	Dr. (Ms.) Radhika Sharma	Assistant Professor
II. DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY		
1.	Dr.(Mrs.) Neelam Sharma	Professor and Head (Retired on 31.01.2022)
2.	Dr.(Mrs.) Suman Sharma	Assistant Professor
3.	Dr. Nageswer Singh	Assistant Scientist (Retired on 31.08.2021)
III. DEPARTMENT OF MICROBIOLOGY		
1.	Sh. Rajinder Kumar	Assistant Professor
2.	Dr. Rishi Mahajan	Assistant Professor
3.	Dr. Abhishek Walia	Assistant Professor
IV. DEPARTMENT OF PHYSICAL SCIENCES AND LANGUAGES		
1.	Dr. (Mrs) Sharda Singh	Professor and Head
2.	Sh. Kapil Sharma	Assistant Professor
3.	Dr.(Mrs.) SheelaThakur	Assistant Professor
4.	Dr.(Mrs.) ManjulaSharma	Assistant Professor
5.	Mr. Arun Kumar	Assistant Professor (On contract)
6.	Dr. Banti Kumar	Assistant Professor (On contract)
7.	Dr Abhishek Guleria	Assistant Professor (Joined on 23.12.2021) (On contract)
V. CENTRE FOR GEOINFORMATICS RESEARCH AND TRAINING		
1.	Dr. Ranbir Singh Rana	Programme Director
2.	Dr.(Mrs.) Sharda Singh	Professor
3.	Mr. Vaibhav Kalia	Assistant Professor

1.6 Department-wise Staff Position in the College

Sr.No	Name	Designation
DEAN OFFICE		
Ministerial Staff		
1.	Sh. J.P Thakur	Section Officer (Transferred to COBS on 16.08.2021)
2.	Sh. S.S. Shahota	S.S.S (From 10.11.21 to 28.06.2022)
3.	Sh. Vinod Kumar	Jr. Assistant
4.	Sh. Manohar Lal	Clerk
5.	Sh. Sanjeev Kumar	Clerk

Class –D		
1.	Sh. Sansar Chand	Beldar(Retired on 31.01.2022)
2.	Smt. Kamlesh Kumari	Sweepress
LAND SCAPPING SECTION (COBS)		
Class-D		
1.	Sh. Suresh	Beldar (transferred to COBS on 18.10.2021)
2.	Sh. Bishan Das	Chowkidar
3.	Sh. Bikram Chand	Chowkidar
DEPARTMENT OF BIOLOGY AND ENVIRONMENTAL SCIENCES		
Ministerial Staff – Nil		
Technical Staff-		
1.	Mr. Atul Kumar	Lab Attendant
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. Trilok Chand	Lab Attendant
2.	Ms. Shikha Chaudhary	Lab Attendant (Transferred on 31.03.2022)
DEPARTMENT OF MICROBIOLOGY		
Ministerial Staff - Nil		
Technical Staff:		
1.	Sh. Jai Raj	Sr. Technician
2.	Mrs. Swati Walia	Lab Attendant
Class-D Staff- Nil		
DEPARTMENT OF PHYSICAL SCIENCES AND LANGUAGES		
Ministerial Staff- Nil		
Technical Staff-		
1.	Sh. Krishen Kumar	Lab Attendent (Transferred on 29.04.2022)
2.	Sh Sushil Kumar	Lab Attendent(Transferred toPSL on 02.05.2022)
Class-D Staff-		
1.	Mr. Rohan Rana	Outsource (skilled)
2.	Mr. Naval	Outsource (un-skilled)
CENTRE FOR GEO-INFORMATICS RESEARCH AND TRAINING		
Ministerial Staff- Nil		
Technical Staff-		
1.	Sh. Shakti Chand	Jr. Technician
Class-D Staff- Nil		

1.7 Students Intake during the Academic Year

Total number of 69 admitted to undergraduate programme and 5 Post Graduate students during the Academic Session 2021-22 are as below:

Students Intake				
Programme		Boys	Girls	Total
B. Sc.(Undergraduate programme)	Life Sciences	09	21	30
	Physical Sciences	19	20	39
M. Sc. (Biochemistry)		-	-	-
M. Sc. (Environment)		-	-	-
Ph.D. (Biochemistry)		-	-	-
M.Sc. (Microbiology)		1	4	05

1.8 Total Students Strength during the Academic Year

In total 269 UG and 07 PG students were registered during the academic year and the break-up is:

Programme	Boys	Girls	Total
Total Students B. Sc.(UG)	93	176	269
Total Students M.Sc. & Ph.D(PG)	02	05	07
M.Sc. (Microbiology)	01	04	05
Ph.D. (Biochemistry)	01	01	02

1.9 Students Passed Out during the Academic Year 2021-22

The degrees were awarded to 83 UG and 2PG students as given below:

Programme	Boys	Girls	Total
Total B. Sc.(UG)	34	49	83
Total M. Sc. & Ph.D.	01	01	02
Ph.D. (Biochemistry)	01	01	02

1.10 Total Credit Hours offered during the Academic Year

The faculty of the college was engaged in the following teaching programmes of Undergraduate 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. Community 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		COCS		COVAS	
	UG	PG	UG	PG	UG	PG	UG	PG	UG	PG
Total	418	93	314	23	46	55	63	15	2	-
Biology and Environmental	106	11	97	-	7	11	10	-	2	-

Sciences										
Chemistry and Biochemistry	87	23	87	23	-	-	-	-	-	-
Microbiology	43	22	9	-	9	7	22	15	-	-
Physical Sciences and Languages	180	31	121	-	28	31	31	-		
C.G.R.T.	2	6	-	-	2	6	-	-	-	

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 (Life Sciences)

(For B. Sc. 1st year w.e.f. 06.02.2021 to 29.10.2021)

Sr. No.	Name of the student	Admission. No.	Amount
1.	Akanksha Rajput	S-2020-07-003	Rs.1000/-per month
2.	Sakshi Verma	S-2020-07-038	Rs.1000/-per month
3.	Anshika Rani	S-2020-07-010	Rs.1000/-per month
4.	Rujal Sharma	S-2020-07-035	Rs.1000/-per month
5.	Ritika Chaudhary	S-2020-07-031	Rs.1000/-per month

B.Sc.1st year (Physical Sciences)

(For B. Sc. 1st year w.e.f. 06.02.2021 to 29.10.2021)

Sr. No.	Name of the student	Admission. No.	Amount
1.	Nikhil	S-2020-08-033	Rs.1000/-per month
2.	Rishav Chauhan	S-2020-08-040	Rs.1000/-per month
3.	Supriya Rana	S-2020-08-054	Rs.1000/-per month
4.	Anshul Rana	S-2020-08-014	Rs.1000/-per month
5.	Anubhav Sood	S-2020-08-016	Rs.1000/-per month
6.	Divya	S-2020-08-018	Rs.1000/-per month

B.Sc.2nd year

(For B. Sc. 1st year w.e.f. 07.04.2021 to 02.09.2021)

Sr. No.	Name of the student	Admission. No.	Amount
1.	Anshika Walia	S-2019-04-024	Rs.1000/-per month
2.	Shalini Thakur	S-2019-04-090	Rs.1000/-per month
3.	Ashita	S-2019-04-029	Rs.1000/-per month
4.	Anukool Jamwal	S-2019-04-025	Rs.1000/-per month
5.	Sudhanshu	S-2019-04-094	Rs.1000/-per month
6.	Chakshu	S-2019-04-037	Rs.1000/-per month
7.	Shilpa	S-2019-04-092	Rs.1000/-per month
8.	Ayushi Dhiman	S-2019-04-035	Rs.1000/-per month
9.	Akshit	S-2019-04-010	Rs.1000/-per month

10.	Avinash Jamwal	S-2019-04-033	Rs.1000/-per month
-----	----------------	---------------	--------------------

B.Sc.3rd year

(For B. Sc. 1st year w.e.f. 05.11.2020 to 25.08.2021)

Sr. No.	Name of the student	Admission. No.	Amount
1.	Akriti	S-2018-04-014	Rs.1000/-per month
2.	Isha Parashar	S-2018-04-033	Rs.1000/-per month
3.	Sonia Thakur	S-2018-04-080	Rs.1000/-per month
4.	Mehak Sharma	S-2018-04-045	Rs.1000/-per month
5.	Nisha Kumari	S-2018-04-048	Rs.1000/-per month
6.	Akanksha	S-2018-04-011	Rs.1000/-per month
7.	Samriti	S-2018-04-070	Rs.1000/-per month
8.	Radha Bharti	S-2018-04-060	Rs.1000/-per month
9.	Vanshika Sharma	S-2018-04-088	Rs.1000/-per month

Amar Shaheed Capt. Sourbh Kalia Memorial Scholarship:

Class	Name	Admission. No.	Amount
1st Year	Anchal	S-2020-08-008	Rs.1000/-per month (w.e.f. 06.02.2021 to 29.10.2021)
2nd Year	Gaurav Kumar Guleria	S-2019-04-043	Rs.1000/-per month (w.e.f. 07.04.2021 to 02.09.2021)
3rd year	Samriti Sharma	S-2018-04-071	Rs.1000/-per month (w.e.f. 05.11.2020 to 25.08.2021)

Scholarships Awarded for Post Graduate Programme:

M.Sc. (Microbiology)	Admission No.	Period	Rate(In Rs)	Amount(In Rs)
Akriti	S-2021-30-001	One Year	3000	36000
Pratiksha Rana	S-2021-30-003	One Year	1500	18000
Rishika Mahajan	S-2021-30-005	One Year	1500	18000
Rishav Sharma	S-2021-30-004	One Year	1500	18000
Shweta Sagar	S-2021-30-006	One Year	1500	18000

1.12 Representation to various University Bodies from the College

Academic Council	
Dr.Anita Singh	Dean
Dr. Neelam Sharma(till 31.01.2022)	Professor & Head, Dept. of Chemistry & Biochemistry
Dr. (Mrs.) Sharda Singh	Prof & Head, Dept. of Physical Sciences & Languages
Dr.(Mrs.) Usha Rana	Professor & Head , Biology and Environmental Sciences w.e.f. 05.03.2022
Research Council	

Dr.Anita Singh	Dean
Dr Sharda Singh	Prof & Head, Dept. of Physical Sciences & Languages
Extension Council	
Dr.Anita Singh	Dean
Dr Sharda Singh	Prof & Head, Dept. of Physical Sciences & Languages
Educational and Resident Instructions Advisory Committee	
Dr. Anita Singh	Dean
Dr Sharda Singh	Prof & Head, Dept. of Physical Sciences & Languages

1.13 Constitution of the Board of Studies of College

Dr.Anita Singh	Dean	Chairperson
Dr. Neelam Sharma (till 28.9.2021)	HOD, Chemistry & Biochemistry	Secretary
Dr. Sharda Singh w.e.f. 29.9.2021	HOD, Physical Sciences & Languages	Secretary
Dr. R.G. Upadhyay (upto 31.01.2022)	HOD, Biology and Environmental Sciences	Member
Dr. Usha Rana w.e.f. 23.11.2021	Professor & HOD, Biology and Environmental Sciences	Member
Sh. Vaibhav Kalia	Assistant Professor (Computer Science)	Member
Dr. Suman Sharma	Assistant Professor (Chemistry)	Member
Dr. Abhishek Walia	Assistant Professor (Microbiology)	Member

1.14 Grievance Redressal Committee

1.	Dean	Chairperson
2.	Dr. Usha Rana, Professor	Member
3.	Dr. Rishi Mahajan	Member

1.15 Sports, Games Cultural and Literary Committees

The In-charges for various activities:

1.	Overall Incharge (Games & Sports)	Dr Ranbir Singh Rana
2.	Athletic	Sh. Vaibhav Kalia
3.	Football	Dr Suman Sharma
4.	Basketball	Dr Sheela Thakur
5.	Volley-ball	Dr Radhika Sharma
6.	Weight Lifting, and best physique	Sh. Arun Kumar

7.	Badminton	Dr Abhishek Walia
8.	Table-Tennis	Dr Rishi Mahajan
9.	Chess	Dr Usha Rana
10.	Mountaineering & Hiking	Dr R.G. Uphadayay
11.	Cultural Activities	Dr Usha Rana/ Sh. Kapil Sharma
12.	Literary Activities	Dr Manjula Sharma/Dr Banti Kumar

1.16 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 Suman Sharma	Convener	94181-65760
	Dr Banti Kumar	Member	99060-87667
	Mr Arun Kumar	Member	98823-67710
Squad No. 2	Sh Vaibhav Kalia	Convener	94184-73248
	Dr Rishi Mahajan	Member	94185-79118
	Dr Radhika Sharma	Member	85809-42328
Squad No. 3	Sh Kapil Sharma	Convener	94184-62229
	Dr Manjula Sharma	Member	94186-72721
	Dr Abhishek Guleria	Member	70184-22645

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).

1.17 NSS and NCC In-charges of College

1.	NSS In-Charge	Sh. Arun Kumar
2.	NCC In-Charge (University Level)	Dr. Ankur Sharma

1.18 Science Club of College

1	Dr. Sharda Singh	President
2	Dr. Suman Sharma	Secretary
3	Dr. Rakesh Chauhan	Joint Secretary
4	Dr. Abhishek Walia	Treasurer

1.19 Budget for Teaching Schemes

The budget expenditure incurred during the year 2021-2022 is given below:

Sr.No.	Scheme No.	Sponsoring Agency	Total Amount (Rs)
College of Basic Sciences			
1.	APL-006-25	State Govt. Scheme	400864/-
2.	APL-009-25	-do-	4817156/-
3.	APL-011-25(i)	-do-	12909630/-

4.	APL-011-25(ii)	-do-	1055967-
5.	APL-011-25(iii)	-do-	10300835/-
6.	APL-019-25	-do-	707981/-
7.	APL-011-26	-do-	21554/-
8.	APL-019-25	-do-	994410/-
Total			3,12,08397/-

1.20 Alumni Association of COBS (CAABS)

1.	President	Dr. Suman Sharma
2.	Secretary	Dr. Rakesh Kumar
3.	Treasurer	Dr. Abhishek Walia

1.21 Infrastructure Development during the Academic Year 2021-22

Centre for Geo-informatics

Details of infrastructure added under Capital Head under CAAST (Year 2021-22)		
Sr. No.	Equipment/Item Name	Amount (in Rs.)
1	Plant Canopy Imager and Analyser Model: - CI-110	997500
2	Ramps and Toilet for Disabled Person	153550
3	Renovation of PG Labs 6 no. Under the Project + Deductions (Others)	4718963
4	Spectrophotometer	262500
5	Air conditioner @ 5.5 tonnes with accessories	362251
6	Compact bench top cooling microcentrifuges	164388
7	Double Walled Autoclave vertical GMP model	98438
8	Electrophoresis large with power supply and other accessories	174300
9	Laboratory centrifuge medium-high speed	42313
10	Water bath with digital microprocessor control GMP Model	52500
11	Renovation of labs: Public health lab (Biosafety)- lab (Civil work)	100000
12	Generator @ 62-65 KVA (Backup system) along with accessories	971250
13	Books and Journals	425000
Total:		85,22,953

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	4+2	Dr.SudarshnaKumari

	Archeogoniate)		
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. Rishi Thakur
Bot 312	Cell and Molecular Biology	4+2	Dr. Radhika Sharma
Bot 313	Medicinal Botany	2+1	Dr. Anita Singh
Zoo311	Applied Zoology	4+2	Dr. Rakesh Kumar
Zoo312	Aquatic Biology	4+2	Dr. Rakesh Kumar and Dr. Radhika Sharma
Zoo 313	Aquarium Fish keeping	2+1	Dr.Madhu Sharma
College of Agriculture			
Bio 111	Introductory Biology	1+1	Dr. Rakesh kumar
Crop Physiol 231	Crop Physiology	1+1	Dr.R.G. Upadhyay& Dr. Usha Rana
Env.111	Environmental Science and disaster management	2+1	Dr. Rajesh Uppal
College of Community Science			
Env 111	Environmental Science and disaster management	2+1	Dr. Priyanka Kalia
Env.311(B.Sc. HHA)	Introduction to Environmental Sciences	2+0	Dr. Priyanka Kalia
Zoo 351	Elementary Human Physiology	2+1	Dr. Rakesh Kumar
FT.238 (B.Tech Food tech)	Environmental Science and disaster management	1+1	Dr. Priyanka Kalia
College of Veterinary and Animal Science			
Env.321	Introduction to Environmental Sciences	2+0	Dr. Priyanka Kalia
B. Postgraduate Courses			
PP.502/Biotech.552	Plant developmental biology	2+0	Dr. Usha Rana
Bio.534/PP.507	Photosynthesis and Respiration	2+1	Dr.R.G. Upadhyay
PP-501 (odd)	Cellular Physiology and plant water relation	2+1	Dr.R.G. Upadhyay& Dr. Usha Rana
PP-506(odd)	Physiology of crop plants-Specific case studies	2+0	Dr.R.G. Upadhyay& Dr. Usha Rana
Bio 537/PP503	Physiological and molecular responses of plants to abiotic stresses	2+1	Dr. Usha Rana
PP591	Masters Seminar	1+0	Dr.R.G. Upadhyay& Dr. Usha Rana
Semester-II			
A. Undergraduate Courses			

Bot 121	Plant Ecology and Taxonomy	4+2	Drs. Usha. Rana and Dr. Priyanka Kalia
Zoo 121	Comparitive Anatomy and Developmental Biology of Vertebrates	4+2	Dr. Rakesh Kumar and Dr. Radhika Sharma
Env.121	Environmental Studies	3+0	Dr. Priyanka Kalia
Bot. 221	Plant Physiology and Metabolism	4+2	Drs. Usha. Rana and Sudarshna Kumari
Zoo.221	Genetics and Evolutionary Biology	4+2	Drs. D.P. Pandey and Rakesh Kumar
Bot 322	Economic Botany and Biotechnology	4+2	Drs. Anita Singh,Radhika Sharma , Pawan Kumar, Sudarshna Kumari
Zoo 321	Immunology	4+2	Dr. Madhu Sharma and Dr. Radhika Sharma
Zoo 323	Public Health and Hygiene	2+1	Dr. Radhika Sharma
Odd semester courses			
Zoo111	Animal Diversity	4+2	Dr. Radhika Sharma
Crop Physiol 231	Crop Physiology	1+1	Dr.Sudarshna Kumari
B. Postgraduate Courses			
PP-501	Principles of Plant Physiology-I: Plant water relations and mineral nutrition	2+1	Dr.Sudarshna Kumari
PP-505	Hormonal Regulation of plant growth and development	2+1	Dr. Usha. Rana

Department of Chemistry and Biochemistry

Sr. No.	Course No.	Course title	Credit Hours	Name of Instructor
Semester-I				
A. Undergraduate Courses				
Chem. 111	Conceptual Organic Chemistry		4+2	Dr. Suman Sharma Dr. Bhanu Priya
Chem.112	Atomic Structure, Bonding, General Organic Chemistry & Aliphatic Hydrocarbons		4+2	Dr. Suman Sharma
Chem.211	Chemical Bonding, Transition Metal & Coordination Chemistry		4+2	Dr.Rishu Katwal
Chem.212	Solution phase, Equilibrium, Conductance, Electrochemistry and		4+2	Dr. Bhanu Priya

	Functional group Organic Chemistry-II		
Chem.311 (LS)	Analytical Methods in Chemistry	4+2	Dr. Suman Sharma
Chem.313	Chemistry of Main Group Elements, Theories of Acids & Bases	4+2	Dr. Bhanu Priya
Chem.315	Chemistry of Cosmetics & Perfumes	2+1	Dr. Rishu Katwal
B. Postgraduate Courses			
Biochem.501	Basic Bio Chemistry	3+1	Dr. Rishi Thakur
Biochem.503	Human Biochemistry	3+0	Dr. Rishi Thakur
Biochem.551	Techniques in Biochemistry	1+3	Dr. Rishi Thakur
Biochem.591	Master's Seminar	1+0	Dr. Rajan Katoch
Semester-II			
A. Undergraduate Courses			
Chem.121	Molecules of Life	4+2	Dr. Suman Sharma & Dr. Rishi Thakur
Chem.122	Chemical Energetics, Equilibria & Functional Group Organic Chemistry-I	4+2	Dr. Suman Sharma & Dr. Bhanu Priya
Chem.321	Bioinorganic & Environmental Chemistry	4+2	Dr. Suman Sharma
Chem.324 (PS)	Analytical Methods in Chemistry	4+2	Dr. Suman Sharma & Dr. Bhanu Priya
Chem.221	Physical Chemistry for the Biosciences.	4+2	Dr. Bhanu Priya
Chem.222	Transition Metal & Coordination Chemistry, States of Matter & Chemical Kinetics.	4+2	Dr. Rishu Katwal Dr. Bhanu Priya
B. Postgraduate Courses			
Chem.521	Electronic Chemistry	1+1	Dr. Suman Sharma
College of Community Science			
Biochem-121	Principles of Biochemistry	2+1	Dr. Rishi Thakur
College of Agriculture			
PB 121	Plant Biochemistry	1+1	Dr. Rishi Thakur
B. Postgraduate Courses			
Biochem.505	Techniques in Biochemistry	2+2	Dr. Rishi Thakur
Biochem.501	Basic Biochemistry	3+1	Dr. Rishi Thakur
Biochem.502	Plant Biochemistry	3+0	Dr. Rishi Thakur

Department of Microbiology

Sr. No.	Course No.	Course title	Credit Hours	Name of Instructor
Semester-I				
A. Undergraduate Courses				
	FT-112	General Microbiology	2+1	Dr. Abhishek Walia

MICRO 231	Fundamentals of Food Microbiology	2+1	Dr. Abhishek Walia
Micro 311	Techniques in Clinical Microbiology	2+1	Dr. Rishi Mahajan
FT-246	Food Biotechnology	2+1	Dr. Rishi Mahajan
FT 233	Industrial Microbiology	2+1	Dr. Rishi Mahajan
B. Postgraduate Courses			
MICRO 502	Principles of Microbiology	3+1	Dr. Abhishek Walia
MICRO 514	Microbial Control of Pests and Diseases	1+1	Dr. Abhishek Walia
MICRO 505 (Old Syllabi)	Techniques in Microbiology	0+2	Dr. Rishi Mahajan
MICRO 511 (Old Syllabi)	Soil Microbiology	2+1	Dr. Rishi Mahajan
MICRO 501 (New Syllabi)	Techniques in Microbiology	0+2	Dr. Rishi Mahajan
MICRO 505 (New Syllabi)	Soil Microbiology	2+1	Dr. Rishi Mahajan
MICRO 507 (New Syllabi)	Food Microbiology	2+1	Dr. Rishi Mahajan
MICRO 601 (New Syllabi)	Improvement in Fermentation Technology	2+1	Dr. Rishi Mahajan
MICRO 691 (New Syllabi)	Doctoral Seminar I	1+0	Dr. Rishi Mahajan
Semester-II			
A. Undergraduate Courses			
Ag.Micro 121	Agricultural Microbiology	1+1	Dr. Abhishek Walia
FT-122	Food Microbiology	2+1	Dr. Rishi Mahajan
B. Postgraduate Courses			
MICRO 503	Microbial Physiology and Metabolism	2+1	Dr. Abhishek Walia
MICRO 510	Industrial Microbiology	2+1	Dr. Abhishek Walia
MICRO 591	Masters Seminar	1+0	Dr. Abhishek Walia
MICRO-505	Techniques in Microbiology	0+2	Dr. Rishi Mahajan
MICRO-531	Food Microbiology	2+1	Dr. Rishi Mahajan
MICRO 504	Microbial Genetics	2+1	Dr. Rishi Mahajan
MICRO 591	Masters Seminar	1+0	Dr. Rishi Mahajan
MICRO 605	Plant Microbe Interaction	2+1	Dr. Rishi Mahajan
MICRO 691	Doctoral Seminar I	1+0	Dr. Rishi Mahajan

Department of Physical Sciences and Languages

S. No.	Course title	Course No.	Cr Hr	Name of Instructor
--------	--------------	------------	-------	--------------------

Semester I				
A. Undergraduate Courses				
Phys 111	Mechanics	4+2	Dr. (Mrs) Sheela Thakur	
Math 111	Differential Calculus	5+1*	Dr. (Mrs) Sharda Singh	
Eng 111	English Communication (Physical Sciences)	2+0	Dr. Vishaka Khajuria	
Eng 111	English Communication (Life Sciences)	2+0	Dr. Vishaka Khajuria	
Phys 211	Thermal Physics and Statistical Mechanics	4+2	Dr. (Mrs) Manjula Sharma	
Math 211	Real Analysis	5+1*	Dr Abhishek Guleria	
Comp 211	Computer Application (Physical Sciences)	2+1	Sh. Kapil Sharma	
Comp 211	Computer Application(Life Sciences)	2+1	Sh. Vaibhav Kalia	
Phys 311	Solid State Physics	4+2	Dr. Manjula Sharma	
Phys 312	Elements of modern Physics	4+2	Dr Sheela Thakur	
Math 311	Matrices	5+1*	Dr Abhishek Guleria	
Phys 313	Weather Forecasting	3+0	Dr. (Mrs.) Manjula Sharma / Dr. Ranbir Singh Rana	
College of Agriculture				
Eng 112	Comprehension and Communication Skills in English	1+1	Dr. Vishaka Khajuria	
Math 111	Elementary Mathematics	2+0	Dr Abhishek Guleria	
Math 111	Elementary Mathematics	2+0	Dr Abhishek Guleria [%]	
Stat 231 (Batch A)	Statistical Methods	1+1	Dr. Banti Kumar	
Stat 231 (Batch B)	Statistical Methods	1+1	Dr. Banti Kumar	
Stat 231	Statistical Methods	1+1	Dr. Banti Kumar [%]	
College of Community Science				
Eng 113	General English Language	1+1	Dr. Vishaka Khajuria	
Eng 113	General English Language	1+1	Dr. Akshita Khajuria [#]	
HHA-116	Languages Optional- Hindi/English	2+0	Dr. Vishaka Khajuria	
Stat 232	Elementary Statistics	2+1	Dr. Banti Kumar	
Stat 232	Elementary Statistics	2+1	Dr. Banti Kumar [%]	
FT 111	English Language	1+1	Dr. Vishaka Khajuria	
FT 237	Statistical Methods and Numerical	1+1	Mr. Arun Kumar	

	Analysis			
FT 237	Statistical Methods and Numerical Analysis	1+1	Mr. Arun Kumar [%]	
Repeat Courses				
Math 111	Differential Calculus	5+1	Dr Sharda Singh	
Phys 111	Mechanics	4+2	Dr Sheela Thakur	
Eng 111	English Communication	2+0	Dr. Vishaka Khajuria	
B. Postgraduate Courses				
Stat 511	Statistical Methods for Applied Sciences	3+1	Dr. Banti Kumar	
Stat 502	Statistical Methods for Applied Sciences	3+1	Sh. Arun Kumar	
Stat 511	Experimental Designs	2+1	Sh Arun Kumar	
Comp 501	Computer Fundamental and Programming	2+1	Sh. Kapil Sharma	
Mca 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. (Mrs) Sharda Singhand Dr Abhishek Guleria	
Phys 221	Waves and Optics	4+2	Dr. (Mrs) Manjula Sharma	
Math 221	Algebra	5+1*	Dr. Abhishek Guleria	
Stat 221	Elements of Statistics	2+1	Dr. Banti Kumar	
Comp 221	Databases with MS Access	2+1	Sh. Kapil Sharma	
Comp 222	Computer Programming using C Language	2+1	Sh. VaibhavKalia	
Phys 321	Nuclear and Particle Physics	5+1*	Dr. Sheela Thakur	
Phys 322	Digital Analog and Instrumentation	4+2	Dr. (Mrs) Manjula Sharma	
Math 321	Numerical Methods	5+1*	Dr. Abhishek Guleria	
Math 323	Vector Calculus	3+0	Dr. Abhishek Guleria	
College of Community Science				
FT 111	English Languages	1+1	Ms Vishaka Khajuria	

College of Agriculture(Regular/Repeat)				
	Stat 231	Statistical Methods	1+1	Dr. Banti Kumar
	Eng 111	Comprehension and communication Skills	1+1	Ms Vishaka Khajuria
	Math 111	Elementary Mathematics	2+0	Dr Abhishek Guleria
B. Postgraduate Courses				
	Stat 511	Experimental Designs	2+1	Mr. Arun Kumar
	Stat 512	Basic Sampling Techniques	2+1	Dr Banti Kumar
	MCA 501	Computer Fundamental and Programming	2+1	Sh. Kapil Sharma
	MCA 511	Introduction to Communication technologies, Computer Networking and Internet	1+1	Sh. Vaibhav Kalia
	MCA 512	Information Technology on Agriculture	2+0	Sh. Kapil Sharma/ Sh. Vaibhav Kalia
*Course with Tutorial				

Centre for Geo-informatics

Sr. No.	Course No.	Course title	Credit Hours	Name of Instructor
Semester-I				
A. Undergraduate Courses				
	GIS/Agron.358	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. Ranbir Singh Rana/ Vaibhav Kalia
Semester-II				
A. Postgraduate Courses				
	GIS-501	Geographic Information System and its Applications	2+1	Dr. Ranbir Singh Rana/ Vaibhav Kalia

2.2 Thesis Completed

Department of Chemistry and Biochemistry

Ph. D. (Biochemistry)

Sr. No.	Name of student & Admission No.	Title of Thesis	Name of Major Advisor
1.	S-2017-40-001	“Influence of organic vis-à-vis inorganic farming on quality parameters of Adzuki bean {Vigna angularis (Wild.) Ohwi & Ohashi}”	Dr. Nageswer Sing
3.	S-2017-40-002	“Biochemical and molecular studies on lignin biosynthesis in Tall fescue(Festuca arundinacea Schreb)”	Dr. Neelam Sharma

Centre for Geo-informatics

Sr. No.	Name of student & Admission No.	Title of Thesis	Name of Major Advisor
1.	Mr. Bheem Pareek A-2017-40-007	Modelling Crop Water Requirement using Weather Model and Spatial Data o Wheat under Limited Irrigations in North Western Himalayas completed on 04.01.2022	Dr Ranbir Rana
2.	Ms Himani Sharma A-2019-30-016	Mapping the Present and Futuristic Crop Water Requirement of Potato Using FAO-CROPWAT In Mid Hills Sub-Humid Region of HP – Completed on 21.10.2021	Dr Ranbir Rana

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 Ravi Sharma	A-2015-40-018
		MrShubhanshu	A-2016-40-016
		Ms Navdeep Kaur	A-2017-40-015
		Mr Ankit	A-2018-40-003
		Mr Kunal Narwal	A-2018-40-005
		Ms Shilpa	A-2018-40-008
		MrSukhchain	A-2018-40-009
		MsHimaliBijani	A-2019-40-029
		Mr Mohit Naik	A-2019-40-004
		MsJeevanjot Kaur	A-2019-40-014
		Mr Rahul Sharma	A-2020-40-006
		Ms Himani	A-2019-30-053
		Mr Tariq Sajjad	A-2019-30-063
Mr Himanshu Kamboj	A-2019-30-025		

		Ms BR Sinchana	A-2019-30-062
		MsAvnika Verma	A-2020-30-001
		Ms Shabnam Thakur	A-2020-30-017
		Ms Shagun Shukla	A-2020-30-018
		Ms Shweta Sharma	A-2020-30-066
		Mr Kumar Sanu	A-2021-30-108

Department of Chemistry and Biochemistry

Sr. No.	Name of Member of the Students' Advisory Committee	Name of the Student	Admission No.
1.	Dr. Nageswer Singh	Ms. Neerja Kharwal	S-2017-40-001
2.	Dr. Neelam Sharma	Mr. Sidharth Singh	S-2017-40-002
3.	Dr. Rajan Katoch	Mr. Sidharth Singh	S-2017-40-002
4.	Dr Suman Sharma	Ms. Anjali	A-2017-40-022
		Ms. Parita	A-2018-40-006
		Mr. Parveen Thakur	A-2017-40-024
		Ms. Anjali Thakur	A-2019-40-027
		Ms. Sakshi Vishvamitera	A-2019-40-031
		Ms. Rushali Katoch	A-2020-40-027
		Ms .Devanshi Baghla	A-2018-40-028
		Deepika Suri	A-2018-40-027
		Neha Chauhan	A-2018-40-029

Department of Microbiology

Sr. No.	Name of Member of the Students' Advisory Committee	Name of the Student	Admission No.
1.	Dr. Abhishek Walia	Shweta Sagar	S-2021-30-006
		Rishika Mahajan	S-2021-30-005
		Shagun Kapoor	H-2020-30-008
		Abha Thakur	H-2020-30-001
		Vishnupriya	H-2020-30-005
		Pooja Kumari	A-2020-40-005
		Vaishnavi	H-2021-40-002
2.	Dr. Rishi Mahajan	Archit Awasthi	H-2020-30-001
		Rishika Mahajan	S-2021-30-005
		Ruchika Thakur	H-2020-30-002
		Somyarki Upadhay	H-2020-30-004
		Mamta Chandel	H-2020-40-002
		Varun	A-2020-40-026
		Shweta Sagar	S-2021-30-006

Department of Physical Sciences and Languages

Sr. No.	Name of Member of the Students' Advisory Committee	Name of the Student	Admission No.
---------	--	---------------------	---------------

1.	Dr Sharda Singh	Ms. Ruchika Thakur	H-2020-30-002
		Ms. Shahina Khan	H-2020-30-003
		Ms Monika Rathi	A-2019-30-069
		Ms. Chaitanya Thakur	A-2021-30-041
		Mr. Nijit Chauhan	A-2021-30-049
		Ms. Sheetal Kashyap	A-2021-30-031
		Mr. Sachin	V-2021-30-010
		Ms. Shivalika Sood	A-2017-40-005
		Mr. Avinash Kumar	A-2016-40-001
		Mr Himanshu Thakur	A-2019-40-010
		Ms. Shagun Thakur	A-2021-40-016
2	Dr. Banti Kumar	Mahima Gopal	
		Sapna Bhardwaj	A-2020-30-006
		Shagun Katoch	A-2020-30-007
		Sargik Sharma	A-2021-30-004
		Shilpa Sen	A-2021-30-005
		Pratiksha Rana	S-2021-30-003
		Akriti	S-2021-30-001
		Shweta Sagar	S-2021-30-006
		Rishika Mahajan	S-2021-30-005
		Samridhi	A-2021-30-070
		Mr. Abhishek Kumar	A-2021-30-095
3	Mr Arun Kumar	Jyoti	A-2020-30-004
		Pratyush	A-2020-30-005
		Ajay Kumar	A-2021-30-063
		Gopika	A-2021-30-094
		Aanchal	A-2021-30-001
		Rishav Kumar	S-2021-30-004

Centre for Geo-informatics

Sr. No.	Name of Member of the Students' Advisory Committee	Name of the Student	Admission No.
1.	Dr Ranbir Rana	Ms. Jeevanjot Kaur (Ph.D.)	A-2019-40-014
		Ms. Ankita (MVSc)	V-2021-30-023
		Ms. Anjali (Ph.D.)	A-2017-40-022
		Ms. Rushali Katoch (Ph.D)	A-2020-40-027
		Mr. Varun Parmar (Ph.D)	A-2020-40-029
		Ms. Shivani (Ph.D)	A-2021-40-042
		Ms. Amisha Sharma (MSc)	A-2021-30-052

2.4 Short Trainings

- Dr Sharda Singh attended Two-Week Interdisciplinary Course in “ADVANCED CONCEPTS IN DEVELOPING MOOCS” from 07-21 January, 2022, conducted by Teaching Learning Centre, Ramanujan College, University of Delhi.

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.	Dr. Anita Singh (P.I.)	Establishment of Big Nursery under National Bamboo Mission	16	Dept. of Agriculture, HP	2019-23
2.	Dr. Anita Singh(P.I.)	Identification of genetically superior species for propagation and demonstration	13	Dept. of Agriculture, HP	2019-23
3.	Dr. Radhika Sharma(P.I.)	Termites a prospective solution for solid waste management	7.5 Lakhs	DEST	2019-2023

Department of Chemistry and Biochemistry

Sr. No.	P.I./Co-P.I.	Title of the Project	Budget outlay (in lakhs)	Funding Agency	Duration (year)
4.	Dr. Suman Sharma (PI)	Evaluation of Nutritionally Important biochemical constituents of promising Buckwheat, Chenopodium and Adzuki bean genotypes”	0.80	AICRP Project on PC	1 year (2021-22)

Department of Physical Sciences and Languages

Sr. No.	P.I./Co-P.I.	Title of the Project	Budget outlay (in lakhs)	Funding Agency	Duration of the Project (year)
1.	Dr. Sharda Singh (PI)	Geospatial Technology based Services to Department of Agriculture and Others	24.52	DOA & Others	Continue
2.	Mr Arun Kumar (Co-PI)	Forecasting Agriculture Output using Space Agrometeorology and Land Based Observations (FASAL) – Adhoc GOI 475-34	20.00	Indian Meteorological Department	5
3.	Sh Kapil Sharma (Co-PI)	Protected Agriculture Natural Farming	–	CAAST, NAHEP Jointly funded by ICAR & World Bank	3 Yrs. in collaboration with Prof. R. S. Rana
4.	Sh Kapil Sharma (Co-PI)	Agri Diksha Web Channel Services, AMA, PIMS eLearning	–	ICAR & World Bank funded project (Component II under NAHEP)	3 Yrs. in collaboration with Prof. R. S. Rana

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.	Dr. Ranbir S. Rana (P.I.)	Centre for Advanced Agricultural Science and Technology (CAAST) on Protected Agriculture and Natural farming	1891.2	ICAR, New Delhi	2019-22
2.	Dr. Ranbir S. Rana (P.I.)	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 SPLICE-Climate Change	2019-22
3.	Dr. Ranbir S. Rana (P.I.)	GRAMIN KRISHI MAUSAM SEWA (Agro meteorological Advisory Service) at Palampur	8.5p.a.	IMD	2012-2021

		in H.P			
4.	Dr. Ranbir S. Rana (P.I.)	Forecasting Agricultural Output using Space, Agro meteorology and Land based observations (FASAL)	4.5 p.a.	IMD	2012-2021
5.	Dr. Sharda Singh (P.I.)	Geospatial Technology based Services to department of Agriculture and Others	24.52	DOA and Others	Feb. 2020
6.	Dr Ranbir Rana (P.I.)	Investment in ICAR Leadership for Agricultural Higher Education under NAHEP Component 2A Project in ICAR-NAHEP-CAAST, CSKHPKV, Palampur Image Capturing of pests/ diseases in Crop/ Livestock for purpose of developing Artificial Intelligence (AI) based Mobile App under the project	6.0 /year	NAHEP ICAR New Delhi	2020-22
7.	Dr Ranbir Rana (P.I.)	Climate Vulnerability Assessment and Adaptation Technology of Agriculture at Block scale under Task Force on Himalayan Ecosystem Total budget 45.03 lakhs	45.03	NMSHE, DST Task force New Delhi	2021-2026

Department of Microbiology

Sr. No.	P.I./Co-P.I.	Title of the Project	Budget outlay (in lakhs)	Funding Agency	Duration of the Project
1.	Dr Abhishek Walia (Co-P.I.)	Efficacy of indigenous cow based formulations as soil inoculants and pesticides in agriculture	45.02	DBT, GOI	3 Years

3.2 Research Projects Sanctioned

Department of Microbiology

Sr. No.	P.I./Co-P.I.	Title of the Project	Budget outlay (in lakhs)	Funding Agency
1	Dr. Rishi Mahajan Component (P.I.)	“Protected Agriculture and Natural Farming (PANF) under National Agriculture Higher Education Project- Centre for Advanced Agricultural Science and Technology (NAHEP-CAAST programme).	Contingency: 10.5 Lakh Equipment: 27.81 Lakh Manpower: 10.40 Lakh PG	ICAR, NAHEP

			Labrenovation Rs. 6.13Lakh	
--	--	--	-------------------------------	--

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.	Dr Ranbir Rana	Climate Vulnerability Assessment and Adaptation Technology of Agriculture at Block scale		Task Force on Himalayan Ecosystem	

3.3 Research Projects Completed

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	Introduction and Evaluation of improved Russian Seabuckthorn Varieties in Lahaul-Spiti, Cold deserts of Himachal Pradesh	5/-	DRDO

Centre for Geo-informatics

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

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.	Dr. Radhika Sharma	Exploring the potential of local earthworm species of Himachal Pradesh and implications of its associated gut micro-flora	29,49,101/-	SERB-Power

2.	Dr. Radhika Sharma	Comprehensive training program on Vermicomposting under Swarnim Himachal Patra to Govt. of Himachal Pradesh.	Rs.4,54,000/training	Govt. of Himachal Pradesh.
----	--------------------	--	----------------------	----------------------------

Department of Physical Sciences and Languages

Sr. No.	P.I./Co-P.I.	Title of the Project	Budget outlay (in lakhs)	Funding Agency
1	Dr Sharda Singh Sh Vaibhav Kalia	GIS based mapping of KVKs farm area, infrastructure and Front Line Demonstrations (FLDs)	16.00	ICAR –Attari through DEE, CSKHPKV-Palampur
2	Dr. Manjula Sharma	Metal Oxide Based Nanofertilizers for Agriculture	10.00	HIMCOSTE, Shimla
3.	Dr Abhishek Guleria	Robust Information Measure To Solve Multi-Criteria Decision- Making Problrms Under Picture Fuzzy Setup	20.065	National Board For Higher Mathematics

Department of Microbiology

Sr.No.	P.I./Co-P.I.	Title of the project	Budget outlay Lakhs	Funding Agency
1.	Dr Abhishek Walia (P.I.)	Mining halophilic plant growth promoting bacteria from rock salt halophytes as potential bioinoculants for sustainable agriculture under salt stress	64.84	DST-SERB, Core Research Grant, Govt of India
2.	Dr Rishi Mahajan (CO-P.I.)	Developing technologies for nano-fertilizers and nano-pesticides and its mitigation potential indifferent production systems	45.00	H.P.Council of Science, Technology and Environment (HIMCOSTE)
4.	Dr Rishi Mahajan (P.I.)	Production of Microbial bio-formulations	2.50	HP SwarnimHimachal DrishtiPatra Govt. ofH.P.
5.	Dr Rishi Mahajan (P.I.)	Microbial Fermented food products	2.50	HP SwarnimHimachal DrishtiPatra Govt. ofH.P.

3.5 . Research Highlights

Department of Biology and Environmental Sciences

Research Highlight-1:

- Under the 2 research projects of National Bamboo Mission total of about 42,000 saplings of different species of Bamboo (*Dendrocalamus strictus*, *Dendrocalamus hamiltonii*, *Bambusa bamboo*) were supplied to Deputy Director of Agriculture Mandi, Hamirpur, Chamba and in addition 460 saplings and 166 culms were provided to farmers of nearby regions Rajpur, Bajnath, Deogran, Vandbihar, Thandol, and Bindraban.
- Six different species of Bamboo namely *Bambusa balcooa*, *Bambusa nutans*, *Bambusa vulgaris*, *Bambusa wamin*, *Bambusa tulda*, *Bambusa yellow vulgaris* were procured from GBPUAT, Pantnagar and acclimatized in the nursery established at Department of Biology and Environmental Sciences.



Seeds of Bamboo



Bamboo Seedlings



Filling of Polybags



Plantation of Bamboo seedlings in Polybags



Bamboo plants in Polyhouse

Sale of Bamboo Plants



Research Highlight-2:

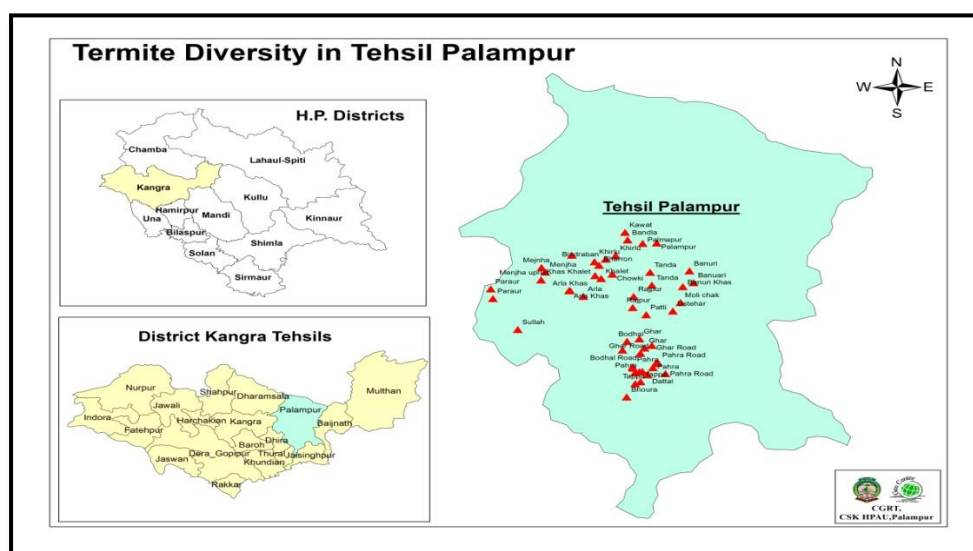
- Sale of around 88 quintal vermicompost and around 7 kg of vermiculture was done during the year 2021-22. In addition new beds were constructed to increase the production.



Research Highlight-3:

- Under the research project on Termites, Diversity of termites in and around Palampur region was studied. It was observed from the survey of 50 sites that the *Microtermes* spp. was maximum in diversity, as it was found in 19 sites. The diversity of other species followed the order, *Microtermes* spp.>*Coptotermesspp.*>*Odontotermesspp.*>*Heterotermesspp.*>*Speculitermes* spp. A

map of termite diversity was constructed using Arc-Map software to pin point the locations of different local termiteria sites.



Department of Chemistry and Biochemistry

Research highlight-1

- Cloned regulatory genes involved in lignification process in tall fescue viz., CCR, COMT and CAD with 1058, 1166 and 207bp. The reactions catalyzed by the enzymes COMT (Caffeic acid/5-hydroxyferulic acid *O*-methyltransferase), CCR (Cinnamoyl CoA reductase) and CAD (Cinnamoyl alcohol dehydrogenase) are crucial for lignin biosynthesis.
- Phylogenetic analysis revealed these genes from tall fescue and other monocots in separate distinct group.
- A close evolutionary relationship was observed between tall fescue with perennial ryegrass (*Lolium perenne*) as they shared same sub branch of monocotyledons clade.
- *In silico* analysis of RbL protein precursor of 280 amino acids isolated earlier was carried out with different bioinformatics tools. The analysis revealed acidic, stable, hydrophobic nature of RbL protein. ExPASy translate software was used to translate the RbL ORF sequence, which had been cloned and sequenced from immature rice bean seeds using a degenerate primers.
- The 3D structure of RbL protein was generated using homology modeling. β -D-galactose, N-acetyl-D-glucosamine, lactose and adenine were predicted as binding ligands for RbL protein using GalaxySite and LigPlot web server.

Centre for Geo-informatics

Project 1: Geo spatial technology-based services to Department of Agriculture and others Adhoc Misc -2246-34

Study Team: Dr. Sharda Singh, Dr. R.S. Rana & Mr. Vaibhav Kalia

Research Staff: Mr. Kunal Sood, Mr. Arun Kumar Kaushal

Key Outputs:

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 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, Hyderabad.

Prepared the following maps of district Una:-

- Tehsil/Sub-Tehsil maps upto gram panchayat level
- Block maps upto gram panchayat level
- Map showing all parcels of vacant Government land in district
- Maps showing the geo-demarcated boundaries of mining leases granted in the river bed

Project 2: Forecasting Agricultural Output Using Space, Agro Meteorology and Land Based Observations (FASAL)

Study Team: Dr. Ranbir Singh Rana , Dr Suresh Kumar Sharma and Dr B.S. Mankotia

Research Staff: Dr. Sachin

Key Outputs:

WHEAT & RICE

The simulated yield prediction for Wheat and Maize done for the season. The yield predicted for wheat which showed deviation of 20.5 and 13.1 % for F1 and F2 phase whereas for Maize two dates of 1st and 10th July with 20 and 40 Kg N was used for prediction and two fertilizers. The yield showed deviation from 25.0 %.

Project 3: 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

Study Team: Dr. Ranbir Singh Rana

Research Staff:

Key Outputs:

- The futuristic crop water footprints and net irrigation requirements for all districts of Himachal Pradesh with rainfall reduction of 10 and 20% along with 1,2, and 3⁰C maximum and minimum temperature were determined and validated using district-wise soil profiling were drawn from 64 sites analyzed across the Himachal Pradesh
- During *kharif* season, the major diseases observed were false smut, leaf blight, banded sheath blight, anthracnose of mash, collar rot of cowpea, target leaf spot & bacterial pustules of soybean, late blight and buck eye rot of tomato, *Cercospora* of capsicum, bacterial wilt of solanaceous crops, powdery mildew of tomato, capsicum and cucurbits and downy mildew of cucurbits.

- During *rabi* season, the major diseases observed were powdery mildew of wheat, powdery mildew and *Fusarium* wilt of pea, *Alternaria* blight of cabbage, purple blotch and downy mildew of garlic & onion and *Ascochyta* blight of gram.

Project 4: GRAMIN KRISHI MAUSAM SEWA (Agro meteorological Advisory Service) at Palampur in H.P

Study Team: Dr. Ranbir Singh Rana

Research Staff: NIL

Key Outputs:

- 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 103*4=412 in English and in Hindi prepared and 412 published IMD website (103 AAS Bulletins, during July 1, 2021 to June 30th, 2022 for Chamba, Una, Hamirpur and Kangra districts of H.P. and published in university website (http://hillagric.ac.in/index/kisano_ke_liye_soochna/crop_advisory.htm) 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 newspapers punjab kesari/ Amar Ujala etc. (35 newspaper clippings)
- Uploaded the advisory content for Chamba, Una, Hamirpur and Kangra districts of H.P in “MEGHDOOT APP” published twice in a week
- 15 SMS to 2.83 lakhs registered farmers sent during June 18,2021 to June 30, 2022 as per quota were sent to farmers of Chamba, Una , Hamirpur and Kangra through MKisan Portal of MOA, GOI , New Delhi and 15 SMS delivered to farmers totaling about 31.45 lakhs farmers.

Project 5: Studies on Measurements of Carbon dioxide fluxes through Eddy Covariance System funded by Indian Institute of Remote Sensing (IIRS) Dehradun

- **Study Team:** Dr. Ranbir Singh Rana
- **Research Staff:** NIL
- **Key Outputs:** Data on carbon fluxes are being recorded and related to crop yield of Rice and wheat and Potato

Project 6: CAAST, NAHEP ICAR sponsored Project on Protected Agriculture and Natural Farming

- **Study Team:** Dr. Ranbir Singh Rana
- **Research Staff:** Dr. Ruchi Sood
- **Key Outputs:**
- New facilitative units established to enable academic and research infrastructure like High tech Protected Structure Unit/Hydroponic Unit, Molecular lab, Creation of Phytotron facility and Students Research Park, Bio-control Laboratory, Nutritional Garden,

Installation of soil nutrient-based fertigation system and pressure bomb and strengthening and renovation of polyhouses (16 Nos.) and PG labs (6 No).

- Hydroponic unit and Plant Growth Chamber established, and crop production started under establishment of PANF as national level advanced training center.
- Knowledge Center “Center for Protected Cultivation Technology (CPCT) ICAR-IARI, New Delhi” developed.
- Under Environment Sustainability Plan, the Nutritional Garden was established. Fruit trees medicinal & aromatic plants were planted with participation of Post Graduate students as Graduation ceremony.
- Virtual class room and Agri Diksha Web portal established to strengthen agricultural education through ICT interventions
- 3 Nos of National Trainings were planned and focused for the students in the National Institutes of repute.
- Organized National and International conferences/expert lectures/brain storming sessions in online and offline-hybrid mode in the thematic research areas. Under the CAAST project, a total of 13 webinars were conducted in which about 1629 people across the country including scientists, farmers, students, researchers, extension workers and other field functionaries attended the webinar’s and got benefitted from it.
- 4 No of Skill Development certificate courses namely Commercial Hybrid Seed Production of Vegetable Crops, Protected Cultivation of Vegetable Crops, Personality Development programmes for students, Pest Management under Protected Cultivation were prepared and submitted in the Academic Council for enactment.
- 11 Nos of MOU’s/LOI established with National and International Institutes/Universities for knowledge sharing, training to PG students, collaboration in holding symposium, training and conferences and exchange of information etc.
- 4 No. of Brouchers highlighting activities and achievements of the project have been published namely Protected Agriculture & Natural Farming: Activities and Salient Achievements (In Hindi and English) and Protected Cultivation of Vegetable Crops, Intellectual property rights policy guidelines. 2 No Manuals (Phytotron for speed breeding and precision agriculture under changing climate scenario, Plant, microbe interaction under protected agriculture and natural farming), 1 No of Handbook of principles and Practices in Natural farming and 1 No of Coffee Table Book.

Project 7: Component II, NAHEP ICAR and World Bank Project Investment in ICAR Leadership for Agricultural Higher Education under NAHEP Component 2A Project in ICAR-NAHEP-CAAST, CSKHPKV, Palampur

- **Study Team:** Dr. Ranbir Singh Rana
- **Research Staff:** -Nil-
- **Key Outputs:**
- NIBPP App: 4050 Photographs of four crops uploaded for app development- As PI and Admin
- Agri-Diksha Web Channel: Arranged total 110 lectures uploaded and approved As PI and Admin
- E- Learning: 4 content creator and 3 Unit reviewer uploaded and approved NAHEP, Comp2– As PI and Admin
- Academic Management System: AMS implemented and data of 263+1265=1528 faculty and students uploaded, all examination schemes uploaded also– As PI and Admin

- Project Management Information System: implemented and data of projects 19 uploaded– As PI and Admin

Project 8: Climate Vulnerability Assessment and Adaptation Technology of Agriculture at Block scale under Task Force on Himalayan Ecosystem

- **Study Team:** Dr. Ranbir Singh Rana
- **Research Staff:** NIL
- **Key Outputs:**
- The process of the equipment procurement completed. Questionnaire for survey was developed for the climate vulnerability assessment and adaptation technology of agriculture at block scale and same has been tested also

Department of Microbiology

Research highlight:

Dr. Abhishek Walia:

- **Physico-chemical and microbial characterization of cow dung** from different cow breeds namely *Pahari* lactating, *Pahari* dry, Sahiwal lactating, Sahiwal dry, Jersey lactating, Jersey dry, and *Pahari* bull.
- **Physico-chemical characterization of Cow dung:**
- Dung of these selected six cows and one bull were analysed for the physico-chemical and microbial characterization.

Table 1. Physico-chemical characterization of cow dung

Sr. No.	Cow dung samples of different cow breeds	pH	N %	P %	K %	EC (mSm ⁻¹)
1.	<i>Pahari</i> lactating	5.33	0.357	0.119	0.865	5.41
2.	<i>Pahari</i> dry	5.26	0.369	0.124	0.892	5.22
3.	Sahiwal lactating	4.83	0.346	0.113	0.858	6.52
4.	Sahiwal dry	5.13	0.349	0.117	0.860	5.43
5.	Jersey lactating	5.30	0.336	0.106	0.846	4.43
6.	Jersey dry	4.93	0.340	0.109	0.848	4.23
7.	<i>Pahari</i> bull	5.60	0.354	0.117	0.864	6.82
	SE m±	0.060	0.001	0.001	0.001	0.035
	CD(5%)	0.185	0.002	0.003	0.003	0.106

A perusal of data presented in Table 1 shows that highest value of pH (5.60) was recorded in the dung of *Pahari* bull, while significantly higher values of N, P and K (0.369 %, 0.124%, 0.892%) were observed in dung of *Pahari* dry, respectively, and it was found to be statistically at par with *Pahari* lactating (0.357%, 0.119%, 0.865%). Lowest value of N, P and K were recorded in the dung of Jersey lactating. Significantly, highest value of EC was recorded in cow dung of *Pahari* bull followed by dung of Sahiwal lactating, whereas lowest value was observed in Jersey dry.

1.2 Microbial characterization of cow dung:

One thousand two hundred and sixty-three (1263) bacteria were isolated from dung of six different cows and one bull. Maximum microbial count of cow dung from different cow breeds and bull was found on first day. Microbial count (25.2×10^6 cfu/g) was found maximum

in *Pahari* lactating followed by *Pahari* dry (24.7×10^6 cfu/g), whereas minimum microbial count (20.2×10^6 cfu/g) was found in Sahiwal dry as shown in Table 2. Thirty two isolates were found morphologically different from each other and were further selected for screening of various plant growth promoting (PGP) traits i.e., nitrogenase activity, phosphate solubilization, hydrogen cyanide (HCN) production, Indole acetic acid (IAA) production and siderophore production. Percent of cow dung isolates of different breeds showed PGP traits showed in Figure 1. Out of these thirty-two bacterial isolates screened for PGP activities, twenty isolates found positive for nitrogen fixation, twenty seven were found positive for P-solubilization, twenty showed siderophore production, twenty seven found positive for IAA production and all were found negative for HCN production. Cow dung isolates showing plant growth promoting activities shown in Figure 2.

Table 2. Microbial count of cow dung on nutrient agar media ($\times 10^6$ CFU/g)

Sr. No.	Cow dung samples of different cow breeds	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1.	<i>Pahari</i> lactating	25.2	23.1	21.7	19.5	16.3	12.8	9.5
2.	<i>Pahari</i> dry	24.7	22.6	20.3	17.4	15.3	11.7	6.6
3.	Sahiwal lactating	20.7	18.3	15.8	12.7	8.9	4.3	2.2
4.	Sahiwal dry	20.2	17.6	13.8	10.2	5.8	2.8	1.4
5.	Jersey lactating	22.2	19.5	16.9	14.2	11.7	8.4	4.8
6.	Jersey dry	21.1	17.2	14.4	11.9	8.2	6.7	3.1
7.	<i>Pahari</i> bull	23.8	22.6	19.8	15.8	12.0	9.8	5.8
	CD (5%)	0.157	0.128	0.184	0.185	0.252	0.215	0.259

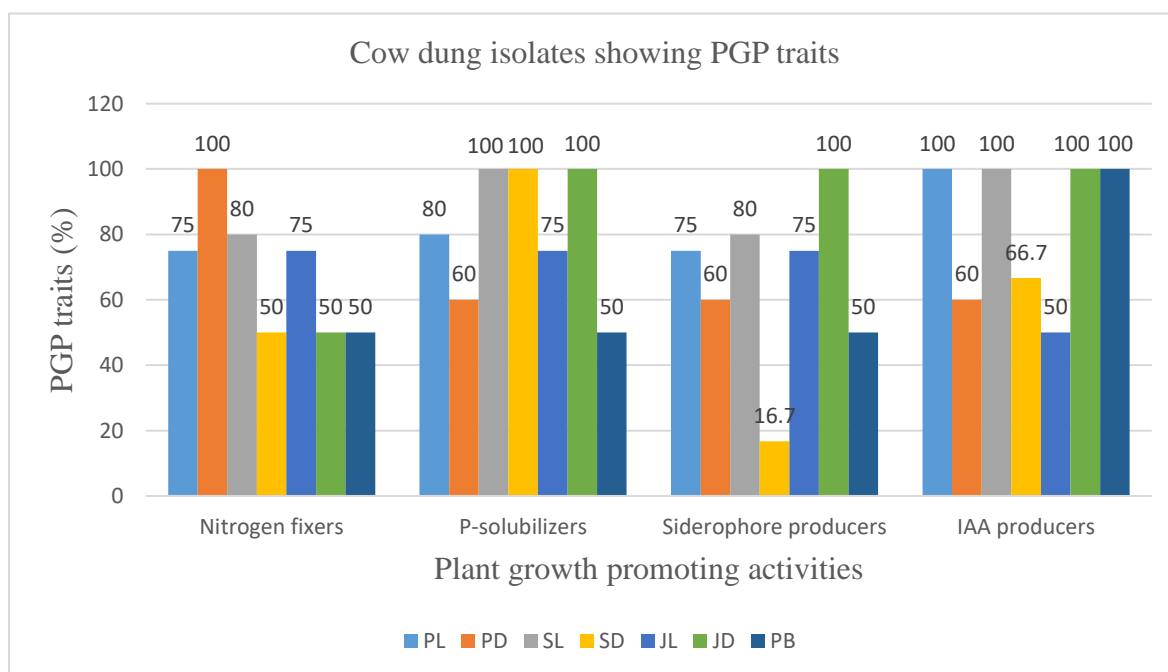


Figure 1. Percent of cow dung isolates of different breeds showing PGP traits

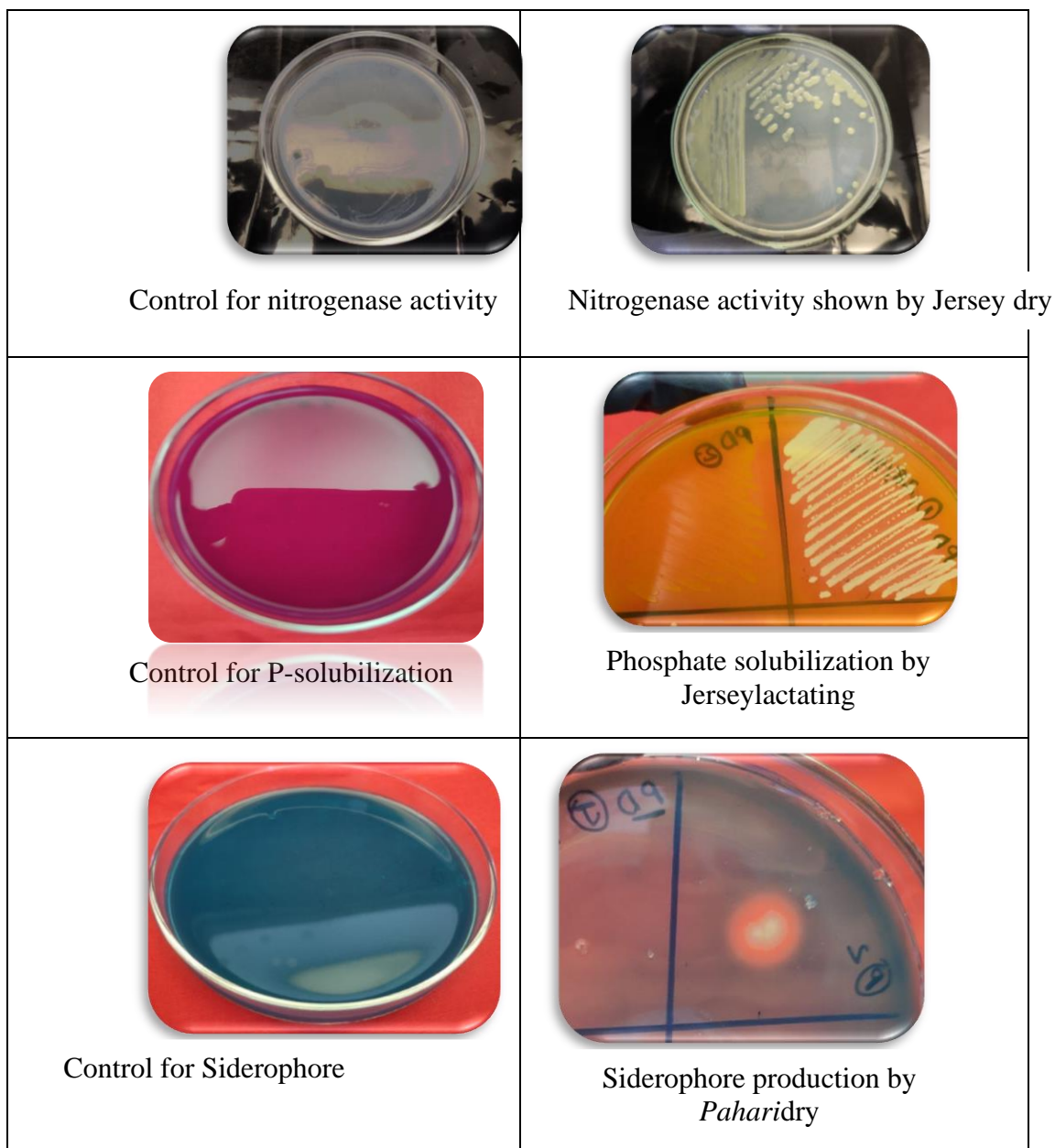


Figure 2. Cow dung isolates showing plant growth promoting activities

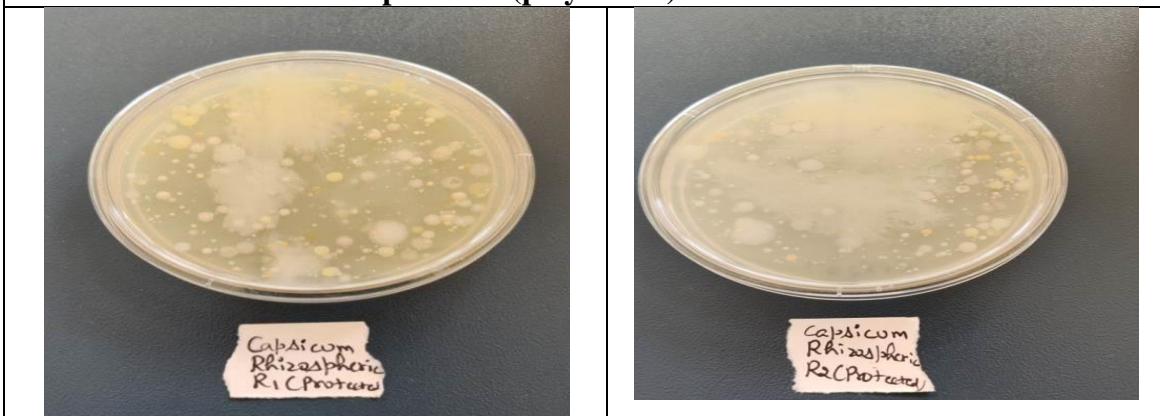
Dr Rishi Mahajan

1. Isolation of indigenous microbial isolates were carried out from the following crops

- a) *Capsicum annuum* L. var. California wonder (Capsicum)
- b) *Cucumis sativus* L. var. Kyan and Damini (Cumber)
- c) *Solanum lycopersicum* L. var. Avatar (Tomato)
- d) *Capsicum frutescens* L. var. Surajmukhi (Chilli)



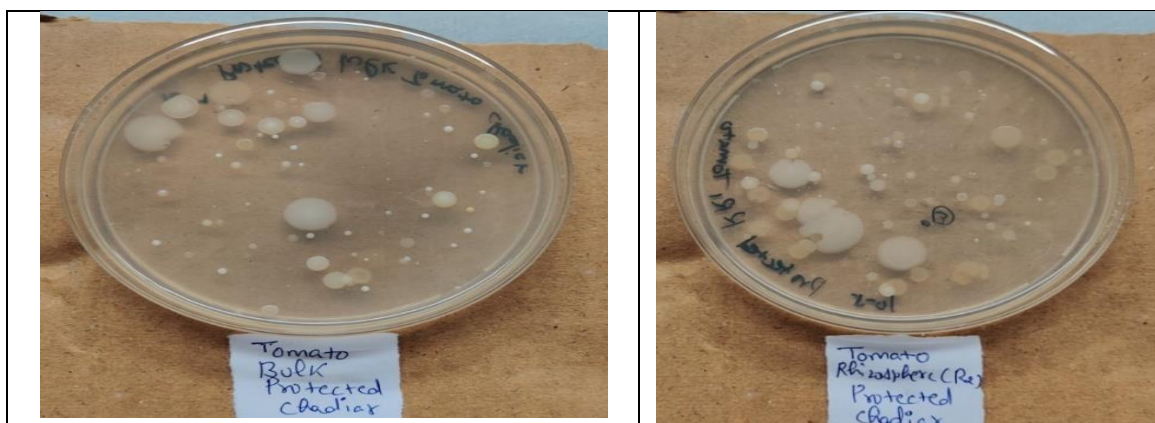
An overview of Collection of samples from capsicum grown in protected(poly house) conditions



Population of bacteria isolated from Capsicum grown under protected (poly house) conditions



An overview of collection of samples from Tomato grown in protected (poly house) conditions



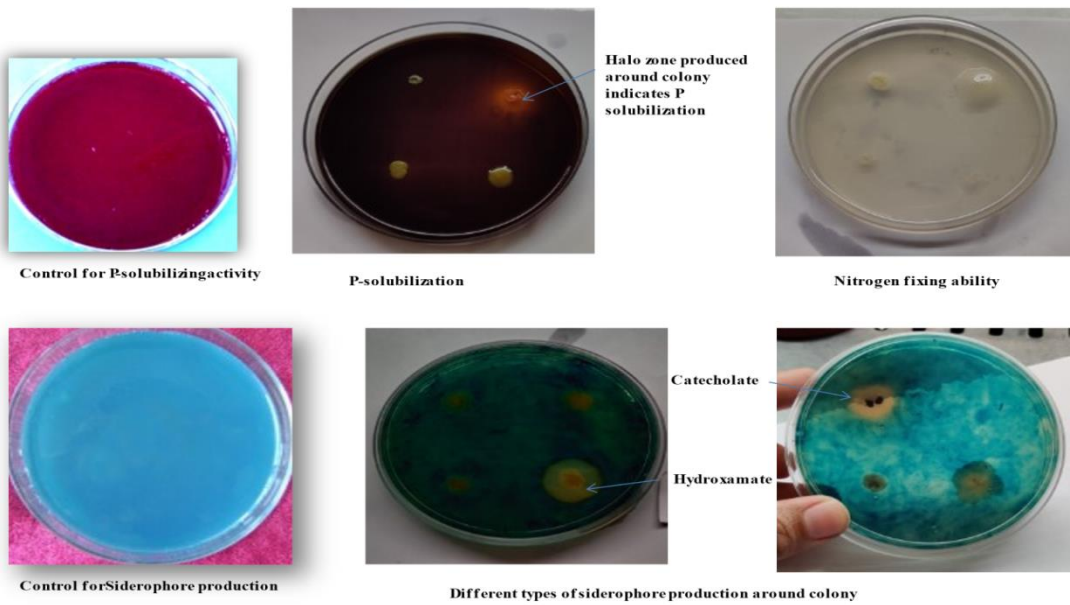
Population of bacteria isolated from tomato grown under protected (poly house) conditions



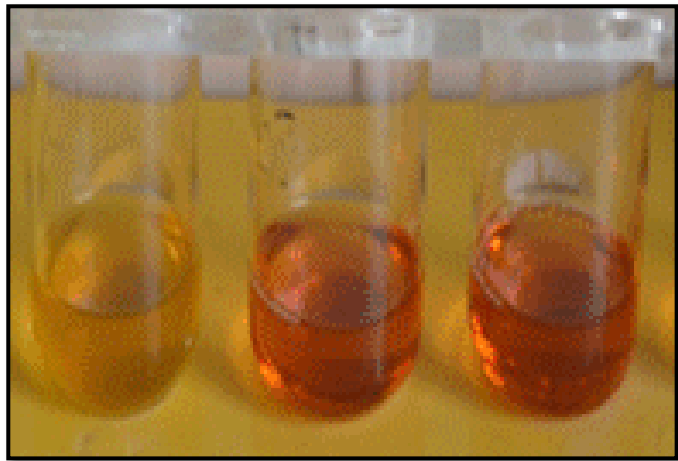
An overview of Collection of rhizospheric and bulk soil samples of Chilli grown in protected (poly house) conditions

Characterization of microorganisms with plant growth promoting abilities

The microbial isolates were screened for plant growth promoting abilities *viz.* Phosphates solubilization, siderophore production, indole -3- acetic acid production. A total of 103 microbial isolates were isolated. Out of total isolated 20 isolates exhibited phosphorus solubilizing ability; 51 isolates exhibited siderophore producing ability; 63 isolates exhibited ability to grow on nitrogen free medium.



In vitro screening of plant growth promoting traits (qualitative)



IAA production

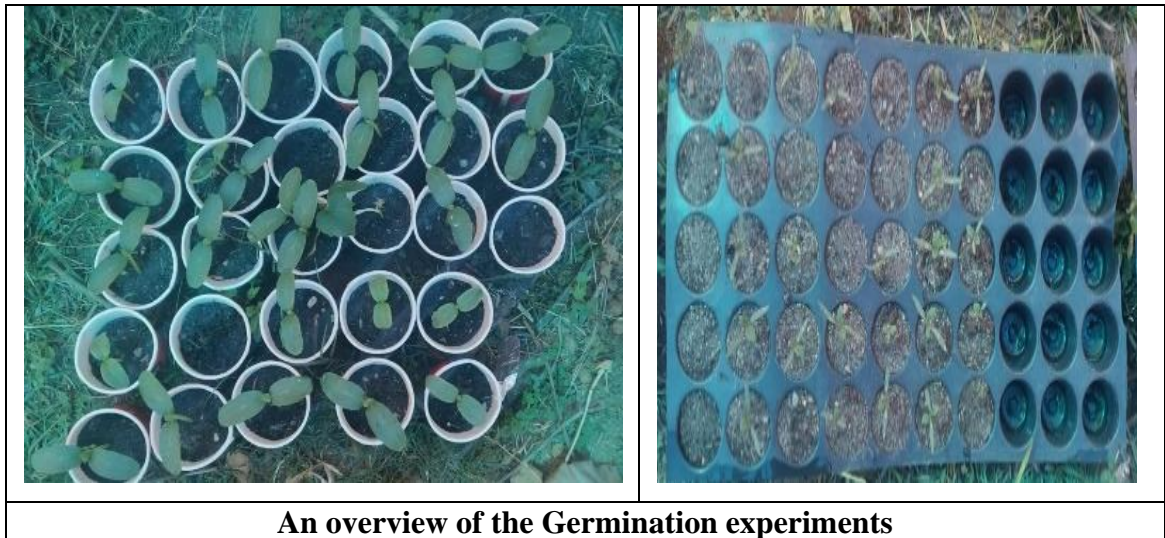
2. Screening of microbial isolates for enhanced germination

The most promising results for enhanced germination were observed in case of cucumber and tomato crops.

In Cucumber consortia of microbes (7) prepared from protected cultivation resulted in 100 per cent germination whereas consortia of microbes (5) prepared from unprotected cultivation resulted in 83 per cent germination. However, under control of Cucumber the germination was only 50 per cent

In Tomato consortia of microbes (7) prepared from *protected cultivation* resulted in 90% germination whereas consortia of microbes (2) prepared from

unprotected cultivation resulted in 73 per cent germination. However, undercontrol of Cucumber the germination was only 70 per cent



3. Microbiological waste management

Pine forest litter is amongst the major cause of forest fires and is often considered a recalcitrant because of lignocellulosic complexities. Employing microbiological interventions significant alterations have been observed in the



lignocellulosic structure of the pine needles.

Significant alterations in Pine needle's lignocellulosic complexities

3.6 Research Publications

Summary Statistics of Publications

		B& ES	Chem & Biochem	PSL	Micro	CGRT
a.	Total Nos of publications (only Published)	6	12	4	8	5
i)	Research Publication (Nos)	5	5	4	2	4
ii)	Extension Publications (Nos)	-	1	-	-	1
iii)	Other Publications (Nos)	1	1	-	6	-
b.	Book Published (only book)	-	2	-	-	-
i)	Name of Book	-	<ul style="list-style-type: none"> • Ricebean-exploiting the potential of an underutilized legume”, published by Springer, New York. • Nutritional Quality Management of Forages in Himalayan Region. Springer Nature Singapore Pte Ltd., 152 Beach Road, #21-01/04. 	-	-	-
ii)	Name of Author	-	Dr Rajan Katoch	-	-	-
iii)	Name of Publishers	-	Springer Nature	-	-	-

3.6.1 Paper Published

Department of Biology and Environmental Sciences

- Madhu Sharma, Pooja Chadha and **Radhika Sharma**. Environmental biomonitoring using different biomarkers and their contribution in aquatic environmental research. International Journal of Fisheries and Aquatic Studies 2021; 9(5): 205-214. <https://doi.org/10.22271/fish.2021.v9.i5c.2570>(NAAS Rating-5)
- Poonia, A. Ghanghas, **R. Sharma**, M. Jangra and V. Sindhu Trends in CITES listed birds trade in South Asian countries in view of evolution of Indian's last during last 4 decades. International Journal of Ecological Economics and Statistics; vol.431 96-115. (NAAS-6).
- **Radhika Sharma** and Madhu Sharma (Jan 2022). Termidegradation: Solution for Solid Waste Menace. Bhartiya KirishiAnusandhanPatrika DOI: 10.18805/BKAP360(NAAS Rating-3.91)
- Sharma, V., **Sharma, R.**& Sharma, V. L. (2022). Andrographis paniculata mitigates first-line anti-tubercular drugs-induced nephrotoxicity in Wistar rats.

Biomarkers, 1-13. <https://doi.org/10.1080/1354750X.2022.2043444> IF- 2.658
NAAS Rating- 8.66

- Amit Kumar, Asha Poonia, Ankur Kumari, Jyoti Dalal, Pushap Lata, Nidhi Verma, **Radhika Sharma**. (Jan-june 2022) Cost Effective and sustainable plastic biodegradation using microbiota. *Shodhasamhita*, 9(5): 80-95. ISSN-2277-7067 (ugc-care list)

Department of Physical Sciences and Languages

- Rana RS, Kalia V, **Singh S**, Randhava SS, Chauhan R, Katoch A, Sandal A, Thakur RK and Upadhyay S.K. 2021. Climate Vulnerability Assessment of Farming Systems in Himachal Pradesh, Indian Himalayas. *mountain Research and Development, Mountain Research and Development*, 41(4):R50-R60 (<https://doi.org/10.1659/MRD-JOURNAL-D-20-00056.1>) (NAAS Rating_2022: 7.19)
- **Kumar B**, Sharma M, Bhat A and Kumar A. 2021. An Analysis of Indian Agricultural Workers-A Ridge Regression Approach. *Agricultural Economics Research Review*. 34(1):121-127.
- Abubakar AA, Arora G, **Kumar B** and Danjuma M 2022. The optimal number of servers in a many server queuing system. *Journal of Physics. Conference Series*. 2267(2022)012105.
- **Kumar A**, Goyal M and Kumar N 2021 A Class of Tests Based Jointly on Sub-Sample Minimum and Median. *Journal of the Kerala Statistical Association* 32(1): 01-17
- Bajaj, R. K., & **Guleria, A.** (2021). T-spherical Fuzzy Soft Matrices with Applications in Decision Making and Selection Process. *Scientia Iranica*, doi: 10.24200/sci.2021.55856.4440 (Article in Press)

Department of Microbiology

- Junta, M. K., Gupta, A. K., & **Mahajan, R.** (2021). Biological control of hairy root (*Rhizobium rhizogenes*) in apple nurseries through *Rhizobium radiobacter* antagonists (strain K-84 and native strain UHFBA-218). *Biological Control*, 164, 104762. Impact Factor: 3.857/ NAAS Rating: 9.69
- Sharma S, Chahal Aj, Prasad H, **Walia A**, Kumar R and Dobhal S. 2021. Identification, phylogeny and transcript profiling of ERF family genes during temperature stress treatment in Pea (*Pisum sativum* L.). *Journal of Plant Biochemistry and Biotechnology*. <https://doi.org/10.1007/s13562-021-00709-6>. NAAS rating: 7.18

Centre for Geo-informatics, Research & Training

Dr. Ranbir Rana

- B. Pareek, **R. Singh Rana**, S. Manuja, S. K. Sandal, V. Kalia, and K.K. Singh .2021 Modeling crop water requirement using weather model under elevated temperature scenarios for scaling up quality of weather based agro advisory. *Journal of Crop and Weed*, 17(2): 80-86 (2021) ISSN- O: 2349 9400; P: 0974 6315 **631 (NAAS Rating_2022: 5.46)** DOI: [10.22271/09746315.2021.v17.i2.1455](https://doi.org/10.22271/09746315.2021.v17.i2.1455)
- **Ranbir Singh Rana**, Vaibhav Kalia, Sharda Singh, S. S. Randhawa, Ramesh Chauhan , Anup Katoch , Anupama Sandal , Rajesh Kumar Thakur , and S. K.

Upadhyay. 2021. Climate Vulnerability Assessment of Farming Systems in Himachal Pradesh, Indian Himalayas. Mountain Research and Development Vol 41 No 4 Nov 2021: R50–R60 (<https://doi.org/10.1659/MRD-JOURNAL-D-20-00056.1>) (NAAS Rating _2022: 7.19)

- Shilpa, Parveen Sharma, Vandana Thakur, Akhilesh Sharma, **R. S. Rana** & Prabhat Kumar. 2022. A status-quo review on management of root knot nematode in tomato. The Journal of Horticultural Science and Biotechnology, Vol. 97 (1): 1-14 DOI: 10.1080/14620316.2022.2034531 (<https://doi.org/10.1080/14620316.2022.2034531>) (NAAS Rating _2022: 7.64)
- **Ranbir Singh Rana**, Ruchi Sood, Vaibhav Kalia, Kapil Sharma. 2021. Validation and Application of Extended Range Rainfall Forecast for Crop Planning in Sub-Humid and Wet Temperate Climatic Conditions of Himachal Pradesh. *Indian Journal of Hill Farming Special Issue* 2021, Volume-34, Page 22-30) (NAAS Rating _2022: 5.04)
- Anamika Chandel, Akhilesh Sharma, Parveen Sharma, Sandeep Manuja, **Ranbir Singh Rana** and S.S. Rana. 2022. Seeding time, fertility level and genotype influence on productivity, quality and profitability of garden pea (*Pisum sativum*). *Indian Journal of Agronomy* 67 (1): 30-37 (March 2022) (NAAS Rating _2022: 5.55)
- Sharma, A., Rani, M., Lata, H., Thakur, A., Sharma, P., Kumar, P., Jaiswal, D.K., **Rana, R.S.**, Global dimension of root rot complex in garden pea: Current status and breeding prospective, *Crop Protection* (2022), doi: <https://doi.org/10.1016/j.cropro.2022.106004>. (NAAS 2022 _8.57)
- **Ranbir Singh Rana**, Sanjeev Kumar Sandal, Shivani Thakur, Ranu Pathania, Ruchi Sood. 2021. Climate change implications and simulated adaptations in rainfed rice production under sub-humid climate of North Western Himalaya. *Indian Journal of Hill Farming* December 2021, Volume 34, Issue 2, Page 1-8. (NAAS Rating _2022: 5.04)
- Arundhati , R.M. Bhagat and **R.S. Rana**. 2021. Climate Change Induced spatio-temporal Changes in Area, Production and Productivity of Apple in Four Major Apple Growing Districts of Himachal Pradesh, India. *International Journal of Theoretical & Applied Sciences*, 13(2): 46-51(2021) (NAAS Rating _2022: 3.60)

Mr. Vaibhav Kalia

- B. Pareek, R. Singh Rana, S. Manuja, S. K. Sandal, **V. Kalia**, and K.K. Singh .2021 Modeling crop water requirement using weather model under elevated temperature scenarios for scaling up quality of weather based agro advisory. *Journal of Crop and Weed*, 17(2): 80-86 (2021) ISSN- O: 2349 9400; P: 0974 6315 631 (NAAS Rating _2022: 5.46) DOI: 10.22271/09746315.2021.v17.i2.1455
- Ranbir Singh Rana, **Vaibhav Kalia**, Sharda Singh, S. S. Randhawa, Ramesh Chauhan , Anup Katoch , Anupama Sandal , Rajesh Kumar Thakur , and S. K. Upadhyay. 2021. Climate Vulnerability Assessment of Farming Systems in Himachal Pradesh, Indian Himalayas. Mountain Research and Development Vol 41 No 4 Nov 2021: R50–R60 (<https://doi.org/10.1659/MRD-JOURNAL-D-20-00056.1>) (NAAS Rating _2022: 7.19)
- Ranbir Singh Rana, Ruchi Sood, **Vaibhav Kalia**, Kapil Sharma. 2021. Validation and Application of Extended Range Rainfall Forecast for Crop Planning in Sub-

Humid and Wet Temperate Climatic Conditions of Himachal Pradesh. Indian Journal of Hill Farming Special Issue 2021, Volume-34, Page 22-30) (NAAS Rating _2022: 5.04)

3.6.2 Papers Presented in Conferences and Workshops

Department of Biology and Environmental Sciences

- Presented paper in conference ICEEGT-22 entitled “Biodegradation of plastic using termites and their gut microbes”. Organized by Yazhi Global multidisciplinary Research organization and Mizan-Tepi University, Ethiopia on 5-6th April 2022.
- Submitted an abstract entitled. "Termites as a prospective solution for solid waste management" and gave oral presentation on 27/5/2022 in National Conference on Natural Sciences-Exploration through innovations (NCNSEI), 2022 organized by Maharaja Agrasen University, Baddi.

3.6.3 Books/ Book Chapters

Department of Biology and Environmental Sciences

- **Sharma, Radhika**, Mandakini Kaur, Ramneek Kaur, Vijay Lakshmi Sharma, and Ranbir Chander Sobti. "Exploration on different animal models used in drug-induced adverse reactions research; current scenario and further prospectives." In *Advances in Animal Experimentation and Modeling*, pp. 179-193. Academic Press, 2022. <https://doi.org/10.1016/B978-0-323-90583-1.00021-0> published on 10 December 2021.
- **Sharma, Radhika**, Reshma Sinha, Ramneek Kaur, Seema Rani, “Drug-Induced Nephrotoxicity and Use of Biomarkers.” In: Patel, V.B., Preedy, V.R., Rajendram, R. (eds) *Biomarkers in Toxicology. Biomarkers in Disease: Methods, Discoveries and Applications*. Springer, Cham. https://doi.org/10.1007/978-3-030-87225-0_50-1

Department of Microbiology

- Mahajan, Rishi., Verma, S., Chandel, S., & Chatterjee, S. (2022). Organophosphate pesticide: Usage, environmental exposure, health effects, and microbial bioremediation. In *Microbial Biodegradation and Bioremediation* (pp. 473-490). Elsevier.
- Kumar Anil, Sankhyan Shailja, Walia Abhishek, Putatunda Chayanika, Kashyap Dharambir, Sharma Ajay, Sharma Anil Kumar. 2019. Antimicrobial resistance: medical science facing a daunting challenge. In: *Medical Microbiology*, Anil K Sharma, Girish Kumar Gupta, Mukesh Yadav (eds). De Gruyter, Berlin, Germany.
- Walia Abhishek, Putatunda Chayanika, Bhatia Ravi Kant, Solanki Preeti, Pathania Shruti. 2021. Techniques for improving microbial inoculants as a tool for sustainable development. In: *Microbiological Activity for Soil and Plant Health Management*. Soni R, Suyal DC, Bhargava P, Goel R (eds.). Springer Singapore.
- Pathania Shruti, Solanki Preeti, Putatunda Chayanika, Bhatia Ravi Kant, Walia Abhishek. 2021. Adaptation to Cold Environment: The survival strategy of

psychrophiles. In: Survival Strategies in Cold-adapted Microorganisms. Goel R, Soni R, Suyal DC, Khan M (eds.). Springer Singapore.

3.6.4 Extended Summary/Abstract Published in Compendium

- “Influence of natural farming practices on soil health” authored by Raveena, Rameshwar Kumar, GD sharma, Raj Pal Sharma, Abhishek Walia and Janardan Singh published in 1st Agrivision Zonal Convention on Natural Farming: A National Priority for Human health and Ecological restoration.

3.6.5 Technical Reports Submitted

Department of Chemistry and Biochemistry

- Kumar N., Sood, V.K., Banyal, D.K. and **Katoch R.** 2022. Progress report for QRT (2016-2020) of AICRP on forage crops and utilization, Palampur
- Evaluation of nutritionally important biochemical constituents of promising Adzuki bean and Buckwheat genotypes (2019-20), All India Coordinated Research Network on Potential crops (ICAR) (No.24-290/10/cdn/part-1 dated the 14th August, 2020, “Grant in-aid- General” for need based experiments of quality analysis at CSK HPKV, Palampur 2020-21

Department of Biology and Environmental Sciences

- Presented annual progress report regarding project-Termites as prospective solution for solid waste management in progress review meeting in Department of Environmental Science and Technology, Shimla

Centre for Geo-informatics

- INTELLECTUAL PROPERTY RIGHTS (IPRS) POLICY GUIDELINES (**June 2021**). Edited & compiled by: Intellectual Property Rights (IPRs) Cell, Department of Crop Improvement, CSKHPKV, Palampur. Published by Principal Investigator, under the ICAR, NAHEP and World Bank jointly funded ad-hoc Research project entitled “PROTECTED AGRICULTURE AND NATURAL FARMING”, Centre Agricultural Higher Education Project (CAAST), National Agricultural Higher Education Project (NAHEP),(ICAR-WB PROJECT) CSK HPKV, Palampur
- Booklet on ACTIVITIES AND SALIENT ACHIEVEMENTS NAHEP. 2022. Published by Principal Investigator under the ICAR, NAHEP and World Bank jointly funded ad-hoc Research project entitled “PROTECTED AGRICULTURE AND NATURAL FARMING”, Centre Agricultural Higher Education Project (CAAST), National Agricultural Higher Education Project (NAHEP),(ICAR-WB PROJECT), CSK HPKV, Palampur (PUB.1/2022)

Pamphlet:

- Protected Cultivation of Vegetable crops. 2022. Published by Principal Investigator under the ICAR, NAHEP and World Bank jointly funded ad-hoc Research project

entitled “ PROTECTED AGRICULTURE AND NATURAL FARMING”, Centre Agricultural Higher Education Project (CAAST), National Agricultural Higher Education Project (NAHEP),(ICAR-WB PROJECT), CSK HPKV, Palampur (PUB.2/2022)

- Protected Cultivation of Vegetable crops. 2022. IN HINDI Published by Principal Investigator under the ICAR, NAHEP and World Bank jointly funded ad-hoc Research project entitled “ PROTECTED AGRICULTURE AND NATURAL FARMING”, Centre Agricultural Higher Education Project (CAAST), National Agricultural Higher Education Project (NAHEP),(ICAR-WB PROJECT), CSK HPKV, Palampur

Manual Published as PI:

- Practical Manual: Veterinary Public Health and Zoonotic Diseases; Published by Principal Investigator under the ICAR, NAHEP-CAAST and World Bank jointly funded ad-hoc Research project entitled “PROTECTED AGRICULTURE AND NATURAL FARMING”, Centre Agricultural Higher Education Project (CAAST), National Agricultural Higher Education Project (NAHEP),(ICAR-WB PROJECT), CSK HPKV, Palampur (PUB.3/2022)

3.6.6 Conferences/ Workshops/ Colloquiums/ Short Courses/ Project Review Meets/ Visits Abroad/ VIP Visits/ Organized

Department of Microbiology

Dr. Abhishek Walia:

- Committee member (Finance Management Committee) to organize One-day stakeholder meet of medicine Plant Sector of Himachal Pradesh on 17th March, 2022 in collaboration with the RCRFC-Northern Region-NMPD, Ministry of Ayush.

Dr. Rishi Mahajan:

- Organizing Secretary of the seminar —Role of Institution for *Atma Nirbhar Bharat* through Innovation and Policy Reforms under NAHEP-CAAST lecture by Dr. P.K. Ghosh, Vice-Chancellor and former Director, ICAR-National institute of Biotic Stress Management, Raipur on 15-06-2022

Centre for Geo-informatics

International Seminar

- International webinar on “Global updates of Cucurbit Breeding” on 14.10.2021 (113 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Virtual mode

National Webinar/ Seminar

- World Milk Day on 01.06.2021 (105 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Virtual mode
- World Environment Day on 05.06.2021 (117 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Hybrid Mode
- Evolution of Statistics National Statistic Day-2021 " on 29.06.2021 (272 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Virtual mode
- Expert Lecture on "Nutraceutical breeding and biofortification of vegetable crops for health and nutritional security " on 18.10.2021 (52 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Offline mode
- Nano fertilizers: potential material for global farming" on 22.10.2021 (93 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Virtual mode
- Soil quality management vis-a-vis climate change" on 23.10.2021 (68 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Virtual mode
- Natural Farming: a new paradigm for climate-resilient agriculture" on 03.03.2022 (100 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Virtual mode
- Application of Drone Technology in Agriculture on 13.05.2022 (158 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Virtual mode & Offline Mode
- Expert Lecture on "Recent advances in developing vegetables suitable for the protected environment " on 17.05.2022 (109 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Hybrid Mode
- Expert Lecture on "Role of Institution for ATMANIRBHAR BHARAT through Innovation and policy reforms " on 15.06.2022 (247 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Hybrid Mode

Awareness Programme cum seminar

- One Health on 01.11.2021 (98 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Virtual mode
- Webinar on “Substance Abuse Prevention” on 29.11.2021 (100 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Offline mode

National Trainings organized under CAAST, NAHEP:

- One Week Training program on “Experimental Design and Analysis through Statistical Software” from 24.05.2022 to 30.05.2022 (306 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Hybrid Mode
- National training-cum-webinar on “Diagnosis and Management of diseases and insects, mites and nematodes on vegetable crops in protected agriculture and natural farming” on 25.02.2022 & 26.02.2022 (182 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Virtual mode
- National training-cum-webinar on “Buzz pollination: Role of bumble bees in pollination of crops in protected agriculture ” on 05.03.2022 (306 participated) Organized under **PROTECTED AGRICULTURE AND NATURAL FARMING, CAAST, NAHEP& WORLD BANK Jointly Funded Project, CSKHPKV, Palampur** through Virtual mode **Seminars organized**

Sr. No.	Title	Speaker(s)	Date	Total Participants	Mode of training
1.	Webinar on “Rainwater harvesting and its application through drip irrigation”	Dr. U. S. saikia Dr. R. T. Thokkal Dr. M. J. Kaledhonkar Dr. R. K. Thakuria	22/12/2021	102	Virtual

Sr. No.	Title	Speaker(s)	Date	Total Participants	Mode of training
2.	Webinar (Talk-3) “Global Update of Cucurbits Breeding”	Dr. Narinder Dhillon (Word Vegetable Centre)	14/10/2021	113	Virtual
3.	Nano fertilizers: Potential Material for Global Farming	Dr. J.C. Tarafdar	22/10/2021	93	Hybrid
4.	Soil Quality Management vis-à-vis Climate Change	Dr. K.L. Sharma	23/10/2021	68	Virtual
5.	Nutraceutical breeding and biofortification of vegetable crops for health and nutritional security	Dr. Pritam Kalia	18/10/2021	52	Hybrid
6.	One Health	Dr. Sunil Raina	01/11/2021	98	Virtual
7.	Substance Abuse Prevention	Ms. Jyoti Bhardwaj	29/11/2021	100	Hybrid
8.	Natural Farming: a new paradigm for Climate Resilient Agriculture	Dr. J.P. Saini Dr. Manoj Gupta	03/03/2022	100	Hybrid
9.	Application of Drone Technology in Agriculture	Col. Arun Sharma	13/05/2022	158	Hybrid
10.	Recent advances in developing vegetables suitable for protected environment	Dr. Hans Raj Bhardwaj	17/05/2022	109	Hybrid
11.	Role of Institution for ATMANIRBHAR BHARAT through Innovation and Policy Reforms	Dr. P.K. Ghosh	15/06/2022	247	Hybrid
12.	Plant Biotechnology Approaches for crop improvement	Dr. R.C. Yadav	20/06/2022	95	Hybrid

3.6.7 Workshops/ Conferences/ 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 Usha Rana	Attended PM programme on National Education Policy on 27/7/21.	
		Attended webinar on Smart Agriculture and budget implementation held on 24.02.22 and attended session on the theme chemical free natural farming & its outreach. Submitted report to the Dean of the college of Basic Sciences.	
		Attended webinar on 25.5.22 regarding the draft of NHEQF.	
2.	Dr. Radhika Sharma	Department of Zoology, St. Xavier's College (Autonomous), Palayamkottai	National Virtual webinar on Marine environments: Diversity, threats and opportunities
		PG Dett. Of Zoology, DR. Samaj College for Women on 7/12/2021.	webinar on "The significance of systematics in Evolutionary thought"
		Yazhi Global multidisciplinary Research organization and Mizan-Tepi University, Ethiopia on 5-6th April 2022 in virtual mode.	conference ICEEGT-22
		organized by Maharaja Agrasen University, Baddi. on 27/5/2022	National Conference on Natural Sciences-Exploration through innovations(NCNSEI),

Department of Chemistry and Biochemistry

Sr.	Name	Name of the Event Date Place	Title of the Event
1.	Dr. Suman Sharma	Attended the ICAR Lecture Series no 63: on 20 th June 2022.	Women In Leadership Role In India
		Attended XXXII Group meeting Kharif -2021 AICRN on PC through video conferencing of All India Coordinated Research Network on Potential Crops on 7 th June, 2022	XXXII Group meeting Kharif -2021 AICRN on Potential Crops

Department of Physical Sciences and Languages

Sr. No.	Name of Faculty Member/Team	Name of the Event Date Place	Title of the Event
1.	Dr Sharda Singh	National Webinar organised by Ministry of Education (MoE) and University Grants Commission (UGC) on 2nd August, 2021	'Holistic and Multidisciplinary Education'
		Attended National Webinar organised by Central University of Himachal Pradesh on 3 rd September, 2021	'वर्तमान संदर्भ में वैदिक गणितकी प्रासंगिकता'
		National webinar organised by UGC on 27th June 2022	National Higher Education Qualifications Framework (NHEQF)
		Attended Special Lecture on 6th June, 2022 organized by ICAR, Gender Advancement for Transforming Institutions (GATI)	'Enhancing Impact of Agricultural Research: Imperative for Effective Gender Integration'
2.	Dr Manjula Sharma	Attended and completed with A+ Grade ONLINE TWO - WEEK REFRESHER COURSE IN "PHYSICS" from 27 October – 10 November, 2021 organized by TLC, Ramanujan College, DU	REFRESHER COURSE IN "PHYSICS"
		Participated in a National webinar "Studies on Conducting Polymer Nanocomposites and its Applications" on 8 th July, 2021 organized by the Department of Studies in Physics, Davangere University, Davangere, Karnataka.	"Studies on Conducting Polymer Nanocomposites and its Applications"
		Attended webinar on 9th July, 2021 organized by the Department of Physics, J. S. M. College, Alibag, MAHARASHTRA.	Nanotechnology Enabled Energy Conversion and Storage Technologies'
		Attended one week faculty development programme from 14th July- 20th July, 2021 organized by Post Graduate department of Physics, DAV College, Amritsar.	"Recent developments in Physical Sciences"

		Participated in three day National Workshop held from 18th July-20th July, 2021 organized by Research Wing, Netaji Subhas University, Pokhari, Jamshedpur, Jharkhand.	“Building Blocks for Authentic Research Journey”
		Attended State level Online Workshop on 31 st July, 2021 organized by Internal Quality Assurance Cell (IQAC) of J. S. M. College, Alibag and Sponsored by University of Mumbai.	‘Career Advancement Scheme (CAS) for College Teachers’
		Participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP from 20th September – 24th September, 2021 at Defence Institute of Advanced Technology.	"Nanomaterials and Nanotechnology"
		Participated in the One Day Webinar on 20th March 2022, Organized by Department of Physics Maharaja Bhoj Govt. P.G. College, Dhar, 454001, M.P. (India) In association with IAPT RC-09 & Academic Activities under the MPHEQIP (World bank project).	“दैनिक जीवन में भौतिकी”

Department of Microbiology

1.	Dr Rishi Mahajan	Online seminar on 31-02-2022	“The CRISPR health revolution” by Nobel Laureate Prof. Jennifer Doudna University of California, Berkeley
		Webinar on 21-04-2022	“Role of Youth for a secure and sustainable Agriculture” by Dr. R S Paroda, Chairman, TAAS and former Sec. DARE and DG, ICAR
		Webinar on 27-04-2022	“Best Practices in Higher Education” by Prof. Govindan Rangarajan, Director, Indian Institute of Science, Bangalore

2.	Dr. Abhishek Walia	International Conference Department of Biotechnology and Bioinformatics, Jaypee University of Information Technology during November 24 & 25, 2021.	“Technological Intervention in Renewable Energy for Sustainable Environment (RESE-2021)” organized by Technology Incubation and Entrepreneurship Development (TIED) Cell and Centre of Excellence in Sustainable Technologies for Rural Development [CESTRD]
		Webinar National Centre for Cell Science and IISER Pune. October, 2021	“How to read Scientific Literature?”
		International Webinar Series-Season II Centre of Excellence in Health Care Technologies and Informatics, Department of Biotechnology and Bioinformatics, JUIT on September 11, 2021.	Research and Technological Advancements in Bioinformatics (Webinar 1: AI platform to catalog unconventional stress proteins for deep exploration of space).
		International Webinar Series-Season II Department of Biotechnology and Bioinformatics, JUIT on October 9, 2021.	Research and Technological Advancements in Bioinformatics (Webinar 2: Research Data Management and FAIR Principles for Healthcare Data) organized by Centre of Excellence in Health Care Technologies and Informatics.
		International Webinar Series-Season II Department of Biotechnology and Bioinformatics, JUIT on November 20, 2021.	on Research and Technological Advancements in Bioinformatics (Webinar 3: FuSe: A tool for functional analysis of RNA-Seq Data) organized by Centre of Excellence in Health Care Technologies and Informatics.

Centre for Geo-informatics

Sr. No.	Name of Faculty Member/Team	Name of the Event Date Place	Title of the Event
1.	Dr. Ranbir Singh Rana	Forecasting Agricultural Output using space, Agro-meteorology and land-based observations (FASAL)	Project Review
		Annual progress report of project entitled “Seventh Annual Review Meeting of Integrated Agromet Advisory Services project	Project Review

		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.	Project Review
		Annual progress report CAAST, NAHEP	Project Review
		Impact of Climate Change on Agriculture & Horticulture Sector in District Shimla, Himachal Pradesh	Project Review

3.6.8 Name of faculty members/employee who has brought honour to the University in the form of awards and honours

S.No	Particulars	
1.	Dr Sharda Singh	DST programme's (WOS-A) Member of Subject Expert Committee (SEC) for Physical and Mathematical Sciences for 21-24 (three years) Session Chair & Member Advisory Committee in International Conference 'Recent Trends in Mathematical Sciences' on 11th Dec 2021
2.	Dr. Ranbir Rana	Nominated as Expert Member of State level Environment Impact Assessment Authority (SEIAA) /State Expert Appraisal Committee (SEAC) of Himachal Pradesh by Ministry of Environment and Forests Government of India, vide Notifications no. 2373 dated June 1, 2022 Gazette of India Success Story, if any <ul style="list-style-type: none"> • Establishment of Nutritional Garden developed under CAAST, ESP Component • Collaboration with International organizations: <ul style="list-style-type: none"> ➤ Michigan State University, USA ➤ University of Melbourne, Australia, ➤ World Vegetable Centre Taiwan IRRI Philippines for CAAST international training
3.	Dr. Usha Rana	Member Board of studies of HP University, Shimla
4.	Dr Rajan Katoch	Selected Member of "National Academy of Sciences India" (NASI)

4. EXTENSION

4.1 Extension projects

Sh Kapil Sharma:

- Editor, Newsletter (Quarterly), CSKHPKV

Dr Rishi Mahajan

- Production of Microbial bio-formulations submitted to HP Swarnim Himachal Drishti Patra Govt. of H.P. Cost:2.5 lakh

- Microbial Fermented food products submitted to HP Swarnim Himachal Drishti PatraGovt. of H.P. Cost:2.5 lakh

4.2 Popular Articles

- Published News paper article Radhika Sharma and Madhu Sharma. Thos apshisth prabandhan me dimak ka pryog. Giriraj saptahik, 22-28 September 2021
- रणबीरसिंहराना. 2022. चौ0 स0 कु0 हिमाचल प्रदेश कृषि विश्वविद्यालय, पालमपुर की राष्ट्रीय कृषि उच्च शिक्षा परियोजना के अंतर्गत गतिविधियाँ. फसल क्रांति, 09.02.2022 (www.fasalkranti.in) ISSN 2394-756X

4.3 Organization of Extension Activity/One day Awareness programme

Nil

4.4 Lectures delivered by the Faculty Members

Dr. Usha Rana:

1. Delivered six lectures on training on Bamboo cultivation under National Bamboo mission organized by KVK (Hamirpur) Bara to educate the 100 farmers on Bamboo cultivation and its importance in human life from 24th September, 2021 and 25th September, 2021

Dr. Abhishek Walia:

1. Delivered an invited lecture on the topic “Role of microorganisms in organic farming: A new dimension in sustainable agriculture” in one day National Seminar “Microbial Biotechnology: A new era of sustainable Development held on 04-12-2021 organized by Department of Biotechnology, Himachal Pradesh university, Shimla.
2. Delivered an invited tutorial lecture on the topic “Role of microorganisms in organic farming system” on 19-01-2022 under the scheme ICAR-1 subplan (SC-SP) sub head 9.2.2 organized by Department of Microbiology, Punjab Agricultural University, Ludhiana.
3. Delivered lecture on “Biofertilizers: Importance and its preparation” to the students of ELP on Organic farming (ELP-473)

Dr Rishi Mahajan

1. Delivered lecture (Online) as invited Guest speaker at Amity University on the eve of International Youth Day celebrations, 28th July, -12th August, 2021.

4.5 Pamphlets prepared

Prepared Pamphlet/Brochure of Department of Microbiology to be included in the College of Basic Sciences.

5. MISCELLANEOUS ACTIVITIES

5.1 Income Generation

Department	Income Generated (approx.)
Department of Biology & Environmental Sciences	Rs 9 lakhs
Department of Chemistry and Biochemistry	-
Department of Physical Sciences and Languages	Rs 4000.00/-
Department of Microbiology	-
Centre for Geoinformatics Research and Training	-

5.2 Paper setter/evaluator/external examiner

	Faculty Name	Institution Name
i.	Dr Sharda Singh	<ul style="list-style-type: none">Central University, Himachal PradeshNIT Hamirpur
ii.	Dr Ranbir Rana	<ul style="list-style-type: none">CSIR-IHBT, Palampur
iii.	Dr Usha Rana	<ul style="list-style-type: none">Paper setting of MSc.Botany course of HP UniversityEvaluated one hundred and twenty four answer books of Crop Physiology course of COA, CSKHKV, Palampur.Evaluated written comprehensive exams of two (02) MSc. and one (01) Ph.D. student.
iv.	Mr. Vaibhav Kalia	<ul style="list-style-type: none">HPU ShimlaUHF Solan
v.	Mr. Vaibhav Kalia	<ul style="list-style-type: none">HPU ShimlaUHF Solan
vi.	Dr. Suman Sharma	<ul style="list-style-type: none">HPU, Shimla
vii.	Abhishek Guleria	<ul style="list-style-type: none">Himachal Pradesh University
viii.	Dr. Abhishek Walia	<ul style="list-style-type: none">Guru Nanak Dev University, Amritsar. PunjabHimachal Pradesh University, Shimla. HP.Dr. YS Parmar University of Horticulture and Forestry, Nauni. Solan. HP.Acharya N. G. Ranga Agricultural University, Telangana
ix.	Dr Rishi Mahajan	<ul style="list-style-type: none">Himachal Pradesh University

5.3 Faculty as referee/reviewer for Scientific Journals

Faculty Name	Details
1. Dr Sharda Singh	<ul style="list-style-type: none"> Journal of “Advances in Applied Research”
2. Dr. Abhishek Walia	<ul style="list-style-type: none"> Review Editor: Journal of Pure and Applied Microbiology, Frontiers in Microbiology, Pantnagar Journal of Research Reviewer: Frontiers in Microbiology, 3Biotech, Journal of Basic Microbiology, Geomicrobiology Journal, Frontiers in Bioengineering, Biocatalysis and Agricultural Biotechnology, PLOS One, Journal of Oleo Science, BMC Microbiology, Journal of Applied Microbiology
3. Dr Rishi Mahajan	<ul style="list-style-type: none"> Biological Control (Impact Factor: 3.857; NAAS rating 9.69) Food Research International (Impact Factor: 7.428; NAAS rating 12.48).Antimicrobials, Resistance and Chemotherapy”-Frontiers in Microbiology (Impact Factor: 5.640; NAAS rating 11.64).
4. Dr. Manjula Sharma	<ul style="list-style-type: none"> Ceramic International, Published by Elsevier (Science Direct)
5. Dr Abhishek Guleria	<ul style="list-style-type: none"> Journal of Intelligent & Fuzzy Systems Journal of Experimental & Theoretical Artificial Intelligence

5.4 Other Activities of Faculty

Department of Biology and Environmental Sciences

Dr. Usha Rana

- Head, Department of Biology & Environmental Sciences from 3rdFebruary, 2022
- Exam-Coordinator (external) of the College
- Member Board of Studies of HP University
- Member Board of Studies of the college
- Member Academic council
- Member of the internal complaint committee (ICC) constituted at University level for implementation of code of conduct for women at work place. Attended training organized by CSKHPKV for ICC on 31stJuly, 21 with Chairperson & Shri Anuj Verma ADA of HP state Commission for Women, Shimla.
- Member in the committee to finalise the contract/MOU with TQ Cert Services and University.
- Executive member from the College of Basic Sciences in the Indian society of Agricultural Biochemist Palampur-Chapter
- Overall Incharge of Registration of B.Sc COBS for academic year 2021-2022

- Member in the committee constituted for checking and scrutinizing the documents & rendering help for preparing merit list for the admission of COBS
- Attended Monthly Review Meetings convened by Dean, COBS and Director Research, CSKHPKV-Palampur
- Convener of Annual Report Committee for the year 2020-21, compiled and submitted the report.
- Attended Webinar on New Education Policy on 24th July, 21
- Committee member from college to check the draft degree including bar coding, certificate of honour and gold medal of passed out students of 2017-18.
- Committee member for the procurement and distribution of shashes for 16th Convocation held on 23rd August, 21.
- Member to assist Academic Incharge of the college.
- Tutor of BSc. 1st yr & 2nd yr students and done counseling.
- Committee member/Tutor and facilitated the registration of 1st yr (fresh) students of BSc. 3 year Degree programme.
- Convener of the Committee in essay and slogan writing competition in the celebration of National Mathematics Day and National Science Day.
- Academic, store and Seminar incharge 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 the Department
- Convener of College Canteen Management Committee and made canteen functional immediately after Corona.
- Convener of Debate committee and Committee member of cultural committee in Himtarang Utsav.
- Committee member for scrutiny of research project proposals to be submitted by the teachers/Scientist of all the constituent department of this college before submitting the same to Director Research, CSKHPKV, Palampur.
- Information for Sardar Patel outstanding institution award was given to Dean and DR from Biology & Environment Department.
- Report for 50 years of journey of statehood was compiled and sent to Dean COBS.
- Cultural Incharge of the College. Member in cultural programme in Annual Group meet on Kharif pulses.
- Overall Incharge of student programme in welcome and farewell party celebration.
- Compiled the information from the college for clean and green campus Award, 2021-22 and files were given for loading.
- Convener of the committee for the sale purchase and inspection committee for the purchase of store articles of the College

Dr. Radhika Sharma

- Worked as Additional Nodal officer for execution of Academic Management System of the College.
- Member of Time Table, Date Sheet, seating plan committee for Ist and 2nd semester of the year 2021-22.
- Member of Annual Report committee for the year 2020-21. Revised Annual Report of 2019-20 and compiled and submitted Annual Report 2020-21.

- Member Board of Studies of COBS
- Member of National Education Policy committee.
- Advisor for students of BSc-3rd Year(S-2019-04-041 TO S-2019-04-060) and BSc 2nd year(S-2020-07-041 TO 053. In addition advisor for Super year S-2017-04-006)
- Incharge of Departmental web page and published updated web page of the department.
- Academic, Research In charge and member of report writing committee of department
- Nodal officer for Virtual Classroom facility for College of Basic Sciences.

Department of Chemistry and Biochemistry

Dr. Suman Sharma

- Coordinator of Entrepreneurship Development Club, COBS.
- Secretary, Science Club, COBS.
- Member of SPCC, COBS.
- Convener, SOP, COBS after October 2021. Member of SOP committee up to Oct, 2021.
- Member of University level Anti ragging squad (Sector Officer- 1).
- Incharge, College Library, COBS.
- Teaching Experiential Learning Module in Department of Tea Husbandry and Technology.
- Prepared E- content of eight chapters for a PG course (AC 503).
- Incharge, UG Laboratory.
- Member of Advisory committee of 9 Ph.D. students.
- Attended Group Meeting of OASI as life member.
- Acted as Judge in Declamation Contest on the occasion of World Environment Day.
- Performed the duty of Superintendent and Course Instructor/Invigilator during Midterm and Endterm examination and Reexamination of UG courses.
- One of the Advisors of B. Sc. 1st year (PS).
- Performed the Duty of Centre Superintendent for Police Constable Written test conducted on 27.03.2022.
- Convener of Discipline committee in celebration of National Mathematics Day.

Department of Physical Science and Languages

Dr Sharda Singh

- GIS based services are being provided to Deptt of Agriculture under MOU , other Govt departments and District Administrations which is enriching geospatial data of Himachal Pradesh and generating employment to two GIS Experts as PI
- Member Academic Council, Research Council, Extension Council, Educational Resident Instructions Committee(ERIC), CSK HPKV-Palampur, Secretary, Board of Studies, College of Basic Sciences; Nodal Officer, Association of Indian Universities (AIU) , CSKHPKV-Palampur
- Academic Incharge, COBS and prepare number of informations in respect of Academics and related activities as NIRF, SSR, Member, Sub Committee to draft proposal on the Academic Regulations, List of disciplines of PG and Ph.D. programmes of ICAR and structural changes to be made on Academic Regulation

- DST programme's (WOS-A) Member of Subject Expert Committee(SEC) for Physical and Mathematical Sciences for 21-24 (three years) ; Member Advisory Committee in International Conference 'Recent Trends in Mathematical Sciences' on 11th Dec 2021
- President, Science Club, COBS ; Acted as Coordinator 'National Mathematics Day 21 to National Science Day 22', for which funds worth Rs. 1.00 lakh were awarded by HP Council for Science, Technology & Environment (HIMCOSTE) supported & catalysed by National Council of Science, Technology & Communication (NCSTC),DST, Government of India
- Member , School Board of 'School of Mathematics, Computer and Information Science' of CUHP, Dharmshala ; Board of Studies of Mathematics, Sai University, Palampur
- Attended Specialist Meeting of SLSC (RKVY) for FY 2021-22 to 27.09.2021 at 3.00 PM held in Chief Secretary Committee Room, HP Secretariat- Shimla (online mode)
- Acted as Judge in Debate Competition in Him-Tarongotsavon on 29th of Dec 21; Various Competition Committees on 'World Book Day & Copy Right Day' on 21.04.22 organised by Librarian, CSKHPKV-Palampur and Declamation contest on the occasion of World Environment Day on 04.06.22; Delivered Three Invited Lectures
- Member Cultural Programme on 16th Convocation of University held on 23rd August 2021, Professor-Incharge, Students Placement and Counseling Committee
- Academic Incharge of COBS, Nodal Officer NEP-2020 & UGC of COBS,; Convener , Sardar Patel Award of COBS on 08.01.22; Convener , Mahavidyalya Uttkrishit Yojna (महाविद्यालय उत्कृष्ट योजना) 21-22 ; Convener SOP for COVID-19 for COBS upto Oct 21;

Dr. Sheela Thakur

- Uploaded the lecture on Topic Vector Algebra of Course No. Phys121
- Store In charge of the Department
- Physics Lab In charge of the Department
- Academic In charge of the Department
- All correspondence letters prepared as Physics Lab. Incharge and calibration of about 25 Physics equipments was done from dated 5th to 8th April 2022 by National Research and Technology Consortium (NRTC) Technicians.
- Performed the duty of invigilator on dated 24.10.2021 for the conduct of written objective type examination for the post of Junior Office Assistant (Information Technology) (Post Code 206) of Dr. Y.S. Parmar University of Horticulture &Forestry , Nauni (Solan) H.P.
- Compiled the information regarding MoU's and Workplans signed by Agriculture Universities vide office letter No.QSD.2-21/20/CSKHPKV/(PSL) COBS 3366 dated 26.10.2021
- Convener of Time Table, Date sheet and seating Plan committee for the Academic Year 2021-22
- Performed the duty as Convener for Decoration /Rangoli / Stage Logistics for Mathematics Day Celebration on dated 22.12.2021
- Performed the duty as Convener for Refreshment Committee for "Mathematics Day Celebration" on dated 22.12.2021
- Performed the duty as Convener for Decoration /Rangoli/ Stage Logistics for "National Science Day" Celebration on dated 26.2.2022
- Performed the duty as Convener for Refreshment Committee for "National Science Day" Celebration on dated 26.2.2022

- Performed the duty as Dean's Nominee for the purchase of FYM in the Department of Biology and Environmental Sciences on dated 4th May 22
- Performed the duty as Convener for the Store verification of Biology and Environmental Sciences for the year 2021-22
- Performed the duty as Member of Committee for providing the documents of the students to the Counseling Committee for Admission and Registration for B.Sc. Physical Sciences on dated 11.2.2022, 18.2.2022, 23.2.2022 and 17.3.2022
- Also Performed the duty of "Superintendent of Examination" on various days of both Mid Term and End Term Under Graduate examinations in College for the Academic Year 2021-22.

Sh. Kapil Sharma

- Incharge UNS, CSKHPKV
- Central Store Incharge, COBS, CSKHPKV
- Database Administrator Admission, CSKHPKV

Dr Manjula Sharma

- Recorded and uploaded Recorded Three video lecture on Agridiksha and Introduction of two New SEC courses (Phys 314 and Phys 324) in Physics as per CBCS syllabus under RUSA.
- Warden, Vageeshwari UG Girls Hostel.
- Performed Duty in counseling as Member of registration/admission (counseling team) committee for admission to B. Sc. Programme for year 2021-2022.
- Performed duty as Social Media Champion of the COBS under AISHE Mandate: uploaded information (photographs, story and activity details) of various activities of College and University on the COBS Facebook and Twitter accounts (Created and Managed regarding this) and Convener, Girl's Common Room Committee, COBS, member of SOP Committee during year 2021-2022 and Co-Ordinator of Entrepreneurship Development Club of COBS.
- Performed duty as Performed Duty as Discipline Committee member in organization of 16th Convocation of CSKHPKV Palampur on 23-08-2021.
- Performed Duty as Convener to conduct Mathematical Games, as Press/Media/Report Convener Organized and Directed a Mathematical Skit, as Committee member to conduct PPT Competitions, Decoration/Rangoli/Stage Logistics committee member for NMD 2021 to NSD 2022 celebration in COBS.
- Performed Duty as Committee member of Cultural Programme, Boarding, Lodging, Transportation and Guest Accommodation for organization of Him-tarangotsav on 29-12-2021 and as Committee member of discipline committee during the Agri night (Unnayan) Celebration.
- Performed Duty along with other member in arrangements for celebration of Independence Day 2021 (15-09-2021), arrangements for celebration of Republic Day 2022 (26-01-2022) and Stage Secretary during organization/celebration of International Yoga Day on 21-06-2022.
- Performed Invigilator duty in the Dr. YSP UHF Nauni, JOA (IT) screening Examination on 24-10 2021, in the laboratory assistant Screening examination of CSKHPKV on 03-04, April 2021 and written test for the post of Police Constables on 27-03 2022.
- Committee member to open the quotations for the printing of Annual Report of COBS, Verified store articles of College of Basic science and Department of

Microbiology along with other committee members for year 2021-2022 and Verified store articles of Department of Physical Science and Languages along with other committee members for year 2021-2022.

Dr Banti Kumar

- Supervised the work of pooled outsourced workers on 14th June, 2022 for cleanliness of the vicinity of college of Basic science.
- Member of the committee for preparing the data/merit list during the counseling-cum-admission of first year students 2021-22.
- Member of the committee constituted to under the physical verification of the store of chemistry and biochemistry dept for the period (1st April 2022 to 31st march,2023)
- Lab in charge of statistics/PG Lab
- Worked as member of Board of Studies as subject expert.
- Performed duty as member of SOP Committee during year 2021-2022
- Member of the committee constituted to prepare a proposal of college of Basic Sciences for MahavidyalayaUtkrishtYojana.
- Member of anti ragging squad to check ragging activities in the college
- Member of the local purchase committee of the college.
- Member of the various committees like banner/poster competition, declamation, refreshment committee during the celebration of National Mathematics day 2021 to National Science Day-2022.
- Worked as cultural incharge of college of Basic Sciences
- Organized a hostel night on 1st May as Warden of UG Boys Dhauladhar hostel.
- Member of Stage and *Shamiana* Committee for HimtranguTsav.
- Member of refreshment Committee for Republic Day
- Member of refreshment committee during International Yoga day-2022
- Convener of the committee for opening of quotations invited for the purchase of Refrigerator, water cooler and water purifier.
- Convener of the committee for opening of quotations invited for the purchase of squat Dress and Bench Dress.
- Warden of UG Boys Dhauladhar hostel.
- Member of Discipline Committee during the Agri night “UNNAYAN-2022

Mr Arun Kumar

- Member of committee of Anti Ragging Squad of College of Basic Sciences
- Performed duty as member of SOP Committee during year 2021-2022
- Performed Duty in counseling team 1 as Member of registration/admission (counseling team) committee for admission to B. Sc. Programme for year 2021-2022
- Member of committee for preparing waiting/ select list of the candidates for admission in UG programe under the chairmanship of Dr. R.K. Asrani.
- Member of prize distribution committee for National Science Day celebration in COBS on 26-02-2022.
- Member of Quiz competition for National Science Day theme 2022.
- Member of Stage and shamiana Committee for Himtrongutsav.
- Member of Stage Committee for Republic Day.
- Organized a seven days NSS camp in Village Bhagotla tehsil Palampur District Kangra
- Warden of new wing Dhauladhar hostel.

- NSS program Officer College of Basic Sciences CSKHPKV, Palampur.
- Performed Duty as Returning officer, COBS for the formation of Students Association of College of Basic Science, CSKHPKV, Palampur.
- Notice board incharge of Block A of the College of Basic Sciences.
- Member Anti ragging committee for PG Students at University level.
- Member committee of solid Waste Management project in CSKHPKV, Palampur.
- Warden of New wing Dhauladhar Hostel, organized a hostel night in the hostel.
- Delivered expert lecture on Nonparametric Inference during seven days training on experimental design.
- Convener of the committee for removing the fallen trees in front of the college of Basic Sciences.
- Member of sitting and stage arrangement committee for International Day of Yoga 2022.

Dr Abhishek Guleria

- End term Examination, Evaluation of M.Sc. Mathematics (ICDEOL) Examination, HPU)
- Performed Invigilator duty in the Police Constable Written test conducted on 27.03.2022
- Performed the duty assigned for the issuance of identity cards to the students
- Organized an awareness rally for creating a health and tobacco free environment
- Member of anti-ragging squads of COBS
- Statistics Lab./Room Incharge (Shared with Dr. Banti Kumar)
- Performed the supervision duty for the Labour pooling for the cleanliness of the adjoining area/surrounding and other periphery of COBS on 12-02-2022
- Member of Prize distribution Committee of National Mathematical Day- 2021 and National Science Day – 2022
- Member of Result Compile and certificates Committee National Mathematical Day-2021 and National Science Day - 2022

Department of Microbiology

Dr. Abhishek Walia

- One DBT Project as Co-PI sanctioned and grant allotted during this year entitled “Efficacy of indigenous cow based formulations as soil inoculants and pesticides in agriculture”.
- Submitted one Project as PI and one as Co-PI to DST-SERB and Deptt. of Agriculture, Govt. of HP.
- Working as Co-PI (Component-Microbiology) in the NAHEP-CAAST project.
- Taught 11 (Eleven) courses of 37 Contact Hours.
- Member-Board of Studies, College of Basic Sciences, CSKHPKV Palampur for a period of one year.
- One Review Article published in Journal Energies (NAAS Rating of 9.25 & Impact Factor-3.252).
- Two Review Articles published in Journal 3 Biotech (NAAS rating of 8.89& Impact factor-2.893).

- One Research Article published in Journal of Plant Biochemistry and Biotechnology (NAAS rating of 7.52 & Impact Factor 1.525).
- Three Book Chapters published in Springer and De Gruyter.
- Two Book Chapters submitted in Elsevier and Springer.
- One Review Article submitted in International Journal of Hydrogen energy.
- Participated in one online National Webinar.
- Participated in three online International Webinars.
- Participated in one virtual International Conference.
- Act as Reviewer for 17 Research Papers of International Journals (SCI) of repute having NAAS rating more than six.
- Act as Paper setter for Department of Microbiology and Biotechnology of Himachal Pradesh University, Shimla and Dr. YSP UH &F, Nauni. Solan, HP.
- Act as External Evaluator for Microbiology and Biotechnology courses of Himachal Pradesh University, Shimla.
- Treasurer and handling the Registration of Alumni and other activities related to College Alumni Association of Basic Sciences (CAABS).
- Treasurer and handling the Registration of Science Club of College of Basic Sciences
- Centre Supervisor to conduct screening test for the post of Junior Office Assistant (IT), 2022 at Solan centre on 21/07/2021.
- Invigilation duty to conduct Written Objective type examination for the post of Junior Office Assistant (IT) (Post Code 206) of Dr YS Parmar University of Horticulture and Forestry, Solan.
- Prepared Pamphlet/Brochure of Department of Microbiology to be included in the College of Basic Sciences.
- Committee member of UNISHOP for select and procure items to be displayed in the UNISHOP for sale
- Anti-ragging Squad Member constituted at the University level for the Academic Session 2021-22.
- Teacher Coordinator of Students Placement Coordination Committee (SPCC) for the welfare of students in COBS.

Dr Rishi Mahajan

- Performed the duties assigned as member of the Vice-Chancellor's Technical Cell from the College of Basic Sciences.
- Performed duty as assigned by the Registrar, CKHPKV to accomplish the exercise of filling up of the application for ranking of Agricultural Universities
- Carried out duty as per direction of the Registrar and further orders by Head of the Department to attend meeting with faculty from University of Melbourne on 6th -7th April, 2022.
- Performed duty as assigned by Dean COBs to compile information regarding compilation of information for IAUA Annual report (2020-21)
- Carried out duties as member of the Canteen Management Committee, pertaining to the process of opening of the canteen in the College of Basic Sciences
- Performed duties as assigned by the Dean COBs to prepare consolidated power point presentation of significant achievements of the College of Basic Sciences for the year 2021

- Performed duties as assigned by Head of the Department to compile information for 27th Meeting of ICAR Regional Committee for submission to the office of the Director of Research.
- Performed duties to compile information as assigned by Head of the Department to compile one-year activities of the department (academic, research and extension) and submit to Hon'ble Vice- Chancellor Office
- Performed duties as Organizing Sectary of the seminar —Role of Institution for *Atma Nirnhar Bharat* through Innovation and Policy Reforms under NAHEP-CAAST lecture by Dr. P.K. Ghosh, Vice-Chancellor and former Director, ICAR-National institute of Biotic Stress Management, Raipur on 15-06-2022.
- Performed duty as Master of ceremonies/host during “University level Teachers Day Celebrations” and Prize Distribution ceremony —National Mathematics Day-2021 and National Science Day-2022.

Centre for Geo-informatics

Dr. Ranbir Singh Rana

Administrative Responsibilities

- Programme Director, CGRT since September 2020 to till date
- Member of Formulation and screening Committee of COBS, vide letter no. 2288 dated 5.8.2017- Continuing
- Member of Screening for hiring teaching services In Plant Physiology COBS on 2-3.2022
- Member of Screening for hiring teaching services in Chemistry y COBS on 85.8.201
- Involved as in administrative work as PIs of the Adhoc Research projects
- Involved as PI & Nodal Officer, GKMS, FASAL, NMSHE, & DST projects
- Involved as PI & Nodal Officer, NAHEP (CAAST)
- Involved as PI & Nodal Officer, NAHEP COMP2 - Artificial App
- Involved as Admin & Nodal Officer, NAHEP- Comp2 - AMS,
- Involved as Admin & Nodal Officer, NAHEP- Comp2 - PIMS,
- Involved as Admin & Nodal Officer, NAHEP- Comp2 - Agridiksha
- Involved as Admin & Nodal Officer, NAHEP- Comp2 – E-learning

Member of Interview Committees

- Acted as Chairman cum PI of Interview Committees for JRF, YP-I & II, Project associate, SRF in CAAST, NAHEP and FASAL Project (11 times)
- Acted as Chairman cum PI of Interview Committee for, JRF in DST Project
- External Examiner in the Assessment Committees Meetings of two years of SRF (CSIR) CSIR-IHBT, Palampur on dated July 13th , 2021
- Nominated as External member of selection committee of Project Scientist-I CSIR-IHBT, Palampur on dated July 19th , 2021
- External Examiner in the Assessment Committees Meetings of Ms. Tsering Dolma, JRF (CSIR) on 25 April, 2022 CSIR-IHBT, Palampur
- External Examiner in the selection committee of Project fellow, Project associate-I and II CSIR-IHBT, Palampur on dated May 25, 2022

Collaboration with International organizations

- Michigan State University, USA
- University of Melbourne, Australia,
- World Vegetable Centre Taiwan
- IRRI Philippines for CAAST international training

Other responsibilities

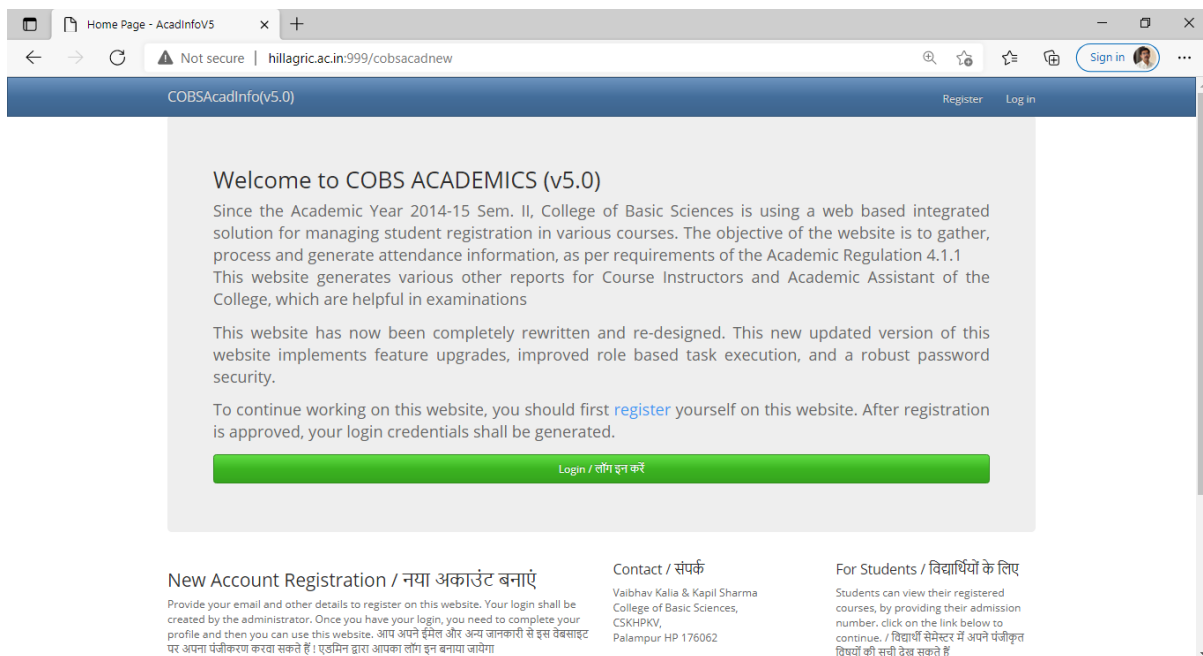
- Nominated as Expert Member of State level Environment Impact Assessment Authority (SEIAA) /State Expert Appraisal Committee (SEAC) of Himachal Pradesh by Ministry of Environment and Forests Government of India, vide Notifications no. 2373 dated June 1, 2022 in the Gazette of India.
- Member Secretary of International Screening Committee in CAAST
- Member of Refreshment committee 16th Convocation on 23.8.2022
- Nominated Member of Admission committee B.Sc., Physical and Life Sciences 11.2.2022
- Convener of Poster making in National Mathematics day (22 December, 2021)
- Convener of Poster making in National Science Day-2022 28th February, 2022
- Sports Incharge COBS
- Added Infrastructure of 85.23 Lakhs under NAHEP-CAAST Project and DST ad-hoc Project
- Clean and submitted green Campus Award for University filed uploaded and submitted as Admin cum PI in ICAR , New Delhi

Mr. Vaibhav Kalia:

A. 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.



2. [Web-Application] CSKHPKV Admission Portal

Designed and developed CSKHPKV Admissions Portal for admissions in 2021. The salient achievements of the portal are:

1. The portal was designed using modern web development technologies, and was mobile friendly.
2. The important communications were bilingual (English/Hindi)
3. Application for External Test Based UG Admissions.
4. Application for Entrance Test Based PG Admissions
5. Application for Merit Based UG Admissions. *Earlier, Merit based admissions were conducted using offline application process.*
6. Integration of PayU Payment Gateway for automatic collection of Application Fees. This enables an automatic collection and confirmation of fees, earlier using SBI-Collect, requiring manual entries submission by the candidates and subsequent verification by University.
7. Bulk candidate fees confirmation from the statement received from Payment Gateway.
8. The portal has 10 steps, where in the candidate can proceed for Test Based and Merit Based applications independently. This enabled both the admission processes to run simultaneously without being dependent on each other.
9. The candidate documents digital format are required as a part of the application submission process, which results in a seamless evaluation of the applications. Earlier the candidate documents arrived through email, which is a difficult process to manage.
10. Redesigned Candidate Application Form.
11. All application forms generation is in PDF format, which were user searchable, in an attempt to save paper by eliminating printing of all application forms.



Log in



or Provide your email to log in.
या अपने रजिस्टर्ड ईमेल से लॉग इन करें

You can login after you have confirmed your account after registration (अकाउंट रजिस्ट्रेशन के बाद ईमेल कन्फर्म करें, फिर आप यहाँ लॉग इन कर सकते हैं)

Email
ishakumarik27@gmail.com

Password

Remember me?



CSKHPKV Admissions

See [this page](#) for details on the latest notifications regarding Admissions to CSKHPKV Palampur.

This portal allows you to register for the following courses:

- Under-Graduate (Based on External Test Score)
 1. B.V.Sc. & A.H. (Based on NEET)
 2. B.Sc. (Hons.) Agri. (Based on AIEEA)
- Under-Graduate (Based on 10+2 Marks)
 1. B.Tech. Food Technology
 2. B.Sc. Community Science
 3. B.Sc. Hospitality and Hotel Administration
 4. B.Sc. Life Science
 5. B.Sc. Physical Science
- Post-Graduate (Based on Entrance Test Conducted by CSKHPKV)
 1. M.V.Sc.
 2. M.Sc. Agriculture
- Post-Graduate (Based on Marks of Qualifying Degree Examination)
 1. M.Sc. in College of Basic Sciences
 2. M.Sc. in College of Community Sciences
- Ph.D. (Based on Marks of Qualifying Degree Examination)
 1. Agriculture
 2. Veterinary Sciences
 3. Community Sciences

Login Page

CSKHPKV Admissions Portal

Application Progress (Click any number to jump to a specific Step)



CSKHPKV Admissions-2021

- Your IP Address is logged and by accessing this portal you agree to terms and conditions mentioned in Information Brochure cum Prospectus.
- The portal is currently IN DEMO mode. DONOT submit LIVE data here, as it be DELETED
- Payment Gateway is LIVE (your money will be deducted)

Before you proceed further...

Terminology used for Degree Programs

- UG-ET: Under-Graduate (Based on External Test Score)
 1. B.V.Sc. & A.H. (Based on NEET)
 2. B.Sc. (Hons.) Agri. (Based on AIEEA)
- UG-MERIT: Under-Graduate (Based on 10+2 Marks)
 1. B.Tech. Food Technology
 2. B.Sc. Community Science
 3. B.Sc. Hospitality and Hotel Administration
 4. B.Sc. Life Science
 5. B.Sc. Physical Science
- PG-ET: Post-Graduate (Based on Entrance Test Conducted by CSKHPKV)
 1. M.V.Sc.
 2. M.Sc. Agriculture
- PG-MERIT: Post-Graduate (Based on Marks of Qualifying Degree Examination)
 1. M.Sc. in College of Basic Sciences
 2. M.Sc. in College of Community Sciences

Candidate Home Page

Select Under-Graduate Degree Programmes
(Based on EXTERNAL QUALIFYING EXAM: [For B.V.Sc. & A.H.-(NEET (UG))] [For B.Sc. (Hons.) Agriculture-ICAR AIEEA (UG)])

Note: You have already confirmed [Test Based] Programmes.

B.V.Sc. & A.H.
 B.V.Sc. & A.H. (Self Finance Seat)

B.Sc. (Hons.) Agriculture
 B.Sc. (Hons.) Agriculture (Self Finance Seat)

Select Under-Graduate Degree Programmes
(Based on Merit (10+2 Marks))

B.Tech. Food Technology
 B.Tech. Food Technology (Self Finance Seat)

B.Sc. Community Science
 B.Sc. Community Science (Self Finance Seat)

B.Sc. Hospitality and Hotel Management
 B.Sc. Hospitality and Hotel Management (Self Finance Seat)

B.Sc. Life Science
 B.Sc. Life Science (Self Finance Seat)

B.Sc. Physical Science
 B.Sc. Physical Science (Self Finance Seat)

Under Graduate
Post Graduate

Bonafile Name
HIMACHALI
NON-HIMACHALI

Non-Himachali Candidates can apply ONLY for Self Financing Seats
Application for SELF FINANCING SEATS (SFS) is to be submitted here on the portal. SFS options will not be accepted at the time of counselling for degree programme.

Select Post-Graduate Degree Programmes
(Based on PG ENTRANCE TEST CONDUCTED BY CSO-PKV)

M.V.Sc.
 M.V.Sc. (Self Finance Seat)

M.Sc.(Ag.)
 M.Sc.(Ag.) (Self Finance Seat)

Select Post-Graduate Degree Programmes
(Based on Merit (Marks of Graduation))

M.Sc. Basic Sciences
 M.Sc. Basic Sciences (Self Finance Seat)

M.Sc. Community Science
 M.Sc. Community Science (Self Finance Seat)

Doctoral Programme (Ph.D.)
 Doctoral Programme (Ph.D.) (Self Finance Seat)

Doctoral Programme (Ph.D.) Discipline

AGRICULTURE
 VETERINARY SCIENCES
 COMMUNITY SCIENCES

Under-graduate and Post Graduate degree selection

Read the options carefully and choose a suitable option

- [Test Based] Application is Already Submitted
- YES, I want to submit [Merit Based] Application now (मैं अभी सिर्फ [Merit Based] Application जमा करना चाहता/चाहती हूँ)
- Either One or Both [Test Based], [Merit Based] Applications are submitted
- Do something else

Confirm you Application. [एक बार इस पेज पर आप अपने आवेदन को पुनः जांच करें]

(Note: This will lock your edits for [Test Based] or [Merit Based], no further changes in your profile or degree selection etc. are allowed after the confirmation!)

Note: You can always update your Marks(Step-5) and Document Uploads(Step-6)

- Last Dates for Application Submission
 - UG-Test Based: Thursday, October 21, 2021
 - UG-Merit Based: Saturday, October 30, 2021
 - PG-Test Based: Monday, September 20, 2021
 - PG-Merit Based: Friday, October 01, 2021

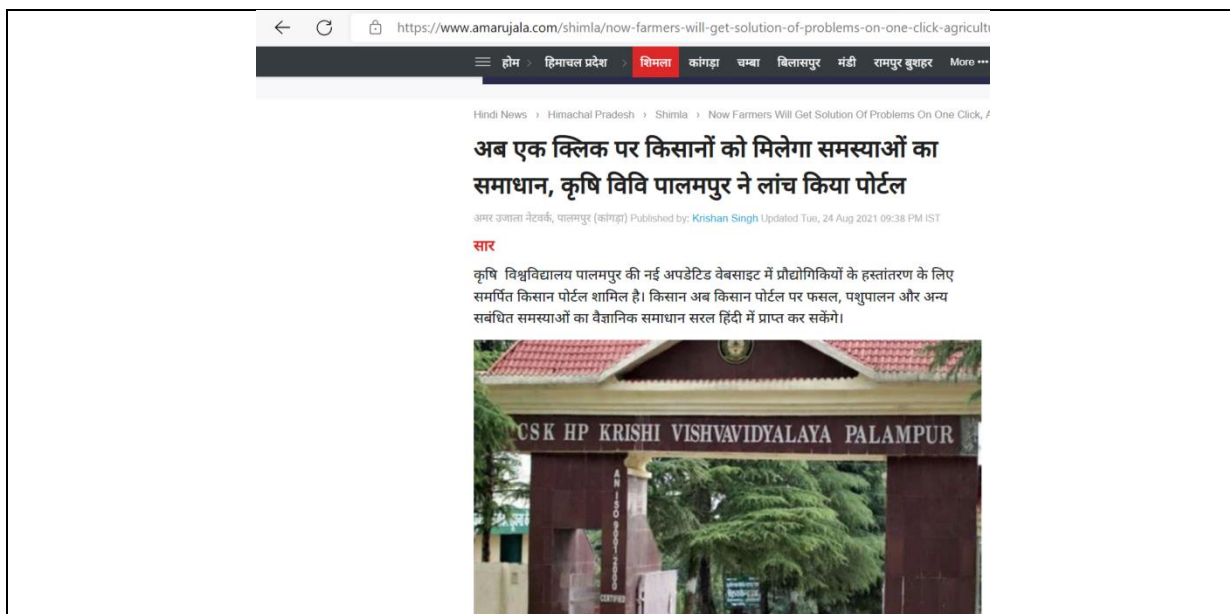
Merit and Test Based Selection options for Candidate

3. [Web-Application] CSKHPKV Kisaan Portal

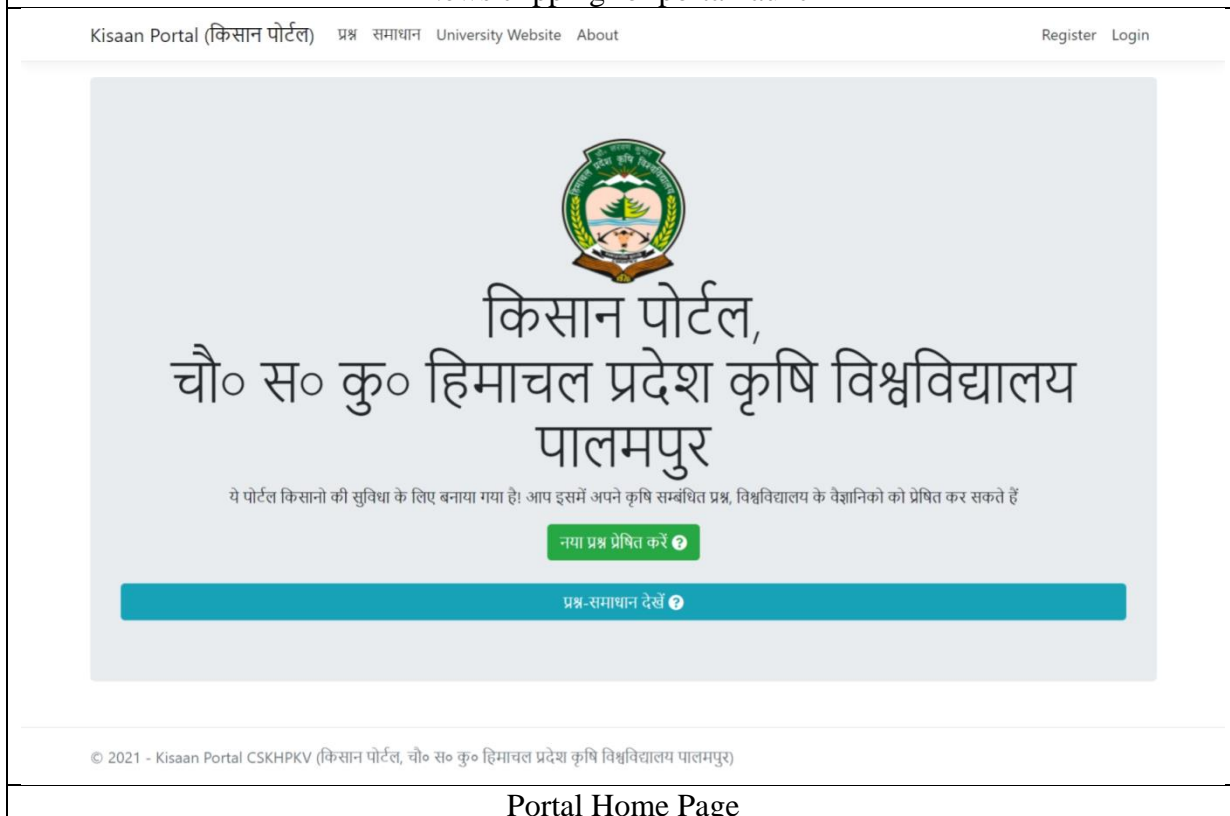
Designed and developed the Kisaan Portal of CSKHPKV. The Hon'ble Governor of Himachal Pradesh inaugurated the portal, during the 16th Convocation of CSKHPKV on 23-08-2021. This is a mobile friendly, dual language (English-Hindi) portal where farmers can directly submit their farming related queries directly from their fields, to the University and upload relevant photographs pertaining to the query.

The submitted farmer query gets evaluated by a nodal officer, who identifies the subject domain of the query. The nodal officer assigns the query to a Scientist in the University, which appears in the dashboard of the Scientist. The response tendered by the Scientist is available to the public for benefit of other farmers.

This portal has been an important milestone in augmenting effective communication between farmer and the University using ICT Tools.



News clipping for portal launch



Portal Home Page

Kisaan Portal (किसान पोर्टल) प्रश्न समाधान University Website About

Disclaimer

Your IP address and browser information will be logged
: IP Address= 49.36.189.249 Browser= Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.

Ask a question / प्रश्न प्रेषित करें

Name / किसान का नाम

Mobile / मोबाइल नंबर (मोबाइल नंबर पर WhatsApp सेटअप में सहायक होगा)

Village / गाँव

Block / ब्लॉक

District / जिला

Select District

Address / पता

Question / कृषक का प्रश्न

Action	Image
You can upload 3 JPG images of 1 MB each आप १ MB की अधिकतम ३ फोटो अपलोड कर सकते हैं	
Attachment 1 of 3 / प्रश्न से संम्बन्धित संलग्न १ / ३ Choose File No file chosen	
Attachment 2 of 3 / प्रश्न से संम्बन्धित संलग्न २ / ३ Choose File No file chosen	
Attachment 3 of 3 / प्रश्न से संम्बन्धित संलग्न ३ / ३ Choose File No file chosen	

[Post Question प्रश्न प्रेषित करें](#)

© 2021 - Kisaan Portal CSKHPKV (किसान पोर्टल, चौ० सं० कु० हिमाचल प्रदेश कृषि विश्वविद्यालय)

Kisaan Portal (किसान पोर्टल)

Resolved Queries for public information/ प्रश्न एवं समाधान

Total Queries Posted in System: **53**

48 I want super napier grass what is the price + subsidy ?

वैज्ञानिक समाधान: आप नेपियर बाजरा घास की पौध के १५ जुलाई से १५ अगस्त के बीच में विश्वविद्यालय के एग्रोनोमी विभाग से प्राप्त कर सकते हैं, एक पौधे की कीमत ७५ रुपये होती है.

कृषक : Deep
गाँव : Natned
प्रश्न का समय : Thursday, June 9, 2022 10:07 AM
समाधान का समय : Monday, June 20, 2022 11:00 AM

47 Kindly let me know the date of sale of plants for

Question Screen

Response Screen

Kisaan Portal (किसान पोर्टल) प्रश्न समाधान University Website User Manual

Assign Query to Scientist

Your Query Status

Queries Assigned to you	Queries Resolved by you	Pending Queries
0	0	0

Respond to Farmer Queries

C. Miscellaneous activities / Responsibilities:

i) University Admissions 2021:

The newly created website *accepts application forms for both MERIT and External Test based admissions. Integration of automatic payment processing using payment gateway system is also implemented in the portal.*

Performed the following tasks:

1. Installation of server software and setting of application and database in multiple machines for practice.
2. Code changes for bug fixation during the entire course of admissions portal, till candidate section was active.
3. Resolving queries related to admissions from candidates.
4. Processing of NEET2021 candidate data received from NTA for admission of BVSc & AH [*there were over eight lakh records in the result document received from NEET, which exceeded the maximum file capability of Microsoft Excel*]. The entire data is imported into other database management system and queries were executed on it.
5. Processing of ICAR-UG 2021 candidate data received from NTA for admission of B.Sc. (Hons.) Agriculture
6. Worked for Post Exam Result Processing for PG ET-2021.
7. Preparation of multiple merit lists for selection of candidates for admissions.
8. Worked for smooth conduct of Postgraduate Entrance Test 2021, under the direction of Dean PGS cum Coordinator PGET-2021.
9. Member of Committee to prepare select/waiting list of candidates for admission to B.V.Sc.& A.H., B.Sc. (Hons.) Agriculture, B.Tech., BSc.(Hons.) Community Science, B.Sc. H.H.A., B.Sc. Life Science, B.Sc. Physical Science
10. Took initiative and established liaison between various stakeholder units pertaining to admissions, - helping the Coordinators, Academic Branch of Registrar Office & Deans of constituent colleges, for successful completion of the admission process of the University.

ii) COBS Merit Admissions-2021

1. Processing of applications received from candidates.
2. Preparation of Merit Lists & pre-verification of candidate application forms.
3. Overall support to Dean COBS during the admission process.

iii) Non-Teaching Recruitment Exam – 2021:

1. Nominated Assistant Coordinator for the written examination for the non-teaching post(s) as advertised vide advertisement No. 02/2020 & 05/2020
2. Assisted the coordinator with preparation and conduct of examination, and collection of OMR sheets and documentation associated with the process.
3. Validated the answer key for the multiple choice questions (1 to 60) of the Screening Test conducted for the post of JOA (IT).
4. Assisted in the OMR Sheets scanning & compilation of results after the exam was conducted.

iv) Component II, NAHEP ICAR, CSKHPKV, Palampur:

Providing Technical Support to the PI-cum-Admin to execute the following tasks:

1. Agri-Diksha Web Channel

2. E- Learning component
3. Academic Management System: AMS implemented and data of faculty and students uploaded. Developing framework for data entry and validation, for successful implementation of AMS in CSKHPKV, Palampur.

v) 16th Convocation of CSKHPKV {23-08-2021}

1. Member Students Guidance Committee
2. Member Live Streaming and Web Casting Committee

vi) Others:

1. RKVY Data Entry on RKVY MIS National Portal (<http://rkvymis.dacnet.nic.in/>)
2. Nodal Officer for UGC Scholarships - Uploaded data of various scholars of the University on UGC Scholarships Portal.
3. Nodal Officer National Fellowship for Higher Education for ST Students – uploaded student data.
4. Checker Role for CSIR Scholarships on the portal.
5. Microsoft Teams Co-Administrator for CSKHPKV, Palampur. Managing user accounts, providing technical support to all users (faculty and students) of the University.
6. Member of various purchase committees
7. NKN Security Officer for University Internet & COBS LAN Segment In-charge
8. Attended the meeting as Member for the Selection cum Screening Committee for filling up one (01) position of Technician (1) (in the area of Computer) advertised by vide Advt. No. 18/2018 at IHBT, Palampur on 12-05-2022.
9. Attended the meeting as Member for the Assessment Committees for considering the cases of eligible staff of Technical Officer {erstwhile Gr.III(3) to Gr.III(6) for their next higher grades under provisions of revised MANAS , due during assessment year 2020-21 on 23-05-2022
10. Convener of sport purchase committee for purchase of LED TV for use in Vice Chancellor's Secretariat
11. Member sport purchase committee for purchase of HDD DVR and CCTV Cameras in Directorate of Extension
12. Performing duties of COBS website webmaster, updating COBS website as and when the new information is provided.
13. Member of committee of University Website Updation.
14. Game In-charge Athletics at COBS.
15. Designated as Member, Board of Studies COBS
16. Providing Technical Support for AUAMS implementation of CSKHPKV Palampur.
17. Convener, Audio Visual aids, lectures, photographer and film shows for National Mathematics Day 22-12-2021 and National Science Day 28-02-2022
18. Convener of Power Point presentation on i) Mathematics Theme; ii) National Science Day Theme on National Science Day 28-02-2022
19. Member of an internal inquiry committee in COBS.
20. Convener Anti Ragging Squad-II of COBS.
21. Performed duties of Superintendent Exam of BSc students in COBS on multiple occasions.
22. Member of committee for recruitment of Young Professional (YP-2) in project Protected Agriculture and Natural Farming (PANF) under NAHEP-CAAST Programme.

23. Member of committee to make arrangements in University Auditorium during visit of Prof. Frank R. Dunshea, Redmond Bary Distinguished Professor, Chair of Agriculture and Dr. SS Chauhan, Senior Lecturer, School of Agriculture & Food, University of Melbourne, Australia on 06.04.2022
24. Teacher Coordinator-cum-member Student's Placement Coordination Committee (SPCC)-COBS.
25. Member of committee for recruitment of Young Professional (YP-1) in project Protected Agriculture and Natural Farming (PANF) under NAHEP-CAAST Programme.
26. Appointed Nodal Officer Webcasting at 19-AC Palampur for upcoming HP Vidhan Sabha elections
27. Provided technical support to various online meetings at The Hon'ble Vice Chancellor's Secretariat.

5.5 Events/ Celebrations during Academic Year

S.No.	Event Name	Date
1.	Sadbhawna Diwas	20/8/2021
2.	Gandhi Jyanti Celebrations	02/10/2021
3.	National Mathematics day	22/12/2021
4.	Celebrations of Republic Day	26.01.2022
5.	Observing the Martyrs Day	30.01.2022
6.	National Science Day	28/02/2022
7.	World Environment Day	05/06/2022

5.6 National Service Scheme Activities

Activities and achievements for year 2021-2022

- Seven days NSS camp held at village Bhagotla tehsil Palampur Dist. Kangra from 23 June to 29 June 2022. 48 students participated in this Camp. Participated volunteers made the awareness among villagers about the cleanliness. Students also made awareness among villagers about the beneficiary schemes of Government.
- Rabies Awareness Workshop was organized by the staff members of Veterinary Hospital Chachian under the guidance of NSS Program Officer. The speakers for this workshop were Senior Veterinary Officer (Dr. Ajay Katwal) & 2 Veterinary Officers (Dr. Vinay Kapoor & Dr. Sunil). The staff members made all the NSS Volunteers aware about the zoonotic disease (Rabies) & non-zoonotic disease (Lumpy skin disease), importance of vaccination & scope of Animal Husbandry.
- Guest lecturers were given to NSS volunteers by Range forest officer Bhart Kohli about the management skills in Zoo, Zoo biologist about the role of Zoo in ex-situ conservation and Veterinary officer about the role of veterinarian in Zoo.

6. GLIMPSES

Centre for Geo-informatics



MOU between Agricare Organic Ludhiana and CSKHPKV Palampur



Visit of Sh. Rajendra Vishwanath Arlekar, H.E. The Governor of Himachal Pradesh



Visit of Dr. HR Bhardwaj, Director IRRI



Visit of Dr. Hema Tripathi, National Coordinator, NAHEP-CAAST



Visit of Dr. PK Ghosh, Director, National Institute of Biotic Stress Management



Expert lecture on protected agriculture by Dr. Pritam Kalia, former Scientist, IARI New Delhi

World Environment Day



National Mathematics Day and National Science Day







National Service Scheme Activities







National Service Scheme (NSS) 7 Days NSS Camp College of Basic Science, CSKHPKV, Palampur HP (23.06.2022 – 29.06.2022) Bhagotalla Panchayat, Palampur, District Kangra Himachal Pradesh where 48 NSS Students participated