

Department of Biotechnology

Annual Progress Report supported under Star College Scheme (2021-22)

1. Name of the College: **Kashi Naresh Government P.G. College, Gyanpur, Bhadohi**

2. Name of Coordinator, designation: **Dr. Rashmi Singh**
 Address, Phone nos. **Assistant Professor**
Department of Botany
K. N. Govt. P.G. College, Gyanpur, Bhadohi-
221304, UP
9415447808

S.N.	Department	Name of coordinator	Designation	Mobile no.
1	Botany	Dr. Rashmi Singh	Assistant Professor	9415447808
2	Chemistry	Dr. Abhimanyu Yadav	Assistant Professor	8517866497
3	Physics	Dr. Kalpana Awasthi	Assistant Professor	8418957246
4	Zoology	Mr. Ratnesh Soni	Assistant Professor	9415153338

3. Assessment duration: **01/04/2021 to 31/03/2022**

Duration in years: 01year

4. Details of Departments Supported:

S.N	Name of Department	Courses (B.Sc./M.Sc./PG Diploma, certificate etc) offered	Regular Faculty members Total, with Ph.D. and without Ph.D
1	Botany	B.Sc. and M.Sc.	Total: 07; Ph.D.: 05; without Ph.D.: 02 Dr. Rashmi Singh, Ph.D., NET Dr. R.K. Pandey, Ph.D., NET Dr. Saumya Mishra, Ph.D., SLET Dr. Suman Gupta, Ph.D. Dr. Shefali Singh, Ph.D, NET Mr. Ravi Kumar Yadav, NET Mr. Niraj Kumar Goswami, NET
2	Chemistry	B.Sc. and M.Sc.	Total: 15 ; Ph.D.: 10 ; without Ph.D.: 05 Dr. V.K. Yadav, Ph.D., NET Dr. Abhimanyu Yadav, Ph.D., NET Mr. Ayyub Ahmad, M.Sc., NET Dr. Abhinav Dwivedi, Ph.D Dr. Rajneesh Dwivedi, Ph.D Dr. Arvind Kumar Pandey, Ph.D, NET Mr. Dheerendra Kumar, NET Dr. Om Prakash, Ph.D, NET Dr. Siddharth Barnwal, Ph.D, NET Dr. Deepali Jaiswal, Ph.D, NET Dr. Shikha Mehta, Ph.D, NET Dr. Jyoti Tiwari, Ph.D, NET Mr. Nikhil Kumar Singh, NET Ms. Jyoti Maurya, NET Mr. Amit Kumar Sharma, NET
3	Physics	B.Sc. and M.Sc.	Total: 10 ; Ph.D.: 05; without Ph.D.:05 Dr. A.K. Kushwaha, Ph.D. ,NET Dr. Kalpana Awasthi, Ph.D., GATE Dr. Priyanka Srivastava, Ph.D. Mr. M.K. Vishwakarma, M.Sc., NET Dr. S.P. Mishra, Ph.D. Dr. Sadanand Singh, Ph.D Mr. Ashish Verma, NET

			Mr. Akhilesh Kumar, NET Mr. Jais Kumar, NET Mr. Dhanajay Gaur, NET
4	Zoology	B.Sc. and M.Sc.	Total: 06 ; Ph.D.: 03; without Ph.D.:03 Dr. Shubha Srivastava, Ph.D. Dr. Anju Verma, Ph.D., NET Mr. Ratnesh Soni, M.Sc., NET Dr. Deepak verma, Ph.D., NET Mr. Vivek Verma., NET Ms. Aaknksha Kushwaha, NET

5. **Number & Date of Advisory committee meeting:** One, 21st March 2022

6. **Qualitative improvements due to DBT support. Please highlight 5 salient points (within 500 words). (You may enumerate 5 minor projects where students were involved and their impact or similar activities and their outcome; this is for representative purpose and coordinator may include details as per his own choice; kindly refrain from providing philosophical data Avoid any introduction. All the justifications must be very crisp like any aspect non-existent pre-STAR Scheme and you achieved after the grant).**

- With the DBT Support, Departments organized minor projects as well as interdisciplinary workshops. Department of Physics organizes minor project on **Preparation of Carbon Nanomaterial (Graphene) Using Agro Waste (Sugercane Bagasse)** and Department of Botany and Chemistry organizes interdisciplinary workshop on **Herbal Cosmetics**.
- The field visits were conducted to research institutes and industries (carpet etc.) under this scheme, students got exposure to newer techniques during their institutional visit. Since the students are from rural area, due to this scheme they attended such field trips and got academic and industrial exposure. The visit enhances their curiosity in research oriented studies. The visit to the **Central Instrumentation Facility, Ewing Christian College, Prayagraj** was organized by chemistry Department, Visit to **Indian Institute of Vegetable Research, Varanasi** by Botany Department, **Hydrogen Energy Centre, Laser and Spectroscopy laboratory and Atal Bihari Vajpayee Science Discovery Centre, BHU, Varanasi** and **Museum of Department of Zoology, Allahabad University, Prayagraj** by Department of Zoology.
- First time hands on training were carried out in such a large scale which develops critical thinking skills, real-world experience and knowledge in the students. All the departments were organized the hands on training programme for UG students. (Appendix –I)
- Due to DBT Star college scheme, the faculties got an opportunity to organize workshops, winter school and invite the guest speakers for the students and faculty which provide a broad academic exposure to them. The guest lectures on various topics have enriched the knowledge of the faculty and students (Appendix –I)
- Outreach Activities were organized with this support for rural people and schools. (Appendix-I)

7. Any Novel aspect introduced or planning to introduce during the scheme duration.

- Herbal Cosmetic workshop introduces the student with new skill set by combining their Botany and Chemistry knowledge. In future we will introduce more workshops that promote start-ups.
- Preparation of energetic nano materials using green synthesis.

8. Lessons learnt / difficulties faced/suggestions if any, in implementation of the programme and utilization of DBT grant. (Max 3 points within 300 words).

- The pandemic situation of Covid-19 imposed many challenges and difficulties in implementation of proposed programme. The core heart of the programme is to strengthen our students with hands on work and outreach activities but due to covid it was not possible. Also the online platform was not accessible to each and every student due to rural area, and the students who attend online sessions were not able to interact for their queries due to network issues.
- During this session, the efforts have made to arrange more and more hands on training by following the rule of NEW Normal.

9. Key performance indicators

S. no	Indicator	Pre-support								During /After Support								Remarks
		S	S	O	G	SC	ST	O	G	S	ST	OBC	G	SC	ST	O	G	
1	No. of students admitted	Total = 513 (2020-21)								Total = 520 (2021-22)								
	B.Sc. (PMC and BZC)	M= 323				F=190				M= 303				F= 217				
		S	S	O	G	SC	ST	O	G	S	ST	OBC	G	SC	ST	O	G	
		C	T	B				B		C						B		
		47	00	164	112	14	00	102	74	45	00	168	117	12	00	107	71	
2	No. of students passing out (%) students admitted/passing out (pass %)	98.3								Result awaited								
3	Drop-out rates	10%								Yet to come								
4	No. of	105								Yet to come								

	students opting for MSc			
5	Average marks	70	Yet to come	
6	No. of hands-on experiments being conducted		Botany: 03 Chemistry: 02 Physics: 02 Zoology: 03	(S.N. 1) : Appendix - I
7	No. of new experiments introduced		Botany:06 Chemistry:07 Physics:04 Zoology:03	(S.N.2) : Appendix - I
8	Publications (Scopus indexed) /patents, if any.		Botany- 02; Book :01; Book Chapter:01 Chemistry: Book :01 Physics: 06; Book Chapters: 01 Zoology: Book Chapters: 01	(S.N.3) : Appendix - I
9	Training received by faculty		07	(S.N.4) Appendix - I:
10	Exhibitions /seminars/training courses conducted		Science Exhibition, Quiz, poster, modal, workshop, field visit, project work etc. organized	(S.N.5-8) : Appendix - I
11	Books/journals subscribed from grants	Not Purchased	
12	Outreach activities	-----	Rural People (02), School Students (01), Faculty Members (01) and supporting staff (01)	(S.N.9) Appendix - I
13	Colleges mentored to apply for DBT Star College grants		01, Dr. Shyama Prasad Mukharjee Govt. Degree College, Bhadohi.	
14	Invited lectures		Botany- 02 Chemistry:02 Physics: 04 Zoology:03	(S.N.10) :Appendix - I

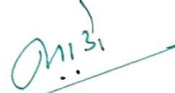
Proofs (S. No. 6-14 not more than 5 pages, 1.5 line spacing 11 times roman font size) to be provided duly attested by Principal and Coordinator


10. Self-evaluation

Department	Objective (as (as stated in proposal)	% achieved	Reasons for underachievement / If achieved, state in quantitative metrics
Chemistry	<ul style="list-style-type: none"> •Organized invited lectures •Field visit •Hands on training , Quiz and poster •New equipments procured •Organization of seminar, faculty development programme, training for laboratory staff. 	<ul style="list-style-type: none"> • Organized Seven invited lectures (100%) • Organized field visit at BHU Varanasi (50%) • Hands on training on measurement of flow time dependency on viscosity and the pH of water from different places such as well, pond and tap water etc ,Potentiometric titration, Chromatography(60%) • Poster and quiz events organized (80%) • New equipments purchased to introduce new experiments (100%) • Organized lab safety workshop for supporting staff (40%) 	<p>2.0</p> <p>1.0</p> <p>1.2</p> <p>1.6</p> <p>2.0</p> <p>0.8</p>
Physics	<ul style="list-style-type: none"> • To organize invited lectures • Workshops • To increase capabilities of instrumentation resources by procuring new equipment and upgrading existing facilities <ul style="list-style-type: none"> • Hands on training • Field Visit 	<ul style="list-style-type: none"> • Organized Seven online lectures (80%) • Workshop on operation and Operation & Utility of Advanced Electronics Devices, Wave Formation using CRO, Foundations of Quantum Mechanics organized.(50%) • New equipments purchased (100%) • Hands on training on experiment with laser and assembling of electronics circuit onto the breadboard (50%) • visit the Department of Physics, 	<p>1.6</p> <p>1.0</p> <p>2.0</p> <p>1.0</p>

	<ul style="list-style-type: none"> • Interdisciplinary Project • Workshop for supporting staff • Winter School • Essay Competition and Quiz Competition 	<p>Institute of Science, BHU, Varanasi, (50%)</p> <p>Interdisciplinary Project on Crystal Growth (50%)</p> <p>Equipment maintenance and handling (50%)</p> <ul style="list-style-type: none"> • Winter School on Experimental Physics (40%) • Essay Competition was done on Miracles of Light (50%) 	<p>1.0</p> <p>1.0</p> <p>1.0</p> <p>0.8</p> <p>1.0</p>
Botany	<ul style="list-style-type: none"> • Workshop on use of biological pesticides instead of chemical pesticides, • Project work related to the collection and identification of microbes and plant physiology, • Organization of Guest lecture • Hands on training • To increase capabilities of instrumentation resources by procuring new equipment • Interdisciplinary project • Field Visit • Winter School • Science Exhibition • Workshop for supporting staff 	<ul style="list-style-type: none"> • Organized workshop on use of biological pesticides instead of chemical pesticides (40%) • Project work on Plant physiology and Plant diseases management (50%) • Organized 4 guest lecture (50%) <ul style="list-style-type: none"> • preparation of herbaria and herbarium techniques and plant disease etc, experiments of biological technique and instrumentation of biological tools (50%) • Purchased new equipment and upgrading existing facilities (100%) <ul style="list-style-type: none"> • Herbal Cosmetics , Electrophoretic technique (50%) • IIVR, Varanasi (40%) • Plant Pathogen identification (50%) • on the occasion of National Science Day a science Exhibition was organized (50%) • Maintenance and Handling of New Equipments (40%) 	<p>0.8</p> <p>1.0</p> <p>1.0</p> <p>1.0</p> <p>2.0</p> <p>1.0</p> <p>0.8</p> <p>1.0</p> <p>1.0</p> <p>0.8</p>

Zoology	<ul style="list-style-type: none"> • Guest lecture/Fieldwork involving local visit for collection /identification and culture technique of native fishes, 	<ul style="list-style-type: none"> •Organized four invited lecture (70%) 	1.4
	<ul style="list-style-type: none"> • Hands on training on 	<ul style="list-style-type: none"> •Organized Five field visits for B.Sc. I, II and III students: (50%) 	1.0
	<ul style="list-style-type: none"> • Project work on higher chordates , 	<ul style="list-style-type: none"> •Six session of hands on training on handling and working principle of compound microscope, Hematological technique, Micrometry and Bioinstrumentation (50%) 	1.0
	<ul style="list-style-type: none"> • To increase capabilities of instrumentation resources by procuring new equipment and upgrading existing facilities 	<ul style="list-style-type: none"> • Project allotted to the UG students on collection and identification of local insects of Gyanpur, native fishes and culture techniques of native fishes and insect pests of cultivated crops (50%) 	1.0
	<ul style="list-style-type: none"> • Quiz and Poster Competition 	<ul style="list-style-type: none"> •New equipments purchased (100%) 	2.0
	<ul style="list-style-type: none"> • Interdisciplinary Workshop 	<ul style="list-style-type: none"> Quiz and Poster Competition organized (60%) 	1.2
	<ul style="list-style-type: none"> • Workshop for supporting staff 	<ul style="list-style-type: none"> Workshop on Electrophoretic Technique (40%) 	0.8
		<ul style="list-style-type: none"> Maintenance of lab equipment (40%) 	0.8


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 DBT - Star College Scheme
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Appendix -I

1. Details of hands on training programme

Dates	Details of training programme	Practical demonstrated / training conducted by	Class and no. of Beneficiaries
Department: Zoology			
9/02/2022-10/02/2022	Workshop on Hematology	Dr. Vivek Verma	B.Sc. II (160) 80+80
19/02/2022	Workshop on Micrometry	Mr. Ratnesh Kumar Soni	B.Sc. I (180) 60+60+60
5/02/2022-07/02/2022	Workshop on Bioinstrumentation: Principal & Application	Dr. Akanksha Kushwaha	B.Sc. III (75)
Department: Botany			
25/10/2021-31/10/2021	Instrumentation of Biological Tools	Dr. Saumya Mishra	B.Sc.I (85+85+85)
19/02/2022-20/02/2022	Experiments of Plant Physiology	Mr. Neeraj Kumar Goswami	B.Sc.II (80+80)
23/02/2022-24/02/2022	BGA as Biofertilizer	Dr. Suman Gupta	B.Sc.I (70+70)
Department: Chemistry			
8/02/2022-9/02/2022	Principle of Chromatography and Paper Chromatography Separation techniques	Dr. Deepali Jaiswal Dr. Arvind Kr Pandey	B.Sc.II (100) 35/batch
19/02/2022-21/02/2022	Hands on Training Workshop on Potentiometric titration: Principle and Applications Titration through potentiometer	Dr. Om Prakash Yadav, Dr . N. K. Singh	B.Sc.III (60) 30/batch
Department: Physics			
11/02/2022	Wave Formation using CRO (Hands on training)	Mr. M.K. Vishwakarma	B.Sc. III(30)
30/01/2022-1/02/2022	Foundations of Quantum Mechanics (Online mode)	Mr. Akhilesh Kumar & Mr. Jais Patel	B.Sc.II (100)

2. List of New Practical introduced in different departments

Department	Details of Experiments
Physics	<ul style="list-style-type: none"> To determine the energy band gap of semiconductor material using four probe setup To determine the frequency of a.c. mains using sonometer Formation of interference, diffraction and slight width determination using diode laser setup. Preparation of nanomaterial by using agrowaste
Chemistry	<ul style="list-style-type: none"> To determine the percentage composition of a given mixture by viscosity method. To determine the strength of HCl by titrating it against standard NaOH solution conductometrically. Preparation of Copper tetra ammine complex Potentiometric titration Separation of amino acids preparation of soaps formation of crystal
Botany	<ul style="list-style-type: none"> Preparation of culture medium and isolation of soil, water and air microflora. Measurement of chlorophyll concentration in diseased and healthy plants To measure the rate of respiration Differentiation between monosaccharides and disaccharides Protein estimation Isolation of essential oils
Zoology	<ul style="list-style-type: none"> Isolation and Separation of DNA Blood group typing Measurement of microbes

3. Publication of faculty

Department: Botany
<ul style="list-style-type: none"> Antifungal potential of some essential oils as a fumigant against a stored grain fungus, <i>Aspergillus flavus</i>. Rashmi Singh, International Journal of Agricultural Technology 2021 Vol. 17(3):1113-1120. Book published on Microbiology and Plant Pathology. Editors: Harjinder Singh, Devashish Singh, Nisha Raghav Sushil Kumar, Biswajeet Kumar, Neelam Tomar and Rashmi Singh. 2021. ISBN-978-93-91152-61-1. Publisher: Krishna Prakashan, Meerut, India. Biodegradation of low density polyethylene by Fungi. Dr. Ravindra Kumar Pandey. Accent journal of economics ecology & engineering issn: 2456-1037. Book Chapter: Post harvest decay control of fruits and vegetables using essential oil. in Advances in Biosciences. Dr. Ravindra Kumar Pandey. ISBN 978-81-948583-0-0. Publisher: Anusandhan Prakashan, Kanpur
Department: Chemistry
<ul style="list-style-type: none"> Book published on Fundamentals of Chemistry. Editors: Devendra Pandey, Paritosh Prasad Bhattacharya, Dharendra Kumar, Subedar Yadav, Ranvir Singh, Vinod Kumar Yadav. 2021. Publisher: Krishna Prakashan, Merrut, India.
Department: Physics
<ul style="list-style-type: none"> Theoretical study of thermal conductivity, mechanical, vibrational and thermodynamical properties of $\text{Ln}_2\text{Zr}_2\text{O}_7$ (Ln=La, Nd, Sm and Eu) pyrochlore. A. K. Kushwaha, S.P Mishra, M.K. Vishwakarma, Shivali Chauhan, Hamad R. Jappor, R.Kheata, S.Bin Omran. 2021. In Inorganic Chemistry Communication. https://doi.org/10.1016/j.inoche.2021.108495 Lattice-Dynamical, Elastic and Thermo-Dynamical Properties of GaAs, InAs and their mixed Ga₁₋

<p>$x\text{In}_x\text{As}$ Alloys. A. K. Kushwaha, S.P Mishra, Shivali Chauhan, M.K.Vishwakarma, R. Ahmed, R.Khenata, Bakhtiar Ul Haq, S. Bin Omran. 2021. In Journal of Electronic Materials. https://doi.org/10.1007/s11664-022-09524-8</p> <ul style="list-style-type: none"> • Atmospheric aerosol properties over Indo-Gangetic plain: A trend analysis using ground truth AERONET data for the year 2009-2017. Akhilesh Kumar, V.Pratap and A.K. Singh .2022. In Advances in Space Research. • Role of women in Science and Technology in India. Dr. Priyanka Srivastava. International Journal of Innovative Research in Technology.2021. 2349-6002 • Spectroscopic study of rare earth doped borate based glasses. Dr. Priyanak Srivastava. Journal of Information and computational Science. 2021. • Book published on Versatile solicitations of materials Science in diverse Science Field. Dr. Kalpana Awasthi. ISBN 978-1-53619-763-1. Publisher Nova Science Publisher, U.S.A. 2021
Department: Zoology
<ul style="list-style-type: none"> • Book Chapter: Post Covid-19 challenges of society. In conference proceeding of Post Covid -19 challenges and opportunities in India. Dr. Anju Verma. 2022.

4. Training received by faculty

- **Dr. Abhimanyu Yadav:** Two Week FDP on Research Methodology Organized by Teaching Learning Centre, Ramanujan College, University of Delhi. 20 July-03 August 2021.
- **Mr. Ratnesh Kumar Soni:** Two week Refresher Course in Life Sciences organized by Teaching Learning Centre, Ramanujan College, University of Delhi. 01-15 September 2021.
- **Dr. Sadanand Singh:** Orientation programme for faculty in universities/colleges/institutes of higher education. organized by Teaching Learning Centre, Ramanujan College, University of Delhi. 19 October-18 November 2021.
- **Mr. Niraj Kumar Goswami:** FDP on NEP 2020 and MOOCs: Design, Development and Delivery organized by Jai Narain Vyas University, Jodhpur, Rajasthan. 07-13 March 2022
- **Mr. Niraj Kumar Goswami:** Orientation programme for faculty in universities/colleges/institutes of higher education. organized by Teaching Learning Centre, Ramanujan College, University of Delhi. 21 March-19 April 2022.
- **Mr. Ravi Kumar Yadav:** Faculty Induction Programme organized by the UGC-HRDC, University of Allahabad. 23 March – 21 April 2022.
- **Dr. Shefali Singh:** Orientation programme for faculty in universities/colleges/institutes of higher education. organized by Teaching Learning Centre, Ramanujan College, University of Delhi. 21 March-19 April 2022.
- **Dr. Deepak Verma:** Faculty Development Workshop jointly organized by the BHU and U.P.Autonomous college, Varanasi under DBT Star College Scheme.

5. Details of institutes/ field visit organized during first year

Visiting Institute/ field	Training detail	Training manger (Name & Designation)	Date	Clas s	No. of Benef-iciaries	Organizer
Department: Zoology						
Department of Zoology, University of Allahabad, Prayagraj	students visited museum and Biochemistry lab where they saw Gel Documentation system, Sonometer, Spectrophotometer		24/02/2022	B.Sc. I, II and III	65	Dr. Deepak Verma
Department: Chemistry						
Spectrophotometric Laboratory, Ewing	Students visited instrumentation facility and research lab		22/03/2022	B.Sc. I, II and III	35	Dr. Deepali Jaiswal

Christian College, Prayagraj						
Department of Botany						
Indian Institute of Vegetable Research, Varanasi	Demonstration of various biochemical techniques, lab to land application of various techniques	Dr. Chandrsekhar Reddy, Senior Scientist	27/11/2021	B.Sc. I, B.Sc. II and B.Sc. III	60	Dr. Ravindra Pandey
Department of Physics						
Hydrogen Energy Centre and Laser and Spectroscopy Laboratory, BHU, Varanasi	The students got know about preparation of metal hydride, storage of hydrogen and its testing. They also saw X-ray diffraction and TEM instruments.	Dr. T.P. Yadav, Dr. Anchal Srivastava	14/03/2022	B.Sc. III	30	Dr. Priyanka Srivastava and Dr. S.P. Mishra

6. Details of organized workshops and winter school

Workshop/ Winter school	Topic	Date	Online/ offline	Lectures delivered (Resource person Name & affiliation)	Class and no. of Beneficiaries	Organizer
Winter School	Collection and Identification of Plant Pathogen	2/02/2022-10/02/2022	Offline	Local plant disease were collected, samples taken to the lab and with Image analysing camera, pathogen were identified.	B.Sc.III	Dr. Rashmi Singh
Winter School	Experimental Physics	18/02/2022 - 24/02/2022	offline	Determination of frequency of a. c. mains using sonometer. Determination of centre of gravity by bar pendulum, To find the value of moment of Inertia of flywheel, modulus of rigidity by Maxwell needle and determination of young modulus by bending of beam.	B.Sc.I	Mr. Akhilesh Kumar, Mr. Jais Kumar

7. Quiz- Poster Competition/ science exhibitions details

Quiz, poster, Essay and Science Exhibition was organized under Science week to celebrate National Science Day from 22/02/2022 to 28/02/2022

Quiz 25/02/2022 Chief Guest: Dr. P. N. Dongre, Principal K.N. Govt. P.G. College, Gyanpur, Bhadohi Organizers: Dr. Abhiannyu Yadav, Ayyub Ahmad	Name and Class of Winners
	First Position: Rehana Bano, B.Sc.III
	Second Position: Vivek Maurya, B.Sc.III
	Third Position: Shivam Tripathi, B.Sc. III
Poster Jal hi Jeevan Hai 25/02/2022 Organizers: Mr. Ratnesh Kumar Soni	First: Bushra Anjum, B.Sc.I Second: Avisha Pandey, B.Sc.I Third: Esha Dubey, B.Sc.I
Essay: Miracles of Light 22/02/2022 Organizers: Dr. Kalpana Awasthi	First: Roli, B.Sc.I Second: Nidhi Yadav, B.Sc.II Third: Muskan Kannaujiya, B.Sc.II
Science Exhibition 26/02/2022 organizers: Mr. Ravi Kumar Yadav	First: Sakshi Maurya, B.Sc.III Second: Prabhat, B.Sc.II Third: Aakash Maurya B.Sc.III

8. Project work details:

S.N.	Details of Project	Class and no of Beneficiaries
Department: Zoology		
1	Project work involving collection/identification of local insects of Gyanpur	B.Sc. I (100)
2	Project work involving local visit for collection/identification of native fishes	B.Sc. II (180)
3	Project work involving local visit for collection/identification and culture techniques of native fishes	B.Sc. III(100)
4	Project work on collection and identification of insect pests of cultivated crops	B.Sc. III (80)
Department: Botany		
1	Project work in Plant physiology (Transpiration rate, Photosynthesis rate and respiration rate)	B.Sc. II (80)
2	Project work in Plant diseases management (Late blight of Potato, Red rot of sugarcane and stem gall of coriander)	B.Sc. III (80)

Department: Physics		
1	Characteristics of p-n junction	B.Sc. III (20)
2	Basic features of transistors and characteristics of p-n-p transistor	B.Sc. III (05)
3	Working principle of field effect transistor	B.Sc. III (10)
4.	Theory of Lorentz Transformation	B.Sc. III (25)
5.	1.Simple Audio Amplifier 2. Body Touch Sensor 3. Wireless Power Transfer System 4. Electric Motor 5. IR Sensor Module 6.Full Wave Rectifier 7.Security Device 8.Tesla Coil 9.Automatic on-off bulb	B. Sc. II (80)

9. Outreach activities :

S.No.	Target Audience	Topic	Date	No .of beneficiary
1.	Faculty Members	Smart use of Online Platform during Covid	26/11/2021	46
2.	Supporting Staff	Lab Safety measures	27/01/2022	25
3.	Rural Area People	Mushroom Production Technology	13/11/2021	38
4.	Rural Area People	Food Nutrition and Health	21/02/2022	54
5.	School students (9 th to 12 th standard)	Understanding Science through Experiments	17/02/2022	51

10. Details of invited lectures (Online/offline mode) organized upto March 2022:

Resource Person	Designation &Affiliation	Lecture Topic	Date and time	Platform (Online /offline)	Class	No. of Beneficiaries	Organizer
Department: Botany							
Dr. Rajesh Kumar	Senior Food Analyst, Food Safety and Drug Administration, Lucknow	Food Safety Measures	28/01/2022	Online	B.Sc. I, II and III	218	Dr. Rashmi Singh
Dr. Balendra Singh	Scientist C DBT, New Delhi	Environmental Biotechnology: Challenges and Solution	31/01/2022	Online	B.Sc. I, II and III	170 (120 online + 50)	Mr. Ravi Kumar Yadav

						offline)	
Department: Chemistry							
Dr. Bhagat Singh Bhakuni	Assistant Professor, Department of Chemistry, KM College, University of Delhi	Cyber Safety	01/12/2021	Online	B.Sc. I, II & II	200	Dr. Abhimanyu Yadav
Dr. Suverna Trivedi	Visiting Scholar, School of Chemistry, University of California, Berkeley, CA USA-94707	Catalyst: Basics to Modern Uses	06/12/2021	Online	B.Sc. I, II and III	250	Dr. Abhimanyu Yadav
Department: Physics							
Prof. R.S. Tiwari	Deptt. of Physics BHU Varanasi	X-ray Diffraction	14/06/2021	Online	B.Sc.I II	60	Dr. Kalpana Awasthi
Prof. S. Sairaman,	Engineering Physics, Florida Polytechnic University, USA	Hydrogen Energy: The Global Alternative Solution for Sustainable Planet	13/11/2021	Online	B.Sc.I II	55	Dr. Kalpana Awasthi
Dr. Seema Awasthi	SRA- CSIR, New Delhi School of Physics, Hyderabad University, Hyderabad	Crystal X-Ray Diffraction	04/02/2022	Online	B.Sc.I II	100	Dr. Kalpana Awasthi
Prof. K.N.Uttam	Department of Physics, University of Allahabad	Green Energy Sources: Future Energy Source	26/02/2022	Offline	B.Sc.I, II and III	75	Mr. Ashish Verma
Department: Zoology							
Prof. U.C. Srivastava	Former Emeritus Prof. of Zoology UoA, Allahabad Treasurer and Council Member NASI	Antioxidant-A boon for the life of Human Being	03/02/2022	Online	B.Sc.I, II and III	204	Mr. Ratnesh Kumar Soni
Prof. M. Singaravel	Department of Zoology, Institute of Science BHU, Varanasi - 221005	Innate and Learned Behaviour	11/02/2022	Online	B.Sc.I, II and III	216	Mr. Ratnesh Kumar Soni
Prof. Abhay Kumar Pandey,	Department of Biochemistry University of Allahabad	Redox regulation: an important key to healthy life	12/02/2022	Online	B.Sc.I, II and III	140	Mr. Ratnesh Kumar Soni

Dr. P. N. Dongre

Principal

PRINCIPAL
K.N. Govt. P.G. College
Gyanpur (Bhadohi)-221304

Dr. Rashmi Singh

Project Coordinator
Project-Coordinator
DBT Star College Scheme
K.N. Govt. P.G. College
Gyanpur (Bhadohi)-221304

Photo Gallery Department of Botany

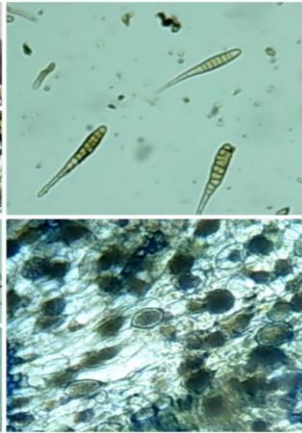


Latitude: 25.331558
Longitude: 82.466826
Altitude: 22.73±4 m
Accuracy: 39.6 m
Time: 30-10-2021 11:48
Note: DBT workshop on Instrumentation

Workshop on Bioinstrumentation



Hands on Training in Plant
Physiology Experiment



पौधों में लगने वाले रोग के विषय में दी जानकारी



चकटोडर गांव में बुधवार को रोग से ग्रस्त पौधा एकत्रित करते केएमपीजी के विद्यार्थी।
को आर्इन्टर डॉ. रश्मि सिंह ने छात्र-छात्राओं संग चकटोडर व जोड़ई समेत कई गांव में भ्रमण किया। रोग से ग्रस्त पौधों को लेकर विद्यार्थी प्रयोगशाला में चले आए। डॉ. रश्मि सिंह ने बताया कि सरसों व पानी में उगने वाले ऐसे पौधों को एकत्रित किया गया जो कई बीमारियों से ग्रस्त थे। रोग से प्रभावित पौधों को विद्यार्थी प्रयोगशाला में अध्ययन करेंगे।

Winter School on Plant Disease Collection and Identification



Latitude: 25.33156
Longitude: 82.46673
Elevation: 87.68±1 m
Accuracy: 59.0 m
Time: 14-02-2022 12:18
Note: Herbal cosmetics workshop

Powered by NoteCam



Latitude: 25.331583
Longitude: 82.466852
Elevation: 87.68±1 m
Accuracy: 63.7 m
Time: 23-02-2022 13:40
Note: Water Soil analysis

Powered by NoteCam

Hands on Training in laboratory instruments



Latitude: 25.331554
Longitude: 82.466699
Elevation: 87.68±2 m
Accuracy: 320.4 m
Time: 12-02-2022 10:26
Note: Interdisciplinary Workshop on Herbal Cosmetics
Place: Botany Department

Powered by NoteCam

Interdisciplinary workshop on Herbal Cosmetics



Latitude : 25.182331767864525°
Longitude : 82.87480621598661°
Altitude : -42.0 meters
Date : 11/27/2021 11:52 AM
Note : Educational visit to IIVR VARANASI

छात्रों के लिये साइंस विलेज फेस्टिवल व शैक्षणिक भ्रमण कार्यक्रम का आयोजन

जन्मस्थान/वाराणसी (एएमपीजी)। राष्ट्रीय कृषि विद्यालय आकाशमि के परामर्शीय पीठ के सभासदन में काशी नरेश राजकीय स्नातकोत्तर महाविद्यालय, जलनूर भदोही के 50 छात्र-छात्राओं के लिये 27 नवंबर को भारतीय राष्ट्रीय अद्वितीय संस्थान में शैक्षणिक भ्रमण एवं छात्र संवाद कार्यक्रम का आयोजन किया गया। संस्थान के निदेशक डॉ. तुषार कांति वैद्य ने छात्रों को राष्ट्रीय शोध की उत्पत्ति में अग्रणी कर्तव्य और कृषि में रोजगारपन्ना संपादन को प्रोत्साहित किया। अकाशमि के निदेशक डॉ. तुषारकांति वैद्य ने नवीन रसायन एवं डॉ. वी.अरुण भादवाय ने कृषि क्षेत्र में अध्ययन, शोध एवं रोजगार से जुड़े महत्वपूर्ण विषयों पर छात्रों का मार्गदर्शन किया। इस अवसर पर छात्रों द्वारा प्रयोगशाला एवं प्रदर्शनिक प्रवेश का प्रमाण भी किया गया। जिसमें उन्होंने राष्ट्रीय शोध से जुड़े कार्यक्रमों को करीब से जाना। इस कार्यक्रम के समन्वयक संस्थान के वैज्ञानिक डॉ. इन्दिरा प्रसाद एवं डॉ. वी.राजेश्वर रेड्डी रहे। इसी क्रम में भारत सरकार के विज्ञान, प्रौद्योगिकी एवं नव-विज्ञान द्वारा विज्ञान भारती के सहयोग से आयोजित किये जा रहे साइंस विलेज फेस्टिवल व शैक्षणिक भ्रमण कार्यक्रम का आयोजन किया जा रहा है। फेस्टिवल 2021 के 'साइंस विलेज फेस्टिवल' को थीम के अंतर्गत राजकीय वैज्ञानिक इंटर



Field Visit to Indian Institute of Vegetable Research, Varanasi

Photo Gallery Photo Gallery Department of Zoology



Workshop on Micrometry and Hematology



विज्ञ में विजेताओं का हुआ सम्मान

झाड़पुर / संवादकर्ता

करोली जेएन राजकीय स्नातकोत्तर महाविद्यालय जंतु विज्ञान विभाग में जुनवत को कबीज व माइल-वार्ट प्रतियोगिता का आयोजन किया गया। इसमें विद्यार्थियों ने प्रतिभाग का अवसर हासिल किया। विज्ञान विभागियों को पुरस्कृत कर सम्मानित किया गया।



प्रतियोगिता में छात्र-छात्राओं ने सर्वोत्तम प्रदर्शन, ई-कॉपीय व प्रश्नको प्रश्नकार, कबजे के विज्ञान से होने वाले प्रश्नको समझकर वार्ड व माइल बनवाने। विद्यार्थियों का वार्ड देख निकाल करकी लाइफ करते रहे। कबीज प्रतियोगिता में सहभाग अंशरी प्रथम,

Amar Ujala 25/02/2022
जंतु विज्ञान के छात्रों ने किया विजित

झुनवत। दोहरी रात कोविड स्थिति के चलते केएनजी के जंतु विज्ञान विभाग के 65 छात्र-छात्राओं ने जुनवत को प्रश्नकार विद्यार्थियों के प्रश्नको समझकर वार्ड देख निकाल करकी लाइफ करते रहे। कबीज प्रतियोगिता में सहभाग अंशरी प्रथम, अंशरी प्रथम, अंशरी प्रथम प्रदर्शन करके विजेताओं को पुरस्कृत किया गया।

BIO-QUIZ

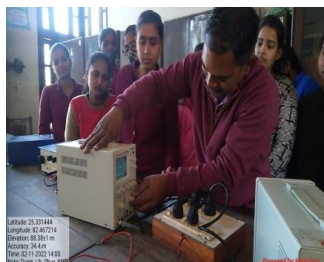


Educational Visit



Workshop on Maintenance of Laboratory Equipment for supporting staff

Photo Gallery Department of Physics



Hands on Training on Wave Formation using CRO

Winter School on Experimental Physics



Field Visit to Hydrogen Energy Centre, Laser and Spectroscopy Laboratory, BHU, Varanasi



**Minor Research Project
Preparation of Carbon Nanomaterial (Graphene) Using Agro Waste (Sugarcane Bagasse)**

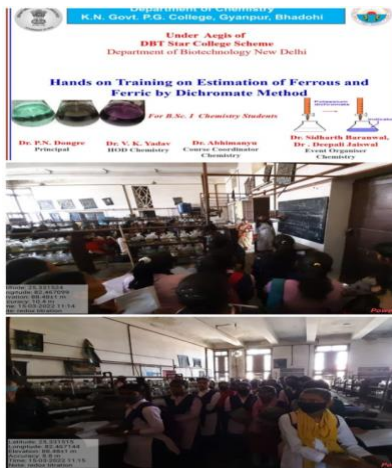


Interdisciplinary workshop on Crystal Growth

Photo Gallery Department of Chemistry



Hands on Training on Chromatography



Hands on Training on Estimation of Ferrous by Dichromate



Workshop on Handling of Laboratory Reagent for supporting staff

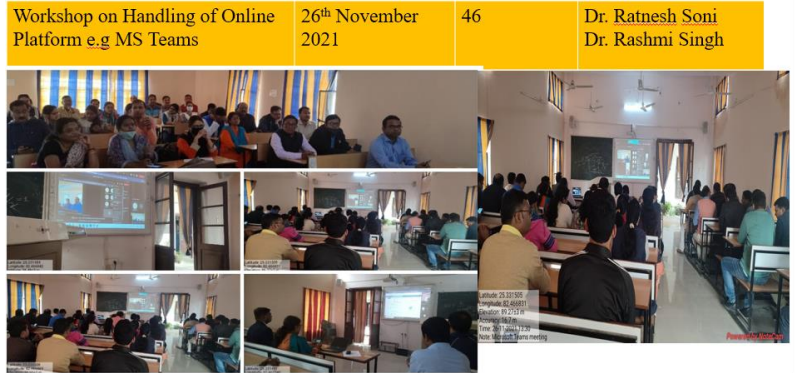


Educational Visit

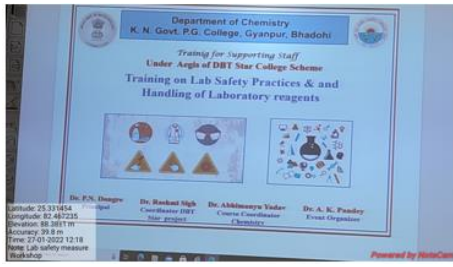
Photo Gallery- Outreach Activity



*DBT Mentorship Launch Programme, DBT
*Bioresources in solving food problem- Outreach Activity
organized by U.P. Autonomous College, Varanasi



Workshop on Handling of Online Platform e.g MS Teams	26 th November 2021	46	Dr. Ratnesh Soni Dr. Rashmi Singh
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Training on Lab Safety Measures for supporting staff



Outreach Activity for School students



महिलाओं को दी पोषण व स्वास्थ्य की जानकारी

कमर चक्रवात जन्म (पत्नी) : कृषि क्षेत्र के विकास में महिलाओं को प्रोत्साहित करने के लिए, महिलाओं को पोषण और स्वास्थ्य के बारे में जानकारी देना आवश्यक है।

जुआर विभाग के सहयोग में, महिलाओं को पोषण और स्वास्थ्य के बारे में जानकारी देना आवश्यक है।

महिलाओं को पोषण और स्वास्थ्य के बारे में जानकारी देना आवश्यक है।

महाराष्ट्र सरकार के लिए स्वच्छता अभियान की शुरुआत

महाराष्ट्र सरकार के लिए स्वच्छता अभियान की शुरुआत।

स्वच्छता अभियान की शुरुआत।

स्वच्छता अभियान की शुरुआत।

Outreach Activity for Rural People