

V.V.VANNIAPERUMAL COLLEGE FOR WOMEN



(Belonging to Virudhunagar Hindu Nadars)
An Autonomous Institution Affiliated to Madurai Kamaraj University
Re-accredited with 'A' Grade (3rd Cycle) by NAAC

VIRUDHUNAGAR - 626 001 (TAMILNADU)

ANNUAL PROGRESS REPORT 2020-2021

STAR COLLEGE SCHEME FOR STRENGTHENING UG SCIENCE DEPARTMENTS
No.HRD-11011/163/2020-HRD-DBT
DT.24.08.2020

SUPPORTED DEPARTMENTS

- PHYSICS
- CHEMISTRY
- ZOOLOGY
- MATHEMATICS & COMPUTER SCIENCE
- BOTANY & BIOTECHNOLOGY
- BIOCHEMISTRY



Under

DBT STAR COLLEGE SCHEME

DEPARTMENT OF BIOTECHNOLOGY
NEW DELHI

JULY - 2021

DEPARTMENT OF BIOTECHNOLOGY
PROFORMA FOR SUBMISSION OF ANNUAL PROGRESS
REPORT SUPPORTED UNDER
DBT STAR COLLEGE SCHEME

1. Name of the College V.V.Vanniaperumal College for Women (Autonomous),
Virudhunagar
 2 Name of the Coordinator, Dr.M.Tamilselvi,
Designation, Address, Associate Professor of Zoology,
Phone Nos. V.V.Vanniaperumal College for Women (Autonomous),
Virudhunagar-626001
Contact No : 9894883106

3. Assessment Duration 2020-2021 Duration in Years : 1

Details of Departments supported

Sl.No	Name of the Department	Courses(B.Sc./M.Sc./PG Diploma, Certificate etc.,) offered	Regular Faculty Members		
			Total =41		
			Total strength	With Ph.D	Without Ph.D
1	Physics	B.Sc	6	6	-
2	Chemistry	B.Sc	6	3	3
3	Zoology	B.Sc	5	5	-
4	Mathematics	B.Sc	10	7	3
	Computer Science	B.Sc	4	3	1
5	Botany	B.Sc	3	3	-
	Biotechnology (Self Finance)	B.Sc	4	1	3
6	Biochemistry	B.Sc	3	3	-
Total			41	31	10

5.Number & Date of Advisory Committee Meeting :

S.No	Meeting	Number	Date
1	Advisory Committee Meeting	1	23.11.2020
2.	General Meeting	5	07.10.2020 26.11.2020 11.01.2021 01.04.2021 20.05.2021

3	Mentors Meeting	8	
(i)	Physics & Zoology	2	08.01.2021
(ii)	Chemistry & Biochemistry	2	18.01.2021
(iii)	Mathematics & Computer Science	2	11.01.2021
(iv)	Botany	1	20.01.2021
(v)	Biotechnology	1	19.01.2021

6. Qualitative improvements due to DBT support. Please highlight 5 salient points (within 500 words)

V.V.Vanniperumal College for Women, Virudhunagar is one of the reputed higher educational institutions taking great endeavours in providing quality education to the rural womenfolk in Southern Tamilnadu. Its remarkable march towards its progress is the “joint venture” with the Department of Biotechnology to strengthen the UG Science Departments by increasing infrastructure facilities, fortifying teaching, learning and research processes and moulding the students to compete globally. The achievements of the beneficiary Science Departments under Star College Scheme of DBT are

- ✓ **Incorporated additional practical modules** in the existing syllabus in accordance with the purchased equipments, books, slides, charts, specimens, software etc., under Star College Scheme and it was approved in BOS to promote teaching, learning and research strategies.
- ✓ Organized **Guest Lectures, Seminars, Workshops Conferences and Faculty Development Programmes** for ensuring exposure of the students as well as the faculty beyond the syllabus to meet out the global demands and create their interest in various branches of science.
- ✓ Arranged good number of **Hands on Training Programmes** which would enable the students acquire technical knowledge in their specific field so as to work in industries and research laboratories.
- ✓ Organized **Interdepartmental Competitions** during the celebrations of special occasions to understand its importance and inculcate social responsibility among the students. The basic principles of science were exhibited as models, charts etc., in exhibition which created interest on the science subjects. This platform has provided knowledge sharing between the science and non-science students and to carry out more interdisciplinary projects.
- ✓ Exposed the students to **Research Centres and Industries** to motivate the students in pursuing higher studies and provided opportunities to interact with the Scientists and Industrialists to keep them well updated in the evolving trends of their field and also the existing and emerging problems. These visits promote self employment venture in the challenging world and instilled entrepreneurial skills.

- ✓ Numbers of student projects have been increased considerably because of facilitated infrastructure under this scheme to meet the relevant problems with scientific approach. The projects on ‘**Water Quality Index**’ in college premises(Chemistry) and in nearby villages of Virudhunagar District (Zoology, Biochemistry, Botany) highlighted the domestic purpose and conservation of freshwater bodies as it inhabits number of biota. These kinds of projects boost the students to identify the problems in their own area that involve them to meet out the real life situation and instill social responsibility among the students. The data on **survey analysis**(Zoology) in small population may be helpful to point out the problems at earlier level and lay foundation to execute in large population through Major Research Projects.
- The projects carried out by the students of Computer Science and Mathematics will definitely help the educational institutions, organizations and public sectors for accessing the data easily during crisis period. Real life problems will be sought out easily (**Arduino based Projects** of Physics students) within a time limit.
- The **projects on “non-conventional biotic resources”** done by the life science students (Zoology, Biotechnology and Biochemistry) alarm the preservation of habitats in local area along with the biota and can also be used for environmental monitoring for the welfare of human beings.
- The **projects on phytochemical screening**(Chemistry, Zoology, Biochemistry, Botany and Biotechnology) and synthesis of nanoparticles may give the solution to the existing problems in search of new medicines and to cure various kinds of common ailments by simple home remedies.

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

- ✓ Under DBT Star College Scheme, the organized **Outreach activity** gave a very good significant impact to the Government Schools of Virudhunagar District. Our college extended its helping hands to the PG Assistants of Government Schools in sharing the expertise of the science faculty to conduct theory and practical classes in accordance with the revised syllabus of Tamilnadu Government. Around 450 PG Assistant Teachers from **98 Government Higher Secondary Schools in Virudhunagar District** were highly benefitted. Our college had an opportunity in identifying the needy schools and extended its valuable service to the rural schools in Virudhunagar District. Their needs were fulfilled by donating the required apparatus to both the Government Boys and Girls Schools of Pandalkudi in Virudhunagar for the benefit of the student community. **We have planned to continue this programme in the succeeding years. It will be helpful to get academically sound new entrants during I year UG admission.**
- ✓ Disseminated the acquired knowledge under DBT Star College Scheme to nearby colleges by organizing collaborative Peer Group Training Programme on “Solving problems in OR

using Excel solver” after attending the workshop on “ Applications of Operations Research” from 2.11.2020to 07.11.2020 conducted by the Department of Mathematics. Significant impact was observed among the students and has been planned to continue by other departments every year.

- ✓ The Department of Botany has set up **medicinal garden** with 150 medicinal plants in our college premises under this scheme. We created awareness on identification of medicinal plants and its uses to cure common ailments among Arts, Commerce and Management students. **We have a plan to extend this programme to school students to create awareness on its uses as traditional medicines and importance for its conservation.**
- ✓ Weekly, 3kg of vermicompostis collected from the established **Vermiculture Unit** under this scheme by the Department of Zoology. It is utilized for the growth of in-campus plants and trees. We plan to give Disciplinary/interdepartmental/interdisciplinary training programmes and projects related to Vermitechnology every year to promote entrepreunerial skills. Moreover, **the vermicast will be supplied to the adopted villages under Unnath BharthAbiyan as “non-remunerative” services under extension services.**
- ✓ As each department purchased specific equipmentsBOD, COD Analyser and Chem Draw Software(Chemistry), Microscopes(Botany and Zoology), Plant Tissue Culture Unit (Biochemistry), Biofermentor (Biotechnology), Adobe Creative Cloud – (Computer Science) under this scheme, they have planned **to carry out more interdepartmental and interdisciplinary projects.**
- ✓ **Common Science Laboratory will be built up** to accommodate large group of UG students in a common platform for promoting research activities at UG level. Besides, a **common Museum** will be set up for the benefit of non-science and school students to create interest on science subjects. We have planned to set up **Plant Tissue Culture Lab** in our college premises and plans are there to give a number of training programmes to the students of nearby colleges to promote interest on Biotechnology field.
- ✓ **Plan to publish books** on Lab Manuals for practicals (all beneficiaries departments), Wildlife Conservation(Zoology) and flora and fauna inside the campus of VVVC(Zoology & Botany) with ISBN.
- ✓ **We have planned to analyse the fluoride content in ground water of the nearby** village as most of the people have tooth discolouration problem. We realized the fact that Survey and Analysis of water samples is a primary source to identify the problems of local people and this data would be helpful for creating awareness and applying major projects in environmental and health issues.
- ✓ We have a plan to give training as interdepartmental programme on handling and operation of new equipments/softwarees and maintenance training to the lab attendants.

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

Lessons Learnt:

- ✓ Training programmes to lab attendants is essential for handling and maintenance of the equipments to avoid mishandling of the equipments.
- ✓ Need for organizing Guest lecture, Seminar, Workshop, Conference, FDP, Hands on Training Programme (interactive e-learning and assessment tools, IPR, Bioethics, Environmental Engineering Sciences) to update the knowledge in recent trends in Science and Technology.
- ✓ Identify the needs of society and give possible solutions through students as educationalist.

Difficult Faced:

- ✓ The adaptability to this pandemic period was found as hard time for us in ordering and receiving the goods (equipments/chemicals/ glasswares& apparatus/ slides, charts/specimens) and organizing programmed activities. Though we have organized the scheduled programmes as per the submitted proposal, this pandemic was found difficult to invite the resource person during the transition period (off-line mode of lecture to online-mode and online to offline). It directly or indirectly affect the total number of participants involved.
- ✓ Planned to take our students to renowned Central Research Institutes (CMFRI in Kochi and Mandapam, Ramanujam Institute for Advanced study in Mathamatics, Chennai, CECRI in Karaikudi, Nuclear Power Plant in Kudankulam) as per the submitted proposal. Unfortunately, permission was not granted to visit these places in this pandemic period. Nevertheless, we took our students to nearby research institutes to fulfil their dreams under this scheme.
- ✓ A large group of students are to be benefitted by conducting exhibition during celebration of significance day. Piteously, online competitions were conducted and expected number of participants could not be observed due to lack of knowledge in use of technology in submitting their assignments/photos/videos etc.,

9. KEY PERFORMANCE INDICATORS

1. NUMBER OF STUDENTS ADMITTED:

Details of Departments Supported	Pre-Support [2019-2020]				During Support [2020-2021]			
	SC	ST	OBC	G	SC	ST	OBC	G
Physics	10	-	39	-	6	-	36	1
Chemistry	3	-	44	-	6	-	39	-
Zoology	7	-	39	-	4	-	43	-
Mathematics & Computer Science	6	-	67	1	14	-	58	-
	3	-	44	1	3	-	41	-
Botany	(Allied Department)							
Biotechnology (Self-finance)	4	-	51	1	3	1	45	-
Biochemistry	7	-	43	-	7	-	36	1

2. Number of students passing out (%) students Admitted/Passing out (Pass %)

S.No	Details of Departments Supported	Pre-Support [2019-2020]			During Support [2020-2021]			
		Students Admitted	% of Admission	Pass Percentage (%)	Students Admitted	% of Admission	Pass Percentage (%)	
1	B.Sc. Physics	49	95.83	100	43	86.36	100	
2	B.Sc. Chemistry	47	89.58	100	45	100	97.61	
3	B.Sc. Zoology	46	85.41	94.59	47	100	92.3	
4	B.Sc. Mathematics &	67	95.83	97.33	72	100	97.26	
	B.Sc. Computer Science	44	93.75	93.02	44	100	100	
5	Botany &	{ Ancillary Regular Department)						
	B.Sc. Biotechnology (Self- Finance}	45	75.00	90.91	49	84.09	96.97	
6	B.Sc. Biochemistry	36	91.66	91.30	44	86.36	100	

3. Drop-out rates

S.No	Details of Departments Supported	Pre-Support [2019-2020]	During Support [2020-2021]	Remarks
1	B.Sc. Physics	6.12	11.62	After joining our College, Students prefer to go for Professional Courses (Engineering, Agriculture and Medical Courses) while the selection list is published
2	B.Sc. Chemistry	8.51	2.22	
3	B.Sc. Zoology	10.86	6.38	
4	B.Sc. Mathematics &	6.75	4.16	
	B.Sc. Computer Science	6.25	-	
5	Botany &	Allied Regular Department		
	B.Sc. Biotechnology (Self- Finance)	35.71	24.48	
6	B.Sc. Biochemistry	12.00	13.63	

4. Number of students opting for M.Sc.

S.No	Details of Departments Supported	Pre-Support [2019-2020]	During Support [2020-2021]	Remarks
1	B.Sc. Physics	36	Summative Examination Results Published on 12.07.2021	After getting a degree, Students prefer Training Course (B.Ed.) and Job
2	B.Sc. Chemistry	12		
3	B.Sc. Zoology	09		
4	B.Sc. Mathematics &	28		
	B.Sc. Computer Science	07		
5	Botany &	Allied Department [Regular]		
	B.Sc. Biotechnology (Self- Finance)	07		
6	B.Sc. Biochemistry	06		

5. Average Marks

S.No	Details of Departments Supported	Pre-Support [2019-2020]	During Support [2020-2021]
1	B.Sc. Physics	76	77
2	B.Sc. Chemistry	76	77
3	B.Sc. Zoology	71	63
4	B.Sc. Mathematics &	77	76
	B.Sc. Computer Science	70	72
5	Botany &	Regular Allied Department	
	B.Sc. Biotechnology (Self-Finance)	72	68
6	B.Sc. Biochemistry	73	69

6. No. of Hands on Experiments being conducted

S.No	Details of Departments Supported	Pre-Support [2019-2020]	During Support [2020-2021]	Remarks
1	B.Sc. Physics	86	116	Due to increase of infrastructure facilities under Star College Scheme, New and additional number of Equipments, Apparatus, Glasswares, and Chemicals purchased. Demo practical are converted into group and some group practicals are converted into individual practical.
2	B.Sc. Chemistry	52	59	
3	B.Sc. Zoology	22	36	
4	B.Sc. Mathematics & B.Sc. Computer Science	-	-	
		12	14	
5	Botany & B.Sc. Biotechnology (Self- Finance)	09	19	
6	B.Sc. Biochemistry	80	89	

7. Number of new experiments introduced

S.No	Details of Departments Supported	Pre-Support [2019-2020]	During Support [2020-2021]	Remarks
1	B.Sc. Physics	3	27	New Practicals are included in the syllabus and passed in the Board of Studies.
2	B.Sc. Chemistry	-	7	
3	B.Sc. Zoology	-	18	
4	B.Sc. Mathematics & B.Sc. Computer Science	-	-	
		-	2	
5	Botany & B.Sc. Biotechnology (Self- Finance)	-	19	
6	B.Sc. Biochemistry	-	09	

8. Publication (Scopus indexed)/patents, if any

S.No	SCOPUS INDEXED RESEARCH ARTICLES	
	PRE-SUPPORT [2019-2020]	
	DEPARTMENT OF PHYSICS	
1	Vidhya, R., M. Sankareswari, R. Gandhimathi, Kand Neyvasagam(2019). Influence of Cu Concentration on the Structural, Morphological, Optical and Catalytic Properties of TiO ₂ thin films, <i>Indian Journal of Pure and Applied Physics</i> ,57(7):475-482.	
2	Rathinamala, I., I.Manohara Babu, J. Johnson William, G. Muralidharan and N. Prithivikumar(2019). CdS microspheres as promising electrode materials for high performance supercapacitors, <i>Material Science in Semiconductor Processing</i> 105 (104677):1-8.	
3	Karthikeyana, B., G. Shanmugapriya, N.Rajamanickam and S.P. Bagare(2020). An attempt of identification of barium hydride molecular lines in sunspot umbral spectra, <i>New Astronomy</i> ,78.	
	DEPARTMENT OF CHEMISTRY	
4	Dhanalakshmi, M., K.Saravanakumar, S. LakshmiPrabavathi, V.Muthuraj(2020). Iridium Doped ZnO Nanocomposites: Synergistic Effect Induced Photocatalytic Degradation of Methylene Blue and Crystal Violet, <i>Inorganic Chemistry Communications</i> , ELSEVIER,111.	
5	Dhanalakshmi, M., S. Lakshmi Prabavathi, K. Saravanakumar, B. Filip Jones and V. Muthuraj(2020). Iridium Nanoparticles Anchored WO ₃ Nanocubes as an efficient Photocatalyst for Removal of Refractory Contaminants (Crystal Violet and methylene Blue), <i>Chemical Physics Letters ELSEVIER</i> ,745.	
	DEPARTMENT OF MATHEMATICS	
6	Santhini, C. and M. Suganya (2020). New notions in ideal topological space, <i>Boletim da</i>	

	<i>Sociedade Paranaense de Matematica</i> , 38 (5):19–31.
DEPARTMENT OF BOTANY	
7	Muniyandi Biruntha, Pitchaimuthu Mariappan, Balan Karunai Selvi , James Arockia John Paul, and Natchimuthu Karmegam(2019). Vermiremediation of Urban and Agricultural Biomass Residues for Nutrient Recovery and Vermifertilizer Production, <i>Waste and Biomass Valorization (Springer)</i> ,
8	Biruntha M, Mariappan P, KarunaiSelvi B . James Arockia John Paul, Ramalingam Balachandar, Muthupandian Saravanan, NatchimuthuKarmegam(2019). Green Synthesis of Zinc Sulfide Nanoparticles Using <i>Abrus precatorius</i> and Its Effect on Coelomic Fluid Protein Profile and Enzymatic Activity of the Earthworm, <i>Eudriluseugeniae</i> , <i>Bio Nano Science</i> .
9	Biruntha M, Karmegam N, Archana J, KarunaiSelvi B , John Paul J, Balamuralikrishnan B, Chang SW, Ravindran B(2020). Ver+miconversion of biowastes with low-to-high C/N ratio into value added vermicompost, <i>Bioresource Technology</i> , 297, 1-8.
DEPARTMENT OF BIOCHEMISTRY	
10	R. Gloria Jemmi Christobel and N. Kasi Selvi(2020). Assessment of in -vitro Antioxidative and Anti-Inflammatory Effect of <i>Caesalpinia bonducella</i> Seed Stabilized Silver Nanoparticles, <i>International Journal of Research in Pharmaceutical Sciences</i> , 11(1):693 – 701.

S.No	DURING SUPPORT [2020-2021]
DEPARTMENT OF PHYSICS	
1	Rahinamala, I. , I Manohara Baby, J. Johnson William, G. Muralidharanand N. Prithivikumar(2021). Extra-Durable Hybrid Supercapacitor Based on Cobalt Sulfide and Carbon (MWCNT) Matrix Electrodes, <i>Journal of Energy Storage</i> , 2352-152X
DEPARTMENT OF MATHEMATICS	
2	Getchial PonPackiavathi, P. , S. Balamurugan and R.B. Gnanajothi(2020). Hop Dominatin Number of Catepillar Graphs, <i>Advances in Mathematics: Scientific Journal</i> , 9(5): 2739-2747.
DEPARTMENT OF BOTANY	
3	Biruntha, M., J. Archana K. Kavitha., K. Vanimuthu., B. Karunai Selvi J. Arockia John Paul R. M. Vithyavathy K. Kaviyarasu and G. Ramalingam(2021). Efficacy of dye degradation of contaminated soil microbial isolates, <i>Materials Today Proceedings</i> , 36(2):167-170.
4	Sreebha R. , and A.E.D. Daniels(2020). The Little known <i>Fissidens axilliflorus</i> Thwaites and Mitt. (Fissidentaceae: Bryophyta) - New to the Moss Flora of India, <i>Plant Science Today</i> , 7(4):560-563.
DEPARTMENT OF BIOCHEMISTRY	
5	Sudha Rameshwari, K. M. Abirami and R. Gloria Jemmi Christobel(2020) . Partial Characterization of Green Synthesized Silver Nanoparticles of <i>Cardiospermum halicacabum</i> and <i>Butea monoperma</i> Aqueous Extract Comination (CHBMCSNP), <i>Research Journal of Pharmacy and Technology</i> , 13(12):6218-6223
6	Sudha Rameshwari, K., M. Muthu Muneeswari, R. Gloria Jemmi Christobel, R. Mallika, R. Renuka and R. Salini(2020) . Synthesis and Evaluation of Herbal Formulation Using Natural Extract, <i>International Journal of Research in Pharmaceutical Sciences</i> , 11(3): 3450-3458.
7	Sudha Rameshwari, K., and Sathiya Priya, R.(2020). Phytochemical screening, HPTLC, antimicrobial activity in extracts of <i>Psidium guajava</i> and piper betle leaves combination (PGPB), <i>International Journal of Scientific and Technology Research</i> , 9(3): 7008–7018.
8	Divyaprabha, M., P. Chitra and K. Sudha Rameshwari (2021). Anti-Ulcer Activity of <i>Psidium guajava</i> on Pylorus Ligation Induced Gastric Ulcer In Albino Rats, <i>International Journal Of Pharmaceutical Sciences And Research</i> , 12(1)

9. Training received by the Faculty

S.No	Details of Departments Supported	Pre-Support [2019-2020]	During Support [2020-2021]	Remarks
1	B.Sc. Physics	56	130	Online programmes provided the opportunity to the Faculty members to participate in more FDPs and Workshops.
2	B.Sc. Chemistry	57	52	
3	B.Sc. Zoology	75	78	
4	B.Sc. Mathematics	1	11	
	B.Sc. Computer Science	15	21	
5	Botany &	81	17	
	B.Sc. Biotechnology (Self- Finance}	19	46	
6	B.Sc. Biochemistry	10	36	

10. Exhibitions/Seminars/ Training Courses conducted

Pre-Support [2019-2020]

Department	Number of Exhibitions/Seminars/ Training Courses conducted
Physics	2
Chemistry	1
Mathematics	1
Computer Science	4
Botany	1
Biotechnology	3

During Support [2020-2021]

Date	Activity	Remarks
Department of Physics		
06.02.2021 – 08.02.2021	National Seminar on Trends in Energy Technology and Management – An Overview	With the Financial Support under DBT Star College Scheme, number of Training Programmes conducted for the students, Faculty members and Lab Attendants. Exhibition conducted for the benefit of Arts
04.02.21 – 06.02.21	Hands-on-Training Programme on “CCTV and Security systems”	
04.02.21 – 05.02.21	Hands-on-Training Programme on “Maintenance of Home Appliances and Servicing”	
05.11.2020 - 07.11.2020 09.11.2020 - 12.11.2020 17.11.2020 - 19.11.2020	Handling and Maintenance of Laboratory Equipments	
13.02.21	Workshop on “Arduino Based Projects”	
11.03.2021- 12.03.2021	Industrial Training Programme on “Microcontroller based Electronic Projects”	

	Department of Chemistry	discipline, Professional Course and other Science Students. National / State level Conference and Seminars provided a platform to know more about Science for learning Community.
06.11.2020	Training Programme to Lab attendents on “Laboratory Safety Measures and Techniques”	
21.12.2020 - 23.12.2020	Practical training on “Inorganic and Organic Semimicro Qualitative Analyses”	
29.01.2021	State Level Seminar- on “Structural Characterization of Nanocarbon Materials”	
25.02.2021	Hands on Training on “Estimation of total hardness of water by EDTA method”	
27.02.2021	Conducted Exhibition on Celebrations of National Science Day	
03.03.2021	Training Programme on preparation of sanitizer, Phenoyl and Cleaning powder to AnnaiTherasa Self-help group at Chinnamoopan patty village	
09.03.2021 & 11.03.2021	Hands-on-Training on “Preparation of Sanitizer, Candle, Ink, Soap, washing powder and Shampoo”	
11.03.2021 & 12.03.2021	Hands-on-Training on “Synthesis & Biological application of metal Nanoparticles Using Plant Extract	
12.03.2021 & 13.03.2021	Hands-on-Training Programme on” Analytical Techniques”	
13.03.2021	Webinar on ‘Thrust Areas in Inorganic Chemistry”	
15.03.2021	Hands-on-Training Programme on” Demonstration of Analytical Techniques using equipments purchased under DBT Star College Scheme”	
Department of Zoology		
26.11.2020 - 03.12.2020	Training program on preparation of chemicals for laboratory attendants	
27.01.2021	Hands on training programme on “Beekeeping”	
30.01.2021	Training on “Apiculture”	
08.03.2021- 09.03.2021	Hands on training programme on “DNA Isolation”	
11.03.2021- 12.03.2021	Hands on training programme on "SDS PAGE"	
15.03.21	Hands on training programme on “Ornamental fish culture”	
15.03.21	Hands on training programme on “Vermiculture”	
24.03.21	Hands on training programme on “Blotting Techniques”	
Department of Mathematics		
05.11.2020 - 07.11.2020	Hands on training on “Solving O.R Problems in EXCEL Solver”	
30.11.2020	Construction of Mathematical Models	
30.12.2020	Data Analysis using R	
18.02.2021	Fundamentals of MATLAB	
Department of Computer Science		
12.01.2021	Installation of Linux Operating System to Lab Attendants	
08.02.2021	Angular JS	
16.02.2021 & 17.02.2021	J Query	
18.02.2021	Character Design in MAYA	
10.03.2021	Installation of a Computer	

11.03.2021	IoT and its Applications
15.03.2021	Green Foot
15.03.2021	MIT AppInventor
20.03.2021	Character Modelling in MAYA
03.12.2020	Workshop on “Applications of Computers in Biology”
21.01.2021	Thermal Imaging and its Applications
24.02.2021	Cloud Computing
10.03.2021	Get Ready for Industry 4.0
Department of Botany	
09.11.2020	Technical Training on” Compound and Dissection Microscope operation techniques” to Lab Attendants
04-12-2020	Hands on Training on “Handling of Laboratory Apparatus and Glasswares”
8.01.2021	Workshop on “Oyster Mushroom Cultivation”
06.03.2021	Methods to Preserve and Handling 12Specimens : Preparation of Dry and Wet Specimens
8.03.2021, 10.03.2021 & 12-03-2021	Anatomy of Flowering Plants Taxonomic Work out of Bryophytes and Angiospermic Plants
12.03.2021	FDP on “Herbal Medicine in Pharmaceutical Industry”
15.03.2021	Identification of Medicinal Plant
20.03.2021	Taxonomic Work out of Bryophytes
Department of Biotechnology	
10.11.2020 & 27.11.2020	Lab Manpower Training on Bioinstrumentation
20.02.2021	State Level Seminar on “Current Scenario in Biotechnology”
24.02.2021	Hands on Training Programme on “Plant Tissue Culture Techniques”
25.02.2021	Hands on Training Programme on “Molecular Techniques”
12.03.2021	Workshop on “Terrace Gardening”
15.03.2021	Hands on Training Programme on “Molecular Techniques”
Department of Biochemistry	
24.11.2020 & 25.11.2020	Training on the maintainence of Laboratory, Electrical equipments, sterilization and Fumigation to Lab Attendants
02.12.2020 & 03.12.2020	Workshop on “Bioinformatics”
06.01.2021 & 07.01.2021	National Conference on “Adolescent and Youth Psychology and Maintaining Stable EQ”
23.02.2021 & 24.02.2021	Hands on training on “Production of Herbal Medicines and Cosmetics”
09.03.2021 & 10.03.2021	Production of Biofertilizer and Vermicompost
23.03.2021 & 24.03.2021	PCR

11. BOOKS/ JOURNALS SUBSCRIBED FROM GRANTS

S.No	Departments Supported	Pre-Support [2019-2020]	During Support [2020-2021]	Remarks
1	B.Sc. Physics	24	18	A total of 182 books received from UGC Autonomous/Special Fees / Book Banks Accounts for 2019-2020. (Pre support)
2	B.Sc. Chemistry	56	12	
3	B.Sc. Zoology	14	13	
4	B.Sc. Mathematics	27	23	
	B.Sc. Computer Science	10	14	
5	Botany &	17	2	
	B.Sc. Biotechnology (Self- Finance}	17	5	During support, Under DBT Star College Scheme, 104 books purchased under contingency grant for the benefits of the learnig community.
6	B.Sc. Biochemistry	17	17	

12. OUTREACH ACTIVITIES (POPULAR LECTURES)

Pre-Support [2019-2020]

Department	Number of Activities
Physics	3
Chemistry	1
Mathematics	3

DURING SUPPORT [2020-2021]

Date	Details of Resource Person	Event/ Activity/Topic/ Beneficiaries
DEPARTMENT OF PHYSICS		
21.12.2020 – 23.12.2020	All the Faculty Members of Physics Department	Experimental Physics(Both in Real Lab and Virtual Lab) to Physics PG Teachers, Government Schools, Virudhunagar District
10.03.2021	Dr. A.Azhagu Parvathi Dr.I.Rathinamala Dept. of Physics	Practical Demonstration to the Girls & Boys , Higher Secondary School , Pandalgudi, Aruppukkottai
DEPARTMENT OF CHEMISTRY		
21.12.2020 To 23.12.2020	All the Faculty Members of Chemistry Department	Lecture cum Demonstration on “ Semimicro inorganic and organic qualitative Analysis to the PG Assistants Chemistry Teachers, Government Schools, Virudhunagar District
DEPARTMENT OF ZOOLOGY		
22.01.2021	Dr.P.Veeramuthumari, Assistant Professor	Lecture cum Training Programme on “DNA isolation and PCR” PG Assistants of Biology teachers, Government Schools, Virudhunagar District
05.02.2021	Dr.M.Tamilselvi, Associate Professor	Guest lecture on “ Culture Practices in Beekeeping” in St.Marys’ College, Thoothukudi.
10.03.2021	Dr.P.Vijaya Assistant Professor	Awareness Programme on “Women’s Health” to the Village people of K.Usilampatti, Virudhunagar.

DEPARTMENT OF MATHEMATICS		
28.12.2020	Dr.P.Geetha, Mrs.P.GetchialPonpackiavathy, Dr.P.Sooriyakala, Dr.M.UmaMaheswari, Department of Mathematics	Model Demonstration on “Use of Advanced Mathematical Aids in Class Room Teaching to the PG Assistants of Mathematics, 20 Government Schools, Virudhunagar District
01.02.2021	Dr.VimalRarh, Head & Assistant Professor, Department of Chemistry, S.G.T.B. Khalsa College, University of Delhi.	Guest Lecture on “ Awareness on MOOC” to the College teachers under Outreach Programme through online
28.05.2021	Mrs.S.Kohila, Assistant Professor, Department of Mathematics (Aide	Guest Lecture on “ CSIR NET& SET Exam in Mathematics in Dr. N. G. P. Arts and Science College, Coimbatore
03.06.2021	Dr.M.UmaMaheswari, Assistant Professor, Department of Mathematics	Guest Lecture on Introduction to Digital Tools in Google Workspace in Academy of Maritime Education and Training, AMET Deemed to be University, Chennai.
DEPARTMENT OF COMPUTER SCIENCE		
21.12.2020 TO 22.12.2020	All the Faculty Members , Computer Science Department	Lecture cum practicals on Advanced concepts in “PYTHON” To Computer Instructors (Grade-I) of various Government Schools ,Virudhunagar District
DEPARTMENT OF BOTANY		
17.12.2020	Dr.B. KarunaiSelvi Assistant Professor & Head Department of Botany,	Lecture cum practicals on “Taxonomic Workout of Angiospermic Plants- Liliaceae” to the Biology PG Assistants of Government School teachers, Arupukottai&Srivilliputhur
18.12.2020	Dr.R.Murugalakshmi Kumari, Assistant Professor of Botany, Dr. R. Sreebha, Assistant Professor of Botany,	Lecture cum practicals on Taxonomic Workout of Angiospermic Plants- Solanaceae and Fabaceae to the Biology PG Assistants of Government School teachers, Virudhunagar &Sivakasi
DEPARTMENT OF BIOTECHNOLOGY		
17.12.2020	Ms. K Indira, & Mrs. Sinthia Ganesan, Assistant Professor of Biotechnology,	Lecture on ” Bioresource Conservation” to the Biology PG Assistants of Government School teachers, Virudhunagar District
1.3.2021	Dr.N.Saranya, Assistant Professor in Bioinformatics, Dept. of Plant Molecular Biology and Bioinformatics, TNAU, Coimbatore.	Weninar on “Molecular Docking” and 12 colleges in TamilNadu participated
DEPARTMENT OF BIOCHEMISTRY		
18.12.2020	R. Mallika, Associate Professor, R. Gloria JemmiChristobel, Assistant Professor	Lecture on “Applications of Biotechnology and Molecular Genetics” to the PG Assistants of Government School teachers, Virudhunagar District

13. Colleges mentored to apply for DBT Star College Grants

Pre support	During Support
Nil	2 colleges mentored to apply for DBT Star College grants
	1.The Standard Fire Works Rajarathinam College for Women,Sivakasi
	2. Srimad Andavan Arts and Science College,Trichy

14. INVITED GUEST LECTURES

Pre-Support [2019-2020]	
Department	Number of Invited Guest Lectures
Physics	10
Chemistry	3
Zoology	3
Mathematics	4
Computer Science	3
Botany	2
Biotechnology	1
Biochemistry	4

During support[2020-2021]		
Date	Title	Resource Person
Department of Physics		
16.11.2020	Troubleshooting of Electrical Appliances	Mr.S.Balamurugan, B.E., Lecturer/EEE, V.S.V.N.Polytechnic College, Rosalpatti Village, Virudhunagar
01.12.2020	The Development of High Quality and Unidirectional Nonlinear Optical And Ferroelectric Single Crystals For Practical Device Applications	Dr.MuthuSenthil Pandian, Research Scientist, Photo Voltaic Devices Laboratory, SSN Research Centre, SSN Institutions, Chennai
09.12.2020	Energy Conservation	Mr.K.Selvakumar,B.E.,MBA., Chief Engineer, TamilNadu Electricity Board, Tirunelveli
28.12.2020	Nonlinear Dynamics- An Introduction	Dr.S.Vijayalakshmi, Associate Professor of Physics, Presidency College, Chennai
05.01.2021	Nano materials in Energy storage Applications	Dr.B.Karthikeyan, Assistant Professor of Physics, MepcoSchlenk Engineering College, Sivakasi
06.01.2021	Internet of Things	Dr.P.Thendral M.E., Ph.D., Associate Professor, School of Computing, Deputy Director, Kalasalingam Academy of Research and Education, Krishnankoil
27.01.2021	Transition Metal Oxide Based Supercapacitors	Dr.K.K.Purusothaman M.Sc.,Ph.D., Assistant Professor of Physics, Arignar Anna Govt. Arts and Science College. Pondicherry.
27.01.2021	An Introduction to Quantum Nanomaterials and their Applications	Dr.D.Nataraj, Associate Professor of Physics, Bharathiyar University, Coimbatore



29.01.2021	TCO Thin Films by Spray Deposition	Dr.R.Ramesh Babu, Assistant Professor of Physics, Bharathidasan University, Thiruchirapalli
01.02.2021	Basics of X-ray Diffraction of Material Characterization	Dr.K.Saravana Kumar, Assistant Professor of Physics, S. R. Naidu Memorial College, Sattur
15.03.2021	Thermodynamics	Dr.A.Basherrudin Mahmud Ahmed, Assistant Professor, Department of Theoretical Physics, School of Physics, Madurai Kamaraj University, Madurai
Department of Chemistry		
27.11.2020	Protein Structure , Folding and its Catalytic Activity	Dr. P. Muthumareeswaran, DST - INSPIRE Faculty, Department of Industrial Chemistry, Alagappa University, Karaikudi
08.01.2021	Microanalytical Techniques in Physical Chemistry	Dr. A. JeyaRajendran, Associate Professor of Chemistry, Loyala College, Chennai
06.02.2021	Electro analytical techniques- Cyclicvoltametry and Polarography	Prof. V.S. VasanthaM.Sc.,Ph. D.,Registrar (i/c) Head, Department of Natural Products Chemistry, School of Chemistry, Madurai Kamaraj University, Madurai
Department of Zoology		
30.11.2020	Bioprospecting of Ascidians	Dr. H. Abdul Jaffar Ali, Head and Assistant Professor, Department of Biotechnology, Islamiah College, Vaniyambadi
7.1.2021	Gut Microbiome''	Dr.H.Poornimakkani, Assistant professor of Zoology, Thiagarajar College, Madurai.
12.1.2021	Marine Biodiversity''	Dr.C.Stella, Professor &Head, School of Marine Science, Department of Oceanography &CAS. Alagappauniversity, Thondi.
09.02.2021	Probiotics	Dr. A. Palavesam, M.Sc.,M.Phil., Ph.D., Professor and Head, Department of Animal Science, Manonmaniam Sundaranar University, Tirunelveli.
Department of Mathematics		
30.11.2020	Construction of Mathematical Models	Mr.Dinesh,B.E., Triple Point, Madurai
22.12.2020	Ramanujan's Theories	Dr.D.Bala Ratnakar, Director(Academics), International Multidisciplinary Research Foundation Acharya Nagarjuna,University, Andrapradesh,
23.12.2020	Working on Data Science using R	Dr.K.Krishnaveni Head and Associate Professor, Department of Computer Science, SRNM. College, Sattur.
16.02.2021	Applications of Stochastic Differential Equations	Dr.S.P.Rajasekar,AssistantProfessor,Department of Mathematics, Government Arts College for Women, Nilakottai-Dindigul.
Department of Computer Science		
10.03.2021	Get Ready for Industry 4.0	Mr. RamamurthyPrabhuram, Ramar Tech Information Systems, Consulting Services, Madurai
16.03.2021	Cloud Computing – Architecture & Implementation	Dr. T. Revathi, Head & Professor of Information Technology, Mepco Schlenk Engineering College, Sivakasi, Tamilnadu.

16.03.2021	Solar Power Plants Automation	Mrs.K.Malarvizhi , Manager, Veyilsakthi Solar , Madurai.
Department of Botany		
28.10.2020	Respiration in plants	Dr.B.Sivasankari, M.Sc., M.Phil., Ph.D., Assistant Professor of Biology, Gandhigram Rural Institute Dindigul.
04.11.2020	Medicinal Plant Diversity: Utilization, Threats & Conservation	Dr.Ramasubbu M.Sc., M.Phil., Ph.D., Assistant Professor of Biology, Gandhigram Rural Institute, Dindigul.
07.01.2021	Trends in Plant Tissue Culture	Dr.S.Karuppusamy, Assistant Professor of Botany, The Madura College, Madurai.
01.02.2021	Mycorrhizae:Symbiotic mediators of Plants and Ecosystem	Dr. M. Jothi Basu, Assistant Professor of Botany, Directorate of Distance Education, Science Campus, Alagappa University, Karaikudi.
06.02.2021	Home Remedies in Siddha Medicine- An Overview	Dr.C. Mary Sharmila, M.D(S), PDCR, PCPV., Medical Officer, Arogya Siddha Hospital, Mugappair Chennai.
24.03.2021	Traditional Uses of Medicinal Plants and Herbs – An Overview	Dr.R.Aruna, M.Sc.,Ph.D., Assistant Professor of Botany,Thiagarajar College, Madurai
Department of Biotechnology		
11.11.2020	Solid Waste management and Biogas Production	Dr.N.Vasudevan, Associate Professor & Head, Department of Botany, S.N. College, Madurai
26.11.2020	Career Opportunities in Life Science	Mr.M.Aravinth, Corporate Relationship and Placement Officer, ACE College of Engineering, Trivandrum
20.01.2021	Genetic Engineering and its Application	Dr.S.Venkatesh, Assistant Professor of Biotechnology, ManonmaniamSundaranar University, Tirunelveli
24.02.2021	Plant Tissue Culture Techniques	Dr.J.VijayaKumar, Assistant Professor of Biotechnology, Ayya Nadar Janaki Ammal College, Sivakasi
Department of Biochemistry		
30.11.2020	Our Discovery of Virus	Dr.Sudhakar M.Sc., Ph.D., Dept of Biotechnology, Manonmaniam Sundaranar University, Tirunelveli.
11.03.2021	Keeping your Kidneys Healthy	Dr. S. M. RathinavelM.B.B.S.C.Diab CARE AKPS Hospital, Virudhunagar

10. SELF EVALUATION

S.NO	Department	Objectives	% achieved	Reasons for under achievement? If achieved, state in quantitative metrics
1	Physics	Guest Lecture organized	100	2
		Hands on Training Programme		2
		Seminars/ Workshop organized		2
		Research Centre and Industrial Visit		2
		Student Minor Projects completed		2
2	Chemistry	Guest Lecture organized	100	2
		Hands on Training Programme		2
		Seminars/ Workshop organized		2
		Research Centre and Industrial Visit		2
		Student Minor Projects completed		2
3	Zoology	Guest Lecture organized	100	2
		Interdepartmental Competitions conducted		2
		Outreach activities organized		2
		Hands on Training Programme		2
		Student Minor Projects		2
4	B.Sc. Mathematics & B.Sc. Computer Science	Purchased of Non-recurring items	100	2
		Guest Lecture Programme		2
		Workshop/Seminars organized		2
		Outreach activities organized		2
		Student Minor Projects completed		2
5	Botany & B.Sc. Biotechnology (Self- Finance}	Guest Lecture Programme	100	2
		Outreach Activities		2
		Hands on Training Programme		2
		Research Centre and Industrial Visit		2
		Student Minor Projects Completed		2
6	B.Sc. Biochemistry	Inter-departmental Competitions	100	2
		Lab Attendant Activity		2
		Conference / Workshop organized		2
		Visit to Research Centre and Industries		2
		Student Minor Projects completed		2

- For quantitative analysis you may fix five objective (Max) each having 2 marks and accordingly can calculate the matrix

 Member Secretary & Coordinator Dr. M. TAMILSELVI Member Secretary / Co-ordinator DBT - Star College Scheme V.V. Vanniaperumal College for Women Virudhunagar-626 001. Tamilnadu, India.	 Chairman & Principal Dr. S.M. MEENA RANI Principal / Chairman DBT - Star College Scheme V.V. Vanniaperumal College for Women Virudhunagar-626 001. Tamilnadu, India.
