



# **V.V.VANNIAPERUMAL COLLEGE FOR WOMEN**

(Belonging to Virudhunagar Hindu Nadars)

An Autonomous Institution Affiliated to Madurai Kamaraj University  
Re-accredited with 'A' Grade (3<sup>rd</sup> Cycle) by NAAC



**VIRUDHUNAGAR - 626 001 (TAMILNADU)**

## **ANNUAL PROGRESS REPORT 2022 - 2023**

**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**



DEPARTMENT OF BIOTECHNOLOGY  
Ministry of Science & Technology  
Government of India

Under

**DBT STAR COLLEGE SCHEME**  
**DEPARTMENT OF BIOTECHNOLOGY**  
**MINISTRY OF SCIENCE AND TECHNOLOGY, MHRD,**  
**NEW DELHI**

**APRIL - 2023**

## DEPARTMENT OF BIOTECHNOLOGY

### PROFORMA FOR SUBMISSION OF ANNUAL PROGRESS REPORT

#### SUPPORTED UNDER

#### DBT STAR COLLEGE SCHEME

- Name of the College** V.V.Vanniaperumal College for Women (Autonomous),  
Virudhunagar.
- Name of the Coordinator,  
Designation,  
Address,  
Phone Nos.** Dr.M.Tamilselvi,  
Associate Professor of Zoology,  
V.V.Vanniaperumal College for Women (Autonomous),  
Virudhunagar-626 001  
Contact No: 9894883106
- Assessment Duration** 2022-2023                      Duration in Years: 3<sup>rd</sup> Year
- Details of Departments supported**

Sl.No	Name of the Department	Courses (B.Sc./ M.Sc./ PG Diploma, Certificate etc.,) offered	Regular Faculty Members		
			Total=39		
			Total strength	With Ph.D	Without Ph.D
1	Physics	B.Sc	7	7	-
2	Chemistry	B.Sc	6	4	2
3	Zoology	B.Sc	5	5	-
4	Mathematics	B.Sc	11	9	2
	Computer Science	B.Sc	4	3	1
5	Botany	B.Sc	3	3	-
	Biotechnology (Self Finance)	B.Sc	5	3	2
6	Biochemistry	B.Sc	3	3	-
<b>Total</b>			<b>44</b>	<b>37</b>	<b>7</b>

#### 5 Number & Date of Advisory Committee Meeting

Meeting	Number	Date
General Meeting	1	16.09.2022

## 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 UG beneficiary Science Departments under Star College Scheme of DBT are

- ✓ The **facilities (Apparatus/ charts, slides software and models)** enriched under the DBT Star College Scheme enable us to organize more number of workshops, Hands-on training, demonstration and outreach activities. In accordance with this, the **curriculum is enriched** to meet the current challenges in edification (National Education Policy) and self-employment. For that, revisions were made to the contents of the course and introduced new courses for the benefit of the student community. All the beneficiary science departments have made revision in the Course content and introduced new courses for diversification of knowledge and skills for exploring disciplinary/interdisciplinary areas for promoting research.

Department	Introduced New courses	Revision in the Course content
Physics	<b>Departmental Course</b> Basics of Arduina Programming (22UVPD02) <b>Non-Major Elective Course:</b> Physics in Everyday life -22UPHN31	Fundamental of Electronics-20UPHN41N
Chemistry	<b>Departmental Value Added Course :</b> Perfume Chemistry -22VCHDO2 <b>Extra Credit Course :</b> Laboratory Practices and safety measures 22UCHO51	<b>Skill Enhancement Course:</b> Polymer Chemistry -20UCHS21
Zoology	-	<b>Skill Enhancement Course:</b> Vermiculture - 20UZYS21N
Mathematics	<b>Non-Major Elective Course:</b> Quantitative Aptitude -22UMTN31 Basic Statistics - 22UMTN32 Operational Research -22MTN42	<b>Non-Major Elective Course:</b> Research with Excel Solver-20UAMA31N
Biotechnology	<b>Core Course:</b> Plant and Animal Diversity – 22UBOC22  <b>Departmental Value Added course-:</b> Bioentrepreneurship (22UVBODO2)	<b>Core Course:</b> Recombinant Technology-20UBOC41N Molecular Biology – 20UBOC21 <b>Skill Enhancement Course:</b> Bioinstrumentation – 20UBOS21

Biochemistry	Metabolism -20UBCC22N Endocrinology -20UBCS21N	<p><b>New Departmental Course</b> Principles of Food Science - 22UBCC41</p> <p><b>Departmental Value Added Course:</b> Organic Farming -22UBCD01 &amp; Therapeutic Nutrition - (22UBCD02)</p> <p><b>Inter -Departmental Value added Courses:</b> Mushroom culture - 22UVBCI01</p>
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- ✓ Organized Workshops/Seminars/ Conferences/ Hands-on training programme and Faculty Development Programme to keep the learner community in **updating the knowledge** in emerging field of science and technology. These programmes promote interest in the science subjects (disciplinary wise/Interdisciplinary/and interdepartmental) and to have wider and in-depth knowledge on various subjects. It provides a wide opportunity for students to choose projects and think innovatively by applying the acquired knowledge through organized **capacity building programmes**.
- ✓ More hands-on training/ demo and Outreach programmes were made possible with the purchased apparatus/ specimens/ Models/software under the DBT-Star College Scheme. The conduct of Hands-on training using LaTeX, R and MATHEMATICA helped the students to enhance the multiplicity of innate potential.
- ✓ Students' interest in doing **project work** has been increased. **Interpretation skills** have also been developed much better.
- ✓ The Department of Computer Science took great effort to preserve the following old manuscripts maintained by the Tamil Department of our College. Recognizing the importance of it, and the benefits of future generation, students are encouraged for **documentation of these valuable manuscripts having traditional/historical and aesthetic values** through **student projects** by adopting a technology tool using software, purchased under the Star College Scheme.

➤ Chitraputran Story Book	( Values through Spiritual)
➤ Meenakshi Ammai Kali Venbaa	
➤ Thanipadallakkiam	
➤ Arallakkiam (Nalvazhi, Moodurai)	
➤ Kandar Anupoothi	
➤ Sitrilakkiam - Parimelazhagar Gnanakuravanji	
➤ Saivasithantha Ilakkiam	

- ✓ Under the outreach programme, basic concepts of science were taught to the Government Hr. Sec. School Virudhunagar with the available facilities. We proudly record here that a 100% pass percentage was recorded in Tamilnadu Public Examination. The organized outreach programme [PG Assistants of Government Schools (2021-2022) /Government-Aided School teachers (2021-2022) in Virudhunagar District and selected, needy schools (2022-2023)] may be one of the reasons for achieving it. The result of career guidance to school students in nearby villages/ districts escalates the admission in choosing science subjects at UG level. This scheme helps us to identify the needy schools and the beneficiary science departments share its facilities/ in-house expertise in compliance with their needs.
- ✓ Adequate teaching aids/text books provide a conducive environment for the students and promote learning levels and research.
- ✓ Knowledge repositories are established to provide incessant training programmes as disciplinary/ interdepartmental/interdisciplinary activities for the benefits of the students (College and school students).

Indoor Bonsai & Mushroom culture Unit	Botany
Vermiculture Unit	Zoology
Solar Power Grid	Physics
Hydroponics	Biochemistry

- ✓ The organized Skill Development Programme, (JAM entrance coaching classes) under the Star College Scheme sharpened the skill of the students to meet global competency. Two students have passed the National Level Entrance Examination. The student, Iswarya Arumugalakshmi of III B.Sc. Chemistry (Reg, No. 202017010) has qualified in for the JAM Entrance Examination. Selvi T.Anukiruthika of III B.Sc. Biotechnology cleared GAT-B Examination in the year 2022-2023 and joined in M.Sc. Biotechnology in Indian University (Alagappa University, Karaikudi). All the students expressed their gratitude to DBT for providing a good opportunity for the science students to crack public service and other entrance examinations.
- ✓ The activities related to the Industrial visit and the Research Centre visit provided an opportunity for the students to learn about the latest technology in science and development. It also paved the way for signing the MoU with the Industries/Research Centre/Government and non-Government Organizations to undergo disciplinary/interdepartmental/ interdisciplinary projects, internship programmes and others. The following departments have signed in MoU in the academic year 2022-2023.

Participating Beneficiary Science Department	Organization with which MoU is Signed	Date of MoU signed	Nature of Collaborating Agency	Purpose
Physics	Transtech Tronic Systems, Madurai	01.03.2022	Industry	Industrial training related to electronic projects
Chemistry	Idhayam- G finance & Investment services Ltd, Virudhunagar		Industry	Industrial visit
Zoology	Alpha Health Foundation, Madurai	02.09.2022	Private Organisation	Internship
	Shamee Bee Farm, Rajapalayam	03.08.2022	Industry	Self-employment Programme
Botany	Sri Marutham Agro Biotech, Srivilliputhur	18.05.2022	Industry	Mushroom Unit visit for Skill development
Biotechnology	Aurapha Private Ltd, Rajapalayam	30.09.2022	Industry	Research/Project activity
Biochemistry	Jana Clinical Laboratory & X-Ray, Virudhunagar	10.11.2022	Private Organisation	Laboratory Visit & Technical skill development

- ✓ Numbers of interdepartmental and interdisciplinary and inter-institutional student projects have been increased considerably because of facilitated physical infrastructure under this scheme to meet the relevant problems with scientific approach (Green audit, Energy audit).
- ✓ Lab Attendant Programme on waste management created awareness on the disposal of wastes properly.
- ✓ Organized departmental/Interdepartmental/inter-institutional competitions under significant Day celebrations created awareness among the students community on the importance of science in day to day life activities. These competitions motivate the students to find the solutions for existing/future challenges using science and technology and inculcates social responsibility for betterment of the society

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

- ✓ The Department of Biotechnology has applied to get approval for the affiliation of M.Sc. Biotechnology course from the academic year 2024-2025.
- ✓ The Department of Mathematics has a plan to institute a Planetarium in our college.
- ✓ The Department of Physics has planned to produce value added products using Solar dryer.
- ✓ The Department of Biochemistry, Botany and Zoology, is going to give more projects to the students through the established knowledge repositories (Hydroponics, Indoor Bonsai, and vermiculture Unit).
- ✓ All the beneficiary science departments have planned to organize outreach programmes to the needy schools for promoting learning attitude, in turn ensuring higher education.
- ✓ Central Instrumentation Centre is established to accommodate large group of UG students in a

common platform for promoting interdisciplinary research activities at UG level.

- ✓ The Biotechnology Department has started Azolla cultivation at lab scale and planned to extend its helping hands to nearby villages as extension Programme.
- ✓ e-Museum (Botany & Zoology) is established under Star College Scheme.

**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:**

- ✓ Slow learners were felt in difficult to do individual projects. They were motivated to do group projects. Advanced learners are motivated to help the slow learners in interpretation of data and presentation of data. Appreciable Team work in data collection and experimental studies was observed. Projects create interest among the student community and made them social responsibility to take data in their locality.
- ✓ The outreach programme helped us to identify the needy schools to share our resources and expertise. We have a plan to organize this programme in the succeeding years to nurture their life through outreach activity and career guidance.
- ✓ Need of organizing more coaching classes to appear entrance examination to crack the national entrance examination. Students were boost-up to appear JAM entrance examination and other examinations for pursuing higher studies and employment.

**Difficult Faced:**

- If the funds are released at the beginning of the every academic year, it will be easier for us to purchase the recurring items and organize the planned activities as per the schedule.

**Suggestions:**

- DBT shall recommend nationalized and State level Research Institution to take up Star College students for internship.

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## 9 KEY PERFORMANCE INDICATORS

### 1 Number of Students Admitted

Details of Departments Supported	SC	ST	OBC	G	Students Admitted
Physics	8	-	21	-	29
Chemistry	10	-	32	-	42
Zoology	7	-	42	-	49
Mathematics & Computer Science	7	-	57	-	64
	4	-	40	-	44
Botany	Allied Department (Regular)				
Biotechnology (Self-finance)	3	-	23	-	26
Biochemistry	2	-	15	-	17

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

S.No	Details of Departments Supported	During Support[2022-2023]			
		Students Admitted	% of Admission	Pass Percentage(%) 2021-2022	Pass Percentage(%) 2022-2023
1	B.Sc.Physics	29	63.04	100	97
2	B.Sc.Chemistry	42	91.30	92.68	90
3	B.Sc.Zoology	49	100	67.65	100
4	B.Sc.Mathematics &	64	92.75	100	100
	B.Sc.Computer Science	44	95.65	100	98
5	Botany &	Allied Department (Regular)			
	B.Sc.Biotechnology (Self-Finance}	26	59.09	96.97	100
6	B.Sc. Biochemistry	17	36.95	100	97



### 3 Drop-out rates

S.No	Details of Departments Supported	During Support [2022-2023]	Remarks
1	B.Sc.Physics	24.13	After joining in our college, students prefer to go for Professional Courses (Agriculture, Medicine, Engineering) while the selection list is published
2	B.Sc.Chemistry	14.28	
3	B.Sc.Zoology	14.28	
4	B.Sc.Mathematics &	23.43	
	B.Sc.Computer Science	6.81	
5	Botany &	(Allied Regular Department)	
	B.Sc.Biotechnology (Self-Finance)	7.69	
6	B.Sc. Biochemistry	5.88	

### 4 Number of students opting for M.Sc.

S.No	Details of Departments Supported	2022-2023	Remarks
1	B.Sc.Physics	08	After getting a degree, students prefer training Course (B.Ed.) and seeking job opportunity.
2	B.Sc.Chemistry	15	
3	B.Sc.Zoology	06	
4	B.Sc.Mathematics &	19	
	B.Sc.Computer Science	16	
5	Botany &	(Allied Regular Department)	
	B.Sc.Biotechnology (Self-Finance)	08	
6	B.Sc.Biochemistry	13	

### 5 Average Marks

S.No	Details of Departments Supported	Pre- support [2021-2022]	During Support [2022-2023]
1	B.Sc.Physics	71	75
2	B.Sc.Chemistry	76	73
3	B.Sc.Zoology	67	69
4	B.Sc.Mathematics &	78	79
	B.Sc.Computer Science	71	71
5	Botany &	Allied Regular Department	
	B.Sc.Biotechnology (Self-Finance)	71	70
6	B.Sc.Biochemistry	70	69

## 6 No. of Hands on Experiments being conducted

S.No	Date	Title	Number of Beneficiary
<b>DEPARTMENT OF PHYSICS</b>			
1	24.02.2023	Arduino UNO	45
2	08.03.2023	Materials Characterization	56
<b>DEPARTMENT OF CHEMISTRY</b>			
3	19.10.2022	Fabulous Fibres	120
4	05.01.2023	Preparation of Cosmetic Products	56
5	18.01.2023	Spectral Characterization of Inorganic Complexes using UV and IR	60
<b>DEPARTMENT OF ZOOLOGY</b>			
6	20.01.2023	Synthesis of Nanoparticles	40
7	15.02.2023	Honey Extraction and Seasonal Management of Apiary	40
8	23.02.2023 & 24.02.2023	Molecular and Immunological Techniques	40
<b>DEPARTMENT OF MATHEMATICS &amp; COMPUTER SCIENCE</b>			
9	13.10.2022	Hands on Training Programme on Mathematica	75
10	18.10.2022	Hands on training on Hadoop	70
11	04.01.2023	Hands on Training Programme on LATEX	59
12	10.01.2023	Data Analytics using SPARK	41
13	18.01.2023 & 19.01.2023	Automated Software Testing for Industrial Applications	43
14	30.01.2023 & 31.01.2023	Computer Network Projects Using Cisco Packet Tracer and Amazon Web services using Cloud	44
15	09.02.2023	Descriptive Statistics and Univariate Statistics using R-Software Probability Distributions and Testing of Hypothesis	68
16	10.02.2023	Internet of Things (IoT)	55
17	15.02.2023 & 16.02.2023	Embedded Systems	31
18	23.02.2023	Design Yourself with Photoshop Graphical Design with Canva	65
19	08.03.2023 & 09.03.2023	Machine Learning using Python	39
<b>DEPARTMENT OF BOTANY &amp; BIOTECHNOLOGY</b>			
20	19.10.2022	Preparation of organic fertilisers and <i>Azolla</i> cultivation	89
21	28.10.2022	Interdepartmental Hands on Training - The Art of Bonsai Making Techniques	35

22	03.01.2023 & 05.01.2023	Interdepartmental Hands on Training - "Vegetative Propagation Techniques"	60
23	08.03.2023	Animal Cell Culture Technique	70
24	13.03.2023	PCR Technique	70
25	13.03.2023	Interdepartmental Hands on Training - "Horticultural Techniques - Miniature Garden, Hanging Pots, Layering and Grafting"	63
<b>DEPARTMENT OF BIOCHEMISTRY</b>			
26	23.12.2022	Inter Departmental Hands on Training on Formulation of Therapeutic Products	41
27	29.12.2022	Hydroponics (Departmental)	32
28	23.02.2023	One Day Hands on Training on Traditional Healthy Food Preparation	45
29	28.03.2023	Clinical Diagnostics	33

**7 Number of new experiments Introduced – NIL**

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

**Details of Patent:**

S.No.	Department	Title of the Invention
1	Biotechnology	Dr.V.Jeyasinga, and Sinthia Ganesan,(2022)Method for Manufacturing Biodegradable Polymeric Nanoparticles Application No:202241007582.
2	Biochemistry	Sudha Rameshwari K(2022). Development of Herbal Tablet for Therapeutic Intervention.
3	Biochemistry	Rajakumari M and Salini R(2022).A method, system and apparatus for cancer immunotherapy based on nano medicines, The Patent Office Journal- Intellectual Property India, Application number 202241050942.

**DOCUMENTATION IN DATABASE**

S.No	Department	Details of documentation	Database
1.	Biochemistry	Rajakumari M and Salini R(2022). Enterobacter cloacae strain VRRAB_516S ribosomal RNA gene, partial sequence.	GenBank

### PUBLISHED BOOK

S.No	Department	Details of Book	ISBN Details
1.	Zoology	Tamilselvi, M and Abdul Jaffar Ail, H(2023). அறிவியல் பழமொழிகள்-விளக்கம் (Exploration of Science from proverbs). VVVC Publisher.121pp.	978-81-956419-8-7
2.	Zoology	Radhalakshmi R and Tamilselvi M (2023). Lab Manual on Invertebrate and Chordata, VVVC Publisher.	978-81-956419-5-6
3.	Zoology	Veeramuthumari, P (2022).New Horizons in Medicine and Medical Research, LAPLAMBERT Academic Publishing, 85pp.	978-620-5-51040-7
4.	Botany	Murugalakshmi Kumari R (2022). An Handbook on Flora of VVVC.Jeyalakshmi Publication 1-87pp.	978-93-91987-93-0
5.	Zoology	Tamilselvi, M(2023). Lab Manual on Biochemistry and Physiology.	-
6.	Biochemistry	Sudha Rameshwari K (2023). A Hand Book for Science Laboratory.	978-93-5891-559-4
7.	Biochemistry	Sudha Rameshwari K (2023). Bioinformatics Laboratory Manual.	-

### PUBLISHED CHAPTERS IN BOOK

S.No	Department	Details of Book Chapters	ISBN Details
1.	Chemistry	Anitha A (2022). Frontiers of chemical sciences, Chapter: Adsorptive Removal of Crystal Violet and Methyl Orange Dye Banyan Leaf ( <i>Ficus citrifolia</i> ) Derived Carbon in Adsorptive Removal of crystal violet and Methyl orange Dye Banyan leaf(Derived Carbon), Navanila Maruthi Publication, 49-62	9788195187126
2.	Chemistry	Anitha A and Ramila Devi N (2023). Biochar-Productive Technologies, Properties and Applications in Prospects of Biochar as Renewable Resource for Electricity, Intech open Publisher, 23-40	978-1-80356-251-3
3.	Zoology	Veeramuthumari P (2022). Interdisciplinary approach on progressive research and perception, In Trace Elements- Human Nutrition and Health, ESN Publications, 21-26	978-93-95196-62-8
4.	Mathematics	Uma Maheswari M (2022). Current Topics on Chemistry and Biochemistry in Kinetic Behaviour of Enzymes Immobilized Membranes in Potentiometric Biosensor: Homotopy Perturbation Method, BP International, 1-24.	978-93-5547-941-9
5.	Biochemistry	Rajakumari M (2022).Trends in Environmental Biology in Environmental Pollution and their Management: an Synopsis on Current Practices, Progresses, and New Perceptions in Environmental Pollution Treatment, Kripa Drishti Publications, 25-36	978-93-94570-52-8

6.	Biochemistry	Salini R (2022). Trends in Environmental Biology in Environmental Factors Causing cancer, Kripa Drishti Publications, 37-42.	978-93-94570-52-8
7	Biochemistry	Gloria Jemmi Christobel R and Renuka R (2022). Interdisciplinary approach on progressive research and perception in Science Behind <i>Wedelia chinensis</i> - A Nature's Gift, ESN Publications, 4.	978-93-95196-62-8

## PUBLISHED ARTICLE

1.	Physics	Rathinamala I (2022). Carboxymethyl Cellulose Grafted on Mesoporous Cobalt Oxide Milieu: Synthesis, Formation Mechanism and Electrochemical Features, Chemistry Select, 2365-6549.
2	Physics	Shanmugapriya G (2022). Investigation of the rotational lines of A-X and C-A band systems of aluminium deuteride molecule using unspotted umbral spectra, The European Physical Journal Plus, 2190-5444.
3	Chemistry	Vairalakshmi M (2023). Evaluation of the Cytotoxic and Antioxidant Activities of Isonized derived Copper and Cobalt Complexes, Mukta Shabd Journal, 2347-3150.
4	Chemistry	Ramila Devi N and Kavitha J (2023). Approaching the pharmaceutical water pollution issue using nanosized efficient compounds via photocatalytic degradation, Mukta Shabd Journal, 2347-3150.
5	Zoology	Tamilselvi M, Prabhavathi V, Sivani P, Balanagammal P, Anitha M, Karthika R and Priyadharshini P (2022). Exploration of Scientific Facts on Crabs (Crustaceans) in Tamil Literature, <i>IMIRJVI</i> (2):57-64.
6.	Mathematics	Maheswari MC (2022). Modified HIV-1 Infection Model With Delay in Saturated CTL Immune Response, Communications in Mathematical Biology and Neuroscience, 2052-2541.
7.	Botany	Murugalakshmi Kumari R (2022). Chemical Profiling and Biological Activity of leaf Essential Oil of <i>Eugenia rotleriana</i> Wt. & Arn., Arabian Journal of Medicinal & Aromatic Plants, 2458-5920.
8.	Biochemistry	Gloria Jemmi Christobel R and Sudha Rameshwari K (2022). Antibacterial and Antioxidant Effect of Citrus Limon- <i>Vitisvinifera</i> Leaf Combinations, Res. Jr. of Aril. Sci, 0976-1675.
9.	Biochemistry	Sudha Rameshwari K, Lakshmi Praba A, Raksitha T, Sangeetha M and Vijaya Shanthi J (2022). A Comparative Study on the Ascorbic Acid Content of Several Fruits. <i>International Journal of Food and Nutritional Sciences</i> , 11(7):1224-1232.

## 9. Training received by the Faculty

S.No	Date	Details of the training	No. of Beneficiary
<b>DEPARTMENT OF PHYSICS</b>			
1.	08.04.2022	Microprocessor and Microcontroller Interfacing Based Projects	15
2.	28.01.2023 & 11.02.2023	Hands on Practice: Interfacing Sensors with Arduino	22

<b>DEPARTMENT OF ZOOLOGY</b>			
3.	18.11.2022	Inter Departmental Workshop on “Patent Searching and Filing Procedure”	106
<b>DEPARTMENT OF MATHEMATICS &amp; COMPUTER SCIENCE</b>			
4.	18.11.2022 21.11.2022 & 22.11.2022	React JS	31
5.	30.11.2022 to 02.12.2022	Angular	31
6.	27.12.2022 & 28.12.2022	Introduction to Python Python Basics	29
<b>DEPARTMENT OF BOTANY &amp; BIOTECHNOLOGY</b>			
7.	11.11.2022	Intercollegiate Workshop on “Herbal Products Preparation”	21
8.	18.11.2022	Faculty Development Programme (Intercollegiate)Taxonomic workout of Bryophytes	7
9.	05.12.2022	Workshop on “Molecular Docking tools”	30
<b>DEPARTMENT OF BIOCHEMISTRY</b>			
10	13.12.2022	Scientific Approach for Building Mental Well being	40

#### 10 Exhibitions/Seminars/Training Courses conducted

Date	Department	Title	Beneficiary
01.11.2022	Physics	Space and Sustainability	200

#### Seminars/Training Courses

S.No	Date	Title	No. of Beneficiary
<b>DEPARTMENT OF PHYSICS</b>			
1	15.11.2022	Departmental Workshop on “Utilization of Renewable Energy Gadgets”	172
2	14.11.2022 22.11.2022	Lab Attendant training programme on Efficient Usage of Energy Resources	28
3	28.11.2022	Lab Attendant training programme on Radioactive Waste Management	28
4	02.02.2023	Regional Seminar on Recent Trends in Nanophysics	187
<b>DEPARTMENT OF CHEMISTRY</b>			
5	19.09.2022	Interdepartmental Skill Development Entrepreneurship Workshop	139
6	17.10.2022	Workshop on “Modelling of Drying in Thin Films of Colloidal Nano Materials”	60
7	29.10.2022	Workshop on “Chemical Techniques in Crime Investigation	80

8	29.11.2022	Management of Hazardous Chemicals	23
9	19.01.2023	National Level Seminar on Chem Material and their Futuristic Applications in Human Wellbeing	172
10	02.02.2023	Workshop on "Polymer Technology"	100
<b>DEPARTMENT OF ZOOLOGY</b>			
11	20.10.2022 & 21.10.2022	Departmental Workshop on "Plant Transformation"	40
12	18.11.2022 to 22.11.2022	Summer Training Programme on Fresh water fish culture	4
13	25.11.2022	Lab Attendant Programme on Waste Recycling Methods	21
14	09.01.2023 & 10.01.2023	Rabbit Farming	40
15	31.01.2023 & 01.02.2023	Feed Preparation and Seasonal Management of Poultry Farming	40
16	09.02.2023	State Level Seminar on Life Style Diseases	214
<b>DEPARTMENT OF MATHEMATICS &amp; COMPUTER SCIENCE</b>			
17	08.10.2022 15.10.2022 29.10.2022 11.11.2022	Series of Practice Session on Knack To Crack Jam	35
18	14.10.2022	National Level Seminar on Discrete Mathematics	127
19	28.11.2022	Lab Attendant Programme on e-Waste Management	20
<b>DEPARTMENT OF BOTANY &amp; BIOTECHNOLOGY</b>			
20	24.11.2022	Lab Attendant Programme on Solid Waste Management	28
21	24.11.2022	Lab Attendant Training Programme on Liquid Waste Management	20
22	09.02.2023	State Level Seminar on Recent Trends in Microbial Biotechnology	162
23	06.03.2023	Workshop on Bioprocess Technology	70
24	19.04.2023	Summer Training Programme on Mushroom Cultivation	43
<b>DEPARTMENT OF BIOCHEMISTRY</b>			
25	25.11.2022	Lab Attendant Programme on Biomedical Waste Management	22
26	14.02.2023 & 21.02.2023	Workshop on Clinical Laboratory Practices	41
27	09.03.2023	State Level Conference on Research Practices and ethics in Biological Sciences	189
28	23.03.2023	Workshop on SDS - PAGE	45
29	27.03.2023	Workshop on Gene Cloning	68

## 11 Outreach Activities

S.No	Date	Title	Number of Beneficiary
<b>DEPARTMENT OF PHYSICS</b>			
1	4.11.2022	Experimental Physics to School students	45
2	08.11.2022		60
3	10.11.2022		47
4	05.12.2022		40
<b>DEPARTMENT OF CHEMISTRY</b>			
5	04.11.2022	Organic Analysis to School students	45
6	05.11.2022	Career Guidance on Botany and Biology	120
7	08.11.2022	Organic Analysis to School students	57
8	10.11.2022	Inorganic Semimicro Qualitative Analysis to School students	45
9	05.12.2022	Organic Analysis to School students	78
10	28.01.2023	Preparation of Bath Soap at Paavaali (Public through our trained students)	106
11		Preparation of Shampoo at Vadamalaikurichi (Public through our trained students)	86
12		Preparation of Handwash at Paapakudi (Public through our trained students)	85
<b>DEPARTMENT OF ZOOLOGY</b>			
13	21.7.2022 - 28.7.2022	Handling classes on the "Concepts in Biology" for the students of STD XI and XII,	189
14	31.10.2022	Educational guidance using learning Resources	195
15	10.11.2022	Demonstration of Practicals	50
16	06.12.2022	Demonstration of Practicals	79
<b>DEPARTMENT OF MATHEMATICS &amp; COMPUTER SCIENCE</b>			
17	07.12.2022	Training on Python to school students	44
18	04.02.2023	Career Guidance and Personality Development Programme	67
<b>DEPARTMENT OF BOTANY &amp; BIOTECHNOLOGY</b>			
19	22.07.2022	Handling theory classes on Plant Kingdom	60
		Sexual and Asexual Reproduction to School students	80
20	28.07.2022	Living World to School students	60
21	05.11.2022	Career Guidance on Botany and Biology to School students	120
22	10.11.2022	Demonstration of Botany Practical to School students	50
23	06.12.2022	Demonstration of Botany Practical to School students	82
24	18.01.2023	Career guidance in Schools	120
25	27.01.2023	Career Guidance on Botany and Biology	40



### 13. Invited Guest Lectures

S.No	Date	Title	Number of Beneficiary
<b>DEPARTMENT OF PHYSICS</b>			
1	16.04.2022	Learning 8085 Microprocessor Architecture and Programming Techniques	120
2	21.09.2022	Awareness Programme on IIT JAM Examination preparation	107
3	22.09.2022	Life Skill Programme on Value Your Strength (Your Access to Good Life)	127
4	08.10.2022	Preparation for JAM Examinations in Physics	36
5	10.10.2022	Quantum to Cosmos – A Pleasant Journey	128
6	15.10.2022	Cluster Colleges Meeting - Guest Lecture on “Recent trends on conducting Polymers Based Composites in Biosensor Applications”	117
7	19.10.2022	Awareness Programme on Benefits of Solar Technology	171
		Life Skill Programme on Beware of Social Media	
		Leadership Excellence	
8	29.10.2022	Preparation for JAM Examinations in Physics	26
9	05.11.2022		24
10	07.01.2023		16
11	28.01.2023		33
<b>DEPARTMENT OF CHEMISTRY</b>			
12	06.10.2022	Biocatalytic and Nanobiocatalytic Organic Transformations	43
13	08.10.2022 & 29.10.2022	Hacks to Crack JAM Examination in Chemistry Preparation of JAM Examinations in Chemistry-Organic Chemistry	37
14	15.10.2022 & 05.11.2022	Preparation of JAM Examinations in Chemistry- Inorganic Chemistry	37
15	07.01.2023	Preparation of JAM Examinations in Chemistry -Physical Chemistry	37
16	20.01.2023 & 28.01.2023	Hacks to Crack Jam Examination in Physical Chemistry	37
17	22.02.2023	Problem Solving Approach: Organic Spectroscopy	43
18	28.02.2023	Global Science for Global wellbeing	43

19	10.03.2023	Activation Energy for a Chemist	43
<b>DEPARTMENT OF ZOOLOGY</b>			
20	30.09.2022	“Health for Adolescent Girls”-Departmental Programme	135
21	15.10.2022 05.11.2022 24.12.2022	JAM Entrance Exam Coaching Class Series Session in Preparation of Biology for Appearing JAM Entrance Examination (Inter-Departmental)	32
22	19.01.2023	Environmental Toxicology and Social issue	40
<b>DEPARTMENT OF MATHEMATICS &amp; COMPUTER SCIENCE</b>			
23	14.10.2022	Cloud Computing Security	83
<b>DEPARTMENT OF BOTANY &amp; BIOTECHNOLOGY</b>			
24	12.10.2022	Invasive alien plants of Western Ghats: Taxonomy and Distribution	80
25	17.10.2022	Natural Resources	44
26	21.10.2022	Current trends in Pharmaceutical Biotechnology	90
27	27.10.2022	Medicinal Chemistry: From Discovery to Development of New Drugs	44
28	07.01.2023	IIT-JAM exam Preparation-Problem solving strategies – Practice session	12
29	19.01.2023	Life Skill -Physicochemical Characterization and Therapeutic Applications of Sulfated Polysaccharides from Marine Algae	60
<b>DEPARTMENT OF BIOCHEMISTRY</b>			
30	15.11.2022	Entrepreneurial Skills in Clinical Laboratory Practices	50
31	23.03.2023	Applications of Nanoparticules	33
32	25.03.2023	Opportunities for Life Science Students	33
33	25.03.2023	Immunodiffusion, PCR Technique & Career Guidance	33
34	27.03.2023	Cardiac Hypertrophy	33

**10. Self Evaluation**

S.NO	Department	Objectives	% achieved	Reasons for under achievement? If achieved, state in Quantitative metrics
1	Physics	Curriculum Enrichment	100	2
		Guest Lecture		2
		Interdepartmental Competitions organized		2
		Lab Attendant Programme		2
		Student Projects		2
2	Chemistry	Curriculum Enrichment	100	2
		Guest lecture		2
		Outreach programme		2
		Research Centre and Industrial Visit		2
		Seminars/Training Programmes		2
3	Zoology	Summer Training	100	2
		Outreach/Extension Programmes		2
		Research Centre/industrial visit		2
		Training Programmes		2
		Student Projects		2
4	B.Sc.Mathematics & B.Sc. Computer Science	Seminars & Faculty Training Programme	100	2
		Interdepartmental competitions		2
		Training Programmes		2
		Skill Development Programme		2
		Student Projects		2
5	Botany & B.Sc. Biotechnology(Self-Finance)	Curriculum Enrichment	100	2
		Seminar/workshop organized		2
		Training Programmes		2
		Interdepartmental competitions		2
		Student Projects		2
6	B.Sc.Biochemistry	Curriculum Enrichment	100	2
		Guest Lecture Programme		2
		Seminars/Conference/Workshop organized		2
		Hands on training Programme		2
		Student Projects		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**  
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