

Bon Secours College for Women (Autonomous)

NAAC Accredited with A++ Grade in cycle II

UGC recognized 2(f) and 12(B) Institution

An ISO 21001:2018 Certified Institution

Affiliated with Bharathidasan University, Tiruchirappalli

Vilar Bypass, Thanjavur- 613 006, Tamil Nadu



2025

2026

ANNUAL PROGRESS REPORT

*Ignition-Skilling-Up-skilling-Implementation-
Impact (ISI)*

DBT STAR COLLEGE PROGRAMME



Submitted to
DEPARTMENT OF BIOTECHNOLOGY
Ministry of Science and Technology
New Delhi-110003



Department of Biotechnology
Proforma for submission of Annual Progress Report supported
Under Star College Scheme

1. Name of the College : Bon Secours College for Women (Autonomous)

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Vilar Bypass, Thanjavur - 613 006

2. Name of Coordinator & Designation : Dr. R. Kalaivani

Assistant Professor

Department of Biotechnology

Address, Phone nos.

: Bon Secours College for Women (Autonomous)

Vilar Bypass

Thanjavur- 613 006, Tamil Nadu

+91-9943381620, +91- 9894289053

3. Assessment duration :

Year 1- 03/06/2024 to 31.03/2025 (Phase I) &
 01/04/2025 to 31/03/2026 (Phase II)

Duration in Years : 2nd year

4. Details of Departments Supported: Biotechnology, Botany, Physics and Chemistry

Administrative order : HRD-11011/16/2023-HRD-DBT & 03.06.2024

S. No.	Name of Department	Courses (B.Sc./M.Sc./PG Diploma, certificate etc.) offered	Regular Faculty members	
			With Ph.D.	Without Ph.D.
			Total = 33	
1.	Biotechnology	B.Sc., Biotechnology M.Sc., Biotechnology Ph.D. Biotechnology Certificate courses: -Biopolymer Technology (22CCBTBT) -DNA Fingerprinting (22CCBTDF) -Bio Entrepreneurship Biofertilizer Production (Revised) (24UBTAD01) -Bio Entrepreneurship for Fermented Product Development (Revised) (24UBTAD02)	08	02

		-Basics of Bioinformatics (24UBTAD06) -Entrepreneurship in Biotechnology (24UBTAD05) -Biotechnology in Forensic Sciences (Revised) (24PBT501) -Tools in Network Pharmacology (21CCBTTP) -3D Bioprinting (Revised) (21CCBT3B / 24PBT502) -Food Product Development (21CCBTDF) -Tools in Biostatistics (20CCBTBS) -Histology (22CCBTHL) -Aquaculture Technology (22CCBTAT)		
2.	Botany	B. Sc., Botany Certificate courses: -Ethnobotany and Traditional Plant Knowledge (24UBOAD01) -Basic Nanotechnology (24UBOAD03) -Hydroponics (24UBOAD02) -Floriculture (24UBOVA01)	02	01
3.	Physics	B.Sc., Physics M.Sc., Physics Ph.D. Physics Certificate courses: - Physics in Everyday Life (24UPHAD01) - Vedic Physics (24UPHAD02) - Basics of Electronics (24UPHAD03) - Radiation (19CCPHRN) - Mobile Hardware and Troubleshooting (15CCPHMT) -Embedding Sensor (24PPH502) - Photovoltaic System (24PPH501) - Sensor and Sensing Techniques (24PPH503)	04	07
4.	Chemistry	B.Sc., Chemistry M.Sc., Chemistry Certificate courses: -Socially useful productive work (24UCHAD01) -Agricultural chemistry (24UCHAD02) -Traditional Indian Alchemy (24UCHAD03) -Chemistry of Cosmetics (24UCHVA01)	02	04

5. Date of Advisory committee meeting: Not yet conducted with Advisory Committee.

Department level meeting with the appointed mentors was held on 10.04.2026 with the following members. The Heads of the Departments (Department level - DBT Star College Programme Coordinators) presented the progress report.

- 1) Biotechnology: Dr.A. Poongathai, Professor, Dept. of Biotechnology, Dr.NGP College of Arts & Science (Autonomous), Coimbatore.

- 2) Botany: Dr.S.Senthil Kumar, Assistant Professor, Dept. of Botany, National College (Autonomous), Trichy
- 3) Physics: Dr.K.Ravichandran, Dept. of Physics & Principal, Thanthai Hansrover College, Perambalur.
- 4) Chemistry: Dr. M. Syed Ali Padusha, Associate Professor, Post Graduate & Research Department of Chemistry, Jamal Mohamed College (Autonomous), Tiruchirappalli.

The External Members visited the laboratories and infrastructure facilities developed under the DBT Star College Programme. They provided suggestions on the maintenance of department-level documents and recommended establishing a dedicated laboratory with the support extended by DBT. The minutes of the meeting were duly recorded.

Department of Chemistry



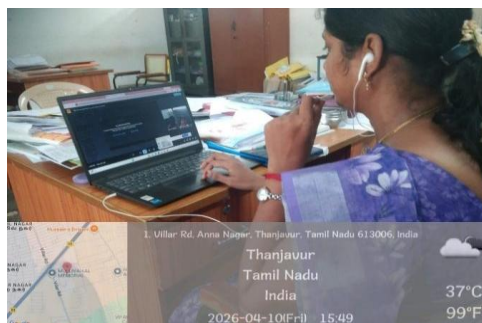
Department of Botany



Department of Physics



Department of Biotechnology (Online mode)



6. Qualitative improvements due to DBT support. Please highlight 5 salient points (within 500 words). Details are enclosed in Annexure-I

6.1. Shift from Theoretical Learning to Hands-on Scientific Learning

DBT support enabled the conversion of several laboratory activities previously conducted only as theoretical approach & demonstrations into **student-performed hands-on experiments**. Techniques such as bacterial transformation, SDS-PAGE, immunological assays, RFLP, Southern blotting and quantitative biochemical analysis etc., are incorporated into practical learning inbuilt with curriculum.

Change after DBT Star College Programme

Students no longer only observe experiments-they perform, analyse and interpret them.

6.2. Emergence of Interdisciplinary Scientific Thinking and Creation of a Research-Ready Undergraduate Ecosystem

DBT support has encouraged students from Biotechnology, Botany, Physics and Chemistry even with Computer Studies to work beyond disciplinary boundaries. Interdisciplinary projects have been undertaken across combinations such as Biotechnology–Physics, Biotechnology–Chemistry and Physics–Chemistry, Physics-Biotechnology-Botany-Computer Studies

List of Interdisciplinary Student research projects:

1. *In-silico* Molecular docking analysis of bioactive compounds from Swarna Masuri, a traditional rice variety for anti-diabetic management.
2. *In-silico* molecular Docking Analysis of Bioactive Compounds from Pokkuru Samba traditional rice variety, for antidiabetic management.
3. Comparative production and characterization of bioplastics from marine macroalgae.
4. A Comparative Study of Chitosan-Based Liquid and Nano formulations for Weed Control as Hyacinth-X.
5. Investigation of Microplastic Contamination in Milk Samples by using MoF.
6. Eco-Friendly Solid-State Synthesis of Copper Oxide Nanoparticles Using *Ficus religiosa* Bark Extract and Study of Anti-Inflammatory and Antibacterial Activity.
7. Plant-Assisted Solid-State Synthesis of Copper Oxide Nanoparticles Using *Ficus racemosa* Bark Extract for anti-Inflammatory and antibacterial Applications.
8. Solvent-Assisted Green Synthesis of Carbon Dots and Evaluation of their antibacterial and UV-Protective Properties.
9. Green Synthesis of Ni–Cu–Zn Oxide Nanoparticles Using *Azadirachta indica* Leaf Extract and Evaluation of Methylene Blue Dye Degradation Activity.
10. Phytochemical Screening, Antibacterial Activity and UV-Protective Analysis of *Cassia fistula* Extracts.
11. Investigation of Microplastic Contamination in Milk Using Ni-MOF.
12. Comparative production and characterization of bioplastics from marine macroalgae.

b. Strengthening of Laboratory Infrastructure and Learning Resources: Financial support from DBT has enabled the procurement of modern scientific equipment, consumables, and essential learning resources. The upgraded laboratory infrastructure has expanded the scope of practical training, allowing students to engage with laboratory techniques and 37 equipment. Access to enriched learning resources, including 98 reference and text books and 4 digital materials, has further elevated the quality of science education by reinforcing the principle of learning by doing.

A separate Central laboratory was established for UG Research Ecosystem under DBT Star College Programme.



Change after DBT Star College Programme: Department-wise learning is gradually transforming into collaborative scientific problem-solving and a central Laboratory was established for UG Research Ecosystem under DBT Star College Programme.

6.3. Strengthening of Faculty Scientific Capacity

DBT-supported expert interactions, training programmes, workshops and faculty participation in scientific programmes have expanded faculty exposure to contemporary scientific methods, research practices and emerging technologies. The 100 % faculty participation in advanced experimental, computational, AI, interdisciplinary training etc. are ensured. 20 Research Article publications 6 Patents, 11 Paper Presentation and Publication in Proceedings, 4 Books are achieved with the support of DBT Star College Programme by the Faculty Members.

Network and Collaborations were extended with 44 Scientists and Academicians / Experts from different Institutions at International and National Levels.

Based on comment of DBT on last year 5th Task force review meeting, arranged exclusive faculty training and development programmes and 100% faculty development & training was achieved in 2025-26.

Change after DBT Star College Programme: Faculty development has increasingly translated into an enhanced capacity to deliver contemporary, research-oriented science education.

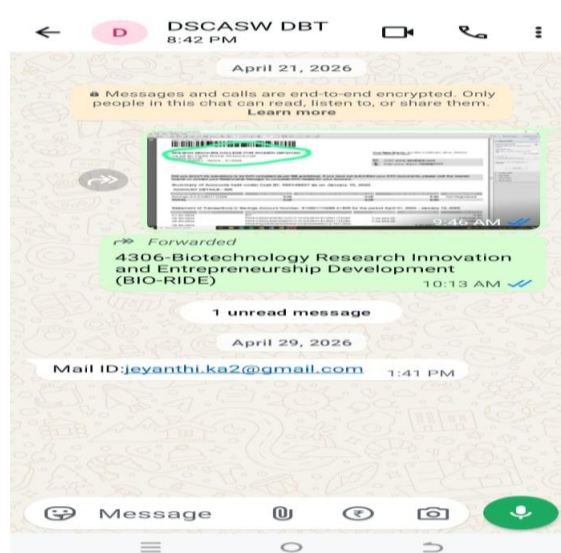
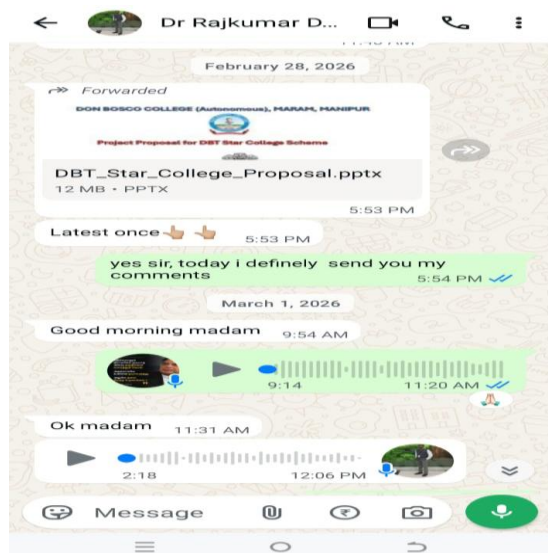
6.4. Expansion from Institutional Learning to Regional Scientific Engagement

DBT-supported facilities and expertise have been extended to students from schools and other colleges through hands-on programmes, training and science outreach.

1. Higher Secondary School Students: A Study Module Kit covering Physics, Chemistry and Biology was prepared with infographic-based on Class XII lessons and practical experiments, supporting easy understanding, quick revision and better retention of concepts, and was provided to St. Joseph's Girls Higher Secondary School, and Kalyana Sundaram Higher Secondary School, Thanjavur and Gnanam Matriculation Higher Secondary School, Thanjavur visited the four departments and Laboratories.

2. Training offered for other institutions:

1. On July 22, 2025, Workshop on Western Blotting was offered to students of the Department of Microbiology at Arputha College of Arts and Science, Pudukkottai.
2. From 24 to 28 February 2026, Department of Biotechnology, Physics and Chemistry, offered training was offered on Solar study kit assembly, fermented foods and beverages, natural dyes and socially useful products making to students from Arul Anandar College (A), Madurai.
3. On 27.01.2026, a training in STEM was conducted to the students of Biotechnology, Thanthai Hans Roever College (Autonomous), Perambalur.
4. National Science Day Celebration – Science Expo: National Science Day was celebrated on 28 February 2026, with students from around 15 colleges in and around Thanjavur participating in the Science Expo and viewing innovative models exhibited by Bon Secours College for Women students. Science Quiz, Science Connection, Model Presentation, Poster Presentation and Scientific Rangoli were organized by the four science departments, with active student participation. Certificates, medals, shields and prizes were awarded to winners and participants in recognition of their achievements.
5. Technical Competitions: The Department of Biotechnology conducted BioUtsav 2026, an intercollegiate competition held on 22.01.2026, in which students from 12 Colleges, 104 participants participated and won prizes.
6. The Department of Chemistry conducted Chemathon 2026 on 20.01.2026 at the interdepartmental level, wherein students from the Departments of Botany, Biotechnology, Physics, and Computer Studies presented their ideas and won prizes.
7. Mentoring Activities: Guidance and Orientation on DBT Star College Programme was extended to Thanthai Hans Roever College, Perambalur, Dhanalakshmi Srinivasan College of Arts and Science for Women (Autonomous), Perambalur and Don Bosco College Autonomous, Maram, Manipur.



Change after DBT Star College Programme

The institution is evolving from a college-level science-learning centre into a regional platform for science engagement. Biotechnology seats were fully filled, while student enrolment improved across other disciplines.

Students are increasingly being exposed to research presentation, scientific exhibitions, newsletters, digital applications, research documentation and external academic forums. Details are given below.

1. Students from III B.Sc., Biotechnology prepared a book named Folk to Fact (F2F), an application that explains the science behind traditional and indigenous practices documented under IKS.
2. III B.Sc. Botany students prepared an **e-Herbarium** comprising 100 herbal specimens, documented using standard scientific techniques and subsequently digitised to create an accessible online repository. The e-Herbarium serves as a vital resource for the study,

documentation, and conservation of medicinal and herbal plant species, underscoring the ecological significance of plants and their role in human well-being.

3. Students from Department of Physics: All laboratory experiments have been digitalised and are accessible through the college website, ensuring wider reach and ease of reference for students.
4. Students from Chemistry have prepared and published "**Chemistry in Daily Life**", a newsletter that connects chemical concepts with everyday applications.
5. All four departments have compiled and published a **Research Compendium** serving as a record of student-led research outcomes.
6. A total of 61 students won prizes in various technical events organised by other colleges; won overall championship; runner up awards covering 44 different prizes.
7. 21 students presented their research outcomes in terms of paper and poster in different seminars and conferences.
8. 11 students pitched ideas in events organized by VIT- AP, St. Joseph, Start-up TN and MSME.

6.5.b. Interdisciplinary Knowledge and Skill Development: The DBT Star College Programme effectively facilitates interdisciplinary learning and research across the supported and other departments. There were 24 programmes conducted at the inter/multi-disciplinary level.

Change after DBT Star College Programme :

Students are learning not only to do Science, but also to Communicate Science

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

7.1. Interdisciplinary Faculty Learning Platform

An interdisciplinary collaborative learning and research platform has been established to promote cross-departmental academic engagement among faculty and students.

7.1.a. Introduction of CoLeDe (Collaborative Learning and Development) at Faculty Level

CoLeDe is a faculty colloquium initiated to foster a culture of shared learning within the institution. Under this initiative, faculty members who participate in Faculty Development Programmes (FDPs), Workshops, Training Programmes, Conferences, and Seminars at other institutions are required to disseminate the knowledge and skills acquired to their departmental and interdepartmental colleagues. Faculty members from the Departments of Biotechnology, Botany, Physics, and Chemistry actively share their expertise at the interdisciplinary level. They are also invited as resource persons for interdepartmental programmes, conducting colloquia to enrich peer learning and to strengthen the teaching of courses and the supervision of student research projects.

7.2. BioE3 Hub – Transition of idea-Product/Process-institution to society

The BioE3-Based Student Innovation and Idea Development activity was introduced under the DBT STAR College Programme to foster a culture of innovation, scientific thinking, problem-solving, and interdisciplinary collaboration among students. Under this activity, students explored innovative ideas related to healthcare, environmental sustainability, agriculture, biotechnology, and sustainable materials. They worked collaboratively to develop, refine, and communicate their ideas in Hackathon for Women in Science and Engineering “TNWISE 2026 conducted by Government of Tamil Nadu’s Centre of Excellence for Advanced Manufacturing (TANCAM)”. The students further participated in ChemSpark’25 – Chemistry Innovation Challenge, hosted by VIT-AP University, Andhra Pradesh.

1. Hyacinth-X: Isolation of Chitin Powder from Prawn Shell for the Treatment of Water Hyacinth
2. Eco-Safe Herbal Bio flocculant for Effective Removal of Turbidity from waste Water
3. Fabrication of Natural Colorimetric Indicator Films Using Seaweed Polymers and Beetroot Extract for Smart Food Packaging.
4. Biobased Smart Bandage with pH Responsive Colour Change
5. Silica from Rice husk and use for TLC
6. Plant based Protein etc.

List of Interdepartmental Programmes Conducted 2025–26 – CoLe-De

S.No.	Name of the Faculty	Details of Training/Programme Attended & Learning Disseminated
1.	Dr. N. Rabita, Assistant Professor, Department of Biotechnology	Participated in the ICAR-AINP Training Programme on Animal Models and their Care in Herbal Research, organised by the Department of Veterinary Pharmacology & Toxicology, Veterinary College and Research Institute, Orathanadu, from 18.11.2025 to 20.11.2025. Learning disseminated to fellow faculty members on 11.12.2025.
2.	Dr. G. Gayathri, Assistant Professor, Department of Botany	Participated in the UGC-Sponsored Interdisciplinary Refresher Course in Life Sciences, UGC MMTC, Bharathidasan University, Trichy, from 21.08.2025 to 03.09.2025. Learning outcomes shared with colleagues on 12.09.2025.
3.	Dr. A. Gayathri and Ms. J. Princess Gracia, Assistant Professors, Department of Chemistry	Participated in the UGC-Sponsored Short-Term Programme in Entrepreneurship and Skill Development” organized by UGC-Malaviya Mission Teacher Training Center from 05.01.2026 to 10.01.2026.
4.	Ms. A. Saratha, Assistant Professor, Department of Chemistry	Participated in the FDP on Good Manufacturing Practices and Quality Assurance from 09.06.2025 to 14.06.2025. Disseminated learning to all faculty members of the Departments of Physics, Chemistry, Botany, and Biotechnology on 19.06.2025.

5.	Dr. M. Renuga Devi, Assistant Professor, Department of Botany	Participated in the Faculty Development Programme on Food Safety and Quality Management on 19.06.2025. Learning shared with all faculty members on 22.06.2025.
6.	Dr. A. Sarumathi, Assistant Professor, Department of Biotechnology	Participated in the Faculty Development Programme on Medical Coding on 19.06.2025. Learning disseminated to colleagues on 22.06.2025.
7.	Dr. R. Kalaivani, Assistant Professor, Department of Biotechnology & Dr. R. R. Saravanan, Assistant Professor, Department of Physics	Participated in the Capacity Building Programme on Proposal Preparation for Research Grants, Patents, and High-Impact Publications, organised by UGC MMTC, Bharathidasan University, Trichy, on 25–26.11.2025. Learning was disseminated to all faculty members on 28.11.2025 and 29.11.2025.
8.	Ms. A. Vivetha, Assistant Professor, Department of Physics	Participated in the FDP on Idea Generation Methods, ICT Academy, from 09.09.2025 to 11.09.2025. Learning disseminated to colleagues on 29.11.2025.
9.	Dr. S. Sivaranjani & Dr. D. Sumithra, Assistant Professors, Department of Biotechnology	Visited the Bio-Innovation Centre and Zen Fold Sustainable Technologies, Bengaluru, from 30.01.2026 to 31.01.2026. Disseminated learning to all faculty members of the Departments of Botany, Biotechnology, and Chemistry on 03.02.2026.
10.	Dr. M. Karthika, Dr. N. Anuradha & Dr. R. Ananthi, Assistant Professors, Department of Physics; Dr. D. K. Usha & Ms. Shalini, Assistant Professors, Department of Biotechnology; Ms. J. Princess Gracia, Assistant Professor, Department of Chemistry	Participated in the Training Programme on Bioinstrumentation and Know-how- Innovation & Start-up, organised by EDII, Anna University Regional Campus, Tiruchirappalli, on 29.01.2026.

7.1. Faculty Training Programme: Based on feedback received during the first-year progress review held on 1st to 3rd July, 2025 and received the report on Aug 26th, 2025 as **faculty members require appropriate training to ensure their effective and accurate implementation.** Hence all faculty members from the four participating departments have been encouraged to attend relevant FDPs and training programmes. Accordingly, faculty members have actively participated in a variety of programmes suited to their disciplinary and interdisciplinary development needs.

7.3. Students-led learning outcomes

The ISI (Ignition, Skilling, and Implementation) student clubs are actively functioning at the first, second-, and third-year levels respectively. At the second-year level, students are provided a platform called **i-Hub**, wherein they explore scientific concepts, principles, and real-life applications relevant to their domain. Students present their findings and disseminate knowledge through newsletters, research compendia, and digital applications, as detailed below:

- **Biotechnology:** Drawing from the Indian Knowledge System (IKS), students have developed **Folk to Fact (F2F)**, an application that explains the science behind traditional and indigenous practices documented under IKS.
- **Botany:** Third-year B.Sc. Botany students prepared an **e-Herbarium** comprising 50 herbal specimens, documented using standard scientific techniques and subsequently digitised to create an accessible online repository. The e-Herbarium serves as a vital resource for the study, documentation, and conservation of medicinal and herbal plant species, underscoring the ecological significance of plants and their role in human well-being.
- **Physics:** All laboratory experiments have been digitalised and are accessible through the college website, ensuring wider reach and ease of reference for students.
- **Chemistry:** Students have prepared and published "**Chemistry in Daily Life**", a newsletter that connects chemical concepts with everyday applications.
- All four departments have compiled and published a **Research Compendium** serving as a record of student-led research outcomes.

7.4.1. Establishment of a Centralized UG Research Laboratory to house the equipment procured under the DBT Star College Programme, thereby enhancing accessibility and optimising utilisation by students across departments.

7.4. Future Plan:

7.4.2. Organisation of a State-Level Student Boot Camp on Interdisciplinary Idea-to-Product/Process Development, aimed at nurturing innovation, and applied problem-solving skills among undergraduate students aligning with BIO3E.

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

8.1. Lessons Learnt: Meticulous planning with a well-defined academic calendar ensures smooth implementation of programme activities and facilitates the achievement of desired outcomes under the scheme. Team spirit among students and faculty members is strengthened through diverse collaborative activities, fostering a healthy competitive spirit and driving collective effort towards 100% achievement of targeted outcomes, including research projects, patents, publications, and books.

Furthermore, interdisciplinary project engagement has broadened students' knowledge base, technical skills, critical thinking, and problem-solving abilities, reinforcing the value of cross-disciplinary learning in undergraduate science education.

8.2. Difficulties Faced: Received the Release order of Rem 1st year grant mail on Oct 6, 2025 and received amount in PFMS on 03.10.2025 And a change in institutional leadership (Principal) resulted in delays in the approval and registration of the digital signature, which temporarily impeded the processing of financial transactions through PFMS.

9. Key Performance indicators

S. No.	Indicator	During I year (2024- 2025)				During II year (2025- 2026)				Remarks
1.		Department of Biotechnology								Total Strength of Departments of Biotechnology, Botany, Physics and Chemistry
		Total= 234				Total= 238				
		F= 234				F= 238				
		SC	ST	OBC	G	SC	ST	OBC	G	
		21	-	194	23	23	-	213	02	
		Department of Botany								
		Total= 53				Total= 38				
		F= 53				F= 38				
		SC	ST	OBC	G	SC	ST	OBC	G	
		11	-	41	-	06	-	32	-	
		Department of Physics								
		Total= 33				Total= 20				
		F=33				F=20				
		SC	ST	OBC	G	SC	ST	OBC	G	
		03	-	-	30	01	-	19	-	
		Department of Chemistry								
		Total=81				Total= 60				
		F= 81				F= 60				
		SC	ST	OBC	G	SC	ST	OBC	G	
		20	-	61	-	17	-	43	-	
S.No	Indicator	During I year (2024- 2025)				During II year (2025- 2026)				Remarks
2.	No. of students passing out (%) Students Admitted/passing out (pass%)	Biotechnology		100%		100% (University Ranking: 5, 6, 11, 18, 20)			100% was achieved for the academic year 2025-26	
		Botany		100%		100% (University Ranking: 1, 3, 4, 9, 10, 12, 13, 14)				
		Physics		100%		100% (University Ranking: 4 (3, 6, 13, 19)				
		Chemistry		100%		100% (University				

				Ranking: 1, 3, 6, 7, 12, 17, 19)	
3.	Drop-out rates	Biotechnology	-	-	-
		Botany	-	-	
		Physics	-	-	
		Chemistry	-	-	
4.	No. of students Opting for M.Sc.,	Biotechnology	42 (83)	63 (82)	-
		Botany	15 (21)	17 (19)	
		Physics	10 (19)	4 (8)	
		Chemistry	28 (31)	21 (28)	
		Total	95/ 154	105/137	
5.	Average marks	Biotechnology	50%	50%	-
		Botany	50%	50%	
		Physics	50%	50%	
		Chemistry	50%	50%	
6.	No. of Hands-on Experiment being conducted	Biotechnology	13	15	The curriculum revision and the addition of new experiments were approved by the respective Board of Studies meetings held on 08.11.2025 and 01.04.2026.
		Botany	14	9	
		Physics	4	5	
		Chemistry	5	8	
		Total	36	37	
7.	No. of New Experiments Introduced	Biotechnology	69	8	Based on the suggestions given by the DBT Task Force Committee during the 5 th Task Force Review Meeting held from 1 st to 3 rd July 2025 at Hindu College, University of Delhi, New Delhi, new experiments were designed for the Academic Year 2025–2026
		Botany	34	3	
		Physics	12	6	
		Chemistry	33	6	
		Total	135	23	
8.	Publications (Scopus indexed)/ patents, if any.	Biotechnology	1 +2	5+2	-
		Botany	-	1+0	
		Physics	5	8+3	
		Chemistry	-	6+1 (filled)	
		Total	6+2	20+6	
9.	Training received by	Biotechnology	10	10	100% Faculty Training was attained
		Botany	3	3	

	faculty	Physics	10	11	
		Chemistry	7	6	
		Total	30	30	
10.	Exhibitions/Seminars/training courses conducted	Biotechnology	10+4 add-on	16+4 add-on	-
		Botany	5+2 add-on	13+2 add-on	
		Physics	5+2 add-on	8 +4 add-on	
		Chemistry	13+3 add-on	14+2 add-on	
		Total	33+5	51+12 add-on	

10. Self-Evaluation

Department	*Objective (as stated in proposal)	% achieved	Reasons for underachievement / If achieved, state in quantitative metrics
Biotechnology Botany, Physics Chemistry	Core competencies: Build strong conceptual foundations with problem-solving and practical skills.	100 %	2 Mark In curriculum revision, one new practical course, 23 new experiments, 30 demonstrations into hands-on and 41 theory to demonstration are added in all 4 departments. 95 different programmes are organized in their core discipline.
	Career Preparedness: Enabling advanced studies, competitive examinations and diverse professional paths including research, industry, and entrepreneurship	100%	2 Mark 8 career guidance, 9 innovation, entrepreneurship and Start-up, 43 research related and 7 higher studies and 1 UPSC preparation programmes were conducted. 76.6 % student enrolled for their higher studies, 6 are pursuing UPSC exam coaching.
Biotechnology Botany, Physics Chemistry	Advances learning: Promote lifelong learning by engaging faculty and students with emerging advancements, national and international collaborations, and the use of relevant technological tools.	100 %	2 Mark All the 4 departments organized Faculty Development Programme 100% faculty training programmes was attained based the requirement; Faculty members published 20 research articles and filled 6 Patents. Network and Collaborations were extended with 44 Scientists and Academicians / Experts from different Institutions at International and National Levels. one Internationally collaborated research article was published and 2 are submitted for publication.
Biotechnology Botany, Physics Chemistry	Scientific communication: Strengthen skills to analyze, interpret, and present scientific data effectively in academic and professional contexts.	100%	2 Mark 21 students, 2 students received Best Paper Presentation award; 20 research outcomes have been published, and 2 are submitted; 2 student Patents, two book was published by students; A audio-book App is developed by students. 11 students

			pitched ideas in events organized by VIT, AP, St. Joseph's College (A), Tiruchirappalli, Start-up TN and MSME.
Biotechnology Botany, Physics Chemistry	Develop higher-order thinking and analytical abilities for real-world problem-solving and extend their learning outcomes to the societal transformation	100%	2 Mark Six patents are published. A total of 61 students won prizes in various technical events organised by other colleges; won overall championship; runner up awards covering 44 different prizes by exhibiting their learning outcomes. 9 outreach programmes are offered. 2 Ideathon programmes were conducted; 11 students pitched ideas in events organized by VIT, AP, St. Joseph's College (A), Tiruchirappalli, Start-up TN and MSME. 25 University Ranks were secured by students
	Total (Out of 10)		10Marks

11. Provide detailed information on budget utilization under Grants-in-Aid (General), including the exact percentage of funds allocated and utilized for the purchase of chemicals, travel, mentoring activities, contingency and any other activity:

11.1. Budget Allocation and Standard Operation Procedure for Fund Utilization

11.1.1. Budget allocation: For 4 departments' viz. Biotechnology, Botany, Physics and Chemistry

- Grant for Creation of Capital Assets: Rs. 29,68,175.00 (Rupees Twenty-Nine Lakh Sixty-Eight Thousand One Hundred and Seventy-Five Only)
- Grant-in-Aid General: Rs. 11,50,000.00 (Rupees Eleven Lakh Fifty Thousand Only)
- Grant Released: Rs. 41,18,175.00 (Rupees Forty-One Lakh Eighteen Thousand One Hundred and Seventy-Five Only)

11.1.2. Standard operation Procedure for fund utilization approved by the institution level advisory committee:

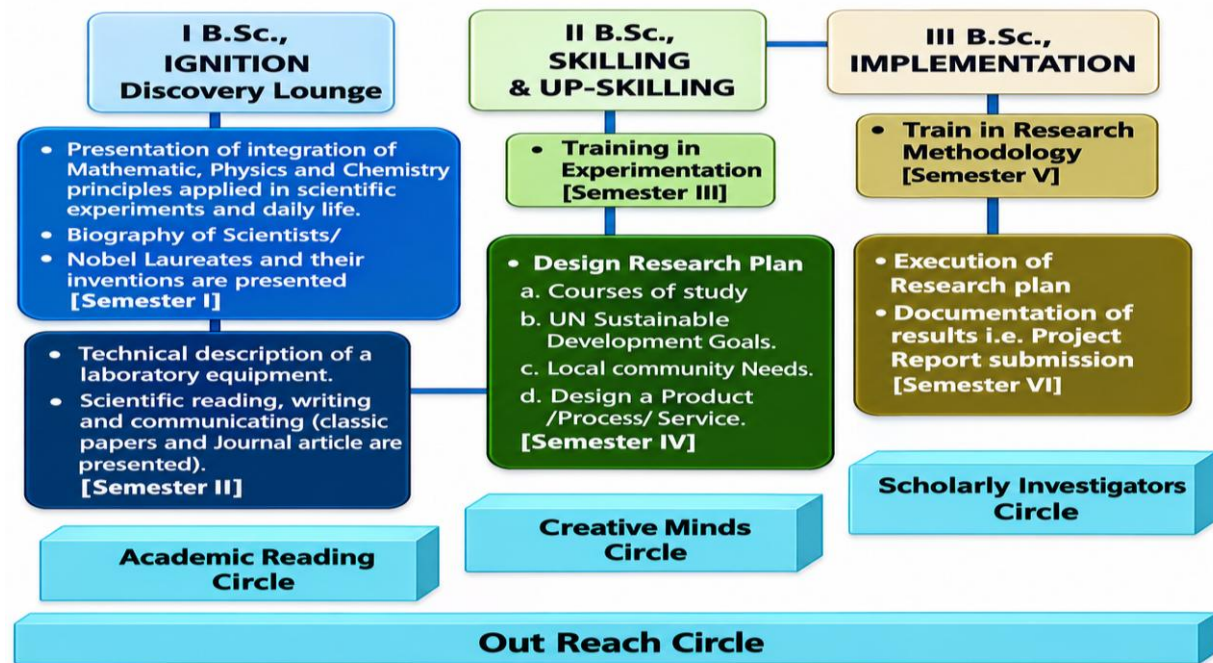
S.No.	Head of Expenditure	Amount / Department (₹)	Total 4 Departments (₹)
1.	Capital Asset (Equipment) As per DBT sanctioned amount for each department	As per DBT sanctioned in administrative order	29,68,175.00
2.	Grant-in-Aid - General		
2.1	Consumables (Chemicals & Glassware)	2,00,000.00	8,00,000.00

S.No.	Head of Expenditure	Amount / Department (₹)	Total 4 Departments (₹)
2.2.	Purchase of Books / Journals	10,000.00	40,000.00
2.3.	Common Programme by the Programme Coordinator Training on PFME / EAT modules; interdisciplinary seminars/ invited lecture programmes; organising Science Expo; Ideathon; intercollegiate competitions, and mentoring activities.	-	10,000.00
2.4.	Programmes for Students: Organising Programmes like Invited Lectures/ Seminars/ Conference /Training/ workshop covering Resource Person's Honorarium, TA & Refreshment	15,000.00	60,000.00
2.5.	Students Training / Workshop covering training kit / materials required; Expo-includes materials required for model/poster preparation; Participation and presentation in seminars / conferences covering registration amount, travel and accommodation.	10,000.00	40,000.00
2.6.	Faculty Participation - Seminar / Conference / Training / Workshop covering registration fee, Travel and accommodation	10,000.00	40,000.00
2.7.	Outreach Programmes: offering Training to school and other college students covering kit and refreshment	2500.00	10,000.00
3.	Contingency includes files, printing certificates, conference kit, medals/prizes, newspaper advertisement etc.	12,500.00	50,000.00
4.	Travel (Rs.25,000/department) Industrial visits	25,000.00	1,00,000.00
	Total - Grant-in-Aid - General		11,50,000.00
	Capital Asset		29,68,175.00
Grand Total			41,18,175.00
Grant Received (4 Departments)			₹ 41,18,175.00

Course Coordinator
(With Seal)

Head of the Institution
(With Seal)

“Grateful to DBT for the Insights, Inspiration & Opportunities”



"Biomufacturing and Biofoundry Initiative will promote the green growth in the country, by transforming today's consumptive manufacturing paradigm to the one based on regenerative principles"

Dr. Rajesh S Gokhale
Secretary, Department of Biotechnology & Director General, BRIC

