St. Francis
College for Women
Begumpet, Hyderabad-500016
(Autonomous & Affiliated to Osmania University)

Department of
BioTechnology,
Government
of India

सत्यमेव जयते

ANNUAL PROGRESS REPORT

Supported under Star College Scheme

2026-27

St. Francis College for Women

Annual Progress Report supported under Star College Scheme, 2026

1. Name of the College: St. Francis College for Women
2. Name of the coordinator: Dr. V. Gayatri
3. Designation : Associate Professor

   Address : Street no.6,Umanagar,Kundanbagh,Hyderabad,

   Telangana -500016

   Phone No: 9704103888

4. Assessment duration: 01/04/2026 to 19/09/2026 Duration in years : 6 months
5. **Details of Departments Supported**

Sl No	Name of Department	Courses (B.Sc./M.Sc./PG Diploma, certificate etc) offered	Regular Faculty members	
			Total = 69	
			With Ph.D.	Without Ph.D.
1	Biochemistry & Applied Nutrition	BSc & M.Sc	6	6
2	Botany& Biotechnology	BSc	3	3
3	Chemistry	B. Sc., M. Sc.	09	4
4	Computer Science	BSc, BSc SE(H), MSc CS, MSc DS	1	14
5	Mathematics & Statistics	B.Sc.	6	4
6	Microbiology	B.Sc., M.Sc.,	7	1
7	Physics	B. Sc	2	
8	Zoology	B.Sc.	2	1

6. Number & Date of Advisory committee meeting: 1 , 22/07/2025

Internal meetings with the faculty : 8 (Principal, Vice Principal, DBT coordinator, Dean of Science, HoDs and Department coordinators).

7. **Qualitative improvements due to DBT support.**

Summary:

- Practical and Experiential Education: Field visits, hands-on activities, and practical exposure enable students to translate classroom concepts into real-world applications.
- Research and Innovation Orientation: Students are encouraged to explore field-based problems, undertake research activities, and develop innovative approaches to address emerging challenges.
- Academic–Industry Linkages: Interaction with industries, research organizations, professionals, and community stakeholders facilitates knowledge sharing and creates opportunities for meaningful collaboration.
- Exposure to Emerging Practices: Students and faculty are provided opportunities to become familiar with recent developments, technologies, methodologies, and professional practices relevant to their fields.
- Faculty Capacity Building: Continuous efforts are undertaken to enhance faculty competencies through professional development, innovative teaching practices, and improved research supervision.

Projects	104
Student & faculty training program	18
Guest Lectures	15
Workshops	24
Field trips	15
Outreach Activity	1
National seminars/ Conferences	8
Staff /Student paper presentation	40

Projects:

- A total of 104 students undertook guided research projects under the supervision of faculty members from different departments. The projects provided students with hands-on experience in experimental research, data analysis, scientific documentation and interdisciplinary problem-solving.
- **Plant Science, Phytochemistry and Natural Products**: Students carried out projects on extraction, characterization and stability assessment of natural dyes; phytochemical screening of medicinal plants; antioxidant profiling; extraction of bioactive polyphenols; comparative analysis of plants cultivated under hydroponic and conventional conditions; and extraction of active principles from medicinal plants.

- **Nanotechnology and Green Synthesis:** Several projects focused on the green synthesis and characterization of silver nanoparticles and other nanomaterials using plant extracts, including evaluation of their biochemical, antimicrobial, cytotoxic and DNA-binding properties. Projects also included magnetic cellulose nanoparticles, cellulose-functionalized Fe_3O_4 nanoparticles, chitosan–pectin nanocomposite films for wound healing, carbon-coated ZnO nanomaterials and photocatalytic nanocomposites.

- **Microbial Biotechnology, Antimicrobial Research and Genomics:** Students undertook projects on antibacterial and antifungal activities of plant extracts, probiotic-derived cell-free supernatants, biofilm inhibition, bacterial spoilage of tomato, enzymatic profiling of spoilage organisms, antibiotic resistance-related genomic studies and CRISPR-Cas systems in bacterial genomes.

- **Molecular Biology, Genomics and Computational Biology:** Projects included molecular docking, ADMET analysis, homology modelling, pharmacophore-based virtual screening, DFT studies, computational drug design, genomic adaptation and structural analysis of bacterial defence systems, providing exposure to contemporary computational approaches in biological research.

- **Pharmaceutical Analysis:** Students worked on synthesis and characterization of Schiff bases, hydrazides, chalcones, metal complexes and ionic liquids, along with studies on antimicrobial, antioxidant and enzyme-inhibitory activities. Analytical projects included HPLC method development, pharmaceutical analysis, quantification of phytochemicals and pharmaceutical impurities, and determination of chemical constituents.

- **Environmental Science and Water Quality:** Student projects addressed physicochemical and biological assessment of water quality, analysis of local water sources, adsorption of toxic metals such as lead, zinc, mercury and cadmium using low-cost adsorbents, and photocatalytic approaches for environmental remediation.

- **Food, Nutrition and Health:** Projects included nutritional evaluation of makhana–moringa laddus, iron-enriched cookies, proximate analysis of food materials, analysis of antioxidant content in fruit juices, and studies relating body composition and dietary consumption to the gut microbiome.

- **Energy and Materials Science:** Students developed projects on piezoelectric energy harvesting, energy harvesting from different sources, smart energy monitoring systems, thermal behaviour and heat-transfer analysis, AI-based classification of materials using physical properties, and utilization of temple floral waste through spectroscopic analysis.

- **Green Chemistry and Sustainable Technologies**: A number of projects focused on green extraction methods, green synthesis of nanomaterials and organic compounds, microwave- and ultrasound-assisted

synthesis/extraction, eco-friendly ionic liquids, sustainable catalysis, energy-storage applications and environmentally sustainable approaches to chemical processing.

- The projects enabled students to integrate theoretical knowledge with practical laboratory and computational skills, while exposing them to contemporary areas such as nanotechnology, biotechnology, molecular biology, genomics, computational drug design, green chemistry, environmental remediation, food science, data-driven analysis, energy technologies and sustainable development. The research activities also encouraged scientific inquiry, innovation, interdisciplinary learning and preparation for higher studies and research careers.

Departmental Activities : 2026 - 2027

S. No	Roll Number	Name of the Student	Topic	Name of the Supervisor
1	121324056026	Geethika	Pathimugam ,Natural Dye:Extraction , characterisation,pH,Thermal storage stability and Nanoparticle based evaluation	Dr.S.Parijatham Kanchana
2	121324056024	Nausheen	Comparative biochemical profiling and physicochemical characterisation of green syntheszed silver nano particles from *phyllanthus buxifolius* leaf extracts	Dr.S.Parijatham Kanchana
3	121324056022	Ritika Thakur	Green Synthesis, Biochemical Profiling and Physicochemical Characterization of Silver Nanoparticles Using *Portulacaria afra* Leaf Extract	Dr.S.Parijatham Kanchana
4	121324055003	Anna	Nutritional Evaluation of makahana-Moringa laddu	Dr. Tabitha Ramona
5	121324053030	S. Sanjana	Iron enriched cookies-Nutrition assessment and sensory evaluation.	Dr. Patricia Michael
6	121324055027	V. Vyshali	Impact of body composition and dietary consumption on gut microbiome	Ms. Umamaheswari
7	121324055002	Angelina Gonsalves	Phytochemical screening, antibacterial and antifungal analysis of the methanolic extracts of *Azadirachta indica*	Dr. S. Revathi
8	121324055006	Bobba Divyasri	Phytochemical screening, antibacterial and antifungal analysis of the methanolic extracts of *Ocimum sanctum*	Dr. S. Revathi
9	121324055029	Vaishnavi Sharma	Phytochemical screening, antibacterial and antifungal analysis of the methanolic extracts of *Curcuma longa*	Dr. Basanti Ch

S. No	Roll Number	Name of the Student	Topic	Name of the Supervisor
10	121324041003	Ganipaka Ruth Prashanthi	Comparative analysis of phytochemical composition and bioactive properties of *Ocimum tenuiflorum* cultivated in hydroponic and conventional soil methods	Dr. Basanti Ch
11	121324041005	Komera Priyanka	Comparative analysis of phytochemical composition and bioactive properties of *Coriandrum sativum* cultivated in hydroponic and conventional soil methods	Dr. Basanti Ch
12	121324041010	N Ann Maria Prakash	Comparative analysis of phytochemical composition and bioactive properties of *Spinacia oleracia* cultivated in hydroponic and conventional soil methods	Dr. Basanti Ch
13	121324041011	Pujari Sunanda	Comparative analysis of phytochemical composition and bioactive properties of *Latuca sativa* cultivated in hydroponic and conventional soil methods	Dr. Basanti Ch
14	121324056028	Samia Qadri	Integrated analysis of Physiocochemical and Biological parameters in water quality assessment of Umda sagar lake,Hyderabad	Ms. Shruti Joshi
15	121324050005	Asna Kulsum	Evaluation of Antibacterial and Anti biofilm activity of Probiotic derived cell free supernatants from traditional fermented foods	Dr. Deepa Switha
16	121324057005	Deekshitha	Benzohydrazide derived metal complexes antimicrobial assay: Experimental, molecular docking, and DFT investigations	Dr. K. Susmitha
17	121324057007	J Harika	Green Extraction of Bioactive Polyphenols from Moringa oleifera Using Ultrasound-Assisted Methods: Optimization and In Vitro Anti-Inflammatory Profiling	Dr. K. Susmitha
18	121324057009	P Manisha	Supercritical Fluid Extraction of Essential Oils from Cymbopogon citratus and Evaluation of Their Synergy with Standard Antibiotics Against Drug-Resistant Strains	Dr. K. Susmitha
19	121324057019	D Raveena	Synthesis, Antioxidant Potential, and DNA-Binding Affinities of Multi-Dentate Schiff Base Ligands Coordinated with Essential Trace Metals	Dr. K. Susmitha
20	121323050036	Sathvika Kasi	Development of Glucosamine-Derived Schiff Base Ligands: Synthesis, Characterization, and Evaluation as Alpha-Glucosidase Inhibitors	Dr Saritha A
21	121324050019	Devi Sri	Synthesis, Characterization, and In Vitro Antimicrobial Evaluation of Novel Transition Metal(II) Complexes Derived from Coumarin-Based Schiff Bases	Dr Saritha A

S. No	Roll Number	Name of the Student	Topic	Name of the Supervisor
22	121324050001	Hansika	Phytochemical Screening of Curcuma longa Rhizophere Extracts for the Green Synthesis of Silver Nanoparticles: Cytotoxic and DNA-Binding Applications	Dr Saritha A
23	121324050015	Isha	Development of Glucosamine-Derived Schiff Base Ligands: Synthesis, Characterization, and Evaluation as Alpha-Glucosidase Inhibitors	Dr Saritha A
24	121323056014	Hima Varsha	Synthesis, Characterization, and In Vitro Antimicrobial Evaluation of Novel Transition Metal(II) Complexes Derived from Coumarin-Based Schiff Bases	Dr Saritha A
25	121324056009	Rishika	Phytochemical Screening of Curcuma longa Rhizophere Extracts for the Green Synthesis of Silver Nanoparticles: Cytotoxic and DNA-Binding Applications	Dr Saritha A
26	121324053001	Aisha Sultana	Development and Validation of a High-Performance Liquid Chromatography (HPLC) Method for the Quantitation of Nicotine Residues in Tobacco Products	Dr Saritha A
27	121324055030	Faiza Mujahid	Optimization of Green Extraction Methods and Subsequent HPLC-DAD Separation for the Quantitation of Target Phytochemicals in Commercial Herbal Extracts	Dr Saritha A
28	121323056033	Tesia Aby	Design, Heterocyclic Synthesis, and Cytotoxic Profiling of Novel Amino Acid-Derived Schiff Bases against Human Cancer Cell Lines	Dr Saritha A
29	121324051006	Vanshika	Preparation and Comparative Study of Natural pH Indicators from Flowers and Vegetables	Dr. Asha Danthi
30	121324051017	Keertahana	Preparation and Comparative Study of Natural pH Indicators from Flowers and Vegetables	Dr. Asha Danthi
31	121324051019	Rakshitha	Comparative Analysis of Antioxidant Content in Different Fruit Juices by Determination of Vitamin C Using Redox Titration	Dr. Asha Danthi
32	121324051030	Tisha	Comparative Analysis of Antioxidant Content in Different Fruit Juices by Determination of Vitamin C Using Redox Titration	Dr. Asha Danthi
33	121324051007	HemaChaya	Comparative Analysis of Antioxidant Content in Different Fruit Juices by Determination of Vitamin C Using Redox Titration	Dr. Asha Danthi
34	121324053029	V. Myren John	Physicochemical Analysis and Quality Assessment of Local Water Sources	Dr. Asha Danthi

S. No	Roll Number	Name of the Student	Topic	Name of the Supervisor
35	121324055024	Takur Esther Rani	Physicochemical Analysis and Quality Assessment of Local Water Sources	Dr. Asha Danthi
36	121324042023	Sadia Gulzar	Study of Corrosion Inhibition of Mild Steel Using Plant Extracts in Acidic Medium and phytochemical studies	Dr. Asha Danthi
37	121324042019	P. Vaishnavi	Study of Corrosion Inhibition of Mild Steel Using Plant Extracts in Acidic Medium and phytochemical studies	Dr. Asha Danthi
38	121324050002	A. Swapna	Adsorption of Toxic metal (Lead)on	Ms.V.Prashanthi
39	121324050016	K. Tanuja	Adsorption of Toxic metal (Zinc) on pomegranate peel powder	Ms.V.Prashanthi
40	121324050031	Nimrah Fatima	Adsorption of Toxic metal (Mercury) on coconut shell	Ms.V.Prashanthi
41	121324050035	S. Saraswathi	Adsorption of Toxic metal (Cadmium) on Banana peel powder	Ms.V.Prashanthi
42	121324042003	B. Akhila	Phytochemical screening and proximate analysis of rajgira seeds powder	Ms.V.Prashanthi
43	121324042009	K. Karishma	Phyotochemical screening and proximate analysis of Coriander seed powder	Ms.V.Prashanthi
44	121324042014	Charan Priya	Phytochemical screening and proximate analysis of Giloy and Ajwain seeds	Ms.V.Prashanthi
45	121324042025	V. Usharani	Phytochemical screening and proximate analysis of Moringa leaf powder	Ms.V.Prashanthi
46	121324050014	Hera Siddiqui	Adsorption of Toxic metal on orange peel powder	Ms.V.Prashanthi
47	121324042021	R. Poojitha	Synthesis and Characterization and Biological evaluation of new hydrazides-Sciff bases	Ms.Sumaiya naaz
48	121324042007	G Akshaya	Sciff base metal complexes: Synthesis, characterization and Antibacterial activity	Ms.Sumaiya naaz

S. No	Roll Number	Name of the Student	Topic	Name of the Supervisor
49	121324042018	N. Prasanna	Synthesis of Chalcones by Conventional and green method, characterization, Anti-microbial activity.	Ms.Sumaiya naaz
50	121324042013	K. Vinitha	Synthesis of Chalcones by Conventional and green method, characterization, Anti-microbial activity.	Ms.Sumaiya naaz
51	121324057002	Anjali singh	Sciff base metal complexes: Synthesis, characterization and Antibacterial activity	Ms.Sumaiya naaz
52	121324056030	Simi	Synthesis, characterization and Biological activity of Sciff bases Hydrazides with molecular docking studies and DFT calculations	Ms.Sumaiya naaz
53	121324041013	Syeda Nabeela	Synthesis, characterization and Biological activity of Sciff bases Hydrazides with molecular docking studies and DFT calculations	Ms.Sumaiya naaz
54	121324041001	Alafia	Synthesis, characterization and Biological activity of Sciff bases Hydrazides with molecular docking studies and DFT calculations	Ms.Sumaiya naaz
55	121324061009	Rafath Fatima	Rational Design of Small-Molecule Inhibitors Using Homology Modeling, Pharmacophore-Guided Virtual Screening, Docking, and DFT Studies	Dr. M. Bhagavi
56	121324056011	Fatima Ali	Benchmarking Homology Models for Virtual Screening and Docking: A DFT-Supported Computational Drug Design Study	Dr. M Bhagavi
57	121324061018	Zoya aman	Elucidating Binding and Electronic Features of Hit Compounds through Homology Modeling, Virtual Screening, Docking, and DFT Analysis	Dr. M.Bhagavi
58	121324041007	Manjala Ashwitha	Extraction of Active principals from Medicinal plants gs	Dr.Sabiha Fatima
59	121324061012	Shalmista Das	Insilico Design of Anti-Cancer Drug	Dr.Sabiha Fatima
60	121324050036	Shireen Ameer	Development of Nanoparticle-Enhanced Chitosan-Pectin Film for Wound Healing	Dr.Shikha Chander
61	121324050043	Zainab Fatima	Development of Nanoparticle-Enhanced Chitosan-Pectin Film for Wound Healing	Dr.Shikha Chander
62	121324050034	Safa Fathima	Development of Nanoparticle-Enhanced Chitosan-Pectin Film for Wound Healing	Dr.Shikha Chander

S. No	Roll Number	Name of the Student	Topic	Name of the Supervisor
63	121324050013	Hafsa	Development of Nanoparticle-Enhanced Chitosan-Pectin Film for Wound Healing	Dr.Shikha Chander
64	121324050023	Madiha sumaira	Ultrasound-Assisted Green Synthesis of Magnetic Cellulose Nanoparticles	Dr.Shikha Chander
65	121324057004	Sanjana	Ultrasound-Assisted Green Synthesis of Magnetic Cellulose Nanoparticles	Dr.Shikha Chander
66	121324050038	Syeda Hafsa	Facile Sonochemical Route for the Preparation of Cellulose Functionalized Fe3O4 Nanoparticles	Dr.Shikha Chander
67	121324050039	Syeda Umaima	Facile Sonochemical Route for the Preparation of Cellulose Functionalized Fe3O4 Nanoparticles	Dr.Shikha Chander
68	121324056002	Anindita Bhaumik	Energy harvesting device from various sources of diyas	Dr. B. Uma Rani
69	121324051016	Mahek Hyder	ML enhanced Improvisation in the resolution of pH range using blue pea flow	Dr. B. Uma Rani
70	121324051032	Zainab Adnan	Material utilization of temple floral offerings via spectroscopic analysis	Dr. B. Uma Rani
71	121324056019	Mahi Agarwal	Design and Synthesis of Novel Eco-Friendly Ionic Liquids for Sustainable Catalysis	Dr. B. Prashanthi
72	121324061004	Jyoti Kumari	Optimising Microwave-Assisted Preparation Methods for Functionalised Ionic Liquids	Dr. B. Prashanthi
73	121324055022	syeda kaunain Fatima	Optimisation of Ultrasound-Assisted Extraction of Bioactive Phytochemicals from Medicinal Plant Materials	Dr. B. Prashanthi
74	121324041007	M.Ashwitha	Comparative Study of Green Solvents Versus Conventional Extraction Methods for Isolating Plant Polyphenols	Dr. B. Prashanthi
75	121324041012	P.Sushma	Synthesis and Characterisation of Task-Specific Ionic Liquids for Advanced Energy Storage Applications	Dr. B. Prashanthi
76	121324053031	Zosangpuii	Optimisation of Reversed-Phase HPLC for the Quantitative Analysis and Quality Control of Critical Pharmaceuticals	Dr. B. Prashanthi

S. No	Roll Number	Name of the Student	Topic	Name of the Supervisor
77	121324051008	Suvartha Angeline	Extraction, Characterisation, and Antioxidant Profiling of Phytochemicals from Local Flora for Therapeutic Applications	Dr. B. Prashanthi
78	121324053009	Jennifer Margaret	High-Performance Liquid Chromatographic (HPLC) Determination of Trace Pharmaceutical Impurities in Bulk Drugs	Dr. B. Prashanthi
79	121324053016	Akshitha	Synthesis (Green and Conventional) and Characterisation of Organic compounds	Ms. Karuna.K.S
80	121324053006	Ramya Sri	To study the presence of Oxalate ions in different fruits	Ms. Karuna.K.S
81	121324055017	Vaishnavi	Kinetics of Iodination of propanone by Colorimetry	Ms. Karuna.K.S
82	121324061002	Meghana Roy	Green Synthesis of carbon coated ZnO for the adsorption of toxic metal ions .	Dr. Y. Lakshmi Madhuri
83	121324061007	Pasala Ruth	HPLC for the Pharmaceutical analysis of water	Dr. Y. Lakshmi Madhuri
84	121324056029	Shaik Thasleema	Photocatalytic applications of C@ ZnO Nanocomposites	Dr. Y. Lakshmi Madhuri
85	121324053010	Sri Kavya	Synthesis (Green and Conventional) and Characterisation of Organic compounds	Ms. Karuna.K.S
86	121324053020	Saba Begum	Synthesis (Green and Conventional) and Characterisation of Organic compounds	Ms. Karuna.K.S
87	121324055010	Karre Rebecca	To study the presence of Oxalate ions in different fruits	Ms. Karuna.K.S
88	121324055011	Minni Rajakumari	To study the presence of Oxalate ions in different fruits	Ms. Karuna.K.S
89	121324055016	Nargees	Kinetics of Iodination of propanone by Colorimetry	Ms. Karuna.K.S
90	121324043001	Ayesha Siddiqa	Design, development and performance analysis of a Piezo electric energy harvesting system.	Ms. Krishna

S. No	Roll Number	Name of the Student	Topic	Name of the Supervisor
91	121324043011	Darisi Nageshwari	Design, development and performance analysis of a Piezo electric energy harvesting system.	Ms. Krishna
92	121324043036	Rapna Pooja	Design, development and performance analysis of a Piezo electric energy harvesting system.	Ms. Krishna
93	121324042006	G. Akshaya	Design and development of a smart energy monitoring and heat transfer Analysis System	Dr. K. Devy
94	121324042024	Shaik Naseema	Design and development of a smart energy monitoring and heat transfer Analysis System	Dr. K. Devy
95	121324043021	Kommana Kasturi	AI based classification of materials using Physical properties	Ms. Krishna
96	121324043042	Sanganamoni Bhavani	AI based classification of materials using Physical properties	Ms. Krishna
97	121324042005	B.Rishika	Investigation of Energy conception and Thermal behaviour using a Smart monitoring system	Dr. K. Devy
98	121324042026	V. Akhila	Investigation of Energy conception and Thermal behaviour using a Smart monitoring system	Dr. K. Devy
99	121324050033	Ms. Angelina and	Enzymatic profiling of Bacterial spoilage agents associated with Tomato Deterioration	Ms.K.Swathi
100	121324050026	Ms. Mahvish	Enzymatic profiling of Bacterial spoilage agents associated with Tomato Deterioration	Ms.K.Swathi
101	121324050034	Ms. Safa Fathima	In silico screening and evaluation of selected phytochemicals From orange and pomegranate peels using molecular docking and ADMET analysis	Ms.K.Swathi
102	121324050036	Ms. shireen Ameer	In silico screening and evaluation of selected phytochemicals From orange and pomegranate peels using molecular docking and ADMET analysis	Ms.K.Swathi
103	121325057003	Ayyagari Harini	Correlation between the presence of crispr cas system and antibiotic gene content in bacterial genomes of klebsiella pneumonia - A computational analysis	Ms.K.Swathi
104	121325057014	Lichee Mehta	Genomic adaptation and structural divergence of MARR and OQXB defence system in space flight isolated Klebsiella quaspineumoniae	Ms.K.Swathi

Link for the details of Qualitative improvements due to DBT support. DBT ANNUAL REPORT 2026

- **Faculty and Students Training :**

- Faculty members and students participated in training programmes and faculty development activities designed to strengthen professional, technical, pedagogical and research competencies. The programmes provided hands-on exposure to emerging technologies, laboratory techniques, computational tools and domain-specific practices, thereby enhancing practical skills, research capabilities and industry readiness.
- **Cell Culture Techniques:** Two faculty members from the Department of Botany attended a training programme on *Cell Culture Techniques* organized by the Department of Microbiology, St. Francis College for Women, on 18–19 August 2026. The training enhanced faculty competency in cell culture methodologies and supported the planning of potential student projects, faculty research activities and the development of a cell culture facility at the college level.
- **Animal Cell Culture Techniques:** Four faculty members from the Department of Biotechnology participated in a two-day workshop-cum-training programme on *Animal Cell Culture Techniques*. The programme provided practical exposure to animal cell culture methodologies and their applications in teaching and research.
- **Intelligent Analytics:** Twenty-five faculty members from the Department of Computer Science attended a two-day Inter-Collegiate Faculty Development Programme on *Intelligent Analytics* held on 1–2 September 2026 at St. Francis College for Women.
- **Modern AI Toolkit:** Fifteen faculty members from the Department of Computer Science participated in a two-day Faculty Development Programme on *Modern AI Toolkit: From GenAI to Autonomous Agents* held on 15–16 September 2026. The programme enhanced their understanding of contemporary AI tools and their applications in academic and professional contexts.

- **Hands-on Training Programmes**

Several hands-on training programmes and workshops were organized to strengthen students' practical, technical, computational and industry-oriented skills**.**

- **Animal Husbandry,** Aquaculture and Integrated Farming: Students received hands-on exposure to practices in animal husbandry, aquaculture and integrated farming systems, enhancing their understanding of sustainable and integrated agricultural practices.
- **Apiculture Technology:** Students received practical training in honeybee biology and ecology, hive management and honey extraction. The programme also introduced students to entrepreneurial opportunities in beekeeping and highlighted the importance of bees in pollination, biodiversity conservation and sustainable livelihoods.
- **Insect Preservation for Museum Collections:** Students received practical exposure to methods of insect collection, preservation, mounting and maintenance for zoological museum collections.

- **Western Blotting Techniques:** Three faculty members and 24 students participated in a workshop-cum-training programme on *Western Blotting Techniques* on 1 September 2026. The programme provided practical exposure to molecular biology techniques and their applications in research.
- **Bioinformatics Tools and Software:** Eighteen students attended an online training programme on *Bioinformatics Tools and Software.* The training strengthened students' computational skills for biological data analysis and introduced bioinformatics workflows relevant to academic and research applications.
- **Molecular Biology and Genomics:** Students received hands-on training in PCR and Southern blotting techniques, along with exposure to cell culture methods and primer-design approaches. The training strengthened their practical understanding of molecular biology and genomics.
- **Biofertilizers and Biopesticides:** Students underwent hands-on training in the quality control and application of biofertilizers and biopesticides. The programme developed practical skills relevant to higher education, research, field applications and entrepreneurship.
- **Data Science and Machine Learning Internship:** B.Sc. Statistics students participated in an eight-week coursework-cum-internship programme on *Mastering Data Science and Machine Learning*, commencing on 16 September 2026. Students worked on industry-oriented regression and classification projects under the guidance of professional mentors, developing skills in data analysis, machine learning and project presentation.
- **Medical Laboratory Techniques:** Second-year students participated in *Clinitek – Medical Laboratory Techniques*, gaining practical exposure to laboratory procedures relevant to clinical and diagnostic applications.
- **Food Service Management:** Final-year students of the Department of Nutrition underwent training in food service management, developing practical skills related to planning and management of food service operations.
- **Proximate Analysis:** Final-year Nutrition students received practical training in proximate analysis, strengthening their laboratory skills in the assessment of nutritional composition of food samples.
- **Chromatographic Techniques:** Chemistry students participated in an industrial training programme at YMC School of Chromatography. The training provided practical exposure to chromatographic techniques, instrumentation and their applications in chemical analysis, thereby strengthening industry-oriented laboratory skills.

The training programmes collectively provided hands-on, laboratory-based, computational and industry-oriented learning experiences to students and faculty. The activities strengthened technical competencies in cell culture, molecular biology, genomics, bioinformatics, chromatography, agricultural biotechnology, data science, artificial intelligence and laboratory techniques, while also supporting student research projects, higher education, entrepreneurship and employability.

Guest lectures

- The Department of Biochemistry conducted sessions on Good Laboratory Practices (GLP), Good Manufacturing Practices (GMP), and Biosafety. The Department of Nutrition organized lectures on Novel Proteins and Enteral and Parenteral Nutrition.
- Medicinal Properties of Selected Wild Medicinal Plants of Anantagiri Hills, Hyderabad by the Department of Botany – Around 22 students and 2 faculty members participated.
- AI for a Greener Future: Transforming Plant Sciences, by the Department of Botany – Around 40 students and 2 faculty members participated.
- Tiny Inter-Cellular Messengers: Role of Exosomes in Liver Disease and Regeneration – Conducted on 13 August 2026 by Dr. Chaturvedula B. Tripura, Scientist-E, CSIR-CCMB, Hyderabad; 96 students and 4 faculty members participated.
- Intellectual Property Rights – Online guest talk conducted on 8 August 2026 for B.Sc. I and II-year Biotechnology students by Ms. Shravya, Patent Professional and Founder, Patent Pilot Services; 98 students and 4 faculty members participated.
- Chemistry Career Compass: Explore, Evaluate, Excel – Conducted for 120 students of B.Sc. III B/C/F by Prof. P. Ramesh, Principal and Professor of Chemistry, Nehru Memorial Government Degree College, Jogipet, Sangareddy.
- From Molecules to Flexible Electronics: Chemistry for a Sustainable Future – Conducted for 75 students of B.Sc. III A and N by Prof. Chitra Gurnani, Head, Department of Chemistry, Ecole Centrale School of Engineering, Mahindra University, Hyderabad.
- Statistics for Decision Making and Applications – Overview – Organized by the Department of Statistics under DBT STAR College Strengthening Component for B.Sc. (D, MES) first-year students; around 100 students and 2 faculty members participated.
- Career in Mathematics – Organized by the Department of Mathematics under DBT STAR College for selected B.Sc. final-year students in hybrid mode on 24 July 2026; resource person: Prof. A. Satyanarayana Reddy, Sreenidhi University, Delhi.
- Applications of Algebra in Data Science and Machine Learning – Organized by the Department of Mathematics under DBT STAR College Strengthening Component for B.Sc. III H students on 15 September 2026.
- Applications of ODE and PDE in Technology – Organized by the Department of Mathematics for B.Sc. I H students on 15 September 2026.
- From Curious Minds to Breakthroughs: The Pursuit of Scientific Research – Organized on 29 July 2026 for B.Sc. I, II- and III-year Microbiology students.

- Neutron Stars in the Era of Gravitational Waves – Organized by the Department of Physics on 15 July 2026 under DBT STAR College; around 144 students and 3 faculty members participated.
- Telescopes: Windows to the Universe – Guest lecture and hands-on session organized under DBT STAR College for II- and III-year Physics students; around 94 students and 3 faculty members participated.
- Citizen Science and Science Communication – Organized by the Department of Zoology under DBT STAR College for I year BTZC and ANZC students; around 63 students and 3 faculty members participated.
- Insect Pest Management (IPM): The Sustainable Strategy – Organized by the Department of Zoology under DBT STAR College for III-year GE students; around 30 students and 2 faculty members participated.

Workshops

- Good Laboratory Practices (GLP), Good Manufacturing Practices (GMP), and Biosafety – Sessions organized by the Department of Biochemistry.
- HPLC Techniques – Workshop conducted at NIPER for final-year Biochemistry students.
- Clinical Genetics, Cytogenetics, Biochemistry, Molecular Biology and Toxicology Techniques – Workshop conducted at the Institute of Genetics for final-year Biochemistry students.
- Baking and Frosting Techniques – Workshop organized for Nutrition students.
- From Questions to Results: The Journey of Nutrition Research – Workshop organized for Nutrition students.
- Nutrigenomics and Molecular Biology Techniques – Interdisciplinary workshop conducted in collaboration with the Department of Zoology.
- Green Archives: A Hands-on Workshop on Medicinal Plant Herbarium Techniques – Around 20 students and 2 faculty members participated.
- The DNA Discovery Lab – Exploring Biotechnology Beyond the Classroom – One-day training and awareness programme conducted on 2 September 2026 for 13 students and 2 faculty members from Cremon Montessori Life School, Hyderabad.
- Hands-on Patent Searching – Faculty Improvement Programme – Dr. Radhika V. introduced the fundamentals of IPR and patent protection, while Ms. Shravya provided hands-on training in patent searching using free patent databases.
- Techniques in Phytochemistry: Plant Extraction, TLC & Column Chromatography – Practical training on plant extraction, TLC and column chromatography, focusing on the isolation, separation and identification of phytochemicals.

- Advanced Embedded System with IoT – Three-day workshop conducted from 2–4 July 2026 for B.Sc. III H Software Engineering students, covering microcontrollers, sensors, controllers, actuators, LCD interfacing, Arduino Uno and ESP32.
- Embedded Systems and IoT for Data Analytics – Two-day workshop conducted on 27–28 July 2026 for B.Sc. III B and III D students, covering Blynk, MQ2 smoke sensors, soil moisture sensors, rain sensors and NodeMCU-based IoT applications.
- Dronetech: From Concept to Flight – Three-day workshop conducted from 2–4 July 2026 for II-year Computer Science students, covering quadcopter structure, aerodynamics, circuit integration, wiring, soldering, sensor calibration and pre-flight testing.
- Power BI Essentials – Workshop organized by the Department of Statistics on 12–13 August 2026 for final-year B.Sc. (MSCs) students.
- Linear Algebra & Its Applications – Workshop organized by the Department of Mathematics under DBT STAR College on 7 September 2026.
- Python Programming on Eigenvalues and Eigenvectors – Workshop organized by the Department of Mathematics under DBT STAR College on 5 September 2026.
- Molecular Biology and Genomics – One-day training workshop organized by the Department of Microbiology on 30 June 2026 for B.Sc. III year students.
- Cell Culture Techniques – Workshop organized on 18–19 August 2026 for faculty members.
- Bioinformatics – Workshop conducted from 31 August–2 September 2026 for faculty and students.
- Telescopes: Windows to the Universe – Hands-on Workshop – Hands-on training conducted for II- and III-year Physics students.
- 3D Printing & Additive Manufacturing – Hands-on workshop conducted under DBT STAR College in association with Physitech Electronics, Hyderabad, for B.Sc. III B students; around 50 students participated.
- From Pellet to Graph: A Hands-on Training in Materials Characterization – Three-day workshop series conducted under DBT STAR College for Science project students and students from Government Degree College, Malkajgiri; around 60 students and 3 faculty members participated.
- Nutrigenomics Unlocked: A Hands-on Workshop on Molecular Biology Techniques – Organized jointly by the Departments of Zoology and Nutrition on 24 August 2026; 30 B.Sc. III N (ANZC) students participated.
- Insect Preservation for Museum Collections: Methods and Techniques – One-day hands-on workshop conducted by the Department of Zoology on 16 September 2026; 60 first-year students and 3 faculty members participated.

- Aquaponic Essentials: Operation & Live Demonstration – Workshop organized by the Department of Zoology for B.Sc. II A (BZC) students, providing practical exposure to aquaponics.
- Culturing Cells: A Comprehensive Workshop on Animal Cell Culture – Two-day workshop organized jointly by the Departments of Zoology and Biotechnology on 23–24 July 2026; around 25 final-year students and 7 faculty members participated.

Field Trips :

- The Department of Nutrition organized a one-day field visit to Dangoria Charitable Trust, Narsapur, under the DBT STAR College Scheme (Strengthening Component) for B.Sc. III Year Nutrition students. The visit was attended by 35 students and 4 faculty members, providing experiential learning in community nutrition and rural healthcare.
- A field trip to the School of Life Sciences, University of Hyderabad, was organized for final-year Biochemistry students on 7 August 2026. The visit included an orientation on departmental research activities and facilities.

- The Department of Nutrition organized an educational visit to Pride Institute of Hotel Management, Ramanagar, under the DBT STAR College Scheme (Strengthening Component) for B.Sc. III Year Nutrition students on 18 August 2026. A total of 58 students, divided into two batches, participated along with 2 faculty members.

- The Department of Botany organized a field trip to Anantagiri Hills, Vikarabad District, to explore wild medicinal flora and learn about their taxonomic identification and collection. Around 22 students and 2 faculty members participated. The visit enhanced students' field observation skills and awareness of wild medicinal plant resources.

- A field trip to the Environment Protection Training and Research Institute (EPTRI), Gachibowli, Hyderabad, was organized on 25 August 2026 for 48 Biotechnology students and 1 faculty member. Students gained exposure to environmental monitoring, plant tissue culture, microbiological techniques, and advanced analytical instruments used in scientific research and environmental studies.

- A field visit to the National Institute of Rural Development and Panchayati Raj (NIRDPR), Hyderabad, was organized on 18 September 2026. The visit provided practical exposure to sustainable technologies, rural development initiatives, skill development, and livelihood-oriented activities. 27 students and 1 faculty member participated.

- An industrial visit to the Central Institute of Petrochemicals Engineering and Technology (CIPET) was organized. Dr. Anjaneya Sharma introduced students to the fundamentals of polymers and plastics, their

classification, manufacturing processes, and industrial applications. Students also gained information about CIPET's short-term skill development programmes and employment-oriented technical training.

- An industrial visit to Pochampally Weavers Cooperative Society provided students with practical exposure to the traditional handloom and textile industry. Students observed various stages of textile production, including designing, dyeing, weaving, and finishing, and understood the application of chemistry in dyes and textile processing.

- The Department of Computer Science organized a field trip to IIT Hyderabad to provide students with exposure to its academic environment, India–Japan collaboration, Japanese culture and language education, and emerging research in educational technology and applied linguistics.

- The Department of Statistics organized a field trip to ICRISAT, Patancheru, Hyderabad, under the DBT STAR College (Strengthening Component) for B.Sc. III D and III MES students. Around 70 students and 2 faculty members participated.

- The Department of Mathematics organized a field trip to IIT Hyderabad under the DBT STAR College (Strengthening Component) on 29 October 2026, from 9:00 a.m. to 3:00 p.m., for around 50 second- and final-year B.Sc. (MES) Physical Sciences students.

- The Department of Microbiology organized a field trip to Professor Jayashankar Telangana State Agricultural University, Hyderabad, for 33 students. Students gained practical skills in culturing, multiplication, and formulation of microbial biofertilizers and biopesticides and developed an understanding of their principles, mechanisms, and benefits in crop production.

- The Department of Physics organized a field visit to the Japal-Rangapur Observatory, Rangareddy District, Telangana, on 11 August 2026 under the DBT STAR College Strengthening Component. The visit was guided by Dr. D. Shanti Priya and Dr. J. Rukmini, faculty members of Osmania University. 67 students of B.Sc. III B (MPC and MPCs) and 3 staff members participated. The visit enhanced students' understanding of observational astronomy and encouraged scientific curiosity and awareness of higher studies and research opportunities in physics and astronomy.

- The Department of Zoology organized a field visit to Winning Fins, Shadnagar, on 18 August 2026 under the DBT STAR College Programme – Strengthening Component. The visit provided students with hands-on exposure to animal husbandry, aquaculture, and integrated farming systems. 24 students and 1 faculty member participated.

- The Department of Zoology organized a field visit to the Apiculture Technology Centre, Rajendranagar, Hyderabad, under the DBT STAR College Strengthening Component on Exploring Beekeeping Entrepreneurship for B.Sc. I A and I N students. Around 50 students and 1 faculty member

participated. The session was facilitated by Mr. Ravindra Kumar Pydi, Director, Apiculture Technology Centre, Bee House, Professor Jayashankar Telangana State Agricultural University, Rajendranagar.

- The Department of Zoology organized an industrial visit to the Centre for DNA Fingerprinting and Diagnostics (CDFD), Uppal, Hyderabad, for B.Sc. III A and III N students. Dr. Varsha Srivastava, Senior Scientist and Head, Science Communication Division, provided an overview of the institute's activities. 52 students and 1 faculty member participated, gaining exposure to advanced research methodologies and laboratory practices.

Paper presentations:

Around 30 students presented their research work at national and international conferences, providing them with opportunities to communicate their findings, enhance scientific presentation skills, interact with researchers and gain exposure to academic and research-oriented forums.

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

Activity	Novel aspects introduced	Planning to introduce
Project based learning	Analysis and characterization of different water samples in and around Hyderabad	AI-assisted prediction of bioactive compounds from medicinalplants—use AI/ML tools to predict potential antimicrobial or antioxidant activity of plant-derived compounds, followed by laboratory validation of selected candidates.
	Green Nanotechnology and Nanoparticle Characterization	Functional food product development
	Nano-enhanced Antimicrobial Activity and Process Optimization	
	Innovative reformulation of traditional foods using modern food-processing approaches	
	Millet-based iron fortification for improved micronutrient density	
	Effect of biofertilizers on seed germination and plant growth	Interdisciplinary projects on Plant tissue culture
	Phytochemical Profiling of Fruit peel extracts and their potential as Organic fertilizers for enhancing seed germination and plant growth	Green synthesis of nanoparticicles from medicinal plant extracts
	Carried out projects on identification and characterization of Lactobacillus sps as Probiotics	Extension of molecular characterizations of different probiotics
	Analysis and characterization of different water samples in and around Hyderabad	
	Students were engaged in interdisciplinary projects covering areas such as nanochemistry, computational chemistry, organic synthesis and biological evaluation, molecular docking and DFT studies, green chemistry, chromatographic techniques, phytochemical analysis, development of low-cost educational pH testing kits, thermoelectric energy harvesting	Interdisciplinary Project on Green Chemistry and Waste-to-Energy • Collaborate with departments such as Physics, Biotechnology, and Environmental Science. • Students will investigate the conversion of

Activity	Novel aspects introduced	Planning to introduce
	from floral waste, and adsorption studies. These projects provided students with hands-on research experience, analytical skills, problem-solving abilities, and opportunities to apply theoretical concepts to real-world challenges.	floral/agricultural waste into useful products or thermoelectric energy
	Mastering Data Science and Machine Learning	
	The publication of research papers and filing of patents based on student projects are currently in progress.	
	Characterisation of magnetic materialsandgreen energy on sensor-based technology.	
		Wanted to give project-based learning for second year students
Training Programme	Practical training in clinical laboratory techniques, food service management, and nutritional analysis	AI tools in Nutrition and Diet planning Green Nanoparticle Synthesis Cell line studies
	Training for Montessori Life School students, providing practical exposure to fundamental biotechnology techniques	Recent advances in Plant tissue culture & Micropropagation
		Training in basic instrumentation and Computer skills for non-Teaching staff from other colleges
		Karyotyping and Cytogenetics analysis
	An industrial training program was organized for Chemistry students at YMC School of Chromatography. The students gained practical exposure to chromatographic techniques, instrumentation, and their applications in chemical analysis. The training enhanced their practical skills and understanding of chromatography in research and industry.	Students will receive practical exposure to drug analysis, quality testing, formulation analysis, and basic QC procedures.
	Training on Mathcad "Linear Algebra and Numerical Analysis".	Training on Mathcad related to Differential Equations,Real Analysis, Differential and Integral Calculus
	Hands on training on "A computational tool in AI using Python"	
		Improved the confidence in planning and to establish a cell culture-based laboratory at college level.
	College Teachers' Training Program On Simulations& Computer Interfaced UG Physics Practicals'	
	Hands-on exposure to various practices in animal husbandry, aquaculture and integrated farming systems	
	Hands-on exposure to apiculture technology	
	Insect Preservation for Museum Collections: Methods and Techniques	
Workshop	Hands on training on "A computational tool in AI using Python"	Serviette folding and Vegetable carvingNutrigenomics and Personalized NutritionAntioxidant Assay-ABTS.FRAP
	Interdisciplinary and experiential learning**.**	Research integrity & Scientific writing in Plant sciences
	Hands on session on Herbarium techniques	Statistical Analysis and Data interpretation

Activity	Novel aspects introduced	Planning to introduce
	Workshop on Animal Cell culture and Analysis of cell viability	
	Workshops and Faculty Improvement Program: The Department of Chemistry organized a Faculty Improvement Program on "Hands-on Patent Searching", along with workshops on"Techniques in Phytochemistry: Plant Extraction, TLC & Column Chromatography"and "No Code AI Chemistry: Hands-On Molecular Design for Beginners." These programs enhanced participants' knowledge of patent search strategies, phytochemical extraction and chromatographic techniques, and emerging AI-based approaches in molecular design.	Workshop on Scientific Writing, Research Methodology and Publication Ethics
	2-day FDP for students and faculty on Mathematics on AI, Hands on training on Python	
	2-day Workshop on Power BI	
	Workshop on Bioinformatics: Faculty and undergraduate students enhanced their technical digital competencies for analyzing complex biological datasets.	
	Solar energy, Composite materials, Astronomy themed Experiments	
	Nutrigenomics Unlocked: A Hands-on Workshop on Molecular Biology Techniques	
	Culturing Cells: A Comprehensive Workshop on Animal Cell Culture	
New experiments	Mutarotation of sugars by Polarimeter	Micropropagation using nodal explants.
	Estimation of Na, K ions by Flame Photometer	
	Estimation of Vitamins using Flourimeter	
	Determination of Gluten formation using Food Processor	
	Determination of Pectin in foods using Jelmeter	
	Gel Electrophoresis	
	Western blotting technique for faculty and students	
	Preparation of Lavender bath salt	Preparation of Coffee-Based Body Scrub
	Preparation of Hair protein pack	Preparation of Oatmeal Facial Cleanser
	Preparation of lip moisture	Preparation of Citrus-Based Room Freshener
	Preparation of banana face powder	
	Preparation of cold cream (Emulsification	
	Preparation of Lavender bath salt	
	Preparation of Hair protein pack	
	Preparation of lip moisture	
	Preparation of banana face powder	

Activity	Novel aspects introduced	Planning to introduce
	Absorption lines in Rotational spectrum of Iodine Vapour Resistivity by Four probe Method Magnetic susceptibility of materials e/m by Thomson's method Astronomy Tools	
	Experiential knowledge of Aquaponics	Rotary microtome
		Kymograph
New approaches	Paper Presentation by the students	Digital herbarium development
	Organized guest talk on use of AI tools for plant identification, disease detection, crop monitoring and data analysis	
	AI tools in drug design and drug discovery	QC & QA analyst
	Analytical techniques such as TLC, Column chromatography for phytochemical analysis	
	Training Program on different softwares used as classroom pedagogy and research Tools.	
	an Outreach program for the Intermediate college students "Exploring Zoology: A Hands-on Workshop in Experimental Techniques for Intermediate Students	
	Introduced students to Citizen Science and Science Communication	
	Provided students with experiential exposure to **DNA fingerprinting and diagnostic techniques**	
	Introduced students to the principles and importance of Integrated Pest Management (IPM)	
Entrepreneurship	Development of Iron Fortified Foods	
	Training in Animal and plant tissue culture enable entrepreneurship by supporting large-scale production of disease-free plants and valuable biological products	Sessions on development of value-added herbal products
	QA & QC analyst	Students can work on product formulation, packaging, labelling, branding and basic cost analysis to understand the complete product-development cycle.
	Cosmetic Formulator	Encourage students to develop products such as herbal soaps, lip balms, shampoos, face packs and scrubs using locally available materials.
		Enhanced skill sets after gaining hands on training on Biofertilizers and Biopesticides and supported students in pursuing higher studies, research projects, or entrepreneurship in the biofertilizer and biopesticide industry.
	Exploring Beekeeping Entrepreneurship	
	Aquaponics an integration of fish culture with plant cultivation for sustainable farming	
	In animal husbandry and aquaculture	

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

Lessons Learnt

- Interdisciplinary collaboration provided students with broader exposure and encouraged the application of knowledge across disciplines.
- Participation in research projects, workshops and conferences fostered scientific thinking, enhanced communication and presentation skills, and increased students' confidence.
- Hands-on and experiential learning activities helped students connect theoretical concepts with practical applications and strengthened their research and technical competencies.

Difficulties / Suggestions

- The activities were implemented alongside the regular academic schedule. Adequate time allocation for planning and execution of activities would further facilitate their smooth integration with the prescribed curriculum and enhance student participation.
- Early release of the sanctioned funds, preferably at the beginning of the academic year, wherever feasible, would provide greater flexibility for advance planning and timely implementation of activities. This would support optimal utilization of resources and enable the organization of more meaningful and impactful student-centric programmes.

8. Key performance indicators

	Indicator	Pre-support (2022-2023)				During Support (2026-2027)				Remarks
1.	No. of students admitted	**Total =1067**				**Total = 436**				
		Only Females				**Only Females**				
		SC	ST	OBC	GEN	SC	ST	OBC	GEN	
						34	7	210	185	
2.	No. of student passing out (%) Students Admitted/passing out (pass %)					85% 318 376				
3.	Drop-out rates					11.46%				
4.	No. of Student opting for M.Sc					163				
5.	Average marks					8.5				
6.	No. of hands-on experiments being conducted					Biochemistry & Nutrition - 5				
						Botany & Biotechnology - 5				
						Chemistry - 9				
						Computer Science - 1				
						Mathematics & Statistics - 3				
						Microbiology - 4				
						Physics - 4				
						Zoology- 4				
7.	No. of new experiments introduced					Biochemistry & Nutrition - 5				
						Botany & Biotechnology - 2				
						Chemistry - 8				
						Computer Science - 1				
						Mathematics & Statistics - 1				
						Physics - 4				
						Zoology-3				
8.	Publications (Scopus indexed) / patents, if. Any					Botany & Biotechnology - 1 Chemistry – 3 and Patents- 2 Microbiology – 2 communicated				
9.	Training received by faculty and student					Biochemistry & Nutrition -3 Botany & Biotechnology - 5 Chemistry – 3 Computer Science – 25 Mathematics & Statistics - 5 Microbiology -4 Physics -1				
10.	Exhibitions/ seminars / Training courses conducted					Botany & Biotechnology - 5				
						Chemistry - 6				
						Computer Science -4				
						Mathematics & Statistics -4				
						Microbiology -5				
						Physics -1				
						Zoology-1				
11.	Books/journals subscribed from grant					Mathematics & Statistics - 79 Zoology- 20				

12.	Outreach activities – (Popular lectures)		Mathematics & Statistics - 1 Zoology-1	
13.	College mentored to apply for DBT Star College grants			
14.	Invited lectures		Biochemistry & Nutrition -3	
			Botany & Biotechnology - 4	
			Chemistry - 2	
			Mathematics & Statistics - 1	
			Microbiology -1	
			Physics -1	
			Zoology-2	

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

Workshop on 'Baking and Frosting techniques'









The Department of Nutrition organized a workshop on **"Baking and Frosting Techniques"** under the **DBT STAR College Strengthening Component** for B.Sc. II Year Nutrition students. The programme was attended by **14 students and 8 faculty members**, with **Ms. Krishnaveni Ch., Pastry Chef, The Baking Panorama**, as the resource person. The workshop provided students with hands-on experience in baking and frosting techniques and helped them understand the role of ingredients and temperature in determining the texture and quality of baked products. The interaction with the pastry

chef also gave students an insight into professional baking practices and career and entrepreneurship opportunities in the food industry.

Workshop/Training on Western Blotting Technique (New Experiment)





A workshop-cum-training programme on **"Western Blotting Technique"** was organized on **1 September 2026** for B.Sc. II Year Biotechnology students and faculty in the Biotechnology Laboratory. The programme was attended by **24 students and 3 faculty members**, with the objective of providing hands-on training in the basic principles, experimental procedure and interpretation of Western blotting results, thereby enhancing their practical skills and understanding of its applications in biotechnology and molecular biology research.

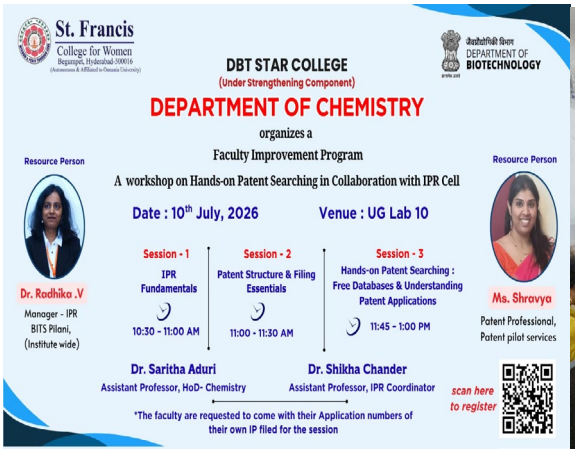
Workshop on Herbarium techniques





The Department of Botany organized a hands-on workshop on **"Green Archives: A Hands-on Workshop on Medicinal Plant Herbarium Techniques"** under the DBT STAR College Scheme (Strengthening Component) for II-year BZC and ANBC students. Around 20 students and 2 faculty members participated, with Dr. Allam Vijaya Bhasker Reddy, Associate Professor, Department of Botany, University College of Science, Osmania University, Hyderabad, as the resource person. The workshop provided practical training in the collection, identification, preparation, labelling, preservation, and scientific documentation of medicinal plant specimens. It enhanced students' taxonomic and observational skills and their understanding of the role of herbaria in botanical research, education, and biodiversity conservation, while encouraging scientific documentation and awareness of medicinal plant diversity.

Workshop on “HANDS ON PATENT SEARCHING” - Faculty Improvement Program





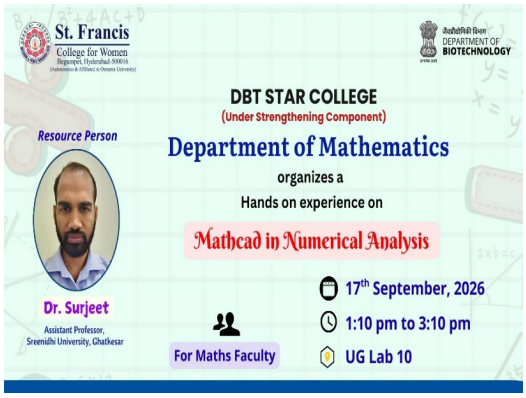
Dr. Radhika V, IPR agent introduced the fundamentals of IPR and explained the importance of patents in protecting research and innovation. She also covered the structure of patent documents and the essential steps involved in the patent filing process. The hands-on session by **Ms. Shravya** focused on patent searching using free patent databases.

Workshop on Advanced Embedded System with IoT

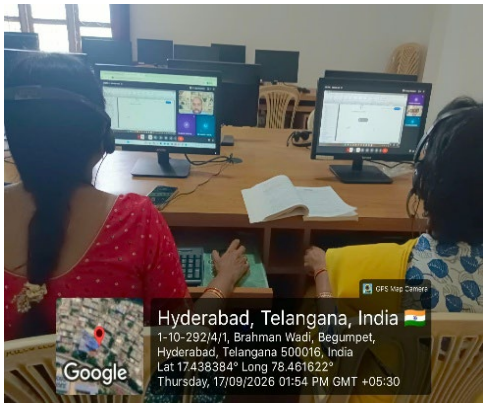


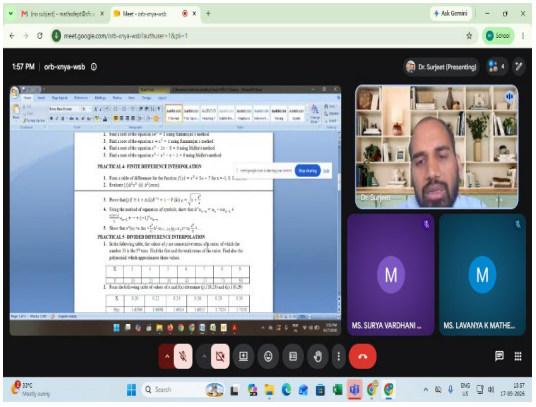
A Three-Day Workshop on “Advanced Embedded Systems with IoT” was organized from 2–4 July 2026 for B.Sc. III Year Software Engineering students at Capitanio Hall, St. Francis College for Women. The workshop provided students with hands-on experience in microcontrollers, microprocessors, sensors, controllers, actuators and 16×2 LCD interfacing. Students also gained practical knowledge of working with Arduino Uno and ESP32 microcontrollers, enhancing their understanding of embedded systems and Internet of Things (IoT) applications.

Hands-on Training on “Mathcad Software”



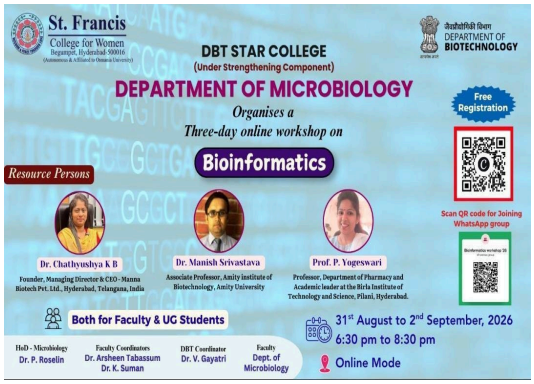






The Department of Mathematics organized a **hands-on training session on “Mathcad – Numerical Analysis”** under the DBT STAR College programme on **17 September 2026** in Lab 10 from 1:10 PM to 3:10 PM. The session was conducted by **Dr. A. Surjeet, Assistant Professor, Department of Mathematics, Sreenidhi University, Ghatkesar**. The training aimed to provide faculty with practical experience in using Mathcad for solving numerical analysis problems and enhanced their proficiency in applying computational tools to numerical methods.

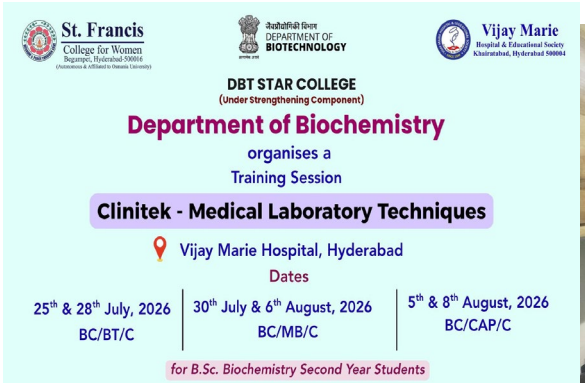
Workshop on Bioinformatics





The training programme introduced faculty and undergraduate students to fundamental bioinformatics tools, algorithms, and biological databases used in data analysis, with practical applications in drug discovery, genomics, and translational life-science research. Through expert-led virtual sessions, participants gained insights into sequence alignment, database navigation, computational methodologies, and bioinformatics workflows, helping bridge biological laboratory data with computational analysis. The programme enhanced participants' digital and analytical skills and provided a foundation for integrating bioinformatics into academic curricula and research projects

Clinitek - Medical Lab Training



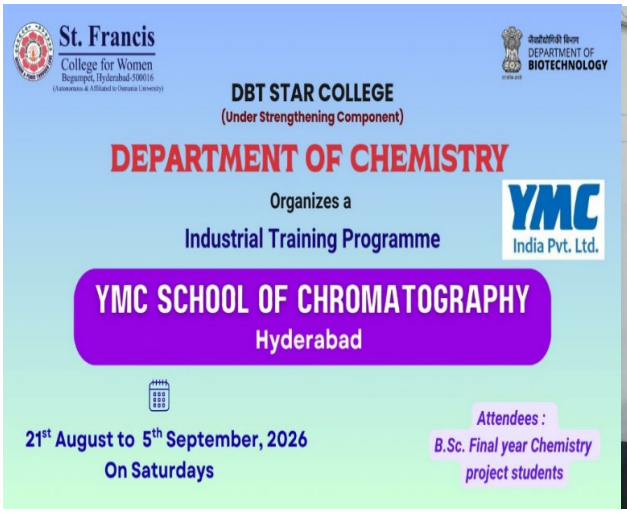






The Department of Biochemistry organized a medical laboratory training session for 71 second-year Biochemistry students at the NABL-accredited Department of Laboratory Medicine, Vijay Marie Hospital, Saifabad. The visit provided practical exposure to Microbiology, Biochemistry, Histopathology, Haematology, and Clinical Pathology, including ELISA, immunochromatography, bacteriology, VITEK-based bacterial identification and antibiotic sensitivity testing, VIDAS, electrolyte and arterial blood gas analysis, Mindray automated analyzers, tissue processing, blood and urine analysis, complete blood picture, and gel card blood grouping. The training familiarized students with modern diagnostic technologies and enhanced their understanding of clinical laboratory procedures, helping them relate theoretical concepts to their practical applications in disease diagnosis, patient care and healthcare.

Industrial Training Program at YMC School of Chromatography





A total of 19 final-year B.Sc. Chemistry students undertaking projects visited YMC for industrial training to gain practical exposure to analytical techniques including HPLC, Preparative HPLC, LC-MS, and weighing balance calibration. The programme provided hands-on understanding of chromatographic instruments, stationery and mobile phases, sample preparation, separation principles, and chromatogram interpretation, thereby enhancing students' practical knowledge and familiarity with analytical techniques used in chemical research and industry.

Workshop on "Telescopes: Windows to the Universe"







The Department of Physics organized a guest lecture and hands-on workshop on "Telescopes:

Windows to the Universe" under the DBT STAR College Scheme (Strengthening Component) for second- and third-year Physics students. Around 94 students and 3 faculty members participated, with Dr. Priya Hasan, Assistant Professor, Maulana Azad National Urdu University (MANUU), Hyderabad, as the resource person. The programme included a lecture on the principles and applications of telescopes, followed by hands-on telescope assembly in the Physics Laboratory and an introduction to the Stellarium application for sky observation. The programme enhanced students' understanding of optics and observational astronomy, developed practical skills in telescope construction, and familiarized them with digital tools for identifying stars, constellations, and planets.

Workshop on Dronetech: From Concept to Flight





Department of Computer Science organized a Three-Day Workshop on Dronetech: From Concept to Flight for B.Sc. Second Year Computer Science students on 2nd - 4th July 2026in MBA Seminar Hall, attended by 40 students. The students equipped with the quadcopter structure and basic aerodynamics, skills in circuit integration.

Workshop on "Solar-Based Water Level Indicator"







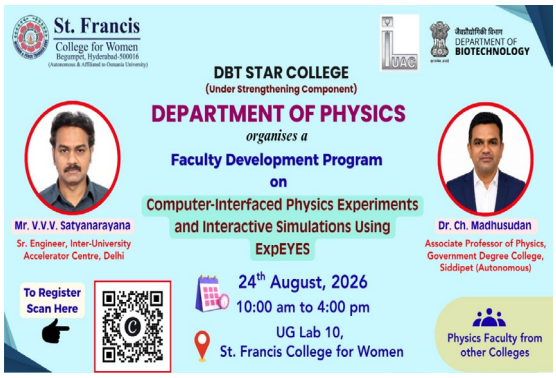




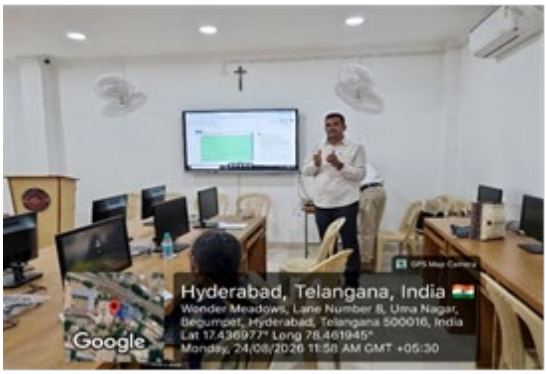
The Department of Physics organized a hands-on training session on "Solar-Based Water Level Indicator" under the DBT STAR College Scheme (Strengthening Component) for around 70 B.Sc. II B students and 3 faculty members in the Physics Laboratory. The session was conducted by Mr. Hamed Raza, Senior Engineer, Lumica Electronic Devices & Services, and provided practical exposure to solar energy conversion, circuit design, electronic components, battery charging, and automation. Students gained hands-on experience in assembling and testing a solar-based water level indicator, developed skills in handling electronic components and polarity connections, and understood the application of renewable energy and automation in addressing real-world problems. The training also encouraged students to explore further projects in renewable energy and electronics.

Faculty Training Programme

Computer-Interfaced Physics Experiments and Interactive Simulations Using Exp EYES







The Department of Physics, St. Francis College for Women, Begumpet, Hyderabad, organized a one-day Faculty Development Programme on "Computer-Interfaced Physics Experiments and Interactive Simulations Using ExpEYES" on 24 August 2026 under the DBT STAR College Scheme (Strengthening Component). The programme was attended by 34 Physics faculty members from various colleges and institutes and conducted by

Mr. V. V. V. Satyanarayana, Senior Engineer, Inter-University Accelerator Centre, New Delhi, and Dr. Ch. Madhusudan, Associate Professor of Physics, Government Degree College, Siddipet (Autonomous). The FDP provided hands-on exposure to computer-interfaced experiments, sensors, real-time data acquisition, interactive simulations, and graphical analysis using ExpEYES, with demonstrations of concepts such as piezoelectric response and Faraday's law of electromagnetic induction. The programme enhanced faculty members' practical skills and equipped them with technology-enabled approaches for engaging, inquiry-driven, and laboratory-based Physics teaching.

- **FDP on Modern AI Toolkit: From GenAI to Autonomous Agents**



Department of Computer Science organized a Two-Day Faculty Development Programme on "**Modern AI Toolkit : From GenAI to Autonomous Agents**" on 15th – 16th September 2026 in Lab 1,Department of Computer Science, St. Francis college for women.

Training program on Preparation of Media, Sterilization Techniques and Log Book Maintenance





The Department of Microbiology, St. Francis College for Women, Hyderabad, under the DBT STAR College Scheme – Strengthening Component, organized a training programme on "Preparation of Media, Sterilization Techniques and Logbook Maintenance" on 2 September 2026 for laboratory assistants of the Life Sciences departments. The programme provided hands-on training in accurate media preparation, pH adjustment, dispensing, labeling and storage, along with autoclaving, sterilization monitoring, aseptic practices and laboratory safety. The participants also gained awareness of systematic logbook maintenance and documentation, emphasizing their importance for quality assurance, traceability and efficient laboratory management.

ONE-DAY WORKSHOP on "Insect Preservation for Museum Collections: Methods and Techniques"



The Department of Zoology, St. Francis College for Women, organized a **one-day hands-on workshop on "Insect Preservation for Museum Collections: Methods and Techniques"** on 16 September 2026 under the DBT STAR College Strengthening Component. The workshop provided 60 B.Sc. I-year students and 3 faculty members with practical exposure to insect collection, preservation, pinning, spreading, mounting and specimen labelling, while highlighting the importance of insect collections in taxonomy, biodiversity documentation, teaching and research.

FDP Training in "Modern AI Toolkit: From GenAI to Autonomous Agents





A Two-Day Faculty Development Programme on "Modern AI Toolkit: From GenAI to Autonomous Agents" on 15th – 16th September 2026 in Lab 1, attended by 15 staff members.

Patents - 2

(10) Publication No: **IN202641096009 A1**
(22) Date of Filing: 08-08-2026
(43) Publication Date: 14-08-2026
Journal No: 33/2026

(19) Intellectual Property Office, India

(12) INDIAN PATENT APPLICATION

(54) Title: **Computer-implemented method for identifying epidermal growth factor receptor inhibitors using computational screening**

(51) International Classification:
G16C 20/50, G16B 15/30, G16C 20/30, G16C 20/70 G16C 20/64
(21) Application No: **202641096009**
(31) Priority Document No: --
(32) Priority Date: --
(86) International Application No: --
Filing Date: --
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(61) Patent of Addition to Application No: --
Filing Date: --
(62) Divisional to Application No: --
Filing Date: --

(71) Name of Applicant(s):
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5. Revanth Bathula

(57) Abstract:

The present invention relates to a computer-implemented method for identifying candidate Epidermal Growth Factor Receptor (EGFR) inhibitors using an integrated computational workflow. The method comprises preparation of the EGFR protein structure and ligand library, hierarchical virtual screening using High Throughput Virtual Screening (HTVS), Standard Precision (SP), and Extra Precision (XP) molecular docking, followed by binding free-energy estimation using Prime MM-GBSA. Selected compounds are further evaluated through pharmacokinetic prediction, Density Functional Theory calculations to determine electronic properties and chemical reactivity, and Normal Mode Analysis-based molecular simulation to assess structural stability of protein-ligand complexes. The integrated workflow prioritizes compounds exhibiting favorable docking scores, binding energies, drug-like properties, electronic characteristics, and stable molecular interactions with EGFR. The identified candidate compounds are suitable for subsequent experimental validation and may facilitate efficient discovery of novel EGFR inhibitor lead molecules for pharmaceutical research and anticancer drug development.

(10) Publication No: **IN202641099074 A1**
(22) Date of Filing: 17-08-2026
(43) Publication Date: 28-08-2026
Journal No: 35/2026

(19) Intellectual Property Office, India

(12) INDIAN PATENT APPLICATION

(54) Title: **Computational strategy for pfkfb3 inhibitor identification**

(51) International Classification:
G06Q 40/10, G09B 7/07, G09B 5/08, H10W 29/00 G06F 21/41
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2. Egala Bhargavi
3. Sanskriti Kumari
4. Shikha Chander
5. Saritha Aduri

(57) Abstract:

The present invention provides an integrated computational strategy for identification and prioritization of candidate inhibitors of 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 3 (PFKFB3). The strategy employs a three-dimensional PFKFB3 structure, protein and ligand preparation, receptor-grid generation, hierarchical virtual screening, molecular docking, Prime MM-GBSA binding-energy estimation, protein-ligand interaction analysis, ADME profiling, density functional theory (DFT) and normal-mode analysis. In an exemplary implementation, approximately 12,349 compounds are screened against human PFKFB3 structure PDB ID 6HVI using sequential HTVS, SP and XP docking. Selected candidates are further ranked using predicted binding free energies, interaction profiles, physicochemical and pharmacokinetic properties, electronic descriptors and structural-dynamics characteristics. The integrated workflow identifies a smaller set of prioritized PFKFB3 inhibitor candidates, including M1–M6, for subsequent biochemical and cellular experimental validation as potential anticancer drug candidates.

Publications

Evaluation of phytochemical composition and antimicrobial activity of selected medicinal plantsShria Puppala, Khadija Suhail, R Venkata Sai Aakanksha, Basanti Chintapalli, Revathi Saravanan and Kondamudi Suman; DOI: https://www.doi.org/10.22271/plants.2026.v14.i4b.2183J. Med. Plants. Stud., 2026; 14(4): Part B, 137-143



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Evaluation of phytochemical composition and antimicrobial activity of selected medicinal plants

Shria Puppala, Khadija Suhail, R Venkata Sai Aakanksha, Basanti Chintapalli, Revathi Saravanan and Kondamudi Suman

DOI: https://www.doi.org/10.22271/plants.2026.v14.i4b.2183

Abstract

For centuries, humans have used various components of medicinal plants to treat diseases and heal ailments. Medicinally useful plants contain a variety of phytochemicals. The aim of the study is to investigate the presence of phytochemicals in the extracts of *Annona reticulata*, *Cassia auriculata* and *Cleome viscosa* by following standard protocols. These extracts are further subjected to antimicrobial screening against indicator organisms *E. coli* MTCC452, *B. subtilis* MTCC 1133, *P. aeruginosa* MTCC10307, *S. aureus* MTCC 3160. The analysis revealed the presence of potential phytochemicals across the selected plants, with *Cleome viscosa* showing the broadest profile. The ethanolic extracts showed significant antimicrobial activity, with the seed pods of *Cleome viscosa* showing the greatest ZOI against *S. aureus* and *P. aeruginosa*. The hexane extracts of *Annona reticulata* seeds also showed a high ZOI against the bacteria *E. coli*. This study thus provides a base for targeted compound isolation to perform more precise investigations further.

Keywords: *Annona reticulata, Cassia auriculata, Cleome viscosa*, phytochemical, antibacterial, qualitative tests

1. Introduction

India is an extremely biodiverse country with over 45,000 plant species. With such a wide array of plants available, many are known to have medicinal properties, roughly 8,000 species. The use of plants for their therapeutic properties is not a novel concept; traditional healers have been using plants with natural healing capabilities to produce medicine and treatment plans since ancient times [1]. Ethnomedicine is the wisdom and knowledge of local plants and their properties as traditional medicines. Traditionally, such medical knowledge is shared from generation to generation via practical practice and through word of mouth. However, over the years, scientists have begun to identify and classify these plants into organized systems with theoretical explanations as for their action [2].

Plants produce bioactive compounds called phytochemicals, made to act against pathogens, comparable to a naturally produced pesticide. Phytochemicals exhibit the property to act against microorganisms. They also can be antioxidant, antidiarrheal, anthelmintic, antiallergic, antispasmodic, and antiviral in nature. Examples include alkaloids, carbohydrates, glycosides, proteins, flavonoids, phenols, tannins, saponins, steroids, terpenoids, phytosterols, resins, fats, etc. Research has shown that phytochemicals can be extracted from various plant parts [3].

Plant based medicine is desirable as it is cost effective, easily available, renewable, and often non-narcotic with less side effects [4].

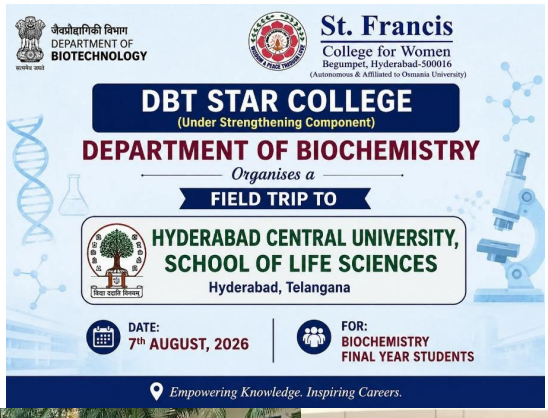
The antimicrobial analysis of plant extracts provides information regarding their biological activity against disease causing microorganisms [5]. For this study, three plant species *Annona reticulata*, *Cassia auriculata*, and *Cleome viscosa* were selected and tested against four bacterial strains: *Escherichia coli* MTCC452, *Bacillus subtilis* MTCC 1133, *Pseudomonas aeruginosa* MTCC10307, *Staphylococcus aureus* MTCC 3160.

Materials and Methods

Collection and Processing of Plant Samples

The plant material used in the study was collected from Hyderabad, Telangana. The details are listed in Table 1. The plant parts were separated, cleaned and dried in a well-ventilated area.

Field Trip to Hyderabad Central University









A field trip to the School of Life Sciences, University of Hyderabad, was organized for final-year Biochemistry students on 7 August 2026. The visit included an orientation on departmental research and facilities, followed by exposure to Genomics, Proteomics, Cell Culture, and Centrifugation facilities, where students observed techniques such as qPCR, PCR, mass spectrometry, cell culture, and centrifugation. Students also visited research laboratories working in areas such as cancer biology, lipid metabolism, mitochondrial biology, parasitology, nanotechnology, neuron metabolism, and lysosome biology. The visit enhanced their understanding of advanced biochemical and molecular techniques, contemporary research areas, and career opportunities in life sciences, motivating them towards higher studies and research.

Field Trip to ICRISAT



The Department of Statistics organized a field trip to ICRISAT, Patancheru, Hyderabad, under the DBT STAR College Scheme (Strengthening Component) for 70 B.Sc. III D and III MES students, accompanied by 2 faculty

members. The visit provided students with practical exposure to the application of statistical techniques in crop research, along with insights into advanced technologies and research practices. Students gained a better understanding of the real-life application of statistical concepts and were introduced to internship and career opportunities in agricultural and research institutions, enhancing their awareness of the scope of Statistics in interdisciplinary research.

Field Visit to EPTRI





Department of Biotechnology organized a field trip to the Environment Protection Training and Research Institute (EPTRI), Gachibowli, Hyderabad, on 25th August 2026 for 48 biotechnology students and 1faculty member.

Field Trip to the IIT Hyderabad





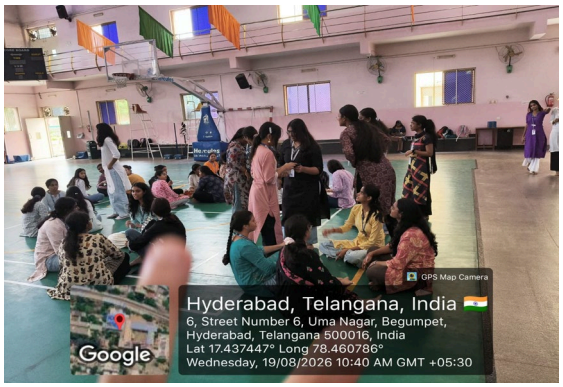


The Department of Mathematics organized a field trip to IIT Hyderabad under the DBT STAR College Strengthening Component on 29 October 2026 for around 50 B.Sc. II and final-year MES (Physical Sciences) students. The visit provided exposure to advanced research facilities and laboratories in Mathematics, Physics and Chemistry, while familiarizing students with higher

education, research and career opportunities. It motivated students to explore M.Sc., Ph.D. and research-oriented career pathways and supported informed future academic and career planning.

Pi Day 2026

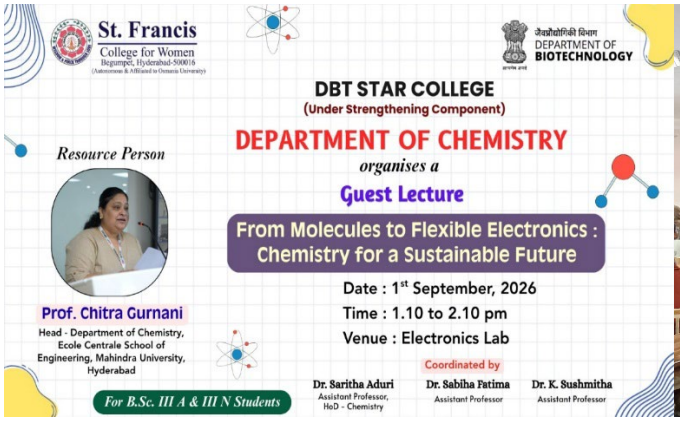






The Department of Mathematics organized Pi Day 2026 under the DBT STAR College Scheme for B.Sc. Physical Sciences students on 19 August 2026 at the Indoor Stadium, with Lt. Col. Sangeeta Kumari as the Chief Guest. The event highlighted the history, significance and properties of π through engaging mathematical activities, fostering students' logical thinking, numerical reasoning and problem-solving skills. It also encouraged teamwork, effective communication and appreciation of Mathematics as a creative and practical subject beyond the classroom.

Guest Lecture on "From molecules to Flexible Electronics Chemistry for a Sustainable Future"





The resource person was **Prof. Chitra Gurnani Head. Department of Chemistry, Ecole Centrale School of Engineering Mahindra University, Hyderabad.** The event was organized for 75 students from BSc III A and

N sections in Electronics lab. The lecture emphasized on the importance of **green chemistry, sustainable materials, and reducing electronic waste** in the development of next-generation electronics. Overall, chemistry provides a strong foundation for designing **safer, smarter, and more sustainable flexible electronic technologies.**

Guest lecture on From Curious Minds to Breakthroughs: The Pursuit of Scientific Research







The Department of Microbiology organized a guest lecture on From Curious Minds to Breakthroughs: The Pursuit of Scientific Research. The session aimed to introduce students to the journey of scientific research in microbiology, connect classroom concepts with real-world applications, inspire research as a career, and provide an opportunity to interact with an early-career researcher. B.Sc. I, II and III-year students gained exposure to research methodologies and techniques in ocular microbiology, with insights into endophthalmitis, its causes, diagnosis, treatment, and ongoing research at the Jhaveri Microbiology Centre, Prof. Brien Holden Eye Research Centre, LV Prasad Eye Institute. The session also encouraged students to think critically about the rationale behind research techniques and approaches.

“NATIONAL STATISTICS DAY”



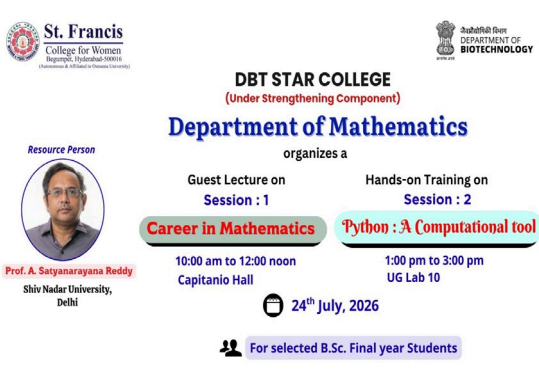


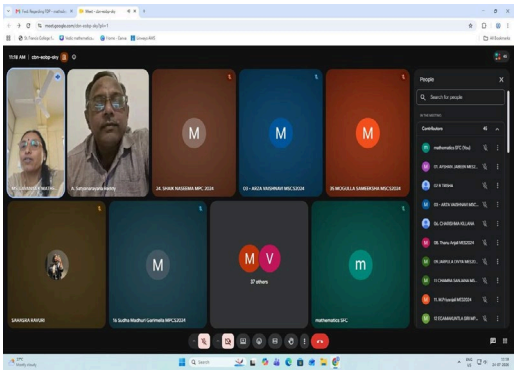


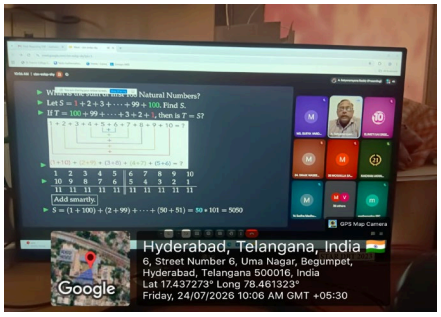


The Department of Statistics organized **National Statistics Day** on 3 July 2026 to commemorate the birth anniversary of Prof. Prasanta Chandra Mahalanobis, for around 350 B.Sc. (D, H & MES) students. Inaugurated by Principal Prof. Uma Joseph, the event highlighted the importance of statistics, administrative data and data analytics in evidence-based decision-making and governance. Students were encouraged to develop analytical and problem-solving skills, apply statistical concepts to real-world and societal challenges, and strengthen teamwork, communication and leadership skills through participation in the programme.

Guest lecture on Career in Mathematics







The Department of Mathematics organized a guest lecture on "Career in Mathematics" under the DBT STAR College Scheme on 24 July 2026 in hybrid mode for selected B.Sc. final-year students. The session, led by Prof. A. Satyanarayana Reddy, Sreenidhi University, Delhi, focused on diverse career opportunities, higher education and research prospects, competitive examinations, internships and industry-oriented skills. Students gained awareness of career pathways and the interdisciplinary applications of Mathematics, including its relevance to emerging technologies and industries.

Outreach Program on "Exploring Zoology: A Hands-on Workshop in Experimental Techniques for Intermediate Students"

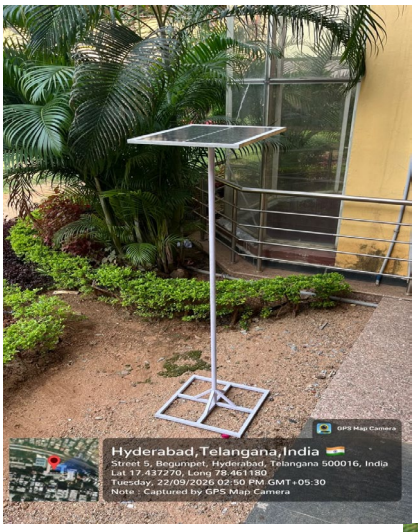






The Department of Zoology organized an **outreach programme titled "Exploring Zoology: A Hands-on Workshop in Experimental Techniques for Intermediate Students"** on 21 September 2026 in the Zoology Laboratory, with around 30 students participating. The programme, facilitated by Dr. A. Padmini, provided hands-on exposure to basic Zoological experimental techniques, laboratory safety, equipment handling, observation and interpretation of results, while highlighting the relevance and career prospects of Zoology. The department also organized an **industrial visit to the Centre for DNA Fingerprinting and Diagnostics (CDFD), Uppal**, for 52 B.Sc. III A & III N students, where Dr. Varsha Srivastava, Senior Scientist and Head of the Science Communication Division, introduced students to the institute's activities and advanced DNA-based research methodologies and laboratory practices.

Solar-Powered Mobile Charging Facility – A Sustainable Campus Initiative





The Department of Physics, under the DBT STAR College Scheme, installed a **30-Watt solar-powered USB mobile charger** in the college quadrangle with DBT scheme support, promoting the practical application of renewable energy and sustainable technology on campus.

8. Self-evaluation

Department	*Objective (as stated in proposal)	% achieved	Reasons for underachievement / If achieved, state in quantitative metrics
Biochemistry Nutrition	1. Project work (ongoing) 2. Visit to reputed laboratories (Completed) 3. Guest lectures (Completed) 4. Workshops-Students (Completed) 5. Training Program for students (Completed) 6. Students & Staff attending Conferences (completed) 7. New experiment based on new instrument purchased. (Completed) . 8. Students Presenting Papers (Completed) 9. Staff attending workshop (Completed)	92%	**Quantitative metrics – 11/12**
Botany& Biotechnology	1. Students research projects (ongoing) 2.Gel electrophoresis experiment (completed) 3.Micropropagation of explants (proposed) 4. Field visits (completed) 5.Guest lectures (completed) 6.Workshops/Training programs (completed) 7.Western blotting technique(completed)	92 %	1. Students' projects will be completed by February 2027 2.Micropropagation activity could not be conducted due to time constraints. Will be planned in the next academic year 3.Training in basic instrumentation and Computer skills for non-Teaching staff from other colleges& Karyotyping and Cytogenetic analysis could not be completed due to limited time for implementation. **Quantitative metrics – 11/12**
Chemistry	1.Students' research projects (completed) 2. Industrial Training (completed) 3. Visit to Pharma industries and labs (completed) 4. Faculty Improvement Program (completed) 5.International Conference/Seminar- planned for next semester 3.Guest lectures-completed 4.Workshops-Completed 5. Hands-on guided laboratory experience on school curriculum. Completed 6. Outreach activities for schoolteachers and college teachers -completed	92%	Couldn't do Seminars/Workshops in collaboration with Research Institutes. Will be completed in next semester. **Quantitative metrics-11/12**
Computer Science	1. Workshops(Completed) 2. Skill Enhancement Courses Course on IoT was initiated)	92%	. **Quantitative metrics–11 /12**
Mathematics and Statistics	1. Workshops organized 2. Training sessions conducted 3. Guest lecturers organized 4. Field trips 5. Purchased Mathcad software	100	**Quantitative metrics–12/12**
Microbiology	1. Student projects (ongoing) 2. Students Hands-on Training - Completed 3. Faculty training - Completed 4. Workshop - Completed 5. Lab staff Training Completed	92%	**Quantitative metrics–11 /12**

Department	*Objective (as stated in proposal)	% achieved	Reasons for underachievement / If achieved, state in quantitative metrics
Physics	1. Visit to reputed laboratories (Completed) 2. Guest lecture (Completed) 3. Workshops-Students& faculty (Completed) 4. New experiment based on new instruments purchase (Completed) 5. Training program attended by Faculty(completed) 6. Paper Presentation by student (completed) 7. Student Projects (on going)	92%	**Quantitative metrics–11 /12**
Zoology	1. Hands on workshop (Completed) 2. Guest Lectures (Completed) 3. Field visit (Completed) 4. Seminars / conferences (Completed) 5. Outreach activity 6. Books Purchased (Completed)	100%	**Quantitative metrics–12/12**

* For quantitative analysis you may fix five objectives (max) each having 2 marks and accordingly can calculate the matrix.

Not opened		Under process		Opened but not mapped on PFMS		Account is functional	✔

ZBSA Status: (Mark Check Box):

Remarks if, any: _____

9. Sanctioned Budget details: (Rs. 2700000 in Lakhs)

Head	Total Released Budget from DBT	Total Expenditure	Balance as on 19/09/2026	Remarks if any
Grants-in-aid General (Recurring)	**2700000/-**	**2543411/-**	**156589/-**	The balance amount is due to the closure of the Department of Electronics for the current academic year, as communicated earlier. Consequently, the grant allocated to the Department of Electronics remains unutilized.

Department of Microbiology
St. Francis College for Women
Begumpet, Hyderabad-16

Course Coordinator

(With Seal)

Principal
St. Francis' College for Women
BEGUMPET

Head of the Institution

(With Seal)