



KONGUNADU ARTS AND SCIENCE COLLEGE



AUTONOMOUS

College of Excellence (UGC)

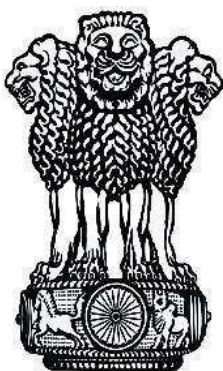
Re-accredited by NAAC with 'A' Grade

4th Cycle

52nd Rank among Colleges in NIRF 2024

DBT STAR COLLEGE SCHEME PROGRESS REPORT 2024-2025

Submitted to



सत्यमेव जयते

**Department of Biotechnology
Ministry of Science and Technology
Government of India, New Delhi**

By

**DEPARTMENT OF PHYSICS
DEPARTMENT OF CHEMISTRY
DEPARTMENT OF COMPUTER SCIENCE
DEPARTMENT OF MATHEMATICS**

A BRIEF PROFILE

Kongunadu Arts and Science College started with pre-university course in the year 1973-1974, has grown tremendously in academic stature and is now offering 24 UG, 14 PG, 27 Certificate, 7 Diploma and 6 PG Diploma programmes. The college has also blossomed into a full-fledged Research institute offering Ph.D. programmes in 14 disciplines.

At present around **4042** students are studying in our college. Our college has the distinction of having over 157 PhDs among the total number of 210 teaching faculty.

The college has been **Re-accredited with “A+” Grade** by the National Assessment and Accreditation Council (NAAC) in the 4th Cycle. Recognizing the quality of Teaching imparted in the college, the University Grants Commission (UGC) awarded the status of **“College with Potential for Excellence”** (CPE) in the year 2011. Satisfied with the successful implementation of the proposals under the CPE scheme, the UGC has awarded the status of **“College of Excellence”** to our college. Autonomy was granted to the college in the year 2004 and it has been extended by the UGC up to 2031-2032. In the year 2019, the College has been approved with a financial allocation of Rs.30,00,000 (Rupees Thirty Lakhs) as Mentor Institution by UGC under the scheme of **“PARAMARSH”** for mentoring NAAC Accreditation Aspirant Institutions to promote Quality Assurance in Higher Education. The Department of Science and Technology (DST), Ministry of Science and Technology, Govt. of India has sanctioned financial assistance to a tune of Rs.1.5 Crores to this college under FIST programme. The Department of Biotechnology (DBT), Govt. of India has sanctioned financial assistant under DBT Star College Scheme to a tune of Rs.82 Lakhs. The college has positioned at **52nd rank in NIRF Ranking 2024**. The college is a Partner Institute with the Amrita DST Technology Enabling Centre (TEC). The institution is also recognized as a Nodal center for Virtual Labs by the Amrita Vlabs for the Department of Biotechnology and School of Computer Science.

During the Academic year 2024 - 2025 the College has produced 34 Ph.D. degree holders. Currently 277 Ph.D. scholars are pursuing their degree under the recognized guides of the college. So far 1,111 Research articles were published in Scopus indexed journals. The Institutional h-index in Scopus data base is 68. At present, 9 research projects are currently ongoing with a total funding of Rs. 87,38,000 (Eighty Seven Lakhs and Thirty Eight thousand).

So far, 38 patents were published and 17 patents were granted. Research and Development cell of the college monitors the ongoing research activities by conducting periodic mentoring meetings. The cell brings out a bi-annual journal in the name of **“Kongunadu Research Journal”** in which standard research articles are being published.

The following bodies functioning in the college are actively engaged in promoting research and extension activities.

- Institution Innovation Council (IIC)
- KASC I-Hub
- KASC Tech hub
- Eco Club
- Bird club
- NCC
- NSS
- YRC
- RRC
- Women Empowerment Cell

The Ministry of Education has established **950+ Institution's Innovation Councils (IICs) in HEIs** on 21st November 2018. **Our college is one among them.** Among the colleges selected, Kongunadu Arts and Science College is the one and only Arts and Science College sharing the platform with renowned research institutions like IITs. Institution Innovation Council (IIC) received 3.5-star status in IIC 5.0 for the academic year 2023-2024.

Aligning to the Sustainable Development Goals which insist on Inclusivity at 360 °, Kongunadu Arts and Science College, Coimbatore is an example for establishing an inclusive atmosphere irrespective of Gender identities. The college has appointed members from the Trans Gender Community as Teaching, Non-Teaching faculty, Research Scholar, and students, as on date 8 persons got benefitted and the management is providing free education for students and research scholars. The Secretary and Director Dr C A Vasuki was also invited as an Advisory member for the National Council for Transgender Persons.

The college also has a very dynamic Center for Tribal Welfare and Studies. A total of 9 students from the Particularly Vulnerable Tribal Group (PVTG) of Nilgiri District are provided free education to pursue their undergraduate degree. A total of Rs 1,75,000/- has been earmarked for the Academic year 2025-2026 to accomplish several developmental, educational, awareness programme in the tribal hamlets in the Nilgiris District. The college has donated 20 computers to tribal villages since 2023 and in the year 2025 Honey extractors, painting canvas for Kurumba painters were donated for improving their livelihood.

The ICT Academy offered various Faculty Development Programmes and a 100 Hours Skill Development Programme. ICT Academy has recognized the institution as the best institution for Learnathon Programme. In the ICT Bridge 2023, Dr. C. A. Vasuki, Secretary and Director was awarded with the “Best Edupreneur Award 2023” and received the award from Shri PTR Palanivelrajan, Minister of IT, Tamil Nadu. The college has been offered with Center of Excellence by Ui Path and

Aspire. The College received ICT Academy's Most Engaged Institution of the Year 2024 in the Arts and Science category.

Dr. L. Kathirvelkumaran, Assistant Professor and Head, Department of CSDA, and ICT Academy Coordinator, honored with the BEST Coordinator 2024 Award for outstanding performance by ICT and recognized as Distinguished Mentor in the Mongo DB Academic Summit 2024.

In the Smart India Hackathon 2022, a team of 8 students from KASC participated in the National Level Hackathon and won 1st place with a cash award of 1 Lakh rupees. The Consultancy services available in the College have been publicized through the college website highlighting the areas of “core-competence” so that user industries and institutions can make use of the expertise. The faculty members of the college have generated considerable amount through the consultancy services of their expertise.

The college has 60 functional MoUs with renowned National and International Institutions / Universities thereby enabling exchange of knowledge, sharing of expertise in niche areas and collaborates on latest research topic which will enhance joint publications.

Mrs. Sasirekha Velusamy, Research Scholar, Department of Energy, University of Exeter, UK and Dr. Senthilarasu Sundaram, Professor of Sustainable Energy Materials, Teesside University, UK and Dr. David Ian Benson, Senior Lecturer in the Department of Politics, University of Exeter, UK visited our college as visiting Professor's under SPARC Scheme during August 2023.

Dr. K. Muthukumar, Assistant Professor of Tamil (A) under SPARC scheme visited University of Exeter, Cambridge University, Westminster University, Newcastle University in United Kingdom, Napier University, Aryavart University, Glasgow University in Scotland between 1st June 2024 and 15th June 2024 as a part of Student/Staff Exchange Programme under the SPARC, MHRD Project.

Our college received the Tribal Education Excellence Award from the Government of Tamil Nadu for the welfare activities initiated by the College for the Tribal people residing at Niligris.

Dr. C. A. Vasuki, Secretary and Director of our college was conferred with the most coveted ‘Women Top 50 Global Award’ under the main category of transformative leadership for her exemplary contribution in leadership, education and research. The award was presented to her at 14th Professional and Career Women Global Award Ceremony 2024 held at Kulalumbur, Malaysia on 7th November 2024.

Dr. C. Ravichandran, Assistant Professor of Mathematics, Dr. K. Sowndhararajan, Assistant Professor of Botany, Dr. V.D. Nithya, Assistant Professor of Physics have been recognized by Stanford University's list of the World's Top 2% of the Most-Cited Scientists in Single Year Citation impact 2024.

The Library and Information centre in the college has a collection of 89,000 volumes of Books, 150 Periodicals, 10,00,000 e-books (N-List / INFLIBNET), more than 6500 e-journals (N-List

/ INFLIBNET), 20 computers, 2 Laptops and one Digital Media Centre. Our College subscribed Drillbit Anti-Plagiarism software for plagiarism checking. The Library is fully computerized, bar coded and functioning from 8.00 a.m. to 8.00 p.m. without any break including Saturdays and vacation. Digital Library Online public access catalogue, E-Gate register are the special features, Lecture capturing System, Video Conference facilities are the latest updation in the Library. KASC NDLI club is functioning effectively with more than 9200 members in this club. Around 70 activities were organized and received the recognition award from NDLI, Kharagpur, Kolkata.

The College has a dedicated Placement Cell which continuously monitors the recruitment needs of Companies and networks with them for arranging campus placements. During 2024-2025, 1072 students were placed in various companies.

This College pays equal attention for harmonious growth of both the body and mind of the students. The College believes in following the dictum 'A Sound Mind in a Sound Body'. The Department of Physical Education, ever since its inception in 1975, has been making all our efforts to train the students in Indoor and Outdoor games. The college has spacious grounds for playing outdoor games like Athletics Track, Volleyball, Kabaddi, Badminton and Basket Ball etc. The students are given intensive training every day in playing many sports and games, with the training provided by professional coaches. There is also a modern, state-of-the-art gymnasium for the benefit of both men and women students of the College, in order to keep their body and physique in a very good shape. The Department of Physical Education has been organizing a number of Sports Events for the benefit of teaching and non-teaching staff of this College. The numbers of Students have won prize in many sports meets, conducted both inside and outside Tamil Nadu, in events like Chess, Badminton, and Volley Ball, Power Lifting, Shooting, Teakwondo, Cycling, Best Physique, Cricket, Table Tennis and Athletic competitions.

Our college students have actively participated in sports events and won 10 Gold medals, 4 Silver medals and 5 Bronze medals. The college has got both Boys and Girls NCC wings and our Cadets have participated in the National Independence and Republic Day parades.

The college has also got a strong NSS team with about 500 volunteers and the college has adopted few villages around Coimbatore. In four villages, 51 group houses have been constructed **under Indira Awas Yojana (IAY) scheme** for the welfare of the under privileged people. The college has also provided individual toilet facilities to the houses in the adopted village. The NSS and YRC volunteers are actively involving in various Eye checkup camp, Health camp, Tree plantation camp, Blood donation camp and many awareness programmes which includes the inculcation of the various beneficiary schemes of Central Government (**Unnat Bharat Abiyan, Swatch Bharat etc.,**) to the public.

The institution was chosen by the Sathish Dhawan Space Center SHAR, Sriharikota to organise the World Space Week Celebrations in October 2023 which had a grand exhibition of the various achievements of ISRO. The institution also hosted the Youth Y20 Summit as a part of G20 in the month of September 2023. The Inaugural Lecture of "The Voice of Coimbatore Academicians" on Indian Heritage in Modern Education integrating Culture and Technology" was held at our College on 18.10.2024. Three Days International Workshop on "CRISPR/Cas9 Technology - An Evolution of 21st Century Health and Environmental Sustainability" held between 09.09.2024 and 11.09.2024.

LABORATORIES

1. Common Instrumentation Centre
2. Language Lab
3. Math Lab
4. Physics Lab (UG, PG & Research)
5. Chemistry Lab (UG, PG & Research)
6. Botany Lab (UG, PG & Research)
7. Zoology Lab (UG, PG & Research)
8. Biochemistry (UG, PG & Research)
9. Biotechnology (UG, PG & Research)
10. Computer Labs – 8 with 522 Systems
11. Costume Design & Fashion Lab
12. Psychology Lab

ACKNOWLEDGEMENT

We would like to express our profound gratitude to the **Department of Biotechnology (DBT), Ministry of Science & Technology, Government of India**, for their invaluable support under the **DBT Star College Scheme**. The financial and academic assistance provided through this initiative has played a transformative role in shaping the educational landscape of our college. The infrastructure of our participating departments has seen significant upgradation through the DBT star College scheme, promoting a more conducive environment for scientific learning and innovation. This initiative has directly impacted around **500 undergraduate students** and **50 Faculty members**, enriching their academic journey and enabling them to explore science beyond the traditional curriculum. We submit our sincere thanks and gratitude to the DBT for giving an **extension for a period of six months** for further development of our institution through this DBT Star College Scheme.

The scheme has served as a powerful catalyst for nurturing scientific curiosity and stimulating a research-oriented mindset among students. Through participation in various scientific events and hands-on projects, students have gained exposure to real-world challenges and application-based learning. This experience has motivated many to pursue higher education and careers in diverse scientific disciplines, strengthening the pipeline of future researchers and educators.

We are deeply thankful to **Dr. Garima Gupta**, Scientist 'F' and Programme Head, DBT, for her expert guidance, continuous encouragement, and unwavering support throughout the implementation of the scheme. Her vision and leadership have been truly instrumental.

We also acknowledge with gratitude the supervision provided by **Dr. R. Rajendran**, Mentor of the DBT Star College Scheme. His insightful advice and consistent support have greatly contributed to the success of our efforts.

The DBT Star College Scheme has not only empowered our students and faculty but also instilled a sense of purpose and responsibility towards scientific advancement and societal development. We look forward to continuing this journey of growth, innovation, and excellence with the sustained support of DBT.

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DEPARTMENT OF BIOTECHNOLOGY

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

1. **Name of the College** : Kongunadu Arts and Science College
2. **Name of the Coordinator, Designation** : Dr. D. Vijayalakshmi,
Address, Phone Number : M. Sc., M. Phil., Ph. D., PGDCA
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3. **Assessment duration** : 01.04.2024 to 31.03.2025 Duration in Years : One year

4. **Details of Departments Supported, Courses Offered and Faculty Members**

Department	Courses Offered					Regular faculty Members	
	UG	PG	Ph. D.	Certificate/ Diploma/ PG Diploma Courses	Job Oriented Courses	With Ph. D.	Without Ph.D.
Physics	B. Sc. Physics	M. Sc. Physics	Physics	Electronic Instrumentation, Astro Physics, Non – Conventional Energy	Electrical Appliances Maintenance and Servicing	9 +2*	1
Chemistry	B. Sc. Chemistry	-	-	Instrumental Methods of Chemical Analysis, Disaster Management	Textile Chemistry	7	-
Computer Science	B. Sc. Computer Science	-	-	-	-	1	3*
Mathematics	B. Sc. Mathemati cs	M. Sc. Mathema tics	Mathematics	Certificate Course in Vedic Mathematics, Diploma in Vedic Mathematics, PGDDA	-	11	-

* - Management Staff

5. Number & Date of Advisory Committee Meeting

Name of the Event	Date	Resource Person	Number of Beneficiaries	Outcome
Online Interactive Meeting for all Co-ordinators under DBT Star College Scheme	21.11.2024	Dr. Garima Gupta Scientist -F Programme Head, Department of Biotechnology, Ministry of Science and Technology, Government of India, New Delhi.	Participatory Departments	Interactive meeting helps us to improve the utilization of funds for the conduct of recurring activities and the importance of Advisory Committee Meeting for further progress towards the scheme.
Students Enrichment Programme - DBT Star College Scheme	22.02.2025	Dr. R. Rajendran Former Principal and Associate Professor, Department of Microbiology, PSG College of Arts and Science, Coimbatore.	Participatory Department Students`	Students gained more knowledge and awareness about the importance and benefits of DBT Star College Scheme.
Internal Advisory Committee Meeting & Mentor Review Meeting	14.03.2025	Dr. R. Rajendran Former Principal and Associate Professor, Department of Microbiology, PSG College of Arts and Science, Coimbatore. & Dr. A. K. Vidya Associate Professor and Head, Department of Biochemistry, Kongu Arts and Science College, Erode.	Participatory Department Staff Members	- To enhance the effectiveness of planning and delivery of various activities under the DBT Star College Scheme with a focused outcome. - Mentors appreciated and motivated the participatory departments to conduct more academic activities to meet societal challenges with global standards.

Name of the Department	Mentor Meeting
Physics	30.07.2024 & 21.02.2025
Chemistry	08.10.2024 & 14.02.2025
Computer Science	12.08.2024
Mathematics	24.01.2025

6. Qualitative Improvements due to DBT Support

With the **implementation of DBT Star College Scheme** and the **generous financial assistance from DBT**, significant progress was made in upgrading Laboratory Infrastructure, Teaching learning Pedagogy and support systems, Practical activities beyond the prescribed syllabus, Onsite Visits and Trainings, Interdisciplinary Projects contributed to the overall development and academic performance of the Participatory Departments and the Institution as a whole.

i) Infrastructure

- **Under the DBT Star College Scheme**, the procurement of new and additional equipment and instruments has upgraded existing teaching-learning resources. This enhancement improved the **student-to-instrument ratio** allowing students to engage in more subject specific experiments. The students were able to learn new techniques more effectively and creatively extending existing practicals which amplifies a vibe towards the subjects and **enhanced the Practical /Technical Skills in handling instruments**.
- Usage of advanced ICT enabled pedagogical tools has further enriched students' learning experience by enabling them in participatory learning to explore beyond traditional notes and gain easy digital access to educational content.
- Additionally, acquisition of the softwares under the DBT Star College Scheme and the establishment of the **well-equipped laboratories** has significantly boosted students' computational and practical capabilities through hands-on projects and practical applications which improves the success rate of higher studies and placement.

ii) Teaching learning Pedagogy and support systems

- The curriculum has been updated with recent and industry-relevant topics while Innovative approaches like **ICT-enabled and Project-based learning** empowered the students to build versatile skills and has instilled substantial qualitative improvements to the overall teaching-learning environment.
- Interdisciplinary subjects, recent advances in the domain and applied subject modules have been integrated in to the curriculum to connect theoretical knowledge with real-world applications.
- Research-based mini-projects from the second year and guest lectures by industry experts help to bridge the gap between academia and industry. These efforts are designed to elevate the overall quality of instruction by providing educators with current, industry- aligned knowledge and hands-on expertise.

- Faculty are actively encouraged to upgrade their skills through Certifications, Workshops and Training programmes in new and emerging fields.
- The Establishment of a Department library funded by Star College Scheme provided the students and faculty with immediate access to wide range of books/journals thus leading to better daily academic performances.

iii) Extending Practical activities beyond the syllabus

- With the **support of DBT Star College Scheme**, an increased number of Research Laboratories, Institutional and Industrial visits organized under the scheme have provided students with valuable exposure and fostered scientific temper which help them to explore and realize their career potential with increased enthusiasm and it has greatly enriched the hands-on learning experience and has prepared students for higher studies, research, and industry-oriented roles.
- Lab manuals and Practice sessions were conducted to **align with Industrial standards** and many students have completed online certification courses aimed at strengthening their analytical and problem-solving abilities.
- Undergraduate students were encouraged to pursue research and present papers/posters in National and International events. Students also participated in various **Science Exhibitions and Hackathons** and won cash prizes by showcasing their academic contributions on a global platform. For instance,
 - i) II Year students from the Department of Chemistry participated in **TNWISE 2025 Hackathon for Women in Science and Engineering** and **won a Cash Prize of Rs.10000/-** organized by Tamil Nadu Industrial Development Corporation Limited.
 - ii) III Year student from the Department of Physics **Won First Prize in Project Competition** for College Students, Kerala ROBOCUP 2025.
 - iii) III Year student from the Department of Physics **Won the Best Poster Presentation Award** in an “International Conference on Exploring the trends and innovation in Material Science” Organised by PG and Research Department of Physics, Tirupattur.
 - iv) II Year students from the Department of Chemistry participated in the National Level Symposium at BV Raju College. Andhra Pradesh and **Won II Place in Science Exhibit-** Application of Chemistry in Forensic Science.

- v) II Year students from the Department of Mathematics participated in the National Level Symposium, Andhra Pradesh at BV Raju College and **Won II Place in Exploring MATLAB.**

iv) **Hands on Training, Lecture Series, Lecture Workshops, Seminars and Guest Lectures**

With the **generous support of the DBT STAR College Scheme**, the participatory departments has actively organized and participated in a variety of academic enrichment programs, such initiatives have significantly contributed to broadening the intellectual horizons of both students and faculty.

- Practical exposure through hands-on training sessions and workshops has effectively bridged the gap between theoretical concepts and real-world applications. For instance, the Idea Pitching Awareness Program conducted by the Department of Mathematics, the students successfully developed various Mathematical models that demonstrated their innovative thinking and problem-solving abilities **earning recognition and Prizes in various Science Exhibitions.**
- Invited distinguished academicians and industry professionals from reputed institutions have deepened students' understanding and expanded their knowledge, emphasizing the practical relevance of scientific concepts in solving real-life problems and also sessions enriched the curriculum with current knowledge and real-world applications and sparked inspiration and offering valuable guidance on higher education and preparation of competitive exams.

v) **Onsite Visits and Trainings**

- Financial assistance provided by the DBT made it possible to organize numerous Institutional / Field visits to Industries and Research Institutes like **ISRO, Satish Dawan Space Centre, CECRI, Karnataka Soap Company, Regional Science Centres, Vijnan Sagar Science and Technology Park, Fluid Control Research Institute**, helped the students to reinforce the theoretical knowledge gained in the classroom and to explore their potential towards their career, providing experiential learning opportunities, industrial exposure and practical understanding of core and applied sciences.

- **A notable visit to ISRO** by 20 students and 5 faculty members had a profound impact, sparking a sense of excitement and inspiration among the students. This exposure fuelled their aspirations, and the students actively seek out internship opportunities to gain hands-on experience and deepened explore their passion towards Space Science and Technology.

Details of Group/Interdisciplinary Projects selected from each department are listed below:

The **Financial Support provided by DBT Star College scheme** has significantly encouraged students to undertake more effective and **Innovative Research initiatives** including group/interdisciplinary projects motivating the students to work in a team. Project based learning has led to noticeable improvement in student presentation skills, report writing skills, laboratory ethics and handling of instruments nurturing creativity with focus on real time applications in different fields of Science.

The following are the some of the notable **Group/ Interdisciplinary Projects** done by the Participatory department students to meet the societal challenges.

- An Interdisciplinary Group Project was done by the Department of Physics students entitled “**Sewage segregator using Arduino**” in which the students learnt to make a device which can separate degradable and non-degradable materials, which supports for recycling the waste and helps in environmental conservation.
- An Interdisciplinary Group Project was done by the Department of Chemistry students “**Nickel oxide nanoparticle: A Co-precipitation approach for enhanced photocatalytic application**” The project achieved the synthesis of nickel oxide (NiO) nanoparticles using a cost-effective and simple co-precipitation method and the photocatalytic properties of NiO make it a promising material for environmental cleanup applications, especially in degrading organic pollutants in water.
- An Interdepartmental group project was carried out by **the Department of Physics in collaboration with the Department of Computer Science** entitled “**Arduino based Mini Satellite with Base Station**”. In this project, students designed and built a 3D- printed micro-satellite capable of capturing live images from space. These images can be viewed in real time from a ground base station on Earth.
- An Interdepartmental project, carried out by students from the **Department of Physics and the Department of Computer Science** entitled “**Smart House Monitoring**

System using IOT". The project focuses on using Internet of Things (IoT) technology to improve home security, energy efficiency, and convenience. The project aims to make daily life easier by automating routine tasks, saving energy, and ensuring a safer living space.

- A Group project was carried out by the Department of Computer Science entitled "**IoT Based Automatic Height Adjusting Bridge**". In this project, students developed a Smart Bridge System to improve flood safety using Arduino Uno, Servo Motors, and Moisture. The system can detect rising water levels and respond in real-time and the system works without manual help by improving safety and reducing the chance of accidents.
- An Interdepartmental group project was carried out by the Department of Physics in collaboration with the Department of Computer Science entitled "**Stock Market Trend Strength Analysis using Average Directional Index**". In this project, the students demonstrated the system automates ADX calculations every 30 minutes during market hours (9:15 AM - 3:30 PM IST), fetching data from Yahoo Finance API, and provides users with actionable insights into bullish and bearish trends.
- A Group project was carried out by the Department of Mathematics entitled "**Mathematical tools in Cryptography using MATLAB**". The project mainly focus on how mathematical tools are used to create and analyse cryptographic algorithms using MATLAB which are essential for securing communication and data.

7. Novel Aspects Introduced or Planning to Introduce during the Scheme Duration

Novel Aspect Introduced Under DBT Star College Scheme

- Under the DBT-Star College Scheme, event on IPR, the participatory department Students gained an understanding of Intellectual Property Rights, including patents, trademarks, and design rights. They were also introduced to the step-by-step process of patent filing and learned about the types of IPR and also students ***focusing on patenting their scientific inventions.***
- Students are motivated towards basic Science research and encouraged to present their research works in conferences in the Undergraduate level and **a total of 23 research articles** have been presented in National and International conferences by the participatory department students and the students bagged many prizes.
- More Programmes to Pitch Innovative Ideas, fostering creativity and entrepreneurial thinking among students and motivates the students to engage in various Science Day

Celebrations by exhibiting and showcasing their models (**nearly 100 models/working models**) to school and college students aimed to promote Science education at large.

- After the implementation of Star College Scheme, Training/ Awareness programmes were conducted for **Lab Technicians and Supporting Staff** by providing more scientific knowledge towards subject and its real time applications.
- Hands-on training sessions in **Science Experiments and Competitions** on scientific events were organized to school students and teachers to promote interest in experimental learning in science education at grassroot level.
- The Department of Physics adopted ICT-enabled and project-based learning, engaging students in mini-projects and group discussions to foster collaboration and also students conducted **energy audits in their homes**, learning practical ways to reduce power consumption.
- The Department of Chemistry provided micro-scale experimental and solution-making training, improving efficiency and preparing students for industry level practices.
- The Department of Mathematics organized an **intensive one-week Winter Training** focusing on core areas of Mathematics to strengthen students' conceptual understanding and facilitates more number of students to pursue higher education in Mathematics.
- The Department of Computer Science organized Awareness Programme on Digital Literacy and AI application for Non-Computer Science Students and also conducted **Film Fest -2025: Short Film Competition** for College Students.

Novel Aspect Planned to Introduce Under DBT Star College Scheme

- Planned to Publish research articles in reputed National/International Journals
- Planned to undergo more interdisciplinary Projects in Collaboration with Science departments.
- Planned to conduct Summer/Winter Training Programme by all participatory departments.
- Planned to organize Workshop/ Guest lecture in collaboration with other DBT funded near by Institutions.

Innovative Initiatives by Students

- III B.Sc. Physics student, participated in various science events across Tamil Nadu, Kerala and Andhra Pradesh winning multiple prizes and also **focusing on patenting** his scientific inventions.
- Students from Chemistry along with their faculty members **applied for design pattern for vacuum suction pump.**
- To enhance the learning experience and encourage critical thinking, the Department of

Computer Science introduced a Peer-Led Team Learning (PLTL) model, where senior students mentor their juniors in complex programming concepts and real-world problem-solving exercises promoting collaboration and leadership.

- Students of Mathematics Department organized ice-breaking activities in local schools to raise mathematical awareness among school students and also students created a **short film on drug awareness**, aiming to sensitize peer consciousness about life's unpredictable challenges.

8. Lessons Learnt / Difficulties Faced/ Suggestions if any, in Implementation of the Programme and Utilization of DBT Grant.

Lesson Learnt Under DBT Star College Scheme

- **With the support of DBT**, the Departments have cultivated a culture of continuous learning, enabling students to acquire new skills and deepen their subject knowledge, contributing their progression towards higher studies in basic sciences.
- Faculty members have gained more experience effectively to organize programmes effectively towards the upliftment of student's aspirations in higher education, research, self-employment and placements.
- Greater emphasis has been placed on student-centric hands-on training programs and interactive workshops which emphasize on academic writing through the preparation of research-based articles.
- Periodic workshops and hands-on training sessions have played a key role in strengthening students' technical proficiency and conceptual understanding.
- Students' skills are improved through the organization of programmes, providing them with practical exposure to key concepts.
- The implementation of the DBT Star College Scheme enabled the participatory departments to actively engage in outreach activities in schools such as exhibitions, competitions and awareness programs. These initiatives significantly enhanced the visibility and appeal of the respective courses, resulting in an increase in student admissions.

Future Prospects

- Following the six-month extension of the DBT Star College Scheme, the current participating departments will continue to strengthen their academic and outreach activities with the aim of achieving Star Status. Furthermore, departments that initially benefited from the scheme are preparing to submit proposals to become participating departments in the upcoming phase of the scheme.

9. Key Performance Indicators

S. No. 1 to 5 – Department wise

DEPARTMENT OF PHYSICS

Batch	1. No. of Students Admitted			2. Pass %		3. Drop-out rates	4. No. of Students Opted for M.Sc.	5. Average Marks
2022-2023	Category	Male	Female	During DBT (%)		1	9	72.62
	SC	2	1	Sem I	89.47			
	ST	-	-	Sem II	84.21			
	OBC	6	8	Sem III	94.44			
	General	1	1	Sem IV	77.78			
				Sem V	83.33			
				Sem V I	100			
	Total	9	10	Average	88.21			
2023-2024	Category	Male	Female	During DBT (%)		2	Not Applicable	66.69
	SC	2	4	Sem I	72.00			
	ST	0	1	Sem II	68.00			
	OBC	10	9	Sem III	88.00			
	General	1	-	Sem IV	83.33			
	Total	13	14	Average	77.83			
2024-2025	Category	Male	Female	During DBT (%)		2	Not Applicable	74.30
	SC	1	4	Sem I	92.86			
	ST	1	2					
	OBC	6	2	Sem II	100			
	General	0	0					
	Total	8	8	Average	96.43			

DEPARTMENT OF CHEMISTRY

Batch	1. No. of Students Admitted			2. Pass %		3. Drop-out rates	4. No. of Students Opted for M.Sc.	5. Average Marks
2022-2023	Category	Male	Female	During DBT (%)		2	15	67.38
	SC	09	05	Sem I	36.59			
	ST	01	01	Sem II	75.76			
	OBC	20	06	Sem III	50.00			
	General	01	-	Sem IV	68.75			
				Sem V	57.50			
				Sem V I	50			
	Total	31	12	Average	56.43			
2023-2024	Category	Male	Female	During DBT (%)		6	Not Applicable	65.24
	SC	3	6	Sem I	59.46			
	ST	0	0	Sem II	63.64			
	OBC	23	9	Sem III	58.33			
	General	1	1	Sem IV	71.88			
	Total	27	16	Average	63.33			
2024-2025	Category	Male	Female	During DBT (%)		2	Not Applicable	65.48
	SC	0	3	Sem I	55.17			
	ST	1	1					
	OBC	15	7	Sem II	73.08			
	General	2	2					
	Total	18	13	Average	64.13			

DEPARTMENT OF COMPUTER SCIENCE

Batch	1. No. of Students Admitted			2. Pass %		3. Drop-out rates	4. No. of Students Opted for M.Sc.	5. Average Marks
2022-2023	Category	Male	Female	During DBT (%)		-	18	74.33
	SC	05	02	Sem I	95.00			
	ST	-	-	Sem II	96.67			
	OBC	17	33	Sem III	96.55			
	General	01	02	Sem IV	91.38			
				Sem V	93.22			
				Sem V I	98.33			
	Total	23	37	Average	95.19			
2023-2024	Category	Male	Female	During DBT (%)		5	Not Applicable	63.10
	SC	4	10	Sem I	87.72			
	ST	0	1	Sem II	90.38			
	OBC	18	24	Sem III	87.50			
	General	2	1	Sem IV	87.27			
	Total	24	36	Average	88.21			
2024-2025	Category	Male	Female	During DBT (%)		2	Not Applicable	65.38
	SC	6	2	Sem I	75.44			
	ST	0	0					
	OBC	19	26	Sem II	77.78			
	General	6	1					
	Total	31	29	Average	76.61			

DEPARTMENT OF MATHEMATICS

Batch	1. No. of Students Admitted			2. Pass %		3. Drop-out rates	4. No. of Students Opted for M.Sc.	5. Average Marks
2022-2023	Category	Male	Female	During DBT (%)		3	19	71.19
	SC	01	01	Sem I	100			
	ST	-	-	Sem II	90			
	OBC	06	24	Sem III	80			
	General	-	01	Sem IV	90			
				Sem V	93.33			
				Sem V I	100			
	Total	07	26	Average	92.22			
2023-2024	Category	Male	Female	During DBT (%)		2	Not Applicable	61.17
	SC	2	4	Sem I	73.33			
	ST	0	0	Sem II	83.87			
	OBC	8	15	Sem III	90.32			
	General	2	2	Sem IV	93.55			
	Total	12	21	Average	85.26			
2024-2025	Category	Male	Female	During DBT (%)		1	Not Applicable	60.3
	SC	0	7	Sem I	65			
	ST	0	0					
	OBC	3	8	Sem II	80			
	General	0	3					
	Total	3	18	Average	72.5			

Key Performance Indicators: S. No. 6 to 14

sS. No.	Indicator	During /After Support (2022-2023)	During /After Support (2023-2024)	During /After Support (2024-2025)
6	No. of Hands-on Experiments Being Conducted	Physics -- 5	Physics -- 5	Physics -- 6
		Chemistry -- 4	Chemistry -- 6	Chemistry -- 4
		Computer Science --5	Computer Science -- 5	Computer Science -- 6
		Mathematics -- 4	Mathematics -- 6	Mathematics -- 6
7	No. of New Experiments Introduced	Physics -- 6	Physics -- 13	Physics -- 14
		Chemistry -- 11	Chemistry -- 2	Chemistry -- 6
		Computer Science -- 40	Computer Science -- 13	Computer Science -- 18
		Mathematics -- 18	Mathematics -- 7	Mathematics -- 6
8	Publications (Scopus Indexed) /Patents, if any.	Physics -- 19	Physics -- 14	Physics -- 21
		Chemistry-- 6	Chemistry -- 6	Chemistry -- 2
		Computer Science -- 1	Computer Science -- 2	Computer Science -- Nil
		Mathematics -- 35	Mathematics -- 26	Mathematics -- 20
9	Training received by Faculty	Physics -- 18	Physics -- 10	Physics -- 17
		Chemistry -- 15	Chemistry -- 8	Chemistry -- 10
		Computer Science -- 6	Computer Science -- 9	Computer Science -- 25
		Mathematics -- 30	Mathematics --17	Mathematics --16
10	Exhibitions/Seminars / Workshop /Training Courses Conducted	Physics -- 9	Physics -- 11	Physics --17
		Chemistry -- 4	Chemistry -- 12	Chemistry -- 10
		Computer Science -- 7	Computer Science -- 13	Computer Science -- 18
		Mathematics -- 10	Mathematics -- 12	Mathematics -- 13
11	Books/Journals subscribed from Grants	Physics -- 97 books	Physics -- 22 books	Physics --26 books
		Chemistry -- 82 books and one journal	Chemistry -- 35 books	Chemistry -- 12 books
		Computer Science -- 140 books	Computer Science -- 55 Books	Computer Science --29 books
		Mathematics -- 119 books	Mathematics -- 20 books	Mathematics -- 28 books
12	Outreach Activities (Popular lectures)	Physics -- 7	Physics -- 6	Physics -- 5
		Chemistry -- 5	Chemistry -- 3	Chemistry -- 2
		Computer Science -- 5	Computer Science -- 2	Computer Science -- 3
		Mathematics -- 4	Mathematics -- 5	Mathematics -- 3
13	Colleges Mentored to apply for DBT Star College Grants	Outlined the benefits of DBT Star College Scheme and motivated Dr. SNS Rajalakshmi College of Arts and Science, Coimbatore to apply for the scheme	Outlined the benefits of DBT Star College Scheme and motivated B.V. Raju College, Vishnupur, A.P. to apply for the scheme	Outlined the benefits of DBT Star College Scheme and motivated B.V. Raju College, Vishnupur, A.P. to apply for the scheme
14	Invited Lectures	Physics -- 3	Physics -- 7	Physics -- 7
		Chemistry -- 7	Chemistry -- 4	Chemistry -- 6
		Computer Science -- 2	Computer Science -- 3	Computer Science -- 5
		Mathematics -- 6	Mathematics -- 9	Mathematics -- 7

10. Self-Evaluation

Department	*Objective (as stated in proposal)	% achieved	Reasons for under achievement / If achieved, state in quantitative metrics
Physics	Real time experience has been carried out for the students by industrial training	98	2
	The students are motivated to do the laboratory experiments individually	100	2
	Various academic events at interdepartmental such as science fiction writing, Debate, quiz, etc., has been conducted to access the knowledge of students	95	1.9
	Organized thematic Seminars/ Invited Talks/ Conferences/ Workshops/ FDPs/ Hands on training/ Guest Lectures etc.	99	2
	Students are motivated to design and exhibit science working models	99	2
Chemistry	To recycle the chemical waste at the laboratory level and to handle glassware, chemicals and instruments in safer way and Chemical safety awareness for lab assistants	100	2
	Hands on Training on solution preparation (molar, normal, ppm percentage, etc.), Phytochemical isolation of compounds, micro-scale techniques	100	2
	Participation in the Orientation programmes, workshops and National and International conferences and seminars by students and faculties and conduct of Guest lectures and invited talks	100	2
	Society centric Outreach activities to nearby school children, school faculties, and to society	100	2
	Student centric Industrial/Lab visits, projects and internships, Competitions and Exhibitions	100	2
Computer Science	To enhance students' understanding of IoT through seminars on "Ubiquitous and Pervasive Computing", enabling them to design problem-based solutions using Arduino and sensors, and implement them as mobile apps in real-world IoT applications.	100	2
	Conduct AI-focused programs that enable students to apply theoretical knowledge to practical solutions, utilizing technologies like Arduino and AI techniques in areas such as satellite communication, image forgery detection, facial recognition, financial analysis and healthcare support systems.	100	2

	Organize Cyber Security seminars that enhance students' awareness of current security challenges, promote best practices in data protection, and equip them with foundational skills in threat detection, risk assessment, and secure system design.	100	2
	Apply computer science techniques such as Image processing, machine learning, and data analysis in agriculture by enabling students to develop solutions for plant disease detection, soil suitability analysis and suspicious activity detection using deep learning models, fostering interdisciplinary learning by integrating AI-based object and behavior recognition to identify weapons and aggressive actions, with automated alert systems that enhance modern security infrastructure through timely threat notifications.	100	2
Mathematics	Initiated and coordinated impactful academic activities ranging from seminars and guest lectures to conferences, hands-on training, and faculty development programs.	100	2
	Engaged students in activity-based learning through school outreach programs, enhancing their teaching abilities and communication skills.	100	2
	Books in Algebra, Operations Research, Differential Equations, and Topology were procured to strengthen the academic resources and support advanced learning and research.	100	2
	Faculty members are encouraged to attend the Orientation programmes, Refresher courses, Faculty development programmes and skill development workshops	100	2
	Student centric Industrial visits, projects and internships, Competitions and exhibitions.	100	2

Course Coordinator

Head of the Institution

DETAILS OF KEY PERFORMANCE INDICATORS – DEPARTMENT WISE

DEPARTMENT OF PHYSICS

9.6 No. of Hands-on Experiments being Conducted/ List of Activities Undertaken by Students

i) Hands-on Trainings being Conducted

S. No.	Name of the Event/ Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1	Hands on Training Programme with “Arduino”	08.10.2024	Mr. Dinesh Kumar Director, Big Bodhi Academy, Coimbatore.	Students: 40 Faculty: 4	- Hands on Training Programme provided knowledge about the function of various sensors and assembling various electronic devices. “Ultrasonic radar with Arduino” and “Exploring the Dual Axis Solar Tracking System Using Arduino for Maximum Efficiency” are the two projects developed by our students based on the inputs received from this Hands-on Training.
2	Hands on Training on “Electrical Safety and Maintenance”	27.12.2024	Mr. G. K. Shanmugasundaram, Managing Partner, GEMCO Renewable Energy Training Institute, Chennai.	Students: 44 Faculty: 2 Nonteaching: 4	- Students acquired knowledge on electrical safety and safe utilization of Rlectrical Appliances. - Two students from II B.Sc. have developed a project “Underground Cable Fault Detector” based on the inputs provided from the training.
3	One Day Hands on Training in “Python Programming”	09.01.2025	Mrs. Gayathri Jayaram, Assistant Professor, Department of Computer Science, PSGR Krishnammal College for Women, Coimbatore.	Students: 48 Faculty: 4	Students have gained practical knowledge in the field of Python Programming which enabled them to code and handle errors in Python Programs.

4	Hands on Training in “Virtual Lab: Physics Experiments”	27.01.2025	Dr. P. Balraju, Assistant Professor, Department of Physics, Coimbatore Institute of Technology, Coimbatore.	Students: 76 Faculty: 3	Students gained a deeper experimental knowledge through virtual learning which enabled them to apply theoretical knowledge, develop problem solving and analyze experimental data more effectively.
5	Hands on Training in “LaTeX Software”	30.01.2025	Dr. V. Radhamani, Assistant Professor, Department of Mathematics, J. K. K. Nataraja College of Arts and Science, Komarapalayam.	Students: 93 Faculty: 6	• Increased awareness of the potential applications of LaTeX Software for handling Mathematical equations, tables and technical content. • Created interest to prepare high quality Documents/ Research articles.
6	One Day Hands -on Training- “Coding in Python Programming”	11.03.2025	Mrs. Gayathri Jayaram, Assistant Professor, Department of Computer Science, PSGR Krishnammal College for Women, Coimbatore.	Students: 34 Faculty: 6	• Hands-on exercises have improved the students’ skills to create and manipulate Numpy arrays which helps to solve Data Science problems. • Students executed the program like time calculator and pentagon area calculator.

ii) List of Activities Undertaken by Students

a) List of Projects Undertaken by Students

Total 29 projects have been undertaken by our students in which 23 are promoted as working models and there are 13 Interdisciplinary Projects. 7 students of our department have done their projects in association with Department of Chemistry students and 6 students of our department have done their projects in association with Department of Computer Science students.

- ❖ Harikrishnan K of I B.Sc., Physics has developed a project entitled **“Exploring the Dual Axis Solar Tracking System Using Arduino for Maximum Efficiency”**. (Interdisciplinary Project)
- ❖ Priya Dharshini R, Suvetha S, and Sharmila V of II B.Sc., Physics have developed a project entitled **“Temperature Sensor”**. (Interdisciplinary Project)
- ❖ Boomika N and Hariprasath K of II B.Sc., Physics have developed a project entitled **“Conversion of Mechanical Energy into Electrical Energy”**. (Interdisciplinary Project)
- ❖ Jenice A and Pritha R of II B.Sc., Physics have developed a project entitled **“Non- Invasive Glucometer”**. (Interdisciplinary Project)
- ❖ Anish Dev D S and Magesh K of II B.Sc., Physics have developed a project entitled **“Underground Cable Fault Detector”**. (Interdisciplinary Project)
- ❖ Pooja Sri N and Gayathri S of II B.Sc., Physics have developed a project entitled **“Water Distillation unit”**. (Interdisciplinary Project)
- ❖ Lara G and Ajmal Y of III B.Sc., Physics have developed a project entitled **“Solar Air Purifier - using Moss and Algae”**. (Interdisciplinary Project)
- ❖ M Karan and V Gowthamraj of III B.Sc., Physics have developed a project entitled **“Piezoelectric Tyres”**. (Interdisciplinary Project)
- ❖ Kaviya T of I B.Sc., Physics, Dharsana R and Tibna Blessy Jas N.J of I B.Sc., Physics have developed a project entitled **“Servo Distance Indicator”**. (Interdisciplinary Project)
- ❖ Karan M of III B.Sc., Physics and Dharshini J and Lathika V of I M.Sc., Physics have developed a project entitled **“Asset Tracking System”**. (Interdisciplinary Project)
- ❖ Ajmal Y of III B.Sc., Physics, Jishnunath K.V and Sreehari K.R of I M.Sc., Physics have developed a project entitled **“Pollution Level Monitoring and Alert System”**. (Interdisciplinary Project)
- ❖ Monisha Praisya A and Sowndhariya S of III B.Sc., Physics, Naveen. D and Karthikeyan. S of II B.Sc., Physics have developed a project entitled **“Sewage segregator- using Arduino”**. (Interdisciplinary Project)
- ❖ Sahana P of III B.Sc., Physics, Shobha. R, Syed Rifayath. S and Leyga K of II M.Sc., Physics have developed a project entitled **“Lie Detector Using Polygraph Simulator”**. (Interdisciplinary Project)
- ❖ Jency Gladia S and Dinesh S of III B.Sc., Physics have developed a project entitled **“An Efficient FM Discriminator”**. (Interdisciplinary Project)

- ❖ Karan M and Kaviya T of III B.Sc., Physics have developed a project entitled “**Ultrasonic Radar with Arduino**”. (Interdisciplinary Project)
- ❖ Raju S and Gowthamraj V of III B.Sc., Physics have developed a project entitled “**Synthesis and Characterization of $\text{CoCo}_2\text{O}_4\text{:SnO}_2$ Nanocomposites**”. (Interdisciplinary Project)
- ❖ Sankari S and Vijayalakshmi V of II B.Sc., Physics and Hirithik. R.K of III B.Sc., Chemistry have developed a project entitled “**Carbon Purification for Industrial Applications**”. (Interdepartmental Project)
- ❖ S Raju, P Hariharan, G Marisamy of III B.Sc., Physics and Thrishok. S of III B.Sc., Computer Science have developed a project entitled “**Smart Cart**”. (Interdepartmental Project)
- ❖ Praneswaran R of II B.Sc., Physics, Roshall Packia and A Lijo Antony of III B.Sc., Physics and Shakti Pooja R.M of III B.Sc., Computer Science have developed a project entitled “**Smart Vehicle system**”. (Interdepartmental Project)
- ❖ Dinesh S of III B.Sc., Physics, Vino R and Murali A of I B.Sc., Physics and Pranesh N of III B.Sc., Chemistry have developed a project entitled “**Hydrogen Gas Generator Using Electrolysis**”. (Interdepartmental Project)
- ❖ Andrew A of III B.Sc., Physics, Rithika Sree P and Gopika R of I B.Sc., Physics and Priya Dharshan. K of III B.Sc., Computer Science have developed a project entitled “**IOT Based Counting System**”. (Interdepartmental Project)
- ❖ Dhaneesh S of II B.Sc., Physics, Shivani K and Navya N of I B.Sc., Physics and Rahul. A of III B.Sc., Computer Science have developed a project entitled “**E-Message System for Accident Detection in Bike Travel**”. (Interdepartmental Project)
- ❖ Raju S of III B.Sc., Physics, Sreesarin G and Ajmal A.R of I B.Sc., Physics and Dharshana. A of III B.Sc., Computer Science have developed a project entitled “**Child Tracking System**”. (Interdepartmental Project)
- ❖ Rathisha Shree T of II B.Sc., Physics, Praveen. P, Madhumitha. D and Priyadarshini A of II M.Sc., Physics and Niveditha. S of III B.Sc., Computer Science have developed a project entitled “**Traffic Flow Regulator**”. (Interdepartmental Project)
- ❖ Andrew A and Geethalakshmi S of III B.Sc., Physics and Santhosh. V of III B.Sc., Chemistry have developed a project entitled “**Preparation Of $(\text{CeGDSmYZr})\text{O}_2$ High Entropy Oxides Nanoparticles**”. (Interdepartmental Project)
- ❖ Sahana P and Pavithra E of III B.Sc., Physics and Gopi Priyan. M of III B.Sc., Chemistry have developed a project entitled “**Preparation of Zn Doped V_2O_5 By Co-Precipitation Method**”. (Interdepartmental Project)

- ❖ Hariharan P and Marisamy G of III B.Sc., Physics and Tholkappian.M of III B.Sc., Chemistry have developed a project entitled “**Preparation of Nickel Doped Zinc Oxide Nanoparticles**”.
(Interdepartmental Project)
- ❖ Sowndarya and Monisha Praisya A of III B.Sc., Physics and Mohan. P of III B.Sc., Chemistry have developed a project entitled “**Cytosine Zinc Nitrate Magnesium Nitrate and Potassium Nitrate Solution Prepared by Green Route Method**”. (Interdepartmental Project)
- ❖ D Vigneshwar and K Malini of III B.Sc., Physics and Elango. P of III B.Sc., Chemistry have developed a project entitled “**Preparation of Vanadium Doped TiO₂ Thin Films**”.
(Interdepartmental Project)

Projects that have been developed as a Working Model

- ❖ Harikrishnan K of I B.Sc., Physics has developed a project entitled “**Exploring the Dual Axis Solar Tracking System Using Arduino for Maximum Efficiency**”.
- ❖ Priya Dharshini R, Suvetha S and Sharmila V of II B.Sc., Physics have developed a project entitled “**Temperature Sensor**”.
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- ❖ Sahana P, Shobha. R, Syed Rifayath. S and Leyga K of II M.Sc., Physics have developed a project entitled **“Lie Detector Using Polygraph Simulator”**.
- ❖ Rathisha Shree T of II B.Sc., Physics, Praveen. P, Madhumitha. D and Priyadarshini A of II M.Sc., Physics and Niveditha. S of III B.Sc., Computer Science have developed a project entitled **“Traffic Flow Regulator”**.
- ❖ Jency Gladia S and Dinesh S of III B.Sc., Physics have developed a project entitled **“An Efficient FM Discriminator”**.
- ❖ Karan M and Kaviya T of III B.Sc., Physics have developed a project entitled **“Ultrasonic Radar with Arduino”**.

Innovative Product Designed and Developed

Under DBT Star College Scheme during the Academic Year 2022-23 the Department of Physics, KASC has organized a Two-day workshop on Solar PV Technology on 23.08.2022 and

24.08.2022. Many of the students utilized the workshop and arrived with new working models based on Solar technology. One of the students now pursuing his third year of B.Sc. Physics has constructed Solar Grass Cutter, Solar Air Purifier and Solar Water Trash Bin and bagged many prizes for his innovation in and around Tamil Nadu, Kerala and Andhra Pradesh. The student is planning to patent his work.

b) Industrial Visits

S. No.	Class	Place of Visit	Date	No. of Beneficiaries	Outcome
1	I B.Sc. Physics II B.Sc. Physics III B.Sc. Physics	Regional Science Centre, Coimbatore.	30.09.2024	Students: 52 Faculty: 2 Non-teaching Staff: 1	- Students gained practical insights into scientific concepts and technological applications of Physics. - Students experienced the working of various machinery and innovations that can inspire future academic and career choices. - Interaction with professionals at I-hub led to valuable connections and insights into career paths in Science and Technology fields.
2	I B.Sc. Physics II B.Sc. Physics III B.Sc. Physics	- Vijnan Sagar Science and Technology Park, Thrissur, Kerala. - Fluid Control Research Institute, Kanjicode West, Palakkad, Kerala.	31.01.2025 & 01.02.2025	Students: 43 Faculty: 3	- Students gained knowledge in thermal and fluid dynamics, instrumentation and process control in air, water, and oil mediums, which reinforced theoretical knowledge through practical observation. - The visit strengthened Industry-Academia connections, helping students to understand the real-world applications of their studies.
3	I B.Sc. Physics II B.Sc. Physics III B.Sc. Physics	Salzer Electronics Limited, Coimbatore.	25.01.2025	Students: 41 Faculty: 2	- Students gained insights about the industrial environment and the integration of Physics concepts in manufacturing. - Enhanced understanding of topics like electrical circuits, material properties and safety measures in Industrial Applications. - Inspired students to explore careers in electrical and manufacturing industries, research and development and quality testing.

4	I B.Sc. Physics II B.Sc. Physics III B.Sc. Physics	Cochin University of Science and Technology, Kerala.	18.02.2025 & 19.02.2025	Students: 9 Faculty: 3 Non-teaching Staff: 1	● Students witnessed real-time experiments using advanced equipment like SEM, Ramans Spectroscopy and Photoluminescence Spectroscopy. ● Increased awareness among students for higher education and research opportunities in Nanoscience and Optics. ● Students were motivated to pursue internships, research projects and postgraduate studies in related fields.
5	II B.Sc. Physics III B.Sc. Physics	ISRO Sathish Dawan Space Research Centre, Sriharikota.	28.03.2025 & 29.02.2025	Students: 5	● The visit provided students with firsthand insight into India's Space Missions and Satellite launch processes. ● They gained practical knowledge about rocket launching systems and space research infrastructure. ● Interacting with scientists deepened their understanding of real-world Physics applications. ● The experience made students consider careers in astrophysics and space science.

c) Summer School/ Internship

- ❖ 3 Students of III B.Sc. Physics underwent Internship Training at Viyen Biotech, Vadamadurai, Coimbatore.
- ❖ 11 Students of III B.Sc. Physics underwent Internship Training at KPR Institute of Engineering and Technology, Uthupalayam, Coimbatore.
- ❖ 3 Students of III B.Sc. Physics underwent Internship Training at Feather touch tissues, Nallampalayam, Coimbatore.
- ❖ Lara G of III B.Sc. Physics underwent Internship Training at Vadamalayan Multi-Speciality Care Hospital, Madurai.

d) Conferences / Seminars / Workshops/ Competitions/ Training Attended

- ❖ Mr. Y. Ajmal and Mr. V. Gowtham Raj of III B.Sc. Physics has attended **“UK sponsored one day national workshop on Decarbonization of Transport Sector Through Green Hydrogen – Current Status, Challenges and Future Strategies”** organized by PSG College of Technology, Coimbatore on 08.01.2025.

- ❖ Mr. Y. Ajmal and Mr. V. Gowtham Raj of III B.Sc. Physics has participated in the “**Summer Internship Program on Synthesis and Characterization of Advanced Materials**” organized by KPR Institute of Engineering and Technology, Coimbatore from 05.06.2024 to 18.06.2024.
- ❖ Mr. Y. Ajmal and Mr. V. Gowtham Raj of III B.Sc. Physics has participated in the “**CSIR NET/SET Workshop on Physical Sciences**” organized by PSGR Krishnammal College for Women, Coimbatore from 12.08.2024 to 13.08.2024.
- ❖ Mr. Y. Ajmal of III B.Sc. Physics has participated and secured **Second place** in the **SPECTRUM 2025** organized by Rathinam College of Arts & Science, Coimbatore from 19.02.2025 to 20.02.2025.
- ❖ Mr. M. Karan and Mr. V. Gowtham Raj of III B.Sc. Physics has participated and secured **Second place** in the **SPECTRUM 2025** organized by Rathinam College of Arts & Science, Coimbatore from 19.02.2025 to 20.02.2025.
- ❖ Mr. V. Gowtham Raj of III B.Sc. Physics has participated in the “**National Symposium on The Western Ghats Biodiversity Conservation and Ecosystem Management (WGBCEM-2025)**” organized by Kongunadu Arts and Science College, Coimbatore in association with Zoological Survey of India, Kolkata from 06.03.2025 to 07.03.2025.
- ❖ Ms. S. Sowndhariya of III B.Sc. Physics participated in the **Mathematical Sciences Festival** organized by Coimbatore Institute of Technology in collaboration with Tamil Nadu Science Forum and Kanthavaani Mathematical Society on 23.12.2024.
- ❖ Mr. Y. Ajmal of III B.Sc. Physics has participated and secured **First place** in the **Innoventures competition on “Inno Vision: From Concept 2 Creation**” conducted by Institution’s Innovation Council, Nirmala College for Women, Coimbatore on 10.12.2024.
- ❖ Mr. Y. Ajmal and Mr. V. Gowtham Raj of III B.Sc. Physics secured **Third place in the event of Project Expo** Solar Grass Cutter in the National Level Symposium, INSPIRE-SJ, conducted by B.V. Raju College (A), Bhimavaram, Andhra Pradesh from 13.12.2024 to 14.12.2024.
- ❖ Mr. Hari and Mr. Praneswaran of II B.Sc. Physics Participated **in the event of Project Expo** in the National Level Symposium, INSPIRE-SJ, conducted by B.V. Raju College (A), Bhimavaram, Andhra Pradesh from 13.12.2024 to 14.12.2024.
- ❖ Mr. Y. Ajmal and MI Nawfees of III B.Sc. Physics had secured the **First Place** in the **Project Competition for College Students**, a sub-event of **TKMCE KERALA ROBOCUP 2025** was conducted by the Centre for Robotics, TKM College of Engineering, Kollam from 17.01.2025 to 18.01.2025.
- ❖ Mr. Y. Ajmal of III B.Sc. Physics has secured **Second place** in the **Science Exhibition**

conducted by the Department of Physics, Kongunadu Arts and Science College under DBT star college scheme on 25.02.2025.

- ❖ Ms. S. Sowndhariya and Ms. A. Monisha of III B.Sc. Physics has secured **First place** in the **Science Mela Exhibition Working Model in District Level Yuva Utsav (2024- 2025)** conducted by Kongunadu Arts and Science College, Coimbatore on 11.12.2024.

Best Practice of the Department

Dynamic Physics Forum

The forum is actively functioning from the year 2018. The forum is running with a creamy layer of Physics UG and PG students. The students meet twice in a week apart from regular working hours of the college in the smart class room and they discuss recent Physics happenings, they take seminars on General Science and Physics and participate in Intra and Inter-Science competitions. They are also preparing for competitive exams with the group members.

e) Paper Presentation by Students

- ❖ Mr. Y. Ajmal of III B.Sc. Physics has presented a paper entitled “**Solar Water Trash bin**” in the 2nd International Conference on Socioeconomic Impacts of Pollution in Water Bodies and Remedial Measures (ICPWRM-2025) organized by Kongunadu Arts and Science College (Autonomous), Coimbatore from 06.01.2025 to 07.01.2025.
- ❖ Mr. Y. Ajmal of III B.Sc. Physics has won the **Best Poster Presentation Award** for a poster entitled “**Solar Water Trash bin**” in the International conference on Exploring the Trends and Innovations in Material Science (ICETIMS-2025) jointly organized by the Sacred Heart College (Autonomous), Tirupattur and the Prof. Albert Irudayaraj Endowment Fund on 27.02.2025.
- ❖ Mr. V. Gowtham Raj of III B.Sc. Physics has presented a paper entitled “**A study on piezoelectric Tyre**” at the **International Conference on “Exploring the Trends and innovations in Material Science (ICETIMS- 2025)”** was jointly organized by the PG & Research Department of Physics, Sacred Heart College (Autonomous), Tirupattur, Tamil Nadu, India and the Prof. Albert Irudayaraj Endowment Fund on 27.02.2025.
- ❖ Mr. A. Yuvaraj and Mr. B. Mathesh Kumar of I B.Sc. Physics has presented a Poster entitled “**The Physics of Black holes**” and secured **Second Place** in the **State Level Inter-Collegiate Symposium BHAUTHIKA '25** organized by PSG College of Arts and Science College, Coimbatore on 27.02.2025.

f) Inter-Departmental Activities

- ❖ Students of II B.Sc. Physics have attended the awareness program on **“Pitching an Idea for Staggering Genius”** organized by Department of Mathematics on 15.07.2024.
- ❖ Rathisha Shree. T of II B.Sc. Physics has attended the program on **“Digital Literacy”** organized by the Department of Computer science from 08.07.2024 to 11.07.2024.
- ❖ 3 members of III B.Sc. Physics have attended the **“Hands-on Training on power BI”** organized by Department of Mathematics on 20.09.2024.
- ❖ 2 members of II B.Sc. Physics and 3 members from I B.Sc., Physics have attended the Independence Day competition organized by the Department of Tamil (UN) from 08.08.2024 to 12.08.2024.
- ❖ 5 Students of I B.Sc. Physics Students attended Guest Lecture on **“Navigating Complexity: Interdisciplinary learning for non-Mathematics students”** on 02.08.2024 Organized by Department of Mathematics.
- ❖ 5 Students of I B.Sc. Physics Students attended **“Hands on Training in MATLAB programming for beginners”** organized by Department of Mathematics on 07.08.2024.
- ❖ 5 students of II B.Sc. Physics Students attended **“A Guest lecture on Students project ideas- Interdisciplinary approach”** organized by department of Mathematics on 23.09.2024.
- ❖ 4 students of II B.Sc. Physics attended **“A One-day Workshop on SPSS”** organized by Department of Mathematics on 16.12.2024.
- ❖ K. Hariprasath of II B.Sc., Physics has attended the program on **“Padaipalar Santhipu”** organized by the Department of Tamil on 25.09.2024.
- ❖ 4 members of II B.Sc., Physics have attended the program on **“Bazooka - quiz competition”** organized by Department of English on 01.10.2024.
- ❖ 3 members of II B.Sc., Physics and one from I B.Sc., Physics have attended the program on **“Kavidhasan arakattalai”** organized by Department of Tamil on 03.10.2024.
- ❖ Students of II B.Sc. Physics have attended the program on **“One Day Workshop on Vedic Mathematics for Science Students”** organized by Department of Mathematics on 23.01.2025.
- ❖ 2 members of III B.Sc., Physics have attended the **“Workshop on Mobile Phone servicing and troubleshooting”** organized by the Department of Computer Science on 22.01.2025.
- ❖ 2 members of III B.Sc., Physics have attended the **“District level Yuva UTSAV”** organized by the Department of Zoology on 11.12.2025.
- ❖ 4 members of I B.Sc., Physics have attended the **“Mahakavi Bharathiar ninaivendhal”**

organized by the Department of Tamil on 11.09.2024.

- ❖ K. Hariprasath of II B.Sc., Physics has attended the program on “Kalyanasundharam ninaivu arakattalai” organized by Department of Tamil (A) on 12.03.2025.
- ❖ 2 members of III B.Sc., Physics have attended the “**Hands on training on Mobile and Laptop service**” organized by Department of Computer Science on 20.02.2025.

9.7 No. of New Experiments Introduced

I B. Sc. Physics Core Practical 1

- Determination of surface tension and interfacial surface tension by drop weight method.
- Determination of viscosity of a liquid by Poiseuille’s flow method.
- Determination of frequency of a tuning fork - Sonometer.

II B. Sc. Physics Core Practical 2

- Determination of temperature coefficient of resistance of a wire – Post office box.

III B. Sc. Physics Core Practical 3

- Determination of Magnetic properties of Iron rod I-H curve apparatus.

III B. Sc. Physics Core Practical 4

- Construction of scalar using opamp.
- Study of characteristics of photodiode.
- Verification of inverse square law of radiation.

Practical beyond syllabus

- Determination of e/m – Thomsons method.
- Determination of e/m – Magnetron method.
- Determination of Youngs modulus – elliptical fringes (Cornus method).
- Determination of Youngs modulus – hyperbolic fringes (Cornus method).
- Music tone generator using 8085 Microprocessor.
- Square wave generator using 8085 Microprocessor.

9.8 Publications (Scopus indexed) /patents, if any.

- ❖ Rehna Parameswaran Mohanraj Kumar, Babu Balraj, Sruti Nanditaa Sampath Kumar, Balachandran Subramanian, **Senthil Kumar Nagarajan** published a paper entitled “**Utilizing**

samarium doped BiVO₄ microspheres for solar-Powered photocatalysis and Microbial Defence” in the journal of Materials Today Sustainability 27: 100944, July 2024.

- ❖ Thangabalu Subramani, **Senthil Kumar Nagarajan** published a paper entitled **“Synergic effect of rare earth doped Sm doped WO₃ nanoparticles for enhanced MB dye photocatalytic activities of waste water treatment and antibacterial activities against Staphylococcus aureus**” in the journal of Materials Today Sustainability 50: 34226-34239, 2024.
- ❖ Thangabalu Subramani, **Senthil Kumar Nagarajan** published a paper entitled **“Influence on the effect of Gd rare earth doped WO₃ nanoparticles for enhanced photocatalytic and antibacterial activities: A nanoplate like morphology**” in the journal of Materials Today Sustainability 50: 50252-50262, September 2024.
- ❖ Thangabalu Subramani, **Senthil Kumar Nagarajan** published a paper entitled **“Structural, optical and morphological properties of Eu rare earth doped WO₃ nanoparticles enhanced photocatalytic for waste water treatment and antibacterial activities**” in the journal of Materials Today Sustainability 50: 44822–44832, August 2024.
- ❖ M. Gowtham, Chandrasekar Sivakumar, Narendhar Chandrasekar, S. Balachandran, **N. Senthil Kumar** published a paper entitled **“Exploring Zinc Vanadate/Cobalt Oxide (Zn₃(VO₄)₂/CoO) Nano Hybrid Composites as Supercapacitors for Sustainable Energy Storage Applications**” in the journal of International Research Journal of Multidisciplinary Technovation 6: 128-143, May 2024.
- ❖ A Ram Kumar, S Selvaraj, P Rajkumar, J Dhanalakshmi, Mohanraj Kumar, Senthil Kumar Nagarajan, P Jayaprakash, GP Sheeja Mol, Shikha Awasthi, Sarvesh Kumar Pandey published a paper entitled **“Insights into structural, vibrational, and chemical shift characteristics, solvents impact (polar and nonpolar) on electronic properties and reactive sites, ADMET predictions, and ligand-protein interactions for antiviral drugs safrole and isosafrole: An in-silico approaches**” in the journal of Journal of Chemical Physics Impact 8:100443, June 2024.
- ❖ S Sathish, B Chandar Shekar, S Rathish Kumar, KC Sekhar, A Sulthan Ibrahim, K Kamakshi published a paper entitled **“Thermally evaporated InTiO transparent thin film: Optical and photoconduction behavior**” in the journal of Materials Today: Proceedings, xxx April 2024.
- ❖ Pratheep Haalan Ravi, Chandar Shekar Bellan, Vadivelan Varadarajan, R. Subramaniyan@Raja published a paper entitled **“Preparation of Panchromatic Silver Halide Emulsion to Fabricate High Efficiency Multiplexed Volume Phase Holograms for Solar Concentration Application**” in the journal of International Research Journal of

- ❖ B Veena, M Seetha published a paper entitled **“Synthesis and Characterization of Cr doped CeO₂ nanoparticles for Rhodamine B dye degradation”** in the journal of Heliyon 10(16): e35758, August 2024.
- ❖ S. Keerthana, R. Venkatesh, K. Mahalakshmi, K. Saravanakumar, C. Ravi Dhas published a paper entitled **“Effect of doping level on the photoconduction and Chemi resistive ethanol gas sensing of lanthanum-doped CuO films”** in the journal of Heliyon 804: 140500 September 2024.
- ❖ Senthilkumar Palanisamy, Nandhana Varnan, Shanmugam Venkatachalam, Kumarakuru Kuppuswamy, Gayathri Devi Selvaraju, Devanesan Sanjeevi Ranjith Santhosh Kumar, Rajendran Kamalabai Selvakesavan, **Gokul Bangaru**, Devaraj Bharathi published a paper entitled **“Preparation of Cellulose Fiber Loaded with CuO Nanoparticles for Enhanced Shelf Life and Quality of Tomato Fruit”** in the journal of Materials 17(12):2823, June 2024.
- ❖ Karthikeyan Kandhasamy, Matheswaran Palanisamy, Shankar Hari, Shradha Suman, Kamatchi Jothiramalingam Sankaran, Pandiyarasan Veluswamy, **Gokul Bangaru**, Asokan Kandhasami published a paper entitled **“Thermally processed phase change behavior on the stoichiometric efficacy of quaternary Se_{77.5-X} Te₂₀ Sn_{2.5} Ag_x (X= 2.5, 5, 7.5) thin films”** in the journal of Materials Science in Semiconductor Processing, March 2024.
- ❖ G Thilakavathi, Annamalai Raja, W Hannah Blessy, **B Gokul**, M Parthasarathy, JE Sangeetha, S Cholan, Misook Kang, Adel El-marghany published a paper entitled **“Enhanced H₂ sensing performance of perforated 3D NiO nanostructures and their comparative study with green synthesized NiO nanoparticles”** in the journal of Journal of Materials Science: Materials in Electronics 35(33):2130, November 2024.
- ❖ S Sudha, A Raja, P Prameela, A Sivakami, S Cholan, Misook Kang, **B Gokul**, Samar A Aldossari published a paper entitled **“Dual function of Zn-doped NiO nanoparticles in high sensing of triethylamine gas and rhodamine B dye degradation”** in the journal of Journal of Materials Science: Materials in Electronics 35(35):1-13, December 2024.
- ❖ Sanjay S Nair, Minnu Peter, Sai Charanya B, Nithya V.D published a paper entitled **“Synthesis and characterization of BIFEO₃ Nanoparticles for supercapacitors”** in the journal of Kongunadu Research Journal 11(1):41-45, June 2024.
- ❖ Rehna Parameswaran, **Senthil Kumar Nagarajan**, Chandrasekar Sivakumar, Balachandran Subramanian, Mohanraj Kumar published a paper entitled **“Bismuth Vanadate Microspheres: Utilizing Temperature-driven Phase Transition for Improved Sunlight-Driven Photocatalysis and Antibacterial Efficacy”** in the journal of International Research Journal of Multidisciplinary Technovation 7(1): 247-263, January 2025.

- ❖ T. Usha Devi, D. Senthil Kumar, M. Gowtham, Senthil Kumar Nagarajan published a paper entitled **“Yttrium doped MoO₃ nanoplates as photocatalysts for enhanced removal of organic dyes in aqueous solutions”** in the journal of International Research Journal of Multidisciplinary Technovation 7(2) 245-260: March 2025.
- ❖ Sathish Sugumaran, Rathish Kumar Sivaraman, Bhakyalatha Meenakshisundaram, Koppole Chandra Sekhar, Koppole Kamakshi, **Chandar Shekar Bellan**, Mohd Faizal Jamlos Published a paper entitled **“16-Smart sensors for Internet of Things-based smart health monitoring”** in the journal of Blockchain and Digital Twin for Smart Healthcare xxx 303- 328: January 2025.
- ❖ Pandian Mannu, VS Manikandan, Karthikeyan Kandhasamy, **Gokul Bangaru**, Matheswaran Palanisamy, Arun Thirumurugan, Asokan Kandasami, Chi-Liang Chen, Chung-Li Dong published a paper entitled **“Thermal annealing-induced phase transition and optical property modulation of In_xSe_{80-x}Te₂₀ thin film”** in the journal of Materials Science: Materials in Electronics 36(9):1-16, March 2025.
- ❖ Vellalalayam Devaraj Nithya published a paper entitled **“Recent Research in the Development of Integrated Solar Cell Supercapacitors”** in the journal of Journal of Electronic Materials 54:1572-1591, January 2025.
- ❖ Nagasundar, Anu Kaliani, Subin and Sakunthala Ayyasamy published a paper entitled **“Supercapacitor Performance and Characterization of La Doped V₂O₅ Nanoparticles”** in the journal of Journal of Oriental Journal of Chemistry 41(1):111-119, January 2025.

9.9 Training Received by Faculty/ List of Activities Undertaken by Faculty

a) Training Received by Faculty

- ❖ Dr. A. Anu Kalyani, Dr. A. Ranjitha, Dr. S. Selvi and Dr. V. D. Nithya participated in a One-week Faculty Development Programme on **“Next generation technologies: Green hydrogen and carbon capture for a sustainable future”** from 09.12.2024 to 14.12.2024 organized by PSGR Krishnammal College for Women, Coimbatore.
- ❖ Dr. M. Mohamed Ibrahim participated in **UGC-Sponsored Refresher Course in Physical Science (Interdisciplinary)**, organized by the UGC-Malaviya Mission Teacher Training Centre (Formerly UGC-Human Resource Development Centre), Bharathidasan University in Face-to-Face Mode from 26.11.2024 to 09.12.2024.
- ❖ Dr. S. Selvi and Dr. V. D. Nithya participated in a **One-day Workshop on “Layered Structures and Devices”** on 30.08.2024 organized by Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.

- ❖ Dr. A. Ranjitha and Dr. S. Selvi participated in **National Level Workshop and Hands-on-Session on Technology Enhanced Physics Teaching (TEPT - 2024) in association with Indian Association of Physics Teachers** on 19.07.2024 Department of Physics, Sri Ramakrishna Engineering College, Coimbatore.
- ❖ Mr. R. Thiyagarajan, Mr. P. Rasu, Mrs. M. Malliga and Mr. T. Vivekanandhan participated in **Laboratory and Chemical safety for Lab Technicians** on 10.01.2025 organized by the Department of Chemistry, KASC.
- ❖ Mr. R. Thiyagarajan, Mr. P. Rasu, Mrs. M. Malliga and Mr. T. Vivekanandhan participated in **Hands-on training on Biosafety and fire safety** on 12.02.2025 organized by the Department of Chemistry, KASC.

b) Conferences/ Seminars / Workshops Attended

- ❖ Dr. P. Matheswaran and Dr. B. Gokul participated in **Industry-Academia Research Conclave 2025 Silicon Synergy: Shaping Semiconductor Future in Empowering the India Semiconductor Mission** from 31.01.2025 to 01.02.2025 organized by Kumaraguru College of Technology (KCT), Coimbatore.

9.10 List of Exhibitions/ Seminars/ Training Courses Conducted

a) Conference/ Seminars / Workshops Organized

S. No.	Name of the Event/ Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1	Webinar on “Overview of Earth’s Atmosphere”	31.07.2024	Dr. Lakshmi Kumar T Associate Professor, School of Environmental Sciences, Jawaharlal Nehru University, New Delhi.	Physics: 41 Maths: 9 Chemistry: 5 Faculty: 5	Students acquired information on ● Main constituents of atmosphere. ● Atmospheric variables. ● Climatic change scenario over the globe. ● Measures to prevent global warming.
2	A Webinar on “Science from Indian Lunar Missions (Chandrayaan-1/2/3)”	20.09.2024	Dr. Dhanya M B., Senior Scientist Space Physics Laboratory, Vikram Sarabhai Space Centre, ISRO, Thiruvananthapuram.	Students: 79 Faculty: 5	Students acquired information on ● Sun-earth atmosphere. ● Solar wind interaction with the moon. ● Lunar exosphere. ● Achievements of Chandrayaan missions.

3	Seminar on “Drone Technology”	28.01.2025	Mr. R. Vijayanandh, Assistant Professor, Department of Aeronautical Engineering, Kumaraguru College of Technology, Coimbatore.	Students: 41 Faculty: 2	Students gained knowledge about drones, their various types, design structures, and wide-ranging applications across different fields.
4	One Day National Seminar on “Bio and Magnetic Materials”	24.02.2025	• Dr. A. Joseph Nathanael, Associate Professor, Vellore Institute of Technology, Vellore. • Dr. K. S. Sivaranjani, Research Associate, National Taiwan University, Taiwan.	Students: 105 Faculty: 10	Students enhanced their experimental skills, team work spirit, communication skills & critical thinking which encouraged their interest in Science & Technology and to take up careers in different fields of Science.
5	Workshop on “Problem Solving Techniques in Heat & Thermodynamics”	16.08.2024	Dr C. Raja Mohan Assistant Professor, Department of Physics, School of Sciences, The Gandhigram Rural Institute, Gandhigram, Dindigul.	UG Physics: 38 PG Physics: 35 Faculty: 04	The students acquired both knowledge and technical skills necessary to solve problems related to heat and thermodynamics.
6	Workshop on “Problem solving Techniques in Quantum Mechanics -I”	24.09.2024	Dr. J. Abuthahir, Assistant Professor, Department of Physics, Govt. College of Technology, Coimbatore.	UG Physics: 45 PG Physics: 50 Faculty: 06	The students have learnt to analyse and solve the problems in the basic level of Quantum Mechanics.
7	Workshop on “Problem Solving Techniques in Quantum Mechanics-II”	01.10.2024	Dr. J. Abuthahir, Assistant Professor, Department of Physics, Govt. College of Technology, Coimbatore.	UG Physics: 16 PG Physics: 50 Faculty: 02	Students enhanced their problem-solving abilities and gained a clearer understanding of how to approach and solve complex problems based on the principles of Quantum Mechanics.

b) Exhibition / Competitions Organized

S. No.	Name of the event/Activity	Date	Number of Beneficiaries	Outcome
1	Science Exhibition in connection with Science Day Celebration “Tesla Fest 2025”	25.02.2025	More than 1000 students	The questions from audience and judges kindled the minds of exhibitors to do more good models in future and the best exhibits were awarded.
2	Quiz Competition in connection with Science Day Celebration “Tesla Fest 2025”	26.02.2025	28 students	Students gained scientific knowledge about new innovations in the field of Science and Technology.
3	Debate Competition in connection with Science Day Celebration “Tesla Fest 2025”	26.02.2025	12 students	Improved critical thinking, communication skills, ability to analyse and defend Science concepts.
4	Brain Training Competition in connection with Science Day Celebration “Tesla Fest 2025”	26.02.2025	101 students	Improved cognitive functions like memory, concentration and enhanced mental ability.
5	Treasure Hunt Competition in connection with Science Day Celebration “Tesla Fest 2025”	26.02.2025	50 students	Improved teamwork, problem solving and logical thinking skills among the students.
6	Alternative climax Competition in connection with Science Day Celebration “Tesla Fest 2025”	26.02.2025	16 students	The competition added creativity and depth to Science fiction, offering new perspectives and unexpected twists that made story writing more dynamic and thought-provoking.
7	Drawing Competition on “Touching lives while touching the moon: India’s Space Saga”	03.09.2024	73 Students from various Departments of Kongunadu Arts and Science College, Coimbatore.	Students gained deeper insight into India’s achievements in space exploration, expressing their understanding and appreciation creatively through art.

c) Training Courses Conducted

S. No.	Name of the event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1	Faculty Development Programme On “Characterization of Materials”	25.07.2024	Dr. N. Muthukumarasamy, Retired Professor, Department of Physics, Coimbatore Institute of Technology, Coimbatore.	Faculty:21 Physics: 11 Chemistry: 8 Botany: 1 Biochemistry: 1	The knowledge and skills acquired through the FDP enabled the faculty to know more about cutting-edge research in the Material Science Industry.
2	Hands on training programme on “Servicing of Electric and Electronic Lab Equipment”	28.12.2024	Mr. G. K. Shanmugasundaram, Managing Partner, GEMCO Renewable Energy Training Institute, Chennai.	Lab Assistants: 4 Faculty: 2	Lab assistants have learnt to troubleshoot the basic Physics lab instruments.

3	Faculty Development Program on “Advanced Materials”	21.01.2025	Dr. Lakshmi Kumar TV, Associate Professor, Jawaharlal Nehru University, New Delhi.	50 Faculty	Gained knowledge about various characterization techniques employed for Aerosol studies.
		22.01.2025	Dr. Uwe Gaitzsch, Fraunhofer Institute for Manufacturing Technology and Advanced Materials, Germany.		Gained knowledge about the use of MoSiB materials for high temperature applications.
		24.01.2025	Dr. Pankaj B Agarwal, Senior Principal Scientist, CSIR-Central Electronics Engineering Research Institute, Pilani, Rajasthan		Gained knowledge about the properties of pyroelectric materials and its application as infrared detectors.

d) Lab Manual

A Standard Operating Procedure was prepared for II B.Sc. Physics students for Core Practical II by Dr. M. Mohamed Ibrahim, Assistant Professor of Physics and Ms. M. Anujency Research Scholar of Physics.

e) Mentor Mentee Meeting

Mentor Meeting I: 30.07.2024 (Beneficiaries: 48 Students of B.Sc. Physics and 12 Faculty from the Department of Physics).

The students have received ideas about internships, industrial visits, interdisciplinary research works and how to utilize the DBT-Star College Scheme effectively.

Mentor Meeting II: 21.02.2025 (Beneficiaries:12 Faculty from the Department of Physics)

- ❖ Adoption of innovative teaching methods, including ICT tools, experiential learning, and interdisciplinary approaches.
- ❖ Identification of new research areas, and potential funding sources.
- ❖ Improved laboratory facilities, skill-based training, and better exposure to real-world applications of Physics.
- ❖ Development of a roadmap for future mentorship activities and workshops.

9.11 Details of Books and Journals subscribed from DBT Grant

S. No.	Bill No.	Date	Company Name	Publisher	Author	Title	Qty	Amount (Rs.)
1	1573B	25.02.2025	Shanti Books	S. Chand and Co., Noida	B.L Theraja	Basic Electronics Solid State	2	1691.50
2	1573B	25.02.2025	Shanti Books	S. Chand and Co., Noida	Brij Lal, N. Subrahmany am, P.S. Hemne,	Heat Thermodynamics And Statistical Physics	2	1275.00
3	1573B	25.02.2025	Shanti Books	Pearson India education services Pvt. Ltd	Robert L Boylestad, Louis Nashelsky,	Electronic Device And Circuit Theory 11th Edition	2	1742.50
4	1573B	25.02.2025	Shanti Books	Elsevier, India	R.K. Pathria, Paul D. Beale	Statistical Mechanics 4th Edition	1	722.50
5	1573B	25.02.2025	Shanti Books	S. Chand and Co., Noida	Murugesan R, Kiruthiga Sivaprasath,	Modern Physics	3	1593.75
6	1573B	25.02.2025	Shanti Books	S. Chand and Co., Noida	V.K. Mehta, Rohit Mehta,	Principal Of Electronic Ed12	3	2103.75
7	1573B	25.02.2025	Shanti Books	Wiley India Pvt. Ltd	Nouredine Zettili	Quantum Mechanics	4	4743.00
8	1573B	25.02.2025	Shanti Books	Starch Press Inc, San Francisco	Eric Matthes	Python Crash Course	1	1359.15
9	1573B	25.02.2025	Shanti Books	Pearson India education services Pvt. Ltd	Herbert Goldstein, Charles Poole, John Safko	Classical Mechanics	2	1700.00
10	1573B	25.02.2025	Shanti Books	Wiley India Pvt. Ltd	Mary L. Boas	Mathematical Methods In The Physical Sciences	2	1902.30
11	1573B	25.02.2025	Shanti Books	National Academic Press, Chennai	Yeeshtdevisi ngh Hosanee	Learn Python Programming	4	1156.00
TOTAL							26	19989.00

9.12 Outreach / Extension Activities

S. No	Name of the Event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1	National Space Week 2024 Touching lives while touching the moon: India's Space Saga	30.08.2024	Department of Physics, Kongunadu Arts and Science College.	Class- IX Standard (16) Faculty (5)	Students gained knowledge about the importance of Space Science and its applications.
2	Awareness Programme on "Higher Education in Science and Physics"	15.10.2024	Dr. M. Seetha, Assistant Professor of Physics, KASC	88 Class XI and XII students of VCSM Matric Higher Secondary School, Coimbatore.	Students acquainted themselves about the unrevealed areas of Science and also understood the benefits of higher education in Science along with the suitable job opportunities.
3	Energy Audit	28.12.2024	Students from I, II and III B.Sc. Physics audited their houses.	55 houses	Our students have learned the importance of energy conservation and the methods for conducting an energy audit.
4	One day Hands on Training on "Physics Experiments to School Students"	03.01.2025	Dr. M. Seetha Dr. P. Matheswaran Assistant Professors of Physics, KASC.	Students: 26, Faculty: 1	School Students gained more knowledge about the concepts and applications of Physics experiments through hands-on training.
6	Demonstration of Class 11th Practical to VCSM Matric School 11 th standard students.	30.01.2025	Faculty Members of the Physics Department.	62 Students of XI standard and 1 teaching staff of VCSM school, CBE	Students learnt and understood the mechanism and working principles of the Physics experiments.

9.14 Invited Lectures / Guest Lectures conducted

S. No.	Name of the event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1	Artificial Intelligence for Physics Applications	30.07.2024	Dr. M. Lavanya, Associate Professor, Department of Physics, PSGR Krishnammal College for Women, Coimbatore.	Students: 46 Faculty: 3	The students have acquired knowledge on current technology and understood how to utilize AI tools for the applications of Physics.

2	Beyond Imagination: “A Journey Through the Universe’s Wonders”	30.08.2024	Dr. D. Khanna, Assistant Professor Department of Physics, Karunya Institute of Technology and Sciences, Coimbatore.	Students: 70 Faculty :03	Students explored key milestones in space exploration, including the successful soft landing of the Vikram lander on the Moon, and developed awareness about Aditya-L1 and other significant space missions, enhancing their understanding of India's advancements in Space Science.
3	Glow discharge Plasma Materials Processing: In the perspective of Advanced and Nanomaterials	27.09.2024	Dr. C. P. Yoganand, Assistant Professor, Department of Physics, Coimbatore Institute of Technology Coimbatore.	Students: 46 Faculty: 6	Enhanced understanding of glow discharge plasma material processing among Students. Created subject interest and motivated them in doing higher education in the field of Material Science.
4	Importance of Science Innovations in Higher Education	09.10.2024	Dr. Ranjithkumar Rajamani, International Research Fellow, INTI International University, Malaysia.	Students: 54 Faculty: 8	Students understood to approach important practical problems faced by the society and how to solve them through Research and Innovation.
5	Nanomaterials Innovations: “Technology Transfer to Industry”	16.10.2024	Mrs. J. Revathi Scientist D, Centre for Nanomaterials, International Advanced Research Centre for Powder Metallurgy and New Materials, Balapur, Hyderabad.	131 students from Department of Physics and Chemistry Faculty: 3	- Students gained insights on how technology transfer in nanomaterials can create employment opportunities, boost revenue generation, and drive economic development by bridging research and industry. - Six group projects have been carried out by our students this year.
6	Crafting the Future: “Innovation and IPR for Aspiring Minds”	12.12.2024	Dr. N. Priyadharsini, Associate Professor, Department of Physics, PSGR Krishnammal College for Women, Coimbatore.	UG Physics: 38 PG Physics: 51 UG CS:15 UG Chemistry: 5 UG Maths: 6 Faculty: 3	Students gained knowledge on protecting their Intellectual Property Rights such as patents, trademarks and Design Rights. They have also been exposed to how to file patents and its stage-by-stage process.
7	Bi- Transition Metal Oxide Nanostructures for Supercapacitor Applications	21.01.2025	Dr. B. Saravanakumar, Associate Professor of Physics, Dr. Mahalingam College of Engineering and Technology, Pollachi.	Students: 80 Faculty: 3	The talk covered the latest breakthroughs in battery, fuel cell systems and supercapacitors, highlighting the innovations that improve energy density, efficiency and longevity.

DEPARTMENT OF CHEMISTRY

9.6 No. of Hands-on Experiments being Conducted/ List of Activities Undertaken by Students

• Hands-on Trainings being Conducted

S. No.	Name of the Event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1	Hands on Training on “Water Pollution Monitoring”	30.12.2024	Dr. S. Dhanakumar, Head, Department of Environmental Science, PSG College of Arts and Science, Coimbatore.	Che: 50 Biochem:18 Physics: 03 Faculty: 4	- Students learned to detect various water pollutants using Chemical techniques and gained experience in analysing water samples for Physical, Chemical and Biological parameters. - Enabled the students to create awareness about water pollution among their communities for a healthy environment.
2	Hands on Training on “Chromatographic Techniques and their Applications”	31.01.2025	Dr. T. Suresh Assistant Professor, Department of Chemistry, Bharathiar University, Coimbatore.	Students: 77	Students learnt about the basics and types of Chromatography and its applications in various Industries.
3	Hands on Training on “Water Quality Analysis”	19.02.2025	Dr. P. Thilagavathy, Assistant Professor, Department of Chemistry, School of Physical Sciences, Amrita Vishwa Vidyapeetham, Coimbatore.	Students: 65 Faculty: 5	- Students came to know about the importance of water quality and causes of pollution. - Students learnt about collection and analysis of water pollutants.
4	Two days Hands on training on “Analytical Techniques and Sustainable Chemical Recycling”	10.03.2025 & 11.03.2025	- Dr. P. Sakthivel, Associate Professor, Department of Nanoscience and Technology, Bharathiar University, Coimbatore. - Dr. S. Yogapriya, Dr. V. Kirthika, Research Associates Department of Chemistry, Vinayaka Mission, Salem.	Students: 23	Students enriched their practical skills by using analytical tools like Chromatography, Spectroscopy to assess the quality and effectiveness of recycled materials.

			Mr. Sanjeev, Analytical Chemist, Tamil Nadu Agricultural University, Coimbatore.		Students were trained to analyze the composition and purity of products obtained from Chemical recycling processes.
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i) List of Activities Undertaken by Students

a) List of Projects Undertaken by Students

- ❖ Six students of III B.Sc., Chemistry completed a project on **“Synthesis and characterization studies of 2-Hydroxyethylammonium 4-nitroBenzoate crystal”**.
- ❖ Six students of III B.Sc., Chemistry completed a project on **“Synthesis of heteroaryl chalcones”**.
- ❖ Six students of III B.Sc., Chemistry completed a project on **“Nickel oxide nanoparticle: A Co-precipitation approach for enhanced photocatalytic application”**.
- ❖ Six students of III B.Sc., Chemistry completed a project on **“Preparation and evaluation of sodium vanadium phosphate Nasicon type Cathode material for sodium ion batteries”**.
- ❖ Six students of III B.Sc., Chemistry completed a project on **“Green synthesis of ZnO nanoparticles using Calliandra haematocephala extract”**.
- ❖ Six students of III B.Sc., Chemistry completed a project on **“Effect of temperature on the corrosion inhibition of mild steel in sodium chloride medium”**.
- ❖ Five students of III B.Sc., Chemistry completed a project on **“Synthesis of heteroaryl substituted quinolone”**.

Innovative Product Designed and Developed

- ❖ Tholkappian. M, Mohan. P, Gopipriyan. M, Dinakaran. T, Ezhil. C Hirthik R. K of III B.Sc. Chemistry, Haalitha Parveen. K, Anbumani. M, Kandeepan. K, Guruprasath. R, Abiram D of II B.Sc. Chemistry along with faculty members of Chemistry has applied Design Pattern for **“Vacuum Suction Pump”**.

b) Industrial Visits

S. No.	Class	Place of Visit	Date	No. of Beneficiaries	Outcome
1	II and III B.Sc. Chemistry	- Keezhadi Heritage Museum, Keezhadi. - Research Lab visit to “CECRI on Open day” and Alagappa University, Karaikudi.	25.09.2024 & 26.09.2024	Students: 41 Faculty: 3	- Students gained knowledge in Li-ion Batteries, Electrochemical power station, working principle of Instruments like SEM, TEM etc. - The students were exposed to the Scientific and Technological achievements of various departments of CECRI.
2	III B.Sc. Chemistry	- Karnataka Soaps and Detergent Limited, Mysuru, Karnataka. - Research lab of Chromatogen Analytical Solution, Mysuru, Karnataka. - Seven Bean Coffee Works Limited, Mugalavalli, Karnataka. - SLN Coffee Private Limited, Koppa, Chikkmagalur, Karnataka.	11.12.2024 to 13.12.2024	Students: 27 Faculty: 3	- Students gained knowledge about the extraction process of oil from sandalwood. - Students came to know about the principle behind the instruments, working methodology and handling procedure and gained a deeper understanding of the coffee market and the factors that influence coffee quality and demand.
3	I & III B.Sc. Chemistry	Regional Science Centre, Coimbatore	01.08.2024	Students: 30 Faculty: 4	Engaged the students with hands-on experiences in various scientific concepts and technologies.
4	III B.Sc., Chemistry II B.Sc., Chemistry	ISRO, Satish Dawan Space Center, Sriharikota.	28.03.2024	Students: 5 Faculty: 1	- Students understood how Chemistry is applied in space missions-e.g., rocket fuel Chemistry, Materials Science and environmental monitoring via satellites. - The visit provided real-world examples that included Chemistry in complex engineering and technological systems.

c) Summer School/ Internship

- ❖ Gopi priyan M, Mohan P, Tholkappiyan M of II B.Sc. Chemistry underwent an internship at Farmfert Advance Tech Pvt. Ltd., Krishnagiri, Tamil Nadu on “**Manufacturing of humic acid liquid fertilizer**”.

- ❖ Dhinakaran T of II B.Sc. Chemistry underwent an internship at Rajapalayam Mills Limited, Rajapalayam, Tamil Nadu on “**Mercerization process**”.
- ❖ Santhosh V of II B.Sc. Chemistry underwent an internship at Rmv Analytical Lab Pvt Ltd., Cuddalore, Tamil Nadu on “**Analysis of pharma products**”.
- ❖ Pragadeesh M of II B.Sc. Chemistry underwent an internship at Ramco Cements Limited, Tamil Nadu on “**Cement manufacturing process**”.
- ❖ Nishandhini G, Pravin Kumar S of II B.Sc. Chemistry underwent an internship at Aavin Dairy, Ooty, Tamil Nadu on **Aavin milk and its milk products**.
- ❖ Suryaprakash. M, P. Seshanth, Niranjana S, Vimalakannan. M, Arunkumar N, Agneeswaran S of II B.Sc. Chemistry underwent an internship at Sri Ganga Soap Works, Coimbatore, Tamil Nadu on “**Manufacturing of soaps**”.
- ❖ T. Karthick Raja, Elango P, S lakshmi Priya, Mathan Kumar K, N. Pranesh, Suryakumar, Geetha M of II B.Sc Chemistry underwent an internship at Shree Jothsana Electroplating, Coimbatore, Tamil Nadu on “**Manufacturing of Electroplating Products**”.
- ❖ Harish, Hirithik R.K, Anuranjani S, Nithya. C, Ezhil C, Geetha M of II B.Sc. Chemistry underwent an internship at BISCO Electro Coating, Coimbatore, Tamil Nadu on “**Coating Technique on Aluminum and Iron Metal**”.
- ❖ Boopathi Raja C, Ayyappan K, Srikanth B, Praveen S, Ruban Raj M of II B.Sc. Chemistry underwent an internship at Mercury Surface Coats Coimbatore, Tamil Nadu on “**Surface Powder Coating**”.
- ❖ Shibila. M, Rinsha jasmine of II B.Sc. Chemistry underwent an internship at H T.C Tea and Enterprises Private Limited, Ooty, Tamil Nadu on “**Processing of Tea**”.
- ❖ Ananthika, Vijayalakshmi P of II B.Sc. Chemistry underwent an internship at PEPS Industries Private Limited, Coimbatore, Tamil Nadu on “**Manufacturing of Polyurethaneams**”.

d) Conferences / Seminars / Workshops/ Competitions/ Training Attended

- ❖ Dhinakaran.T, Gopipriyan of II B.Sc. Chemistry won **Second Place** in the event **Chem Quiz** conducted by Department of Chemistry, PSGR Krishnammal College for women on 10.09.2024 (Chem Utsav).
- ❖ Gopipriyan, Ezhil of III B.Sc. Chemistry participated in Chem fusion - 24 “**One day Intercollegiate Chemistry Students Meet**” organized by Department of Chemistry, Sri Ramakrishna Mission Vidyalaya College of Arts and science. Coimbatore and won first prize in Chem fusion.
- ❖ Dhinakaran.T, of III B.Sc. Chemistry won **First Place** in **Crazy capture on Chem Bond: An**

- Intercollegiate Students Meet** conducted by PG and Research Department of Chemistry, Kongunadu Arts and Science College on 13.03.2025.
- ❖ Ezhil. C, Venkat. K of III B.Sc. Chemistry won **Second place in Chem quiz on Chem Bond: An Intercollegiate Students Meet** conducted by PG and Research Department of Chemistry, Kongunadu Arts and Science College on 13.03.2025.
 - ❖ Aswathi.K, Suryaprapha M and Lavanya, K of II B.Sc., Chemistry students participated **TNWISE 2025 Hackathon for women in Science and Engineering and won cash prize of Rs.10,000/-** organized by Tamil Nadu Industrial Development Corporation Limited.
 - ❖ Anbumani and Abhiram of II B.Sc. chemistry secured Second Place **In Application of Chemistry in forensic Science- Test exhibit** in the National Level Symposium, INSPIRE- SJ, conducted by B.V. Raju College (A), Bhimavaram, Andhra Pradesh from 13.12.2024 to 14.12.2024.
 - ❖ Srikanth of II B.Sc. chemistry Participated **in Escape room** in the National Level Symposium, INSPIRE-SJ, conducted by B.V. Raju College (A), Bhimavaram, Andhra Pradesh from 13.12.2024 to 14.12.2024.
 - ❖ Guru of II B.Sc. chemistry secured **First Place In Escape room** in the National Level Symposium, INSPIRE-SJ, conducted by B.V. Raju College (A), Bhimavaram, Andhra Pradesh from 13.12.2024 to 14.12.2024.

e) Paper Presentation by Students

- ❖ M. Tholkappiyan, P. Mohan, of III B.Sc. Chemistry & Dr. R. Manimekalai and Dr. K Saminathan Assistant Professor of Chemistry Participated in 9th Asian PGPR, India Chapter National Conference on “The beneficial microbes on integrated approach for sustainable agriculture. Opportunities and challenges” from 29/08/2024 to 30/08/2024 and presented a paper entitled **“Precision agriculture: Optimizing nutrient management with NPK spot analysis”**.
- ❖ Hirthik of III B.Sc. Chemistry & Dr. R. Manimekalai Assistant Professor of Chemistry Presented a paper entitled **“Efficient synthesis and characterization of transition metal oxide, nanoparticles for advanced industrial applications”** Conducted by Chevalier T. Thomas Elizabeth College for Women on 06.11.2024, International E Conference on Advancing Frontiers, Empowering the Next Generation of Chemists -2024.
- ❖ P. Mohan and Hirthik R.K. of III B.Sc. Chemistry Dr. R. Manimekalai Submitted an article for New Journal of Chemistry entitled **“Nickel oxide nanoparticle: A Co- precipitation approach for enhanced photocatalytic application” (for publication)**.

Inter-Departmental Activities

- ❖ 5 Students of III B.Sc. Chemistry participated in a Webinar on “**Overview of Earth’s atmosphere**”, conducted by Department of physics, Kongunadu Arts and Science College, Coimbatore on 31.07.2024.
- ❖ 10 Students of I B.Sc. Chemistry participated an event **Navigating complexity: Interdisciplinary learning for Non - Mathematics students** conducted by Department of Mathematics, Kongunadu Arts and Science College, Coimbatore on 02.08.2024.
- ❖ 5 Students of III B.Sc. Chemistry participated a **Hands-on training in MATLAB programme for beginners** conducted by Department of Mathematics, Kongunadu Arts and Science College, Coimbatore 07.08.2024.
- ❖ 5 Students of III B.Sc. Chemistry participated a **Hands-on training on power BI** conducted by Department of Mathematics, Kongunadu Arts and Science College, Coimbatore on 20.09.2024.
- ❖ Ezhil C of III B.Sc. Chemistry participated in a event, **Students project ideas - Interdisciplinary approach** conducted by Department of Mathematics, Kongunadu Arts and Science College, Coimbatore on 23.09.2024.
- ❖ 5 Students of I B.Sc. Chemistry participated **Workshop on SPSS (Statistical Package for Social Sciences)** conducted by Department of Mathematics, Kongunadu Arts and Science College, Coimbatore on 16.12.2024.
- ❖ 5 Students of III B.Sc. Chemistry participated a guest lecture on “**Grafting the future: Innovation and IPR for aspiring minds**” conducted by Department of Physics, Kongunadu Arts and Science College, Coimbatore on 14.12.2024.
- ❖ 5 Students of III B.Sc. Chemistry participated **The Western Ghats Fest** jointly organized by Eco club, PG and Research Department of zoology and wildlife biology, Kongunadu Arts and Science College, Coimbatore 07.03.2025.

9.7 No. of New Experiments Introduced

Practical beyond syllabus

- ❖ Photocatalytic Reactions Using Visible Light.
- ❖ UV-Vis Analysis of Sunscreen Absorption.
- ❖ Electrochemical Cells and Battery Design.
- ❖ Colorimetric Determination of Iron in Food.
- ❖ pH and Buffer Capacity of Beverages.
- ❖ Extraction of Caffeine from Tea or Coffee.

9.8 Publications (Scopus indexed) /patents, if any.

- ❖ **E. Jayanthi**, *Tecoma stans* intermediated green synthesis of copper oxide nanoparticles, their characterization, paracetamol degradation and biological activities, *Inorganic Chemistry Communications*, 170 (2024) 113503.
- ❖ **E. Jayanthi**, Seasonal variation in chemical compositions and biological activities of essential oils extracted from *Ageratum conyzoides* L. - grown in Western Ghats region-South, India *Plant Science Today*, Vol 11(3),2024, 535-542.

9.9 Training Received by Faculty/ List of Activities Undertaken by Faculties

a) Training Received by Faculty

- ❖ Dr. M. S. Sivaramkumar, Dr. R. Manimekalai, Dr. K. Saminathan, Dr. K. Krishnaveni, Dr. K. Chandraprakash, Assistant Professors, Department of Chemistry participated in the **Faculty Development Programme on Characterization of Materials** on 25.07.2024 conducted by the Department of Physics, Koungnadu Arts and Science College, Coimbatore.
- ❖ Dr E Jayanthi, Dr K Krishnaveni, Dr K Chandraprakash, Dr. R. Manimekalai, Assistant Professors, Department of Chemistry participated in a Two-day **Faculty Training Programme on LaTeX “Quality documentation easy with PC”** on 14.02.2025 conducted by Department of Mathematics, Kongunadu Arts and Science College, Coimbatore.
- ❖ Dr K Chandraprakash, Assistant Professor, Department of Chemistry participated in a **One-day workshop on AI tools for research writing and publishing** on 21.02.2025. conducted by the Department of Biochemistry in association with professor Dr. M Aruchami Foundation, Kongunadu Arts and Science College, Coimbatore.

b) Conferences/ Seminars / Workshops Attended

- ❖ Dr. K. Saminathan, Assistant Professor, Department of Chemistry participated in **9th Asian PGPR. India chapter National Conference on the beneficial microbes on integrated approach for sustainable agricultural opportunities and challenges** on 29.07.2024. and 30.07.2024 conducted by Department of Botany, Bharathiar University, Coimbatore.
- ❖ Dr. R. Manimekalai, Assistant Professor, Department of Chemistry participated **International E-Conference on advancing frontiers: empowering the next generation**

of chemists - 2024 on 06.11.24 conducted by Chevalier T Thomas Elizabeth College for women, Perambur, Chennai.

- ❖ Dr. K. Saminathan Assistant Professor, Department of Chemistry participated in the **International Conference on frontiers in material science and technology, energy and environmentally sustainable development** on 05.12.24 & 06.12.24 conducted by Department of Chemistry, SRM TRB Engineering College, Tiruchirappalli.

9.10 List of Exhibitions/ Seminars/ Training Courses Conducted

a) Conferences/ Seminars / Workshops Organized

S. No	Name of the Event/ Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1	Seminar on “Scope and Opportunities in Chemical Industries”	19.09.2024	• T. Narendran, Vice President, Finance and Administration, Aquasub Engineering, Coimbatore. • Mr. Arjun Moorthy, Founder and Director, Rob Bell Materials Research Centre, Salem.	Students: 88 Faculty: 4	• Students came to know about various opportunities and challenges in Chemical Industries, R&D Laboratories. • They also learnt about current trends and applications of advanced materials like Silicon carbide, graphene in the field of Electronics. • 6 students got placement offers from Aquasub Engineering, Coimbatore.
2.	Seminar on “Recent Trends in Chemical Sciences”	20.01.2025	• Dr. S. Marappan Velusamy, Professor, Department of Chemistry, North Eastern Hill University, Shillong, Meghalaya, India. • Dr. K. Sundaravel, Assistant Professor, Department of Chemistry. Bharathiar University, Coimbatore.	Students: 65 Faculty: 4	Students learnt about the design, efficiency, and stability challenges of small molecule organic solar cells (OSCs) and also gained key insights into the future potential of the innovative technologies for sustainable energy in the field of Chemistry.

3	Workshop on “ICT Tools for Teaching and Research in Chemistry”	21.01.2025	Dr. V. Rajapandian, Assistant Professor, Department of Chemistry, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore.	Students: 44 Faculty: 5	Students learnt about the usage of ICT tools & software which helps in conceptual learning of Chemistry by visualizing various chemical structures in 3D-way.
4.	An International Webinar on “Recent Research Scenario in the Field of Chemistry”	17.02.2025	- Dr. Nandhakumar Ponnusamy, Postdoctoral Researcher, Department of Nanoengineering, University of California, United States of America. - Dr. Agilan Perumal, Postdoctoral Researcher, Nanomaterial and System Lab, Department of Mechatronics Engineering, Jeju National University, Republic of Korea	Students: 75 Faculty: 3	Students gained insights into cutting-edge research trends in Chemistry, including advancements in Material Science, Pharmaceuticals, and reaction Engineering, fostering interdisciplinary collaboration and inspiring future research directions.

b) Exhibition / Competitions Organized

S. No.	Name of the event/Activity	Date	Number of Beneficiaries	Outcome
1.	Exhibition on “Exploring Young minds for Foster Creativity”.	14.12.2024	106 School students Faculty: 3	The exhibition served as a platform for school students to present their innovative ideas, promoting scientific thinking, enhancing problem-solving abilities, and building confidence through practical learning and interaction with peers.
2.	Interdepartmental Exhibition for Science Students	27.01.2025	70 students from Botany, Bio- Chem, Physics and Mathematics	- Students from different departments participated and shared creative projects and ideas related to chemistry. - The event encouraged teamwork, learning, and a better understanding of how Chemistry connects with other fields.

c) Training Courses Conducted

S. No.	Name of the event/ Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1	Faculty training Programme on “Scientific Conduct”	21.09.24	Prof. S. Karutha Pandian Honorary visiting Professor, Department of Biotechnology, Science campus, Alagappa University, Karaikudi.	Faculty :43	Improved Knowledge on Avoiding Misconduct: Faculty members are now better equipped to identify and prevent common research misconduct, such as plagiarism and data manipulation.
2	Faculty Development Programme on “Reverse Mentoring”	08.10.24	Prof. Dr. A. Sangamithra Professor, Department of Economics Bharathiar University, Coimbatore.	Faculty:25	It broke down the traditional mindset that only teachers have the experience and knowledge fit for mentorship. From students also teachers can learn to a new way of thinking, new technologies, and current needs.
3	An Awareness Program on “Laboratory and Chemical Safety” for Lab Technicians	10.01.2025	Dr. B. Vidhya, Assistant Professor, Department of Applied Physics, Karunya Institute of Technology and Sciences, Coimbatore.	13 Lab Technicians Faculty:4	Lab technicians came to know about various Chemical and lab safety measures and how to handle chemical hazards.
4	Hands on Training on “Biosafety & Fire safety Awareness”	12.02.2025	V. Ranga Raju, Safety Officer, PSG Institutions, Coimbatore.	Lab Technicians: 15 Faculty: 4	The participants learned the importance of biosafety and fire safety and responsibilities in preventing accidents.

d) Lab Manual

- ❖ Lab manual was revised for **Physical Chemistry** practicals for III B.Sc. Chemistry Students.
- ❖ Lab manual was revised for **Gravimetric Analysis** practicals for III B.Sc. Chemistry Students.
- ❖ Lab manual was revised for **Application Oriented Practicals in Chemistry** for III B.Sc. Chemistry Students.
- ❖ Lab manual on **Organic Analysis and Volumetric Analysis** was revised for II B.Sc. Chemistry and Allied Botany, Physics and Biochemistry students.
- ❖ Lab manual on **Inorganic Analysis and Inorganic Preparations** was revised for I B.Sc. Chemistry.
- ❖ SOP is provided for all the lab courses.

e) Mentor Mentee Meeting

- ❖ Mentor Mentee meeting was organized on 08.10.24 and **Dr. D. Nalini**, Associate Professor & Head, Department of Chemistry, PSGR Krishnammal College for Women, Coimbatore was the resource person. The total number of beneficiaries are 7.
- ❖ Mentor Mentee meeting was organized on 14.02.25 and **Dr. T. Selvaraju**, Associate Professor, Department of Chemistry, Bharathiar University, Coimbatore was the resource person. The total number of beneficiaries are 7.

9.11 Details of Books and Journals subscribed from DBT Grant

S. No	Bill No.	Date	Company Name	Author	Title	Qty	Amount
1	1767	14.03.25	Shanti Books	Arun Bahl, B.S. Bahl	Advanced Organic Chemistry	3	4832.25
2	1767	14.03.25	Shanti Books	O.P. Agarwal	Organic Chemistry of Natural Products Volume - I	2	4564.50
3	1767	14.03.25	Shanti Books	O.P. Agarwal	Organic Chemistry of Natural Products Volume - II	2	4564.50
4	1767	14.03.25	Shanti Books	Samuel Devlin	Problems in Organic Spectroscopy	5	4228.75
					Total	12	18,190

9.12 Outreach / Extension Activities

S. No.	Name of the event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1.	A Hands-on Chemistry Experiments for School Students	25.01.2025	❖ Mr. R. Gokul, Assistant Director, Nature Science Foundation, Coimbatore. ❖ Dr. K. Saminathan and Dr. K. Chandra Prakash, Assistant Professor, Department of Chemistry, Kongunadu Arts and Science College, Coimbatore.	19 Students (accompanied by teacher)	The simple chemistry experiments made learning more enjoyable, increasing students' interest and involvement.
2.	“Innovation and Entrepreneurship Outreach Programme” for School Students	27.01.2025	Dr. K. Kalpanadevi, Associate Professor & Head, Department of Chemistry, Kongunadu Arts and Science College, Coimbatore.	Students: 71	Students gained insights into innovative thinking and the process of new product development, fostering entrepreneurial mindset and creativity.

9.14 Invited Lectures/Guest Lectures Conducted

S. No.	Name of the event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1.	Guest Lecture on “Experience with Experiments in Chemistry”	04.07.2024	Dr. Ilango S A, Former Deputy Director, Vikram Sarabhai Space Center, ISRO, Trivandrum.	150 students	Students gained knowledge in topics such as battery systems, Chemical reactions in Space, Thermal protection systems, and special polymers used in ISRO's missions.
2.	Guest Lecture on Future Perspective and Challenges in Nanoscience and Nanotechnology (jointly organised with Physics Department)	31.07.2024	Dr. P. Premasudha, Assistant Professor, Department of Nanoscience and Technology, Bharathiar University, Coimbatore.	Chemistry: 54 Physics: 29	Students came to know about the applications of various advanced materials and learnt to apply photocatalytic concepts in their projects.

3.	Invited talk on “Topics of Interest in Inorganic Chemistry Research”	08.08.2024	Dr. V. Madhu, Associate Professor, Department of Applied Chemistry, Karunya Institute of Technology and Sciences, Coimbatore.	Students: 60 Faculty: 5	Students came to know about the different types of inorganic compounds and their applications in various fields like catalysis, energy storage, sensors, etc.
4	Guest Lecture on “Chemistry in Day-to-Day Life”	03.09.24	Dr. P. Thilagavathy, Assistant Professor, Department of Chemistry, Amrita School of Physical Sciences, Amrita Vishwa Vidyapeetham, Coimbatore.	Students: 68 Faculty: 3	Students enhanced their understanding of Chemistry by relating concepts to everyday life experiences.
5	Guest Lecture on “State – of – The– Art: Computer Application for Science Students”	12.12.2024	Er. T. Gopal General Manager (Retd.), Bharat Heavy Electricals Ltd., Govt. of India. Vice President, Mascon Global Director, Resurgent Software Technologies Ltd.	41 Students 16 Botany, 16 Bio-Chem	Students gained fundamental knowledge in the usage of programming languages in Data analysis, Industrial collaboration and real-world applications.
6	Invited lecture on “Green Hydrogen Production”	07.01.2025	Dr. Kannan Kandasamy Professor, Department of Chemical Engineering, Kongu Engineering College, Erode.	41 Students	Students gained a deeper understanding of green hydrogen as a clean energy solution, recognizing its growing significance in the industrial sectors.

DEPARTMENT OF COMPUTER SCIENCE

9.6 No. of Hands-on Experiments being Conducted/ List of Activities Undertaken by Students

i) Hands-on Trainings being Conducted

S. No.	Name of the Event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1.	Hands on Training Programme on “Problem Solving Techniques Using Mobile App”	19.08.2024	Dr. K. Rajalakshmi, Assistant Professor, Department of Science & Humanities, Sri Krishna College of Engineering & Technology, Coimbatore.	Students: 72 Faculty: 3	Students learnt about P/S (Price-to-Sales) Calculator to find the mean, median, correlation and regression. They also learnt about MATLAB and Online Octave which enables them to do the matrix calculation easily.
2.	Hands on Training Programme on “Machine to Machine Communication (M2M)”	03.09.2024	Dr. N. V. Brindha, Assistant Professor of Computer Science, PSGR Krishnammal College for Women, Coimbatore.	Students: 71 Faculty: 3	Students learnt more about machines through • Real Time Monitoring • Data Exchange • Predictive Maintenance 5 Students have done a project using M2M Communication.
3.	Hands on Training Programme on “Pervasive Computing”	20.09.2024	Mr. Mohamed Ibrahim, Cross Platform Developer, Accent Techno Soft, Coimbatore.	Students: 55 Faculty: 2	Students gained practical knowledge about how Pervasive Computing affects various aspects of daily life. • Impacts on education and skill development • Changes in urban planning and infrastructure.
4.	Hands on Training Programme on “DevOps and Docker”	20.01.2025	• M. Harish Goutham, Cloud Architect, Oracle, Bengaluru. • B. Karthick Prakash, CEO, Heycloud Innovations, Coimbatore.	Students: 54 Faculty: 3	Students learnt about how DevOps and Docker helped the organizations to achieve faster software delivery cycles, improved system reliability and enhanced collaboration between development and operations teams, leading to increased customer satisfaction and business agility.
5.	Hands on Training Programme on “IoT & Robotics”	26.02.2025	Dr. T. Kalaiselvi, Associate Professor of Computer Science & Applications, Gandhigram Rural Institute, Gandhigram. Dindigul	Students: 41 Faculty: 4	• Students gained practical experience in working with microcontrollers, sensors and communication protocols. 17 students have done projects using IoT with automation.

6.	Hands on Training on “Exploring R in Data Science”	14.03.2025	Dr. S. P. Gayathri, Department of Computer Science, Government Arts College for Women, Nilakottai.	Students: 45 Faculty: 4	• The students gained more knowledge about data manipulation, visualization, statistical analysis and machine learning which enabled them to analyze complex datasets and derive meaningful insights for data-driven decision-making. • The students learnt to apply the concepts of R Programming to visualize the data in their projects.
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ii) List of Activities Undertaken by Students

a) List of Projects Undertaken by Students

- ❖ P. Monish, R. Anushree of III-B.Sc. Computer Science developed a project entitled “**Deep fake Detection using Deep learning**” using AI, Machine Learning. **(Interdisciplinary Project)**
- ❖ M. K. Sushmitha, P. Mithun of III-B.Sc. Computer Science developed a project entitled “**Book Hub Web Application**” using Web Application. **(Interdisciplinary Project)**
- ❖ V. Pavithra, J. Madhumitha of III-B.Sc. Computer Science developed a project entitled “**RFID Based Attendance System**” using Automation. **(Interdisciplinary Project)**
- ❖ Barathkumar, S. Sumathi of III-B.Sc. Computer Science developed a project entitled “**Smart House Monitoring System**” using IoT. **(Interdisciplinary Project)**
- ❖ M. Dhivya, R. Srilatha of III-B.Sc. Computer Science developed a project entitled “**IoT Based Automatic Height Adjusting Bridge**” using IoT. **(Interdisciplinary Project)**
- ❖ M. Akash of III-B.Sc. Computer Science developed a project entitled “**Online Job Portal**” using Web Application. **(Interdisciplinary Project)**
- ❖ R. M. Shakti Pooja, V. Mirdhula of III-B.Sc. Computer Science developed a project entitled “**Face Recognition Attendance System**” using AI, Machine Learning. **(Interdisciplinary Project)**
- ❖ C. Srithar, V. Siranjeevi of III-B.Sc. Computer Science developed a project entitled “**Agri Helpline Management System**” using Web Application. **(Interdisciplinary Project)**
- ❖ J. Jesina Kethyrin, A. Deepaishwarya of III-B.Sc. Computer Science developed a project entitled “**Sunflower Solar Tracking System**” using Ardiuno and IoT. **(Interdisciplinary Project)**
- ❖ K. Priya Dharshan, P. Nikil of III-B.Sc. Computer Science developed a project entitled

“Stock Market Trend Strength Analysis” using ADX, AI, Machine Learning. **(Interdisciplinary Project)**

- ❖ Benitta, A. Divya of III-B.Sc. Computer Science developed a project entitled **“IoT Based Automatic Fish Feeder with Turbidity Test”** using IoT. **(Interdisciplinary Project)**
- ❖ S. Subaksha, B. Harini of III-B.Sc. Computer Science developed a project entitled **“Smart Car Parking System”** using IoT. **(Interdisciplinary Project)**
- ❖ J. Sree Sahana, V. Sanjana of III-B.Sc. Computer Science developed a project entitled **“A Patient Medical Help Treatment Forgery Detection”** using AI, Machine Learning. **(Interdisciplinary Project)**
- ❖ H. Mohammed Arshad Jawahir, G. Sakthi Vignesh of III-B.Sc. Computer Science developed a project entitled **“Plant Disease Detection and Remedy Suggestion”** using IoT. **(Interdisciplinary Project)**
- ❖ G. Suresh of III-B.Sc. Computer Science developed a project entitled **“Wild Animal Detection System”** using IoT. **(Interdisciplinary Project)**
- ❖ S. Vishnu Pathi, R. Aravinth of III-B.Sc. Computer Science developed a project entitled **“Web Portal for Agricultural Insurance”** using Web Application. **(Interdisciplinary Project)**
- ❖ G. Revathi, A. Dhanu Sri of III-B.Sc. Computer Science developed a project entitled **“E-Commerce Website”** using Web Application. **(Interdisciplinary Project)**
- ❖ R. Srinath, V. Madhumitha of III-B.Sc. Computer Science developed a project entitled **“Gas Level Detection and Automatic Booking”** using IoT. **(Interdisciplinary Project)**
- ❖ V. Deepak, V. Vikram of III-B.Sc. Computer Science developed a project entitled **“OLX – 2.0 Product Exchange App Zonex”** using Web Application. **(Interdisciplinary Project)**
- ❖ A. Rahul, R. Athira of III-B.Sc. Computer Science developed a project entitled **“Arduino Based Mini Satellite with Base Station”** using IoT. **(Interdisciplinary Project)**
- ❖ P. Arjunan of III-B.Sc. Computer Science developed a project entitled **“Online Sports Management System”** using Web Application. **(Interdisciplinary Project)**
- ❖ K. Sri Durga Devi, S. Nithya of III-B.Sc. Computer Science developed a project entitled **“Automatic Fire Extinguish Vehicle”** using Arduino and IoT. **(Interdisciplinary Project)**
- ❖ A. Dharshana, H. Lidia Jenifer of III-B.Sc. Computer Science developed a project entitled **“Wrong Posture Muscle Strain Detector”** using IoT. **(Interdisciplinary Project)**
- ❖ N. Kiruthika, M. Farhana Sherin of III-B.Sc. Computer Science developed a project

entitled **“Smart Health Monitoring System”** using IoT **(Interdisciplinary Project)**

- ❖ S. Abiruba, V. Ananditha of III-B.Sc. Computer Science developed a project entitled **“Smart Billing System”** using IoT **(Interdisciplinary Project)**
- ❖ P. Ajai Selvam, K. M. Nandhini of III-B.Sc. Computer Science developed a project entitled **“Agriculture Management System”** using Web Application. **(Interdisciplinary Project)**
- ❖ V. Dhanalakshmi, N. Narmatha Sri of III-B.Sc. Computer Science developed a project entitled **“Air Pollution Monitoring System”** using IoT **(Interdisciplinary Project)**
- ❖ B. Dhanya, S. Shabeetha of III-B.Sc. Computer Science developed a project entitled **“Predicting Solar Panel Efficiency Using Weather Data”** **(Interdisciplinary Project)**
- ❖ M. Agalya of III-B.Sc. Computer Science developed a project entitled **“Online File Sharing Web Application”** using Web Application. **(Interdisciplinary Project)**
- ❖ D. Mukilan, M. Venubabish of III-B.Sc. Computer Science developed a project entitled **“Alpha Trading App”** using Web Application. **(Interdisciplinary Project)**
- ❖ S. Niveaditha of III-B.Sc. Computer Science developed a project entitled **“Crypto Alert System Using IoT”** **(Interdisciplinary Project)**
- ❖ R. Prasanth, S. Thrishok of III-B.Sc. Computer Science developed a project entitled **“Suspicious Activity Detection”** **(Interdisciplinary Project)**
- ❖ P. L. Swasthika of III-B.Sc. Computer Science developed a project entitled **“Crime Rate Analysis”** using cyber-Security. **(Interdisciplinary Project)**

Innovative Product Designed and Developed

- ❖ Gas level Detection and Automatic booking System using IOT
- ❖ IoT Based Automatic Height adjusting Bridge
- ❖ IoT Based Automatic Fish Feeder with Turbidity Test
- ❖ Plant Disease Detection and Remedy Suggestion| using IOT
- ❖ Wild Animal Detection System using Arduino
- ❖ Arduino based mini-Satellite with Base station
- ❖ Automatic Fire Extinguish Vehicle with Arduino
- ❖ Wrong posture Muscle Strain Detector using IOT
- ❖ Suspicious Activity Detection using IOT

b) Industrial Visits

S. No.	Class	Place of Visit	Date	No. of Beneficiaries	Outcome
1.	III-B.Sc. Computer Science	Regional Science Centre and Science Museum, Coimbatore.	26.09.2024	Students: 48 Faculty: 4	- Students experienced the applications of Science in various domains. - Enriched technological knowledge. - Created interest in Scientific principles - Fostered creativity and innovative thinking in the minds of the students.
2.	II-B.Sc. & III-B.Sc. Computer Science	Industrial Visit to A-Cube Tech Skills Lead, Mysuru, Bangalore.	04.12.2024 to 08.12.2024	Students: 51 Faculty: 4	- Learnt the life cycle of software development. - Created awareness about the opportunities in the subdomains of the IT industry. - Exposed to the functionalities of various departments of the IT industry. - Students learnt about cyber security system and project were done based on Cybersecurity and AI.
3.	I-B.Sc. & II-B.Sc. Computer Science	Vijnan Sagar Science and Technology Park, Thrissur, Kerala.	25.02.2025	Students: 50 Faculty: 4	- The visit provided students with practical exposure to emerging technologies such as robotics, sensors, and computing systems. - It enhanced their understanding of interdisciplinary innovation and demonstrated how Computer Science contributes in solving real-world problems.
4.	II-B.Sc. Computer Science	BSNL office, Coimbatore.	03.03.2025	Students: 32 Faculty: 3	- Students acquired knowledge on working principles of Telecommunication Industries, Customer service and operations including various Mobile services. - Visited the power room and interacted with Telecommunication personnel to know about its working process.
5.	III-B.Sc. Computer Science	ISRO Satish Dhawan Space Centre, SHAR, Sriharikota.	28.03.2025	Students: 5 Faculty: 1	- Students gained valuable insights into ISRO's cutting-edge work in space science and technology. - They learnt about upcoming missions like Gaganyaan and developed a deep sense of national pride witnessing ISRO's global achievements.

c) Summer School/ Internship

- ❖ 17 Students of II-B.Sc. Computer Science underwent Internship Training Programme at Techvolt Software Pvt Ltd., on “**Full Stack Development with Python**” from 27.05.2024 to 18.06.2024.
- ❖ 17 Students of II-B.Sc. Computer Science underwent Internship Training Programme at

GateWay Software Solutions on “**Python with MYSQL**” from 18.05.2024 to 07.06.2024.

- ❖ 8 Students of II-B.Sc. Computer Science underwent Internship Training Programme at GateWay Software Solutions on “**Python with Data Science**” from 27.05.2024 to 14.06.2024.
- ❖ P. Monish has attended Internship Program at Brain o Vision on “**Amazon Web Services**” from 29.01.2024 to 02.04.2024.
- ❖ R. Prasanth has attended Internship Program at Movements Digital India Pvt Ltd., on “**App Development**” from 29.01.2024 to 02.04.2024.
- ❖ S. Thrishok has attended Internship Program at Brain O Vision on “**Data Science with ML using Python**” from 29.01.2024 to 22.04.2024.
- ❖ M. Akash has attended Internship Program at Net Tel Solutions India Pvt Ltd., on “**Python with AI**” from 23.05.2024 to 07.06.2024.
- ❖ A Total of 5 Students of II-B.Sc. Computer Science underwent Internship Training Programme in the field of “**Mobile Application Development**” at GateWay Software Solutions from 20.05.2024 to 31.05.2024.
- ❖ M. K. Sushmitha has attended Internship Program at ACE Edutech on “**Python Programming**” from 01.04.2024 to 15.06.2024.
- ❖ A Total of 4 Students of II-B.Sc. Computer Science underwent an Internship Program on “**Web Development**” at GateWay Software Solutions during the period of 20.05.2024 to 07.06.2024.

d) Conferences / Seminars / Workshops/ Competitions/ Training Attended

- ❖ D. Helanisha Shelin, M. Haridha, K. Balanethra, B. B. Shalini, Juliyana of III B.Sc Computer Science has participated in the “DHR – ICMR” sponsored **Two days National Level Workshop on Integrating MRI and AI: Towards Personalized Medicine in Neurology** Organized by Department of Computer Science and Engineering and Technology from 21.02.2025 to 22.02.2025.
- ❖ A. Rahul of III B.Sc. Computer Science has won **Second place** in **BUG HUNT** in **National Level Symposium INSPIRE-SJ** Conducted on 13.12.2024 & 14.12.2024 at B.V. Raju College (A), Bhimavaram, Andhra Pradesh.
- ❖ P. Mithun of III B.Sc. Computer Science has won **Consolation prize** in **BUG HUNT** in national level symposium INSPIRE-SJ Conducted on 13.12.2024 & 14.12.2024 at B.V. Raju College (A), Bhimavaram, Andhra Pradesh.

K. S. Suriya and S. Hari Prasath of II B.Sc. Computer Science has won **Second Place** in **Discover (Quiz)** at the **National Level Technical Symposium-TecKtrix’25** organized by the

Department of Computer Science with Data Analytics and Department of Artificial Intelligence and Machine Learning on 31.01.2025.

- ❖ M. Ravivarma of II B.Sc. Computer Science has won **First Place** in the Thannambikkai **Arakkattalai Award – 2024** on 04.01.2025.
- ❖ M. R. Afrin Fathima and S. Lakshana of III B.Sc. Computer Science has won **Third Place** in Dance in the inter-college lit fest **FLORINA 2025** organized by the Department of English (Aided), Kongunadu Arts and Science College in Coimbatore on 18.02.2025.
- ❖ M. Ravivarma of II B.Sc. Computer Science has won **First Place** in **Tamil Speech** organized by NCC Wings, Kongunadu Arts and Science College in Coimbatore on 25.07.2024.
- ❖ M. Ravivarma of II B.Sc. Computer Science has participated in the **Kamarajar Kakkan Memorial 11th Coimbatore District Level Chess Tournament under 25** organized by Pollachi Chess Club, Changavi Vidhyaa Mandhir Mat hr.sec school on 28.07.2024.
- ❖ M. Ravivarma of III B.Sc. Computer Science and S. Vishal of I B.Sc. Computer Science has participated in the **GSA Trophy state level chess tournament** on 16.02.2025 at Gobi Arts and Science College.
- ❖ M. Ravivarma of II B.Sc. Computer Science **won First Place** in Drawing Competitions in **Ullaga thaimozhi naal Competitions 2025** conducted by Kongunadu Arts and Science College.
- ❖ P. Lokeshwaran, R. Indhunath, S. Nilavan and M. Keerthivarthan of I B.Sc. Computer Science have participated in BLITZKERGOTZ'25 Organized by Department of Computer Technology, Kongunadu Arts and Science College “Treasure hunt” event in the Intra-Collegiate Technical Meet'25 held on 09.01.2025.
- ❖ S. Thrishok and R. Prasanth of III B.Sc. Computer Science has participated in BLITZKERGOTZ'25 Organized by Department of Computer Technology, Kongunadu Arts and Science College “Treasure hunt” event in the Intra-Collegiate Technical Meet'25 held on 09.01.2025.

e) Paper/ Poster Presentation by Students

- ❖ A. Vishalini and L. Dharshini of III B.Sc. Computer Science presented a paper on “**Study on Green Cloud Computing**” in the proceedings of the International Conference on Recent Advances in Cloud Computing and Communication Technology (ICRACCT'24) organized by Noorul Islam College of Arts and Science Kumaracoil, Kanyakumari District held on 06.09.2024.
- ❖ M.S. Thaarunyaa and P. Madhumitha of III B.Sc. Computer Science presented a paper on “**Survey on Threats and Attacks with Cyber Security**” in the proceedings of the International Conference on Recent Advances in Cloud Computing and Communication

Technology (ICRACCT'24) organized by Noorul Islam College of Arts and Science Kumaracoil, Kanyakumari, District held on 06.09.2024.

- ❖ S. Surendar and S. Krishnaprasath of III B.Sc. Computer Science presented a paper on **“Study on Internet of Things”** in the proceedings of the International Conference on Recent Advances in Cloud Computing and Communication Technology (ICRACCT'24) organized by Noorul Islam College of Arts and Science Kumaracoil, Kanyakumari, District held on 06.09.2024.
- ❖ S. Amirtha and S. Navaneetha of III B.Sc. Computer Science presented a paper on **“Study on Applications of Big Data in Indian Healthcare”** in the proceedings of the International Conference on Recent Advances in Cloud Computing and Communication Technology (ICRACCT'24) organized by Noorul Islam College of Arts and Science Kumaracoil, Kanyakumari, District held on 06.09.2024.
- ❖ P. Monish and A. Dharshana of III B.Sc. Computer Science presented a paper on **“Study on Artificial Intelligence”** in the International Conference on Innovative Digital Technologies (ICIDT'24) organized by Dr. R.V. Arts and Science College Department of Computer Science, Coimbatore held on 28.08.2024.
- ❖ K. Malarmathi and S. Shamini of II B.Sc. Computer Science presented a paper on **“Study on Internet of Things”** in the International Conference on Innovative Digital Technologies (ICIDT'24) organized by Dr. R.V. Arts and Science College Department of Computer Science, Coimbatore held on 28.08.2024.
- ❖ M. Dilip Remo and N. Nishanth of II B.Sc. Computer Science presented a paper on **“Study on Wireless Technology”** in the International Conference on Innovative Digital Technologies (ICIDT'24) organized by Dr. R.V. Arts and Science College Department of Computer Science, Coimbatore held on 28.08.2024.
- ❖ C. K. Narmatha of II B.Sc. Computer Science presented a paper on **“Study on Latest Trends in Digital Image Processing”** in the International Conference on Innovative Digital Technologies (ICIDT'24) organized by Dr. R.V. Arts and Science College Department of Computer Science, Coimbatore held on 28.08.2024.
- ❖ M. Dhivya of III B.Sc. Computer Science presented a paper on **“Water Pollution”** in the 2nd International Conference on Socioeconomic Impact of Pollution in Water Bodies and Remedial Measures (ICPWRM-2025) as a part of Scheme for promotion of academic and research collaboration (SPARC) jointly organized by KASC, Teesside University, SPARC, TamilNadu Agricultural University held on 07.01.2025.

Courses Completed

❖ **29 students of I B. Sc, Computer Science** has completed various online courses in “Artificial Intelligence and Machine Learning, Python with Basic Programs, Artificial Intelligence Fundamentals, Learn Python Using Google Gemini, Python Projects for Beginners, Data Preprocessing, Spoken English”.

❖ **60 students of II B.Sc. Computer Science** has completed various online courses in “Artificial Intelligence Fundamentals, JAVA Programming, Virtual Cloud Computing, Soft Skills for IT, Inheritance in Java, AWS Sagemaker, Introduction to Deep Learning, Introduction to Transfer Learning, Microsoft Azure Essentials, Artificial Intelligence and Machine Learning, Introduction to Google Cloud Platform, Digital Marketing Strategy, Python classes”.

❖ **60 students of III-B.Sc. Computer Science** has completed various online courses in “Prompt Engineering for ChatGPT, Python with basic programs, OOP’s in Python, Soft Skills for IT, Effective Communication, Java Programming, Functions in Python, Introduction to Machine Learning & Python Matplotlib, Smart English Basics for Professionals, Basics of Machine Learning, Python Projects for Beginners, Introduction to Machine Learning, Python Pandas & Machine Learning Algorithm, Introduction to Machine Learning, Functions in Python, Quantitative Aptitude Basics, Introduction to Machine Learning, & Functions in Python, Basics of Machine Learning & Python MySQL, Introduction to Machine Learning & Python IDLE, Introduction to Machine Learning & Python MySQL, Smart English Basics for Professionals & Python Basics Programs, Introduction to Machine Learning & Python Pandas, Introduction to Supervised Learning, Data Science Using Python in Swayam online Course”.

f) Inter-Departmental Activities

- ❖ 12 students of II B.Sc. Computer Science Students attended the Awareness Programme on “**Pitching an Idea for Staggering Genius**” on 15.7.2024 organized by the Department of Mathematics.
- ❖ 20 students of I B.Sc. Computer Science Students attended Guest Lecture on “**Navigating Complexity: Interdisciplinary learning for non-Mathematics students**” on 02.08.2024 Organized by the Department of Mathematics.
- ❖ 11 students of I B.Sc., Computer Science Students attended “**Hands on Training in MATLAB programming for beginners**” organized by Department of Mathematics on 07.08.2024.
- ❖ 10 students of II B.Sc. Computer Science Students attended “**A Guest lecture on Students project ideas-Interdisciplinary approach**” organized by department of Mathematics on 23.09.2024.

- ❖ 4 students of II B.Sc. Computer Science Students attended “**A Workshop on SPSS**” organized by department of Mathematics on 16.12.2024.
- ❖ 8 students of I B.Sc. & II B.Sc. Computer Science Students attended “**An Exhibition on Expo’24**” organized by Department of Zoology on 11.12.2024.
- ❖ 3 students of III B.Sc. Computer Science Students attended “**Hands on Training programme on Arduino**” on 08.10.24 organized by Department of Physics.
- ❖ 5 students of III B.Sc. Computer Science Students attended “**Hands on Training programme on Electrical Safety and Maintenance**” 27.12.2024 organized by Department of Physics.
- ❖ 10 students of B.Sc. Computer Science participated and exhibited their science models in the Science Exhibition in connection with science day celebration “**Tesla fest 2025**” organized by the Department of Physics.
- ❖ 5 students of B.Sc. Computer Science participated in the Guest lecture “**Importance of Science Innovation in Higher Education**” on 09.10.2024 organized by the Department of Physics.
- ❖ 5 students of B.Sc. Computer Science participated in the Guest lecture “**Crafting the Future: Innovation and IPR for Aspiring Minds**” on 12.12.2024 organized by the Department of Physics.
- ❖ II B.Sc. Computer Science Students **M. R. Afrin Fathima, M. Mythili, K. Gopika, S. Shamini, K. Maheswari, S. Lakshana** won **First Prize** in Group Dance the Interdepartmental Fest BAZOOKA’24 Organized by Department of English on 1.10.2024
- ❖ I B.Sc. Computer Science **M. Santhanalakshmi, S. Siji, A. Dhiyaana** has secured **Second Place** in “Thattangal” event of Advaita’2k25 National Level Intercollegiate Students Technical Symposium held on 13th March 2025 Organized by Avinashilingam Institute for Home Science and Higher Education for Women of Arts and Science for Women.
- ❖ II B.Sc. Computer Science Students **M. R. Afrin Fathima, S. Lakshan** won **Third Place** in Dance in the Inter- College Lit Fest FLORIANA ’25 Organized by Department of English (Aided), Kongunadu Arts and Science College, Coimbatore held on 18.02.2025.
- ❖ I B.Sc. Computer Science **Balanethraa. K, B.B. Shalini** participated in the event “Canvas Painting & Mehendi Competition” in Fantabulous, All India Inter Collegiate Cultural Fiesta held on 26th September 2024 at Nehru Arts and Science College.
- ❖ I B.Sc. Computer Science **Balanethraa. K, Shalini B B** participated in the “DHR-ICMR sponsored Two days National Level Workshop on Integrating MRI and AI: Towards Personalized Medicine in Neurology” organized by Department of Computer Science and Engineering, KPR Institute of Engineering and Technology from 21.02.2025 to 22.02.2025.
- ❖ I B.Sc. Computer Science **Divya. A, Sanjeevini A** secured **Third prize** in “Snapssell – The

Ultimate Ad Battle” in ADZAP competition conducted during the Intercollegiate Meet held on 4th February 2025 at Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.

- ❖ I B.Sc. Computer Science **Priyadharshini. V** participated in “Creative Splash” competition conducted during the Intercollegiate Meet held on 4th February 2025 at Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.
- ❖ III B.Sc. Computer Science K. **Priya Dharshan, H. Mohammed Arshad Jawahir, A. Rahul, P.L. Swasthika** participated in an Intercollegiate Event “Solve4Society” Hackathan’24 held on 09.08.2024 conducted by the Department of Computer Science, KG College of Arts and Science.

9.7 No. of New Experiments Introduced:

Core Practical 1 – C Programming–Lab

- Write a C program to display a month-by-month calendar for a given year.
- Write a C program to Read/Write structure to a file.
- Write a C program to check if a String is Palindrome using pointers.

Core Practical 2 – Object Oriented Programming with C++ - Lab

- Write a C++ Program to Store Information of a Student in a Structure.
- Write a C++ Program to print Inverted Pyramid Pattern.
- Write a C++ Program to check if a given year is leap year.

Core Practical 3 – Java Programming – Lab

- Write a java program to convert string value to byte value.
- Write a java program to convert linked list to an array.
- Write a java program to rotate an elements of an list.

Core Practical 4 – Visual Basic and Oracle Lab

- Design a form to display a picture using image box/picture box selected from a file in file list box directory list box, drive list box.
- Design a simple application using OLE control.
- Write a php program to create an analog clock which shows all the three hands (Hours, Minutes, Seconds). You can add an option to change the background of the clock.

Core Practical 5 – Python Programming and IoT – Lab

- Potentiometer and IR Sensor interfacing with Arduino.
- TDS Sensor Interfacing with Arduino.
- Actuators controlling by mobile using Arduino.

Core Practical 6 – PHP Programming Lab

- Create a simple HTML form with fields for name and email. Write a PHP script to handle form submission and display the entered data.
- Write a php program to check whether a given number is Armstrong or not.
- Write a php program to find the largest values of two numbers using nesting of functions.

9.8 Training Received by Faculty/ List of Activities Undertaken by Faculties

a) Training Received by Faculty

- ❖ Dr. S. Radharani Participated in Seven days National Level Faculty Development Programme on **“Enhancing Academic and Administrative Excellence Through Quality Initiatives”** conducted by Park’s College (Autonomous), Tirupur, from 22.07.2024 to 29.07.2024.
- ❖ Dr. S. Radharani has Participated in the National Level Workshop **titled “Green Computing”** on 19.11.2024 Organized by A.C.T Academy, Kerala, Department of Information Technology, CMS College of Science and Commerce.
- ❖ Dr. S. Radharani Participated in **“Saas: Revolutionizing IT – How Cloud Based Solutions are Transforming Business”**, Organized by Computer Society of India, Coimbatore Chapter on 14.08.2024.
- ❖ Dr. S. Radharani Participated in the **“Tech Trends in Cybersecurity”** jointly Organized by Society for Electronic Transaction and Security (SETS), IEEE Computer Society Madras Chapter and Data Security Council of India (DSCI) held at Dr. APJ Abdul Kalam Auditorium, SETS, Chennai on 19.08.2024 (Hybrid Mode).
- ❖ Dr. S. Radharani and Dr. A. Kavitha Participated in two-day FDP on **“Critical and Creative Thinking Skills”** on 5th & 6th August 2024 Organized by IQAC & Michael Job Memorial College of Education for Women, Coimbatore.
- ❖ Dr.S. Radharani Participated in One day FDP on **“IPR Insights and Digital Tools for Teaching”** Organized by Department of Computer Science, KASC, Cbe -29 held on 27.01.2025.

- ❖ Dr. S. Radharani Participated in One Week FDP on “**Microsoft Power BI Data Analyst**” Organized by E & ICT Academy Organized by KASC, CBE -29 held on 17.02.2025 to 21.02.2025.
- ❖ Dr. S. Radharani Completed FDP Course Swayam (NPTEL) in “**Cloud Computing**” held in November 2024.
- ❖ Dr. S. Radharani has Participated in a National Workshop on “**Mastering SPSS Data Analysis, Publication Strategies and Ethical Compliance**” Organized by Department of Yoga Studies, School of Medicine and Public Health, Central University of Kerala held on 28th & 29th February 2025.
- ❖ Dr. A. Kavitha has participated in IP Awareness Training Program under National Intellectual Property Awareness Mission on March 11 2024.
- ❖ **Ms. K. Deekshana** has Completed the online course “**Introduction to Deep Learning**” provided by Great Learning Academy on August 2024.
- ❖ **Ms. K. Deekshana** has Completed the online course “**Digital Image Processing**” provided by Great Learning Academy on August 2024.
- ❖ **Ms. K. Deekshana** has Successfully Completed the online course “**Azure Fundamentals**” provided by Simplilearn: Skill Up on 29th August 2024.
- ❖ **Ms. K. Deekshana** has Successfully Completed the online course “**Cloud Computing and Distributed Systems**” provided by NPTEL Online Certification on January – March 2025 with Distinction.
- ❖ **Ms. K. Deekshana** and **Dr. S. Radha Rani** has Successfully Completed the Faculty Development Programme on “**Research Publications**” held on 14.08.2024 Organized by Department of Computer Applications & Department of Information Technology Kongunadu Arts and Science College, Coimbatore.
- ❖ **Dr. A. Kavitha & Ms. K. Deekshana** has Successfully Completed the 7 Days National Level Faculty Development Programme on “**Enhancing Academic and Administrative Excellence Through Quality Initiatives**” Conducted by IQAC, Park’s College (Autonomous) Tirupur, Tamil Nadu from 22.07.2024 to 29.07.2024
- ❖ **Dr. A. Kavitha & Ms. K. Deekshana** has Participated the 2 Days National Level Faculty Development Programme on “**Critical & Creative Thinking Skills**” on 5th & 6th August 2024 Organized by IQAC, Michael Job Memorial College of Education for Women, Coimbatore.
- ❖ **Dr. A. Kavitha & Ms. K. Deekshana** has Participated the “**SaaS: Revolutionizing IT- How Cloud Based Solutions are Transforming Business**” Organized by Computer

Society of India, Coimbatore Chapter on August 14, 2024.

- ❖ **Dr. A. Kavitha** has successfully participated in **“IP Awareness/Training Program”** under National Intellectual Property Awareness Mission (NIPAM) Organized by Intellectual Property Office, India on March 13th 2024.
- ❖ **Dr. A. Kavitha, Ms. K. Deekshana** has attended the One Week Online FDP on **“Visual Intelligence: Exploring Image Processing and Computer Vision”** Organized by Department of Computer Science and Engineering in association with Computer Society of India (CSI)-SB, CVR College of Engineering, Hyderabad from 26th March to 30th March 2024.

b) Conferences/ Seminars / Workshops Attended

- ❖ Dr. A. Kavitha Presented a paper entitled **“Study on Wireless Technology”** in the International Conference on Innovative Digital Technologies ICIDT’24 held on 28.08.2024 organized by Dr. R.V. Arts and Science College, Department of Computer Science, Coimbatore.
- ❖ K. Deekshana Presented a paper entitled **“Study on Artificial Intelligence”** in the International Conference on Innovative Digital Technologies ICIDT’24 held on 28.08.2024 organized by Dr. R.V. Arts and Science College, Department of Computer Science, Coimbatore.
- ❖ Dr. S. Radharani Presented a paper entitled **“Study on Latest Trends in Digital Image Processing”** in the International Conference on Innovative Digital Technologies ICIDT’24 held on 28.08.2024 organized by Dr. R.V. Arts and Science College, Department of Computer Science, Coimbatore.
- ❖ Dr. S. Radharani Presented a paper on **“Study on Green Cloud Computing”** in the International Conference on recent Advances in Cloud Computing and Communication Technology (ICRACCCT’24), 06.09.2024, organized by Department of Computer Science, Information Technology and Computer Applications, Noorul Islam College of Arts and Science Kumaracoil.
- ❖ Dr. S. Radharani Presented a paper on **“Survey on Threats and Attacks with Cyber Security”** in the International Conference on recent Advances in Cloud Computing and Communication Technology (ICRACCCT’24), 06.09.2024, organized by Department of Computer Science, Information Technology and Computer Applications, Noorul Islam College of Arts and Science Kumaracoil.
- ❖ Dr. S. Radharani has Participated in a webinar titled **“Guarding Your Digital Legacy -**

Cyber Security for Seniors and Adults” organized by Computer Society of India, Coimbatore Chapter held on 09.10.2024.

- ❖ Dr. S. Radharani has Participated and Presented a Paper in Two days International Level Seminar on **“Harmonizing Tribal Development and Biodiversity Conservation on Western Ghats”** held on 6th & 7th March 2025 Organized by Department of Tamil in association with PG & Research Department of Zoology and Wildlife Biology.
- ❖ **Dr. A. Kavitha, Ms. K. Deekshana** has attended the Online Webinar on **“Cloud Computing Simplified: An Introduction to Microsoft Azure”** Organized by the School of Computer Science and Engineering and School of Information Science of the Presidency University, Bangalore on 16th November 2024.

Any other

- ❖ **Ms. K. Deekshana**, has presented a paper **“Study on Data Mining Technology”** at the International Conference on **“Recent Advances in Cloud Computing and Communication Technology”– ICRACCCT ’24** Organized by Department of Computer Science, Information Technology and Computer Applications, Noorul Islam College of Arts & Science in Collaboration with ICT Academy of Tamil Nadu on September 6, 2024.
- ❖ Dr. S. Radharani Participated in the International Webinar on **“The New Education Policy and the Revival of Indian Knowledge System based on Sanskrit”** organized by Department of Sanskrit, Faculty of Arts, Communication and Indic Studies, Sri Sri University, Cuttack, Odisha in collaboration with HRDC, Sri Sri University and Department of Sanskrit, University of Calcutta, held from 29.07.2024 to 31.07.2024.
- ❖ Dr. S. Radharani has presented paper on the topic **Vision of youth towards self reliant bharat through IKS** in the International Seminar on Bharathiyasastras & Samskrtam Bridging Traditional Wisdom & Modern Innovation for Vikasith Bharath organized by ABRSM in collaboration with Rajiv Gandhi Center for Biotechnology, central Sanskrit University & ICFAI University supported by UVAS (Kerala) on 03.01.2025-04.01.2025.
- ❖ Dr. S. Radharani has Participated and presented a paper on 8th International Conference on Yoga Sastra Organized by Vivekananda Rock Memorial and Vivekananda Kendra, Yoga Sastra Sangamam held on 28.02.2025 to 02.03.2025.
- ❖ Dr. S. Radharani has Participated in a Four-day Workshop on **“Vagvipakaha”** Organized by Department of Vyakarana, Karnataka Sanskrit University, Bengaluru held on 23rd September 2024 to 26th September 2024.

9.9 List of Exhibitions/ Seminars/ Training Courses Conducted

a) Conference/ Seminars / Workshops Organized

S. No.	Name of the Event/ Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1	A Seminar on “Exploring the Power of Gen-AI Tools”	12.08.2024	Dr.S. Karpagavalli, Associate Professor of Computer Science, PSGR Krishnammal College for Women, Coimbatore.	Students: 60 Faculty: 3	- Acquired the knowledge of AI, Machine Learning, Deep Learning and Generative Artificial Intelligence obtaining the importance of Gen AI tools. - Many students used AI tools in their Projects.
2.	A Seminar on “IPR Infringement & Consumer Affairs”	04.10.2024	J. Cijin Samuel, B.A, B.L(Hons)., Advocate (Civil & Criminal), District Court, Coimbatore.	Students:145 Faculty: 4	- Increased awareness among students about IPR infringement and its impact on consumers. - Enhanced understanding of consumer rights and responsibilities related to IPR.
3.	A Seminar on “AI Applications and Practical Insights”	08.01.2025	Dr. Venkatapathy Subramanian, Director, Anaadi Rural AI Center, Palani.	Students: 36 Faculty: 4	- Students understood the basics of Artificial Intelligence and Machine Learning, and also gained knowledge about Reinforcement Learning, Natural Language Processing (NLP) and Computer Vision. - Students also learned how to apply predictive data analytics to real-world problems and explored new AI techniques like Generative AI and its working structure.
4.	A Seminar on “Power BI: Insights and Applications”	30.01.2025	Dr. V. Radhamani, Assistant Professor, Department of Mathematics, J.K.K Nataraja College of Arts and Science, Namakkal.	Students: 41 Faculty: 3	Students understood the features of Power BI, which helps to design interactive reports and dashboards, and learnt about how data visualization supports effective business decision-making.
5.	A Seminar on “Emerging Trends in Cyber Security”	11.03.2025	Mr. Karthikeyan, Nagaraj, Cloud Consultant, Coimbatore.	Students: 65 Faculty: 4	Students gained a deeper understanding of the latest cyber threats, including ransomware, phishing and advanced persistent threats (APTs) and developed projects based on Cyber Security.

6.	A workshop on “Web Application Development”	02.09.2024	Dr.V.K. Narendira Kumar, Associate Professor of Computer Science, Gobi Arts and Science College, Gobi.	Students: 69 Faculty: 3	• Students were provided with an opportunity to explore the fundamentals of building websites and web applications. • They gained a basic understanding of core Web technologies and were encouraged to take their first steps toward becoming skilled web developers. • Projects based on Web Application had been developed by the students.
7.	A Workshop on “Ubiquitous Computing”	12.09.2024	Mr. Mohamed Ibrahim, Cross Platform Developer, Accent Techno Soft, Coimbatore.	Students:60 Faculty: 3	• Students understood how computing was integrated into everyday life. • They learnt how it improved productivity, user experience, accessibility, decision-making, and personalized healthcare.
8.	A Workshop on “Mobile Phone Servicing and Troubleshooting”	22.01.2025	Mr. B. Krishnakumar, Founder / CEO, New Technology Institutions, Coimbatore.	Students: 50 Faculty: 3	• Students learnt to efficiently diagnose and repair both hardware and software issues in mobile devices and to use advanced tools for troubleshooting problems. • Students practiced preventive maintenance to improve device performance and longevity and gained skills in replacing faulty components.
9.	A Workshop on “Machine Learning Using Python”	05.03.2025	Dr. P. Sriramakrishnan Assistant Professor, Department of Mathematics, Amrita Vishwa Vidhyapeetham, Coimbatore.	Students: 52 Faculty: 4	• Students learnt about the key concepts in Machine learning and learnt about how to improve accuracy in predictions, automate tasks, and enhance decision-making through data-driven insights. • Students also explored the power of Pattern recognition in solving complex problems. • Projects incorporating Machine Learning and Python have been developed by the students.
10.	A Workshop on “Data Analytics using Tableau”	10.03.2025	Dr.S. Ramkumar, Associate Professor, Department of Computer Science, Christ University, Bangalore	Students: 73 Faculty: 4	Students learnt about • Basics of Tableau • Data Connection & Preparation • Interactive Dashboards & Reports • Advanced Data Visualization

b) Exhibition / Competitions Organized

S. No.	Name of the event/Activity	Date	Number of Beneficiaries	Outcome
1.	IDEAL IGNITION Competitions	04.09.2024	92 Students	● Boosted Confidence and Self-Esteem ● Developed Competitive Spirit and Resilience ● Enhanced Skills and Knowledge ● Encouraged Teamwork and Collaboration ● Improved Problem-Solving and Critical Thinking
2.	Competitions for School Students	08.10.2024	64 School Students	● Enhanced students' diverse skill sets. ● Students were motivated to learn advanced developments in Computer Science subjects. ● The competitive spirit among the students ignited their minds towards science education.
3.	Science Fest '24- Exhibition	08.10.2024	98 School Students	● School students were motivated towards science education. ● Students gained practical understanding of concepts through real-time models.
4.	“Techno Fusion 2k24” Competitions for College Students (Poster, Paper Presentation, Connection, Advertisement, Web designing, Quiz)	17.12.2024	316 Students	● Explored interdisciplinary connections between the Mathematics, Engineering and other Science domains. ● Encouraged team work and presentation skills. ● Promoted innovation and creativity by integrating theory with practice.
5.	“Filmfest '25” for Science students.	20.02.2025	20 Students	● Motivated students to delve deeper into emerging trends and advanced developments in science, fostering a passion for continuous learning and innovation.

c) Training Courses Conducted

S. No.	Name of the event/ Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1.	5 Days Virtual FDP “Future Prospects of Innovations in Artificial Intelligence”	2.12.2024 to 6.12.2024	● Mr. Ramesh Lekshmyanarayanan, Digital & Business Transformation, Green Catapult Duke University, New York, US. ● Mr. Bhairav Mehta Senior Manager, Data Science and	83 Faculty	● The outcome of leveraging AI Tools in fostering academic excellence in research and innovation is a paradigm shift towards streamlined processes, enhanced collaboration, and groundbreaking discoveries. ● By integrating AI – Driven solutions,

			Product Management Amazon Cornell University, California, US. ❖ Dr. Anand Nayyar, Professor, Scientist, Vice-Chairman and Director, School of Computer Science, Duy Tan University, Vietnam. ❖ Mrs. Rose Oviya Ramasamy, Senior Cloud Architecture & Consultant, New York SenOvi Software Consultants ❖ Dr. Anand Ranganathan, Co-founder, Chief AI Officer.		researchers can efficiently navigate novel insights and trends with ease.
2.	Training Programme for Lab Technician on “Laptop Servicing and Networking Credentials”	22.1.2025	Mr.A. Sajith Trainer Technician, New Technology Institutions, Coimbatore	12 Lab Technicians	Technicians acquired practical knowledge about various types of Laptops servicing and troubleshooting through hands-on training.
3.	Faculty Development Programme on “IPR Insights and Digital Tools for Teaching”	27.01.2025	• Dr. B. Gayathri, Associate Professor, Department of Computer Science, Bishop Heber College, Trichy. • Dr. M. Rani, Professor, Kumaraguru College of Technology and Business School, Coimbatore.	63 Faculty from various Science Departments	• The Programme enhanced the importance and awareness of IPR. • Faculty members gained clear understanding of Patents, Copyrights, Trademarks, Research ethics and equipped with skills to use digital platforms.

d) Lab Manual

- ❖ SOP and Lab Manual prepared for “C Programming” for I B. Sc Computer Science.
- ❖ SOP and Lab Manual prepared for “Object Oriented Programming with C++” for I B. Sc Computer Science.

- ❖ SOP and Lab Manual prepared for “PHP Programming” for III B. Sc Computer Science.
- ❖ SOP and Lab Manual prepared for “Advanced Excel” for III B. Sc Computer Science.

e) Mentor Mentee Meeting

Mentor Mentee Meeting was held on 12.08.2024 by Dr. S. Karpagavalli, Associate Professor and Head, Department of Computer Science, PSGR Krishnammal College for Women, Coimbatore- 641 004, mentored the session and 4 Faculty members are benefited regarding utilization of recurring budget for Internships, Projects, Workshops, Lab Manual, Hands on-training and Industrial Visits.

9.10 Details of Books and Journals subscribed from DBT Grant

S. No	Bill No	Date	Company Name	Publisher	Author	Title	Qty	Amount
1.	SINV03100	14.03.2025	TBH Publishers & Distributors	CRC TBH	KumarI Sadas	Edge Computing Fundamentals Advances App	2	1492.50
2.	SINV03100	14.03.2025	TBH Publishers & Distributors	PEARSON	Desikan	Software Testing: Principles & Practice	1	570.00
3	SINV03100	14.03.2025	TBH Publishers & Distributors	MHE	Buyya	Mastering Cloud Computing	1	727.50
4	SINV03100	14.03.2025	TBH Publishers & Distributors	PEARSON	Tanenbaum	Computer Networks 6ED	2	1395.00
5	SINV03101	14.03.2025	TBH Publishers & Distributors	PEARSON	Tanenbaum	Computer Networks 6ED	1	697.50
6	SINV03101	14.03.2025	TBH Publishers & Distributors	SCITECH	Bhuvaneshwari	Big Data Analytics	1	165.00
7	SINV03101	14.03.2025	TBH Publishers & Distributors	CRC TBH	KumarI Sadas	Edge Computing Fundamentals Advances App	1	746.25
8	SINV03101	14.03.2025	TBH Publishers & Distributors	CAMBRIDGE	Misra	Introduction to IOT	1	596.25
9	SINV03101	14.03.2025	TBH Publishers & Distributors	ORIENT B	Arshdeep	Cloud Computing: A Hand on Approach	1	712.50
10	SINV03102	14.03.2025	TBH	MHE	Buyya	Mastering	1	727.50

			Publishers & Distributors			Cloud Computing		
11	SINV03102	14.03.2025	TBH Publishers & Distributors	PEARSON	Tanenbaum	Computer Networks 6ED	1	697.50
12	SINV03102	14.03.2025	TBH Publishers & Distributors	PEARSON	Desikan	Software Testing: Principles & Practice	1	570
13	SINV03103	14.03.2025	TBH Publishers & Distributors	SCITECH	Bhuvaneshwari	Big Data Analytics	1	165.00
14	SINV03103	14.03.2025	TBH Publishers & Distributors	MHE	Buyya	Mastering Cloud Computing	2	1455.00
15	SINV03103	14.03.2025	TBH Publishers & Distributors	PEARSON	Tanenbaum	Computer Networks 6ED	2	1395.00
16	SINV03103	14.03.2025	TBH Publishers & Distributors	CRC TBH	Kumari Sadas	Edge Computing Fundamentals Advances App	2	1492.50
17	SINV03103	14.03.2025	TBH Publishers & Distributors	OXFORD	Reema Tharej	Python programming	1	468.75
18	SINV03108	14.03.2025	TBH Publishers & Distributors	SCITECH	Bhuvaneshwari	Big Data Analytics	2	330.00
19	SINV03108	14.03.2025	TBH Publishers & Distributors	MHE	Buyya	Mastering Cloud Computing	1	727.50
20	SINV03108	14.03.2025	TBH Publishers & Distributors	PEARSON	Tanenbaum	Computer Networks 6ED	3	2092.50
21	SINV03108	14.03.2025	TBH Publishers & Distributors	PEARSON	Desikan	Software Testing: Principles & Practice	3	1710.00
22	SINV03108	14.03.2025	TBH Publishers & Distributors	OXFORD	Reema Tharej	Python programming	1	468.75
23	SINV03108	14.03.2025	TBH Publishers & Distributors	CRC TBH	Kumari Sadas	Edge Computing Fundamentals Advances App	3	2238.75
24.	SINV03108	14.03.2025	TBH Publishers & Distributors	CRC	Tripathy	Internet of things (IOT): Technologies Application Challenges an	1	2246.25
25	SINV03108	14.03.2025	TBH Publishers & Distributors	CAMBRIDGE	Misra	Introduction to IOT	1	596.25

26	SINV03207	20.03.2025	TBH Publishers & Distributors	PEARSON	Tanenbaum	Computer Networks 6ED	4	2790.00
27.	SINV03207	20.03.2025	TBH Publishers & Distributors	PEARSON	Desikan	Software Testing: Principles & Practice	3	1710.00
28	SINV03207	20.03.2025	TBH Publishers & Distributors	MHE	Buyya	Mastering Cloud Computing 2NE ED	1	581.25
29.	SINV03207	20.03.2025	TBH Publishers & Distributors	OXFORD	Reema Tharej	Python programming	1	500.00
TOTAL							29	30,065

9.11 Outreach / Extension Activities

S. No.	Name of the Event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1.	Hands on Training Programme in “Python and PHP” (XII Standard students)	01.02.2025	Students of III B.Sc. Computer Science.	70 Students	Students learnt about - Advantages and applications of Python language. - Learnt the syntax to code basic programs using Python. - Learnt about the basics and usage of PHP for website development.
2.	Hands on Training Programme in “HTML” (XI Standard students)	06.02.2025	Dr. M. Jagadeeswari, Assistant Professor, Department of Computer Science, KASC, Coimbatore.	38 Students	- Students learnt the basic web designing skills. - It improved their computer knowledge, encouraged creativity, and gave them a better understanding of how websites are made, preparing them for the digital world.
3.	Awareness Programme on “Digital Literacy for Non-Computer Science students”	08.07.2024 - 11.07.2024	Students of III B.Sc. Computer Science.	Students: 70 Faculty: 2	Imparted the Knowledge of Basic Operations of Computers, functionality of ChatGPT, Scratch and Cloud Computing about Artificial Intelligence (AI).

9.14 Invited Lectures/Guest Lectures Conducted

S. No.	Name of the event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1	A Guest Lecture on “Nurturing Youth Entrepreneurship the need of the hour”	19.07.2024	Dr.R. Mayilsamy Assistant Professor of Co-operation, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore.	Students: 47 Faculty: 3	● Acquired the knowledge and obtained the importance of Entrepreneurship. ● Four students completed an Interdisciplinary project in Commerce discipline.
2	A Guest Lecture on “Cyber Threats”	23.07.2024	Mrs. Dilipa Sub Inspector, Thudiyalur Police Station, Coimbatore.	Students: 68 Faculty: 4	● Taught about cyber offences, including morphing, personal data theft and cash hacking, fake calls and fraudulent activities in bank transactions and money transfers. A Student has done a Project under Cyber threats.
3	A Guest Lecture on “Impact of AI”	07.01.2025	Dr. V. T. Balamurugan, Professor & Head, Department of Biomedical Engineering, Bannari Amman Institute of Technology, Sathyamangalam.	Students: 52 Faculty: 4	● Enabled the students to learn, conceptualize and develop the comprehensive knowledge of Artificial Intelligence, Machine Learning, Deep Learning algorithms effectively to analyze problems and identify solutions for real time applications.
4	Guest Lecture on “Cyber Security & Intelligence”	28.01.2025	Dr. T. Velumani, Assistant Professor, Department of Cyber Security & DCFS, Rathinam College of Arts and Science, Coimbatore.	Students: 45 Faculty: 3	● Emphasized the importance of cybersecurity in today's digital world and provided insights into various cyber threats. ● Focused on strategies to protect data and the role of intelligence in preventing Cybercrimes. ● 2 Students had done projects under Cyber Security.

5	A Guest Lecture on “Evolution of AI in Medical Field”	12.03.2025	Dr. V. Manikandan, Medical Officer, Sakthi Siddha Medical Centre, Kumaraguru Institutions, Coimbatore.	Students: 64 Faculty: 4	● Students learned how AI assists doctors by automating tasks and reducing paperwork, allowing for more focus on patient care. ● They also understood the challenges such as data privacy, fairness in decision-making, and the need for clear rules and safety measures. ● 3 Students have done Project under Medical Field.
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DEPARTMENT OF MATHEMATICS

9.6 No. of Hands-on Experiments being Conducted/ List of Activities Undertaken by Students

i) Hands-on Trainings being Conducted

S. No.	Name of the Event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1.	Hands on Training on “MATLAB - Programming for Beginners”	07.08.2024	Dr. P. Murali Krishna Assistant Professor, Department of Mathematics, Amrita Vishwa Vidyapeetham, Coimbatore.	Maths: 53 Computer: 9 Chemistry: 5	The Program helped the students to enhance their proficiency in MATLAB by covering key areas such as the basics of MATLAB, the use of functions and plotting graphs using MATLAB software.
2.	One Day Hands on Training on “Power BI”	20.09.2024	Dr. V. Radhamani, Assistant Professor, Department of Mathematics, J.K.K. Nataraja College of Arts and Science, Komarapalayam.	Maths: 49 Physics: 03 Chemistry: 05	Student developed their practical skills in data visualization and the training offered valuable insights into using Power BI as a powerful tool which facilitates connecting and transforming various data sources for large data set.
3.	Hands on Training on “R Programming”	21.01.2025	Dr. V. Parthiban, Associate Professor, Vellore Institute of Technology, Chennai.	44 Students	Students learned to install and use R programming effectively, which enhanced their knowledge in Statistical Analysis.
4.	Hands on Training on “Data Analysis using Python”	26.02.2025	Dr. Rajkumar Rajasekaran, Professor, School of Computer Science and Engineering, Vellore Institute of Technology, Vellore.	50 Students	Students collected secondary data from resource persons and made use of Python packages to visualize and analyse the data.
5.	Hands on Training “Programme on Sage Mathematics”	10.03.2025	Dr. M. Gilbert Rani, Assistant Professor, Department of Mathematics, Arul Anandar College, Madurai.	37 Students	Students gained practical experience in using Sage Mathematics for Mathematical Computations including Algebra, Calculus, and Differential Equations.

6.	A Hands-on Training on “SCILAB Programming”	14.03.2025	Dr. C. Periyasamy, Assistant Professor, Department of Mathematics, SRM Institute of Science & Technology Chennai.	59 Students	Students gained practical experience in SCILAB programming which enhanced their computational skills for Mathematical Modeling, Simulation and Problem-Solving techniques in Engineering and Scientific Applications.
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ii) List of Activities Undertaken by Students

a) List of Projects Undertaken by Students

- ❖ Shalini L, Priyadarshini K and Keerthi A of III B. Sc Mathematics completed a project on “**A Study on Automatic Vehicle Reversing Sensor System with Ultrasonic Technology**” (Interdisciplinary).
- ❖ Priyadarshini K, Sandhiya P and Girija D of III B. Sc Mathematics completed a project on “**A Study on Applications of Operations Research.**” (Interdisciplinary).
- ❖ Srivarshini S completed a project on “**Credit card fraud detection using streamlit**” (Interdisciplinary).
- ❖ Nisha AS, Shyamala S and Karthikeyan M of III B. Sc Mathematics completed a project on “**A Study on Indian Knowledge System in Modern Education**” (Interdisciplinary).
- ❖ Thanya Shri BS, Smrutilipi Jena and Vaideeswari S H of III B. Sc Mathematics completed a project on “**A Study on Various Methods to find Eigenvalues and Eigenvectors using MATLAB**” (Interdisciplinary).
- ❖ Jaculine merry P, Ganthi G and Gokulakannan M of III B. Sc Mathematics completed a project on “**A Study on Some Applications in Mathematical Modelling**” (Interdisciplinary).
- ❖ Thakshinya Shri S, Karthikeyan S and Arockiya Reshma R of III B. Sc Mathematics completed a project on “**Mathematical tools in Cryptography using MATLAB**” (Interdisciplinary).
- ❖ Tamilselvan C, Hariprasath P and Abinaya Sri B of III B. Sc Mathematics completed a project on “**A Study on Applications of Differential Equations using Python Programming**” (Interdisciplinary).
- ❖ Rakshna N, Katharine merry P and Danya K of III B. Sc Mathematics completed a project on “**Mathmetical Modeling in Music using Matlab**” (Interdisciplinary).
- ❖ Santhiya B, Dharani K K and Vaitheeswari D of III B.Sc. Mathematics completed a project on “**Vedic Mathematics: An Introduction and Analysis - Multidimensional Approach**” (Interdisciplinary).

- ❖ Sandhiya R and Subasri RR of III B. Sc Mathematics completed a project on a **“Python Modules to Perform Statistical Computations and Data Analysis” (Interdisciplinary)**.

Innovative Math Models designed and developed by the students

- ❖ Induja AM, Karthika G, Subha Harini S, Mahalakshmi S and Kiruthika D of I BSc Mathematics designed a model **“Golden Ratio”**.
- ❖ Santhosh A, Janarthan S and Santhoshkumar J of I BSc Mathematics designed a model **“Hypercube Visualization”**.
- ❖ Mathumitha K, Sathya K, Gnamini S and Suji N of I BSc Mathematics designed a Model **“Applications of Trigonometry”**.
- ❖ Dhanalakshmi M, Dhanalakshmi K, Devadharshini K and Vennila K of I BSc Mathematics designed a Model **“Algebra Working Model”**.
- ❖ Gayathri S, Shwetha D, Sivaranjani A and Nagalakshmi P of I BSc Mathematics designed a model **“Types of Graphs”**.
- ❖ Prathiksha M, Arthi N, Pavithra VS and Visakan R of II BSc Mathematics designed a model **“Presentation of 3D Figures by 2D Shapes”**.
- ❖ Ramalakshmi S, Raaghav M, Muthumari S and Pavithra M of II BSc Mathematics designed a model **“Trigonometry (Solid of Revolution)”**.
- ❖ Sowndarya R, Sharmila R, Eshasagar S and Divin Kumar K of II BSc Mathematics designed a model **“Golden Ratio in Nature”**.
- ❖ Ridhanya SK, Kaviya S, Sathya G and Rakshana K of II BSc Mathematics designed a model Visualization of **“Types of Angles”**.
- ❖ Sruthi Sree N, Boomidharhsini P, Priyanka Teres D and Nazarin A of II BSc Mathematics designed a model **“Pythagoras Theorem-Angle of Elevation and Depression”**.
- ❖ Hariprasath P of III BSc Mathematics designed a model **“Trigonometry and Its Applications”**.
- ❖ Smrutilipi Jenio and Gokulakannan M of III BSc Mathematics designed a model **“Conic Sections and Ellipse”**.
- ❖ Danya K of III BSc Mathematics designed a model **“Mathematical Park”**.

b) Industrial Visits

S. No	Class	Place of Visit	Date	No. of Beneficiaries	Outcome
1.	I B.Sc. Mathematics II B.Sc. Mathematics III B.Sc. Mathematics	- Radio Astronomy Centre - Tata Fundamental Research Centre, Ooty.	15.10.2024	Students: 40 Faculty :05	- Students explored the practical applications of Mathematics at the Radio Astronomy Centre, where they learned about data analysis and signal processing in the field of Astronomy. - In the Tata Fundamental Research Centre, they gained insights into advanced concepts like Statistical Analysis and computational methods used in Mathematics. - These experiences deepened their understanding of how Mathematics drives solutions towards scientific research.
2.	I, II & III B.Sc. Mathematics	- Pilikula Regional Science Center. Karnataka - Golden Temple Karnataka	21.12.2024 - 24.12.2024	Students: 25 Faculty :05	- Students developed a deeper understanding of Mathematical concepts through hands-on experiences, enhancing their ability to apply Algebra, Geometry, measurement, and data analysis in real-world contexts. - By exploring architectural symmetry, natural environments, engineering structures and scientific exhibits, strengthened their problem-solving skills and fostered a deeper appreciation for the practical applications of Mathematics.
3.	I B.Sc. Mathematics II B.Sc. Mathematics III B.Sc. Mathematics	- Vijnan Sagar Science and Technology Park, Thrissur. - State Museum- Thrissur	25.02.2025	Students: 49 Faculty: 5	- The visit provided the students with practical insights into how Mathematical principles are applied in Science and Technology. - They explored real-world examples of how Mathematics supports its advancements in various fields including Engineering, Physics and Biology.
4.	III B.Sc., II B.Sc., Mathematics	ISRO, Satish Dawan Space Center, Sriharikota.	28.03.2024	Students: 5 Faculty: 2	- Students understood how to work on developing models for various Space Missions and Satellite orbits. - The visit provided real-world application of Mathematics in optimization and scheduling Process.

c) Summer School/ Internship

- ❖ L. Shalini, A. Keerthi, S. Thakshinya Shri, B. S. Thanya Shri, S. Karthikeyan, R. Arockiya Reshma and S. H. Vaideeswari of III B.Sc. Mathematics underwent an internship on **Python Programming** at Stuvells Software Solutions, Coimbatore.
- ❖ N. Rakshna of III B.Sc. Mathematics underwent an internship on **Textile Industry** at Sree Knm Spinning Private Limited, Coimbatore.
- ❖ K. Priyadharshini, B. Santhiya and K. K. Dharani of III B.Sc. Mathematics underwent an internship on **Accounts and Finance** at Sree Vaari Industries, Coimbatore.
- ❖ S. Nisha, S. Shyamala and M. Karthikeyan of III B.Sc. Mathematics underwent an internship on **Number Theory** at Periyar University, Coimbatore.
- ❖ P. Katharine Merry and P. Jaculine Merry of III B.Sc. Mathematics underwent an internship on **Mathematical Modelling in Biological Applications** at Bharathiar University, Coimbatore.
- ❖ K. Priyadarshini, D. Girija and C. Tamilselvan of III B.Sc. Mathematics underwent an internship on **Python Programming** at Gateway Software Solutions, Coimbatore.
- ❖ Smrutilipi Jena of III B.Sc. Mathematics underwent an internship on **Python Programming** at Seeree Training and Development, Coimbatore.
- ❖ R. Sandhiya, S. Srivarshini and R. R. Subasri of III B.Sc. Mathematics underwent an internship on **Auditing** at Giri and Co, Coimbatore.
- ❖ K. Danya and D. Vaitheeswari of III B.Sc. Mathematics underwent an internship on **Dye Casting Moulding Tools of CNC Machine** at Mathi Engineering Industries, Coimbatore.
- ❖ P. Hariprasath of III B.Sc. Mathematics underwent an internship on **Goods and Services Tax** at Jds Associates Charter, Coimbatore.
- ❖ Abinaya Sri of III B.Sc. Mathematics underwent an internship on **Auditing and GST Filling** at Lakshmi Associates, Coimbatore.
- ❖ G. Ganthi of III B.Sc. Mathematics underwent an internship on **Impact of Graphic Designing Social media** at Tamil News TN, Coimbatore.
- ❖ M. Gokulakannan of III B.Sc. Mathematics underwent an internship on **Machinery and Tissue paper manufacturing** at Feathure Touch Tissues, Coimbatore.
- ❖ P. Sandhiya of III B.Sc. Mathematics underwent an internship on **Tally ERP 9** at Royal Institute of Fire and Safety, Coimbatore.

d) Conferences / Seminars / Workshops/Competitions/ Training Attended

- ❖ K. Priya Dharshini, R. Arockiya Reshma, and S. H. Vaideeswari of III B.Sc. Mathematics participated in “**PIESTA 2k24 Vellalar College for Women**” organized by The Department of Mathematics of Vellalar College for Women (Autonomous), Erode, held on 22.07.2024. **R. Arockiya Reshma and S. H. Vaideeswari won I place in Manculator, while K. Priyadharshini won a prize in Puzzle.**

- ❖ C. Tamilselvan of III B.Sc. Mathematics participated in the event **Poetry** organized in the **Coimbatore book fest at Codissia complex in Coimbatore**, from 19.07.2024-28.07.2024.
- ❖ K. Priyadarshini, K. Priyadarshini, C. Tamilselvan, S. Sri varshini, M. Karthikeyan and P. Hari Prasath of III B.Sc. Mathematics participated in the “**A one day workshop on Innovations in Learning Mathematics, SOLSTICE-2024**” organized by Department of Mathematics in **Kongunadu Arts and Science College** held on 24.09.2024.
- ❖ M. Induja of I B.Sc. Mathematics participated in **Elocation** on the occasion of **Sri Ramakrishna Paramahansa’s Birthday Celebrations in Ramakrishna Mission Vidyalaya** on 24.09.2024
- ❖ R. Arockiya Reshma, and H. S. Vaideeswari of III B.Sc. Mathematics participated in “**A two-day MTTS programme at SNR College**” organized by **Sri Ramakrishna College of Arts & Science for Women** held on 9.12.2024 & 10.12.2024.
- ❖ M. Induja of I B.Sc. Mathematics participated in the **Idea Ignite** competition on “**Innovation from concepts 2 Creation**” conducted by **Institution’s Innovation Council, Nirmala College for Women** on 10.12.2024.
- ❖ K. Priyadarshini, R. Arockiya Reshma, R. R. Subasri and K. K. Dharani of III B.Sc. Mathematics participated in the event **Science Mela Exhibition Working Model (Group)** in **District Level Yuva UTSAV at Kongunadu Arts and Science College** held on 11.12.2024.
- ❖ Tamilselvan of III B.Sc. Mathematics participated in the event **Science Mela Exhibition Working Model** in **District Level Yuva UTSAV at Kongunadu Arts and Science College** held on 11.12.2024.
- ❖ L. Shalini, P. Jaculine Merry, R. Arockiya Reshma, and H. S. Vaideeswari of III B.Sc. Mathematics participated in the **Workshop on “AI Tools for Research”** organized by **Sri Ramakrishna College of Arts & Science for Women** held on 23.01.2025.
- ❖ L. Shalini, P. Jaculine Merry, R. Arockiya Reshma, and H. S. Vaideeswar of III B.Sc. Mathematics participated the **International Conference on “Innovations in Intelligent Computing and Biological Sciences”** organized by **Sri Ramakrishna College of Arts & Science for Women** held on 24.01.2025.
- ❖ K. Priyadarshini, S. Srivarshini and K. Priyadarshini of III B.Sc. Mathematics participated in the event **Math Auction in MATHFLIX, an inter-collegiate fest** organized by **PSGR Krishnammal College for Women** held on 05.02.2025.
- ❖ K. Priyadarshini, S. Srivarshini, K. Priyadarshini and A. S. Nisha participated of III B.Sc. Mathematics in the event **Dictionary Competition, an inter collegiate fest** organized by **PSGR Krishnammal College for Women** held on 05.02.2025.
- ❖ K. Santhiya and K. Dharani of III B.Sc. Mathematics participated in the event **IPL Auction** in the **National Level Inter-Collegiate South Indian Cultural Fest, NAYA 2K25**, in **Sankara College of Science & Commerce, Coimbatore**, held on 21.02.2025.

- ❖ K. Priyadarshini and K. Priyadharshini of III B.Sc. Mathematics participated in the event **Group dance** in the **National Level Inter-Collegiate South Indian Cultural Fest, NAYA 2K25**, in **Sankara College of Science & Commerce**, Coimbatore, held on 21.02.2025.
- ❖ Tamilselvan of III B.Sc. Mathematics participated in the event **Treasure Hunt** in the **National Level Inter-Collegiate South Indian Cultural Fest, NAYA 2K25**, in **Sankara College of Science & Commerce**, Coimbatore, held on 21.02.2025.
- ❖ Santhiya and K. K. Dharani of III B.Sc. Mathematics participated in the event **Quize and IPL Auction in CASCALL'25** organized by **PSG College of Arts and Science** held on 20.03.2025.
- ❖ M. Karthikeyan and K. Priyadharshini of III B.Sc. Mathematics participated in the event **Start Music in CASCALL'25** organized by **PSG College of Arts and Science** held on 20.03.2025.
- ❖ M. Karthikeyan of III B.Sc. Mathematics participated in the event **Mobile Photography in CASCALL'25** organized by **PSG College of Arts and Science** held on 20.03.2025.
- ❖ Santhosh of I B.Sc. Mathematics **won III place** in the event **Math Modelling in Infifnity-2k25** organized by **Gandhigram Rural Institute**, held on 20.03.2025.

e) Paper/ Poster Presentation by Students

- ❖ C. Tamilselvan and P. Hariprasath of III B.Sc. Mathematics presented a paper entitled **Applications of differential equations in medical field** in the **National Level Inter-Collegiate South Indian Cultural Fest, NAYA 2K25**, in **Sankara College of Science & Commerce**, Coimbatore, from 21.02.2025.
- ❖ K. Priyadarshini and K. Priyadharshini of III B.Sc. Mathematics presented a paper entitled **Applications of operations Research** in the **National Level Inter-Collegiate South Indian Cultural Fest, NAYA 2K25**, in **Sankara College of Science & Commerce**, Coimbatore, from 21.02.2025.
- ❖ Arockiya Reshma R and Vaideeswari S H of III B.Sc. Mathematics presented a paper entitled **RSA Algorithm for Tamil Language** at Sri Ramakrishna College of Arts and Science for women on 24.01.2025.
- ❖ Shalini L and Jaculine Merry of III B.Sc. presented a paper entitled **Statistical Analysis of Share Price Movement of Sun Pharmaceutical Industries Ltd** at Sri Ramakrishna College of Arts and Science for women on 24.01.2025.
- ❖ Priyadarshini K, Sandhiya P and Girija D of III B.Sc. Mathematics presented a paper entitled **Applications of Operations research** at International Conference on Current Scenario in Pure and Applied Mathematics 2025 in Kongunadu Arts and Science College, Coimbatore.
- ❖ Smrutilipi Jena and Gokulakannan M presented a Paper entitled **Mathematical Modelling in Machinery** in **PSG College of Arts and Science** on 27.02.2025 and 28.02.2025.
- ❖ D Priyankateres of II B.Sc. Mathematics Presented a paper on **Cultural Heritage and Lifestyle**

changes due to Aquatic Pollution in the second International conference on Socio Economic impacts of Pollution in Water Bodies and Remedial Measures on 6th and 7th January 2025 at Kongunadu Arts and Science College, Coimbatore.

f) Inter-Departmental Activities

- ❖ S. Gayathri, P. Nagalakshmi, D. Kiruthika and G. Karthika of I B.Sc. Mathematics participated in a **“Awareness Programme on Digital Literacy on MS Office, Current Technology and Common Digital Utility”**, organized by the Department of Computer Science Under DBT Star college Scheme from 08.07.2024-12.07.2024.
- ❖ P. Nagalakshmi and K. Sathya of I B.Sc. Mathematics participated in **Essay writing** organized by the Department of Tamil on 08.08.2024.
- ❖ S. Gnamini of I B.Sc. Mathematics **won I place in Drawing**, organized by the Department of Computer Science, in connection with **National Space Day 2024** under DBT Star College Scheme from 08.07.2024-03.09.2024.
- ❖ C. Tamilselvan of III B.Sc. Mathematics **won I place in Poetry** organized by the Department of Tamil as part of **Mahakavi Bharathiyar's Memorial Day** on 11.09.2024.
- ❖ R. R. Subasri and R. Arockiya Reshma of III B.Sc. Mathematics participated in **Quiz** in the **Inter departmental Fest BAZOOKA'24** organized by the Department of English on 01.10.2024.
- ❖ A. M. Induja, G. Karthika, K. Sathya and S. Gnamini of I B.Sc. Mathematics participated in **Face Painting** in the **Inter departmental Fest BAZOOKA'24** organized by the Department of English on 01.10.2024.
- ❖ A. M. Induja and S. Subhaharhi of I B.Sc. Mathematics participated in **Group Dance** in the **Inter departmental Fest BAZOOKA'24** organized by the Department of English on 01.10.2024.
- ❖ S. Gayathri, S. Gnamini and K. Sathya of I B.Sc. Mathematics participated in **Spell Bee** in the **Inter departmental Fest BAZOOKA'24** organized by the Department of English on 01.10.2024.
- ❖ B. Pawan Krishnan and D. Richard Edison of I B.Sc. Mathematics participated **“National Level Symposium”** organized by the Department of Mathematics on 13.12.2024 & 14.12.2024.
- ❖ R. R. Subasri, R. Arockiya Reshma and K. Priyadharshini of III B.Sc. Mathematics participated in **“Interdepartmental fest TECHNO FUSION'24”** organized by Department of Computer Science on 17.12.2024. R. Arockiya Reshma **won V place** in Quiz, R. R. Subasri **won II Place** in Poster Presentation, and K. Priya Dharshini **won II place** in Connection.
- ❖ S. Srivarshini of III B.Sc. Mathematics participated in a national-level conference on **“Artificial Intelligence in Shifting Global Business”** organized by the Department of Commerce on 03.01.2025.
- ❖ A. M. Induja of I B.Sc. Mathematics participated in a national-level conference on **“Artificial Intelligence in Shifting Global Business”** organized by the Department of Commerce on 03.01.2025.

- ❖ S. Gnamini of I B.Sc. Mathematics **won Second Place** in the **Drawing competition** conducted on the occasion of **World Wetland Day 2025** organized by Department of Zoology on 03.02.2025.
- ❖ A. Santhosh of I B.Sc. Mathematics participated in **Science Exhibition** conducted by the Department of Physics on 25.02.2025.
- ❖ K. Priyadharshini, B. Santhiya, C. Tamilselvan, K. K. Dharani and D. Vaideeswari of III B.Sc. Mathematics participated in “**The Western Ghats Fest**” organized by the PG and Research Department of Zoology and Wildlife Biology on 06.03.2025 & 07.03.2025.
- ❖ B. Santhiya of III B.Sc. Mathematics participated in the **National level Students Start-up Conclave, Expro and Intercollegiate Meet** and **won I place** in the event Mathematical Model organized by Department of Commerce with Information Technology and Department of Mathematics of Kongunadu Arts and Science College held on 13.03.2025.

9.7 No. of New Experiments Introduced

Practical beyond syllabus

MATLAB Programs:

- ❖ Plot multiple 2D graphs in a single figure window using subplots for sine, cosine and tangent functions using MATLAB.
- ❖ Perform matrix operations like addition, multiplication and transpose using MATLAB.
- ❖ Program to find the roots of a quadratic equation and display whether they are real and distinct, real and equal or complex using MATLAB.
- ❖ Plot a 3D surface plot for the function $z=x^2+y^2$ over a specified range of x and y values using MATLAB.

LaTeX Programs:

- ❖ Write a thesis or project report template in LaTeX with structured sections, title page, and bibliography.
- ❖ Prepare a document compiling mathematical derivations, multi-line equations, and theorems using amsmath and breqn packages in LaTeX.

9.8 Publications (Scopus indexed) /patents, if any.

- ❖ K. Tharani and V. Kokilavani published a paper entitled “**On Neutrosophic Crisp g#α Closed Set Operators**”, in the journal Neutrosophic Sets and Systems, Vol: 73, 1 (2024).
- ❖ Nisar Kottakkaran Sooppy, Farman Muhammad, Abdel-Aty Mahmoud and **Ravichandran Chokkalingam**, published a paper entitled “**A review of fractional- order models for plant epidemiology**” in the journal Progress in Fractional Differentiation and Applications, Vol 10(03) (2024) 489 – 521.

- ❖ M Sivashankar, S Sabarinathan, Kottakkaran Sooppy Nisar, **C Ravichandran**, BV Senthil Kumar published a paper entitled “**Stability, numerical simulations, and applications of Helmholtz-Duffing fractional differential equations**”, in the journal Chaos, Solitons & Fractals: X ,Vol: 12 (2024) 100106.
- ❖ E Thilakraj, K Kaliraj, **C Ravichandran**, M Manjula published a paper entitled “**New investigation on controllability of sobolev-type Volterra-Fredholm functional integro-differential equation with non-local condition**”, in the journal Results in Control and Optimization, Vol: 15 (2024) 100418.
- ❖ Chandran Anusha, **Chokkalingam Ravichandran**, Kottakkaran Sooppy Nisar, Suliman Alsaeed, Shankar Rao Munjam published a paper entitled “**Periodic Boundary Value problem for the Dynamical system with neutral integro-differential equation on time scales**”, in the journal Partial Differential Equations in Applied Mathematics, Vol: 10 (2024) 100691.
- ❖ KottakkaranSooppy Nisar, Kalimuthu Kaliraj,Mohan Manjula, **Chokkalingam Ravichandran**, Suliman Alsaeed and Shankar Rao Munjam published a paper entitled “**Existence of a mild solution for a fractional impulsive differential equation of the Sobolev type including deviating argument**”, in the journal Results in Control and Optimization, Vol: 16 (2024) 100451.
- ❖ Sooppy Nisar Kottakkaran, Sivashankar M, Sabarinathan S, **Ravichandran C** and Sivaramakrishnan V published a paper entitled “**Evaluating the stability and efficacy of fractal-fractional models in reproductive cancer apoptosis with ABT-737**”, in the journal of Inequalities and Applications, Vol: 2025 (2025) 10.
- ❖ R. Jagatheeshwari, **C. Ravichandran**, P. Veerasha and Kottakkaran Sooppy Nisar, published a paper entitled “**A strong technique for solving the fractional model of multi-dimensional Schnakenberg reaction-diffusion system**”, in the journal Modern Physics Letters B, (2025) 2550095.
- ❖ E. Thilakraj, K. Kaliraj, C. Ravichandran and M. Manjula, published a paper entitled “**New Results on Controllability Analysis for Sobolev-Type Volterra-Fredholm Functional Integro-Differential Equation in Banach Space**”, in the journal Results in Control and Optimization, Vol: 15 (2024) 100418.
- ❖ A. Irin Feno, **M. Venkatachalam**, Laxmi Rathour, I. N. Cangul, and K. Abirami, published a paper entitled “**On r-dynamic k-coloring of ladder graph families**”, in the journal Discrete Mathematics, Algorithms and Applications, Vol. 17(03) (2025) 2450035.
- ❖ Ika Hesti Agustin, Dafik Dafik, Ika Nur Maylisa, **M Venkatachalam**, K Abirami and N Mohanapriya, published a paper entitled “**On Local Antimagic b-Coloring of Graphs: New Notion**”, in the journal Discrete Mathematics, Algorithms and Applications, Vol. 13(04) (2025) 1544 - 1556.

- ❖ B. J. Septory, L. Susilowati, D. Dafik and **M. Venkatachalam**, published a paper entitled **“On the study of rainbow antimagic connection number of comb product of tree and complete bipartite graph”**, in the journal Discrete Mathematics, Algorithms and Applications, Vol. 16(07) (2024) 2350098.
- ❖ **M. Venkatachalam**, K. Praveena, D. Dafik and Cangul Ismail Naci, published a paper entitled **“Iterated Modified Tabu Search based Equitable Coloring for Scheduling Cricket World Cup Tournament”**, in the journal El-Cezeri Journal of Science and Engineering, Vol. 11(02) (2024) 131 - 141.
- ❖ Falcon, Raul M, **Venkatachalam M.**, and Margaret S. Julie, published a paper entitled **“Determining the b-chromatic number of subdivision-vertex neighbourhood coronas”**, in the journal El-Cezeri Journal of Science and Engineering, Vol. 32(02) (2024) 53 - 84.
- ❖ S. Sabarinathan, M. Sivashankar, Kottakkaran Sooppy Nisar, **C. Ravichandran**, and Anas Ratib Alsoud, published a paper entitled **“Fractal–fractional approach to stability in enzyme kinetics: A mathematical model perspective”**, in the journal Partial Differential Equations in Applied Mathematics, Vol: 13 (2025) 101028.
- ❖ Nisar Kottakkaran Sooppy, Hamsavarthini G., **Ravichandran C.**, and Kumaran Shyni Unni, published a paper entitled **“Analyzing predator-prey dynamics in the context of global warming using fractional integro differential equations”** in the Journal of Mathematics and Computer Science, Vol: 39(02) (2025) 249 - 262.
- ❖ K. Kaliraj, M. Manjula, E. Thilakraj, **C. Ravichandran**, Kottakkaran Sooppy Nisar, Yousef A. Baker El-Ebiary and Ahmad O. Hourani, published a paper entitled **“Discussions on Sobolev type Neutral Nonlocal fractional differential equation”**, in the journal Partial Differential Equations in Applied Mathematics, Vol 13 (2025) 101018.
- ❖ **P. Sathishmohan**, G. Poongothai, K. Rajalakshmi and S. Stanley Roshan, published a paper entitled **“More on micro semi – pre-operators in micro topological spaces”**, in the journal Mathematical Models in Engineering, Vol 11(01) (2025).
- ❖ **Sathishmohan P.**, Roshan S. Stanley, Rajalakshmi K., Brindha S. and Poongothai G., published a paper entitled **“On Micro Pre Operators in Micro Topological Spaces”**, in the journal European Journal of Pure and Applied Mathematics, Vol 17(04) (2024) 3156- 3166.
- ❖ Karthika R., and **Mohanapriya N.**, published a paper entitled **“Dissimilarity between Dominator and Total Dominator Coloring of Certain Graphs”**. In: Balasubramaniam, P., Raveendran, P., Mahadevan, G., Ratnavelu, K. (eds) Discrete Mathematics and Mathematical Modelling in the Digital Era. ICDMMMDE 2023. Springer Proceedings in Mathematics & Statistics, Vol: 458 (2024) 241 - 255, Springer, Singapore.

9.9 Training Received by Faculty/ List of Activities Undertaken by Faculties

a) Training Received by Faculty

- ❖ Dr. M. Vigneshwaran has participated in the **“FDP on Classroom Psychology and Psychological for effective teaching and learning”** Kongunadu Arts and Science College, Coimbatore, 12.09.2024.
- ❖ Dr. D. Vijayalakshmi, Dr. P. Sathishmohan and Dr. E. Prakash has attended **“Five-day Virtual FDP on Research Methodology”** organized by VLB Janakiammal College of Arts and Science from 01.10.2024 to 05.10.2024.
- ❖ Dr. S.P.R. Priyalatha has participated in **Refresher Course in Mathematics** organized by Gandhigram Rural Institute, held from 17.10.2024-30.10.2024.
- ❖ Dr. P. Sathishmohan and Dr. E. Prakash has participated in **“Five-day National Level Online FDP on Beyond Boundaries: Driving Innovation in Research”** organized by Auxilium College (Autonomous), Vellore in Collaboration with North East Institute of Social Sciences & Research, Nagaland, from 26.12.2024-30.12.2024.
- ❖ Dr. P. Sathishmohan has participated in the **“Webinar series on Fuzzy logic for beginners”** organized by IIT Kottayam from 02.06.2024 – 05.06.2024.
- ❖ Dr. M. Vivek Prabhu has participated in the **“Summer school on mathematical foundation for data science and machine learning (MFDSML – 2024)”** organized by the Department of Mathematics IIIT NR, Raipur, Chhattisgarh from 06.06.2024 – 09.06.2024.
- ❖ Dr. N. Mohanapriya has participated in **“One-day National workshop on Graph theory in memory of Prof. E. Sampathkumar”** organized by Sridharacharya Academy of Mathematical Science (SAAMA), West Bengal, held on 22.09.2024.
- ❖ Dr. N. Mohanapriya and Dr. L. Vidyarani has attended in two days national level virtual workshop on **“Analysing & visualizing data with Microsoft power BI”** organized by St. Paul’s college of Arts & Science for Women, Coimbatore from 19.10.2024 & 20.10.2024.
- ❖ Dr. C. Ravichandran has participated in the One-day International Workshop on **“Mathematical Foundations of AI and Electronics in Modern Communication Systems”** organized by the Department of Mathematics and Information Technology, Thiagarajar College of Engineering, Madurai held on 10.01.2025.
- ❖ Dr. D. Vijayalakshmi, Dr. L. Vidyarani and Dr. N. Mohanapriya has attended in National- Level Online Workshop on Mastering **“Graph Theory and Linear Algebra with Sagemath”** organized by Infinity Research & Development Institute & Indian Mathematics Professors Association from 03.02.2025-07.02.2025.

b) Conferences/ Seminars / Workshops Attended

- ❖ Dr. M. Vigneshwaran, Dr. M. Venkatachalam, Dr. S.P.R. Priyalatha and Dr. N. Mohanapriya has participated in the **“Two-day National seminar on Envisioning New Bharat: Educational Reforms and Indigenous Systems”** organized in Hotel Vivanta, Coimbatore from 08.06.2024-09.06.2024.
- ❖ Dr. C. Ravichandran has actively participated in the **“International Seminar on New Frontiers in Applied Mathematical Sciences”** organized by the Department of Mathematics and Statistics, Providence Women’s College (Autonomous), Kozhikode, Kerala in 07.08.2024.
- ❖ **11 Faculty members of Department of Mathematics participated** in the second International conference on Socio Economic impacts of Pollution in Water Bodies and Remedial Measures on 6th and 7th January 2025 at Kongunadu Arts and Science College, Coimbatore.

9.10 List of Exhibitions/ Seminars/ Training Courses Conducted

a) Conferences/ Seminars / Workshops Organized

S. No.	Name of the Event/ Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1.	Awareness Programme on “Intellectual Property Rights”	16.08.2024	Dr. Parimelazhagan Thangaraj, Professor and Head, Department of Botany, Bharathiar University, Coimbatore.	Maths: 35 Computer: 5	Awareness Programme on Intellectual Property Rights provided students with valuable insights into the importance of protecting creative and innovative works.
2.	One day Seminar on “Modern Algebra: Its Essence and Impact on Real - Life Problems”	04.10.2024	• Dr. K. Kanagarajan, Assistant Professor and Head, Department of Mathematics, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore. • Dr. P. Veeramani, Professor (Retd.), Department of Mathematics, IIT Madras, Chennai.	Students: 64	• Students gained a deeper insight into the relevance of algebra in various real-world scenarios. • The seminar highlighted how algebraic techniques are used to solve practical problems in fields such as Engineering, Economics, and Computer Science.
3.	One day Workshop on “SPSS”	16.12.2024	Dr. D. Sasikala, Assistant Professor in Mathematics, PSGR Krishnammal College for Women, Coimbatore.	Maths: 54 Chem: 5 CS:5	• Students developed their skills on Data handling through the SPSS software. • Students gained knowledge about various tools and techniques used for Data analysis.

4.	One day workshop on “Vedic Mathematics for Science Students”	23.01.2025	• Dr. N. Mohanapriya, • Dr. A. Amuthalakshmi, • Dr. P. Sathishmohan, Assistant Professors, Department of Mathematics, Kongunadu Arts and Science College, Coimbatore.	Maths: 18 Physics: 23 Botany: 03 Biochem: 06 Zoology: 08 CS: 08	• Students significantly improved their mental math speed and problem-solving efficiency. • By applying Sutras and participating in group exercises and they developed enhanced skills for performing well in group exams and boosting their overall mathematical proficiency.
5.	8 th International Conference on Current Scenario in Pure and Applied Mathematics (ICCSPAM - 2025)	17.02.2025 & 18.02.2025	• Prof. Dr. Ismail Naci Cangul Professor, Department of Mathematics, Uludag University, Turkey. • Prof. Dr. Raúl M. Falcón, Associate Professor, Department of Applied Mathematics, University of Seville, Spain. • Prof. Dr. Dafik, Professor, Dean of FKIP University of Jember, Indonesia.	Participants: 102	• Exchange the views on the recent development of different topics of Mathematics and also to bring together the leading experts from different countries and also from different parts of our country and other countries. • It will stimulate the interest of young researchers in important research areas. • The conference will cover a number of research areas such as Algebra, Graph theory, Topology, Differential Equations and their Applications.
6.	A Seminar on “Differential Equations and its Applications”	21.02.2025	Dr. K. Kaliraj Assistant professor, Ramanujam Institute for Advanced Study in Mathematics, University of Madras, Chepauk Campus, Chennai.	Students: 35	• The seminar provided insights into the theory and solutions of Differential Equations by highlighting its applications in real-world problems across Physics, Engineering and Biology.

b) Exhibition / Competitions Organized

S. No.	Name of the event/Activity	Date	Number of Beneficiaries	Outcome
1.	Inter School Mathematics Competitions.	08.10.2024	School Students: 601	Memorizing techniques were taught for the school students which helped them to ease the process of learning Mathematical formulae which creates interest towards the subject.
2.	Online quiz for school students	22.12.2024 - 31.12.2024	School Students: 1889	An online quiz helps assess school students' learning outcomes by testing their understanding and retention of concepts.

3.	Inter-school chess competitions chess carnival 2k25	09.01.2025	Students: 103	Decision making through logical thinking and the skill set to solve the problems were attained by the students
4.	MathExperia 2K25 Inter-Departmental Competitions	19.02.2025	Students: 120	Event provided a vibrant platform for students to demonstrate their mathematical abilities. A range of engaging activities encouraged teamwork, logic, and creativity.

c) Training Courses Conducted

S. No.	Name of the event/ Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1.	Five Days Virtual Faculty Development Programme on “Recent Frontiers in Pure and Applied Mathematics”	11.11.2024 to 15.11.2024	• Dr. G. Nagamani, Assistant Professor, Department of Mathematics, The Gandhigram Rural Institute-Deemed to be University, Dindigul • Dr. V. Parthiban, Associate Professor at Vellore Institute of Technology, Chennai. • Dr. K. Palpandi, Assistant Professor, Department of Mathematics, National Institute of Technology, Calicut. • Prof. Dr. R. Roopkumar, Professor, Department of Mathematics, Central University of Tamilnadu, Thiruvavur. • Dr. P. Veerasha, Assistant Professor, Department of Mathematics, Christ (Deemed to be University), Bangalore.	618 Participants	• Faculty Development Programme served as a platform for the Faculty members by enriching the knowledge in various fields of mathematics and its application towards real-world problems. • It also served as a discussion forum to share the experience and knowledge to explore the basic dimensions of Mathematical research.

2.	Five-day Winter Training Programme on Pure and Applied Mathematics	27.01.2025 to 31.01.2025	• Dr. P. Veeramani, Retired Professor Department of Mathematics, Indian Institute of Technology Madras, Chennai • Dr. M. Marudai, Honorary Professor, Department of Mathematics, Bharathidasan University, Thiruchirappalli. • Dr. G. Nagamani, Associate Professor, Department of Mathematics, Gandhigram Rural Institute, Dindigul. • Dr. K. Balachandran, Mentor Professor, Department of Mathematics, Bharathiar University, Coimbatore. • Dr. R. Gnana Prakasam, Lecture in Department of Mathematics, Tamil Nadu Polytechnic College Madurai (Expert in CSIR-NET).	Maths: 29 Other College Students: 9 Faculty: 11	• Students and Faculty enabled a deeper understanding of theoretical and practical knowledge towards Mathematical concepts. • The programme Kindled the students mind to know more about innovative applications in various Mathematical fields.
3.	Two-day Faculty Training Programme on “LaTeX Quality Documentation- Easy with PC”	13.02.2025 to 14.02.2025	Dr. J Vernold Vivin Assistant Professor of Mathematics, Anna University Regional Campus, Coimbatore.	English: 1 Maths: 17 B. Com CA: 2 B.Com IT: 4 Physics: 6 Chemistry: 3 B. Com PA: 3 B. Com: 5 Biotech: 1 Psychology: 5 B. Com A&F: 1	• Enhance participants skills in creating high-quality academic and technical documents using LaTeX. • The sessions focused on simplifying LaTeX usage through practical demonstrations and hands-on experience.

d) Mentor Mentee Meeting

- ❖ Mentor-Mentee Meeting was conducted on 24.01.2025 and the resource person was **Dr. P. Parvathi**, Associate Professor and Head, Department of Mathematics, Vellalar College for women (Autonomous), Erode and **Dr. D. Sasikala**, Assistant Professor in Mathematics, PSGR Krishnammal College for Women, Coimbatore. 11 faculties attended to discuss about the activities planned and purchase of Books under the DBT Star College Scheme.

9.11 Details of Books and Journals subscribed from DBT Grant

S. No.	Bill No.	Date	Company name	Publishers	Author	Title	Qty	Amount
1.	1572 B	19.03.2025	Shanti Books	Chapman & Hall/CRC Chapman	STEVEN G. KTANTZ	Essentials Of Topology With Applications	1	2970.75
2.	1572 B	19.03.2025	Shanti Books	S Chand Publishing	Dr. M. D. Raisinghania	Advanced Differential Equations	6	4565.50
3.	1572 B	19.03.2025	Shanti Books	New Age International Private Limited	Savita Arora and S. C. Malik	Mathematical Analysis	5	3187.50
4.	1572 B	19.03.2025	Shanti Books	Prentice Hall India Learning Private Limited	Kenneth Hoffman	Linear Algebra	5	2252.50
5.	1572 B	19.03.2025	Shanti Books	Sultan Chand & Sons	K. Swarup, P. K. Gupta and M. Mohan	Operation Research	4	2862.00
6.	1572 B	19.03.2025	Shanti Books	O'Reilly Media	George Mount	Modern Data Analytics in Excel	6	7140.00
7.	1572 B	19.03.2025	Shanti Books	Vikas Publishing House	Vijay K Khanna, S. K. Bhamabri	A Course in Abstract Algebra	1	590.75
TOTAL							28	23,568

9.12 Outreach / Extension Activities

S. No.	Name of the event/ Activity	Date	Number of Beneficiaries	Outcome
1	Awareness Programme on "Pitching Idea for Staggering Genius" for Science Students	15.07.2024	Students: 76	Students gained valuable insights into idea validation, communication strategies and entrepreneurial thinking which enhanced their confidence to pitch creative concepts in future platforms.
2	An Awareness Programme on "Thoughts on Stress Management and Happiness" (For Supporting Staff)	28.10.2024.	Non-teaching Staffs: 20	• The awareness programme provided valuable insights on effective stress management techniques and ways to enhance personal happiness. • Supporting staff gained practical strategies to cope with workplace

				pressure, improve emotional well-being, and maintain a positive work-life balance.
3	Activity based learning (Yuva public school)	24.12.2024	School Students: 135	Our UG students exhibited their teaching skills and helped the school students to learn mathematics in easy, fun-filled ways and created interest towards the subject.

9.14 Invited Lectures/Guest Lectures Conducted

S. No.	Name of the event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1.	A Guest Lecture on Navigating Complexity: “Interdisciplinary Learning for Non-Mathematics Students”	02.08.2024	Dr. D. Gunasekaran, Assistant Professor, Department of Mathematics, PSG College of Arts & Science, Coimbatore.	B. Com A&F: 35 BBA CA: 40 B. Com PA: 04 Botany: 05 Chemistry: 12 Physics: 10 Computer: 20 Computer Tech: 20 B. Com IT: 10	- Developed the ability to think critically and innovatively by applying interdisciplinary approaches to complex problems. - Gained skills in integrating various mathematical concepts in real-world situations.
2.	Lecture Series on Algebra & Analysis – I	30.08.2024	Dr. M. Sambath, Assistant Professor of Mathematics, Periyar University, Salem	Students: 45 Faculty: 5	The B. Sc Mathematics students understood the basic concepts of linear Algebra, Vector Algebra and its applications in the field of Differential Equations.
3.	A Guest Lecture on “Student Project Ideas- Interdisciplinary Approach”	23.09.2024	Dr. P. Jayaraman, Assistant Professor, Department of Applied Mathematics, Bharathiar University, Coimbatore.	Maths: 23 Physics: 06 Computer: 07 Chemistry: 01 Biochem: 02	- Students gained insight into generating innovative project ideas through interdisciplinary approach. - Students enhanced their understanding of both academic theories and their practical applications in real- world scenarios.

4.	Lecture Series on Algebra & Analysis- II: Fractal Analysis and Its Applications	23.09.2024	Dr. R. Uthayakumar, Professor & Head, Department of Mathematics, The Gandhigram Rural Institute Dindigul	32 Students Faculty:5	Students acquired foundational knowledge of Fractal Analysis and understood the real-world applications of Fractals in Science and Technology which enhances analytical thinking and the ability to model various complex systems.
5.	Lecture Series on Algebra & Analysis – III	20.02.2025	Dr. S. Raja, Assistant Professor, Department of Mathematics, Amrita School of Computing, Amrita Vishwa Vidyapeetham, Nagercoil Campus.	Students: 42 Faculty:5	The lecture series provided in-depth insights into advanced concepts of Algebra and analysis which fostered critical thinking and problem-solving skills through theoretical discussions and practical applications.
6.	National day celebration: A Lecture on “Technological Inventions by Indian scientists- An inspiration for future innovators”	24.02.2025	Mr. K. Leninbarathi, Science Communicator, Regional Science Centre, Coimbatore.	Students: 40	It inspired students to explore innovation and research, fostering a spirit of scientific curiosity and motivating young minds to contribute to the nation's technological growth.
7.	Lecture Series on Algebra & Analysis – IV	03.03.2025	Dr. Shangerganesh Lingeswaran, Assistant Professor of Mathematics, Department of Applied Sciences, National Institute of Technology, Goa.	Students: 56 Faculty:5	Students deepened their understanding of advanced topics in Algebra and Analysis, focusing on abstract structures and their applications which Strengthened problem-solving skills and theoretical insight which enhances for higher-level Mathematical reasoning.

Details of Recurring Expenditure DBT Grant – Department wise

DEPARTMENT OF PHYSICS

S. No.	Particulars	Amount (Rs.)
1	Internship, Staff & Students Activities	28,775
2	Training Programme	38,945
3	Industrial Visit	49,586
4	Conference/ Seminars / Workshops/Guest lectures	64,998
5	FDP's	11,330
6	Interdepartmental/ Intercollegiate Competition/ Exhibition	14,517
7	Projects	49,114
8	Consumables	19,224
9	Books and Journals	19,989
10	Lab Manuals	1,554
11	Outreach Programme and Mentor Meetings	1,968
TOTAL		Rs. 3,00,000

DEPARTMENT OF CHEMISTRY

S. No.	Particulars	Amount (Rs.)
1	Internship, Staff & Students Activities	18,336
2	FTP and FDP	9,853
3	Training Programme	38,704
4	Industrial Visit	43,594
5	Conference/ Seminars / Workshops/Guest lectures	69,931
7	Inter departmental/ Intercollegiate Competition/ Exhibition	2,550
9	Outreach activities	6,916
10	Projects	31,727
11	Consumables (Chemicals)	60,099
12	Books	18,190
TOTAL		3,00,000

DEPARTMENT OF COMPUTER SCIENCE

S. No.	Particulars	Amount (Rs.)
1	Internship, Staff & Students Activities	12,550
2	Training Programme	34,009
3	Industrial Visit	60,511
4	Conference/ Seminars / Workshops/Guest lectures	48,673
5	FDP's	29,309
6	Interdepartmental/ Intercollegiate Competition/ Exhibition	13,992
7	Projects	37,464
8	Consumables	28,727
9	Books	30,065
10	Lab Manuals	4,730
Total		Rs. 3,00,030

DEPARTMENT OF MATHEMATICS

S. No.	Particulars	Amount (Rs.)
1	Internship, Staff & Students Activities	19,377
2	Training Programme	67,948
3	Industrial Visit	59,950
4	Conference/ Seminars / Workshops/Guest lectures	66,195
5	FDP's	17,500
6	Interdepartmental/ Intercollegiate Competition/ Exhibition	23,555
7	Projects	15,119
8	Consumables	6,788
9	Books	23,568
Total		Rs. 3,00,000

Course Coordinator

Head of the Institution

KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS)

DBT STAR COLLEGE SCHEME

DETAILS OF ADVISORY COMMITTEE MEMBERS

CHAIRPERSON

Dr. V. Sangeetha M.Sc., Ph.D.,
Principal and Head, Department of Chemistry,
Kongunadu Arts and Science College,
Coimbatore -641 029, Tamil Nadu, India.
Phone (Off): 0422-2642095
E-mail: principal@kongunaducollege.ac.in

DBT REPRESENTATIVES

- **Dr. Garima Gupta**, Scientist - 'F',
Programme Head,
Department of Biotechnology,
Ministry of Science & Technology,
Government of India, New Delhi.

EXTERNAL EXPERTS

- **Dr. R. Rajendran** M.Sc., PGDEM., MBA., Ph.D.
Former Principal & Associate Professor, Department of Microbiology,
PSG College of Arts and Science,
Civil Aerodrome (post), Coimbatore – 641 014, Tamil Nadu, India.
Phone: (Off) 0422-4397901 to 905, Mobile: +91- 9443751400
E-mail: rjendranmicro@yahoo.co.in
- **Dr. A. K. Vidya** M.Sc., M.Phil., PGDBI., SLET., Ph.D.
Associate Professor and Head, Department of Biochemistry,
Kongu Arts and Science college,
Erode-638107, Tamil Nadu, India.
Phone: 9360018644
E-mail: vidhya_ak@hotmail.com

OVERALL COORDINATOR-MEMBER SECRETARY

Dr. D. Vijayalakshmi M.Sc., M.Phil., Ph.D., PGDCA.
Assistant Professor, Department of Mathematics,
Kongunadu Arts and Science College,
Coimbatore-641029, Tamil Nadu, India.
Phone: 9442534761
E-mail: vijikasc@gmail.com

WORKING COMMITTEE MEMBERS

- Dr. E. Prakash M.Sc., Ph. D., Assistant Professor of Mathematics
- Dr. K. Chandra Prakash M.Sc., Ph. D, Assistant Professor of Chemistry
- Dr. S.P.R. Priyalatha M.Sc., M.Phil., Ph. D, Assistant Professor of Mathematics
- Dr. S. Selvi M.Sc., Ph. D, Assistant Professor of Physics

COORDINATORS OF ALL PARTICIPATORY DEPARTMENTS

- Dr. M. Seetha M.Sc., Ph. D, Assistant Professor (Physics - Department Coordinator)
- Dr. R. Manimekalai, M.Sc., M.Phil., Ph. D, Assistant Professor (Chemistry - Department Coordinator)
- Ms. Deekshana M.Sc., Assistant Professor (Computer Science - Department Coordinator)
- Dr. C. Ravichandran M.Sc., M.Phil., Ph. D, Assistant Professor (Mathematics - Department Coordinator)

LIST OF MENTORS

DEPARTMENT OF PHYSICS

- **Dr. M. Lavanya** M.Phil., Ph.D.
Assistant Professor, Department of Physics,
PSGR Krishnammal college for women,
Peelamedu, Coimbatore-641004, Tamil Nadu, India.
Phone:
E-mail: lavanyam@psgrkcw.ac.in
- **Dr. N. Ponpandian** M.Sc., M.Phil., Ph.D.
Professor and Head, Department of Nano science and Technology,
Bharathiar university,
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E-mail: ponpandian@buc.edu.in

DEPARTMENT OF CHEMISTRY

- **Dr. T. Selvaraju** M.Sc., M.Phil., Ph.D.
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- **Dr. D. Nalini** Ph.D.
Assistant Professor and Head, Department of Chemistry,
PSGR Krishnammal College for Women,
Peelamedu, Coimbatore-641004, Tamil Nadu, India.
Mobile: 9843822004
E-mail: nalinichemistry@gmail.com ; nalini@psgrkcw.ac.in

DEPARTMENT OF COMPUTER SCIENCE

- **Dr. S.K. Jayanthi** M.Sc., PGDCA., M.Phil, Ph.D.
Principal and Head, Department of Computer Science,
Vellalar College for Women (Autonomous),
Erode-638012, Tamil Nadu, India.
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E-mail: jayanthi.sk@vcw.ac.in
- **Dr. S. Karpagavalli** M.Sc., M.Phil., Ph.D.,
Associate Professor and Head, Department of Computer Science,
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Peelamedu, Coimbatore-641004, Tamil Nadu, India.
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E-mail: karpagavalli@psgrkcw.ac.in

DEPARTMENT OF MATHEMATICS

- **Dr. R. Parvathi** M.Sc., M.Phil., Ph.D., PGDCA., B.Ed.
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Vellalar College for Women (Autonomous),
Erode-638012, Tamil Nadu, India.
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E-mail: parvathi@vcw.ac.in
- **Dr. D. Sasikala** M.Sc., M.Phil., Ph.D.,
Assistant Professor, Department of Mathematics,

PSGR Krishnammal College for Women,
Peelamedu, Coimbatore-641004, Tamil Nadu, India.
Phone:
E-mail: dsasikala@psgrkcw.ac.in

FACULTY MEMBERS OF ALL PARTICIPATING DEPARTMENTS

DEPARTMENT OF PHYSICS

- Dr. A. Anu Kaliani M.Sc., M.Phil., Ph.D., Associate Professor and Head
- Thiru. K. Karuppuswamy M.Sc., M.Phil., B.Ed., PGDCA (SLST), Associate Professor
- Dr. B. Chandar Shekar M.Sc., M.Phil., Ph.D., Associate Professor
- Dr. K. Saravanakumar M.Sc., Ph.D., Associate Professor
- Dr. M. Seetha M.Sc., Ph.D., Assistant Professor (Department Coordinator)
- Dr. P. Matheswaran M.Sc., Ph.D., Assistant Professor
- Dr. M. Mohamed Ibrahim M.Sc., Ph.D., Assistant Professor
- Dr. A. Ranjitha M.Sc., Ph.D., Assistant Professor
- Dr. N. Senthil Kumar M.Sc., M.Phil., Ph.D., Assistant Professor
- Dr. S. Selvi M.Sc., Ph.D., Assistant Professor
- Dr. B. Gokul M.Sc., M.Phil., Ph.D., Assistant Professor
- Dr. V. D. Nithya M.Sc., Ph.D., Assistant Professor

DEPARTMENT OF CHEMISTRY

- Dr. V. Sangeetha M.Sc., Ph. D, Principal, Associate Professor and Head
- Dr. M. S. Sivaramkumar M.Sc., M.Sc., MA., MA., M.Ed., M.Phil., Ph.D., PGDCHI, Assistant Professor
- Dr. R. Manimekalai M.Sc., M.Phil., Ph. D, Assistant Professor (Department Coordinator)
- Dr. K. Saminathan M.Sc., Ph. D, Assistant Professor
- Dr. E. Jayanthi M.Sc., M.Phil., Ph. D, Assistant Professor
- Dr. K. Krishnaveni M.Sc., M.Phil., Ph. D, Assistant Professor
- Dr. K. Chandra Prakash M.Sc., Ph. D, Assistant Professor

DEPARTMENT OF COMPUTER SCIENCE

- Dr. A. Kavitha MCA, M.Phil., Ph.D., Associate Professor and Head
- Dr. R. Radha Rani, MCA, M.Phil., Ph.D. Assistant Professor
- Dr. K. Jagadeeshwari MCA, M.Phil., Ph.D. Assistant Professor
- Ms. Deekshana M.Sc. Assistant Professor (Department Coordinator)

DEPARTMENT OF MATHEMATICS

- Dr. V. Kokilavani M.Sc., M.Phil., Ph.D, Associate Professor and Head
- Dr. D. Vijayalakshmi M.Sc., M.Phil., Ph.D, PGDCA, Assistant Professor
- Dr. M. Vigneshwaran M.Sc., M.Phil., Ph.D, PGDCA, Assistant Professor
- Dr. M. Venkatachalam M.Sc., M.Phil., Ph.D, Assistant Professor
- Dr. L. Vidyarani M.Sc., M.Phil., Ph.D (SET), PGDCA, Assistant Professor
- Dr. C. Ravichandran M.Sc., M.Phil., Ph.D, Assistant Professor
(Department Coordinator)
- Dr. S.P.R. Priyalatha M.Sc., M.Phil., Ph.D, Assistant Professor
- Dr. M. Vivek Prabu M.Sc., Ph.D (SET), Assistant Professor
- Dr. P. Sathishmohan M.Sc., M.Phil., Ph.D, Assistant Professor
- Dr. N. Mohanapriya M.Sc., Ph.D, PGDCA, Assistant Professor
- Dr. E. Prakash M.Sc., Ph.D, Assistant Professor

DBT Star College Scheme

Internal Advisory Committee Meeting & Mentor Review Meeting

KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS)



Re-accredited by NAAC with 'A+' Grade (4th Cycle)
College of Excellence (UGC)
52nd Rank among Colleges in NIRF 2024
G.N. Mills(Po), Coimbatore 641 029



DBT STAR COLLEGE SCHEME INTERNAL ADVISORY COMMITTEE MEETING & MENTOR REVIEW MEETING



Dr. R. RAJENDRAN

Mentor & Task Force Member
DBT Star College Scheme
Associate Professor
Department of Microbiology
PSG College of Arts and Science
Coimbatore



Dr. A. K. VIDYA

Associate Professor & Head
Department of Bio-Chemistry
Kongu Arts and Science College
Erode

Participatory Departments

- Physics
- Chemistry
- Computer Science
- Mathematics

14. 03. 2025

2:00 PM

SEMINAR HALL

WELCOMES YOU ALL



**KONGUNADU ARTS AND SCIENCE COLLEGE
(AUTONOMOUS)**

Re-accredited by NAAC with A⁺ Grade - 4th cycle,
52nd Rank among Colleges in NIRF 2024
College of Excellence – UGC
Coimbatore - 641 029, Tamil Nadu, India

Date: 14.03.2025

Venue: Seminar Hall, KASC

DBT Star College Scheme

Minutes of Internal Advisory Committee Meeting and

Mentor- Review Meeting

The Internal Advisory Committee Meeting and Mentor Review Meeting of DBT Star College Scheme was convened on 14.03.2025 at 02.00 P.M in the Seminar Hall, Kongunadu Arts and Science College, Coimbatore.

- Dr. D. Vijayalakshmi, DBT Star College Co-ordinator, Kongunadu Arts and Science welcomed the gathering.
- Dr.V.Sangeetha, Principal Presided over the meeting and outlined the support provided by the DBT Star College Scheme to enhance the UG participatory Departments (Physics, Chemistry, Computer Science, Mathematics).
- From each Participatory departments, the Department Co-ordinator presented their action plan under DBT Star college scheme for the academic year 2024 – 2025 under recurring grant.

Suggestions/ Recommendation of Dr. R. Rajendran, Expert Member

- ❖ Dr.R.Rajendran , Expert Member appreciated all the participatory departments for their contribution in Conducting various student and staff activities.
- ❖ He gave valuable suggestions to conduct various quality activities and also suggested to purchase library books/Journals and consumables under recurring grant.
- ❖ He insisted to add new practical programs in the curriculum in the forthcoming Board of Studies.
- ❖ Awareness/ Training Program can be conducted for non-teaching faculty members

- ❖ He emphasized to concentrate more on “Hands on Training, Workshop, Mini Project, Summer training, Internship, Industrial Training, Field Training” to enhance the student knowledge.
- ❖ He emphasized to invite students from other neighbouring institutions.
- ❖ He motivated the staff to attend more training programmes in renowned institutions.

• **Suggestions/ Recommendation of Dr. A. K. Vidya, Expert Member**

- ❖ She suggested to conduct more outreach activity for the school students.
- ❖ She insisted to focus more on inter/ cross disciplinary Projects
- ❖ She suggested to undergo internship in renowned research institutions.
- ❖ She motivated all the participatory departments to organize Summer/ Winter Training Programmes for other college Students

All the queries raised by faculty members were clarified by the experts. The meeting came to an end, with the formal Vote of thanks by **Dr.R.Manimekalai**, Assistant Professor of Chemistry, Department Star College Coordinator.

The following members were present:

Chairman

DR. V. SANGEETHA

Principal

Kongunadu Arts and Science College.

External Expert

• **Dr.R.RAJENDRAN,**

Former Principal & Associate Professor

Department of Microbiology

PSG College of Arts and Science

Coimbatore.

• **Dr. A. K. Vidya M.Sc., M.Phil., PGDBI., SLET., Ph.D.**

Associate Professor and Head, Department of Biochemistry,

Kongu Arts and Science college,

Erode-638107, Tamil Nadu, India.

Members Present

Dr. A. Anukalyani, Associate Professor and Head, Department of Physics

Dr. M. Seetha, Assistant Professor, Department of Physics (Department Co-ordinator)

Dr. M. S. Sivaramkumar, Assistant Professor and Head i/c, Department of Chemistry

Dr. R. Manimekalai, Assistant Professor, Department of Chemistry
(Department Co-ordinator)

Dr. A. Kavitha, Associate Professor and Head, Department Computer Science

Ms. K. Deekshana, Assistant Professor, Department Computer Science
(Department Co-ordinator)

Dr. V. Kokilavani, Assistant Professor and Head, Department of Mathematics

Dr. C. Ravichandran, Assistant Professor, Department of Mathematics,
(Department Co-ordinator)

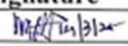
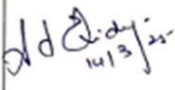
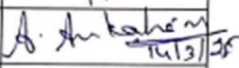
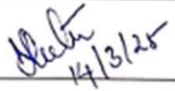
Coordinator Star College Scheme

Dr. D. VIJAYALAKSHMI

Assistant Professor

Department of Mathematics

Members Present:

S.No	Name & Designation	Position	Signature
1	Dr. V. Sangeetha Principal, KASC	Chairman	
2	Dr. R. RAJENDRAN, Former Principal & Associate Professor Department of Microbiology PSG College of Arts and Science, Coimbatore	External Expert	
	Dr. A. K. Vidya Associate Professor and Head, Department of Biochemistry, Kongu Arts and Science College, Erode.	External Expert	
3	Dr. D. Vijayalakshmi Assistant Professor Department of Mathematics	DBT STAR College Co-ordinator	
4	Dr. A. Anukalyani, Associate Professor and Head, Department of Physics	Member	
5	Dr. M. Seetha, Assistant Professor, Department of Physics (Department Co-ordinator)	Member	

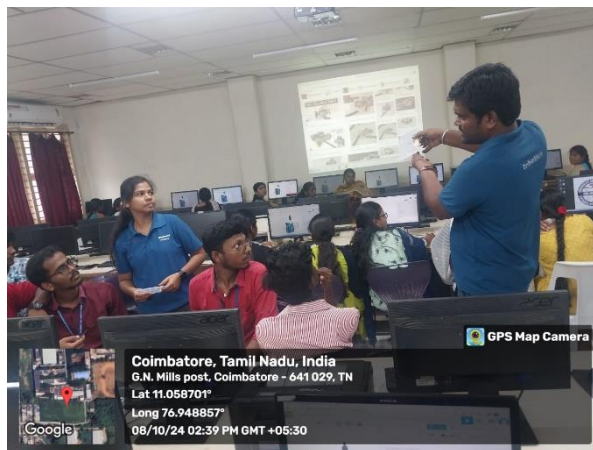
6	Dr. M. S. Sivaramkumar, Assistant Professor and Head, Department of Chemistry	Member	ML
7	Dr. R. Manimekalai, Assistant Professor, Department of Chemistry (Department Co-ordinator)	Member	<i>[Signature]</i> 14/3/25
8	Dr. A. Kavitha, Assistant Professor and Head, Department of Computer Science	Member	<i>[Signature]</i> 14/3/25
9	Ms. K. Deekshana, Assistant Professor Department of Computer Science (Department Coordinator)	Member	K. Deekshana 14/3/25
10	Dr. V. Kokilavani, Associate Assistant Professor and Head, Department of Mathematics	Member	<i>[Signature]</i> 14/3/25
11	Dr. C. Ravichandran, Assistant Professor, Department of Mathematics (Department Co-ordinator)	Member	<i>[Signature]</i> 14/3/25

Photo Gallery

DEPARTMENT OF PHYSICS

1. HANDS ON TRAINING PROGRAMMES

Hands On Training Programme with Arduino



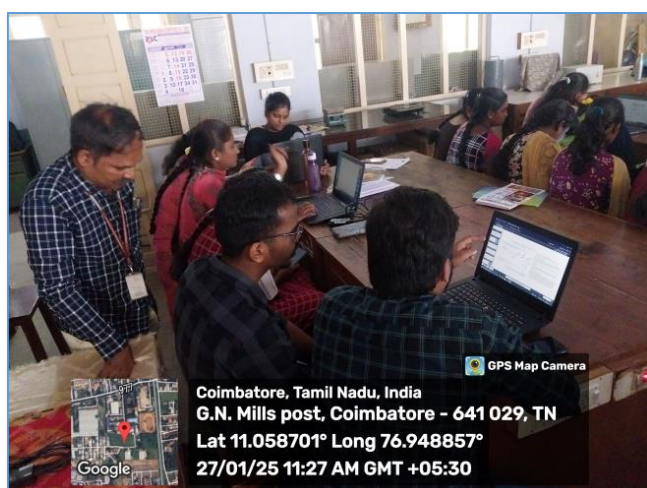
Hands on Training on “Electrical Safety And Maintenance”



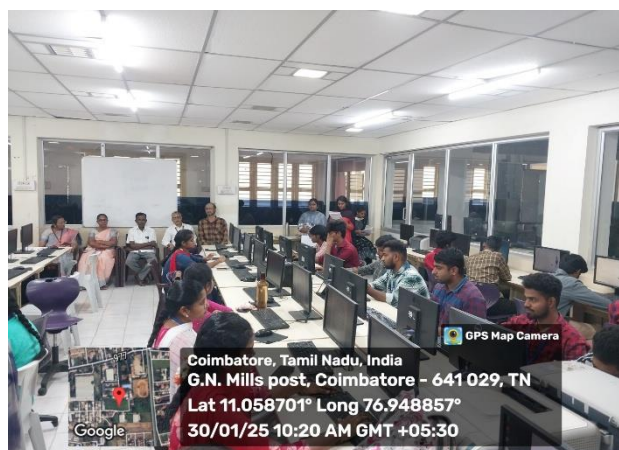
One Day Hands-On Training in Python Programming



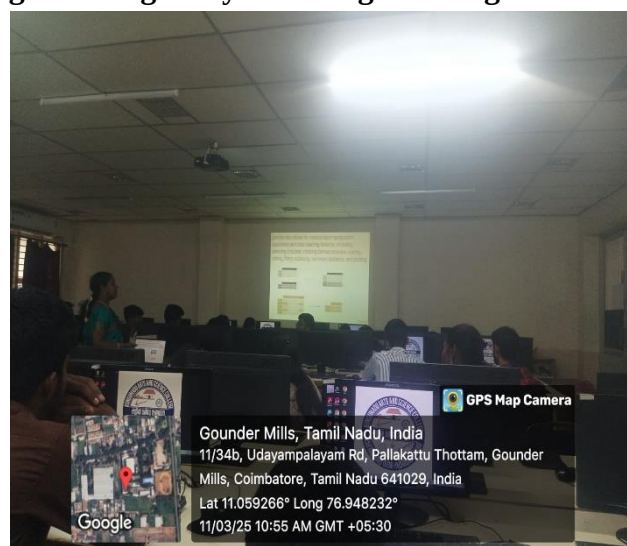
Hands on Training on Virtual Lab: Physics Experiments



Hands on Training in Latex Software

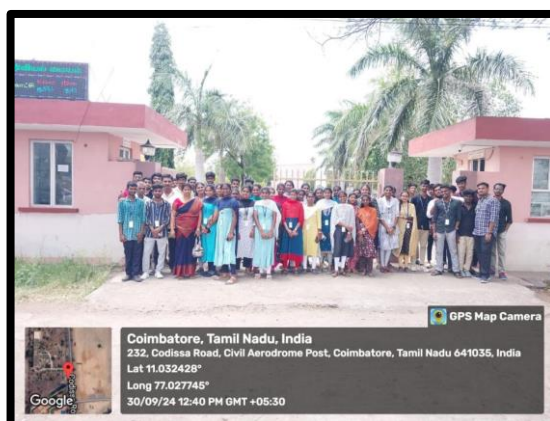


One Day Hands-On Training – Coding In Python Programming



2. INDUSTRIAL VISITS

Industrial Visit: Regional Science Centre, Coimbatore



Industrial Visit to Salzer Electronics Limited, Coimbatore



Institutional Visit on Vijnan Sagar Science And Technology Park, Thrissur, Kerala And Fluid Control Research Institute, Kanjikode West, Palakkad, Kerala



Institutional Visit to Cochin University of Science and Technology, Kerala



ISRO Visit



3. EXHIBITIONS / COMPETITIONS

Drawing Competition On “Touching Lives While Touching the Moon: India’s Space Saga” - College Students



National Science Day Celebrations “Tesla Fest- 2025”



Working Model Exhibition



Alternative Climax Competition



Debate Competition



Quiz (Finals) Competition



Brain Training Competition



4. LECTURES/SEMINARS/WORKSHOPS CONDUCTED

Invited Talk On “Artificial Intelligence for Physics Applications”



Webinar On Overview of Earth’s Atmosphere



Lecture Workshop On “Problem Solving in Heat and Thermodynamics”



An Invited Talk On “Beyond Imagination: A Journey Through The Universes Wonders”



A Webinar On “Science From Indian Lunar Missions (Chandrayaan-1/2/3)”



Lecture Workshop On Problem Solving in Quantum Mechanics - I



A Guest Lecture On “Glow Discharge Plasma Materials Processing: In the Perspective of Advanced and Nanomaterials”



A Lecture Workshop On “Problem Solving in Quantum Mechanics-II”



A Guest Lecture on “Importance of Science Innovations in Higher Education”



An Invited Talk On Nanomaterials Innovations: Technology Transfer To Industry



A Guest Lecture On “Crafting The Future: Innovation and IPR for Aspiring Minds”



Physics2tech - A Dream Journey



Invited Talk On “Bi- Transition Metal Oxide Nanostructures For Supercapacitors Applications



Seminar On Drone Technology



5. EXTENSION ACTIVITIES

National Space Week 2024 Touching Lives While Touching The Moon: India’s Space Saga



Awareness Programme On Higher Education In Science And Physics



Awareness Programme On "Journey Beyond The Success Path"



One Day Hands On Training On “Physics Experiments To School Students”



Demonstration of Class 11 Practicals To VCSM Matric School 11th Standard Students



6. TRAINING PROGRAMMES

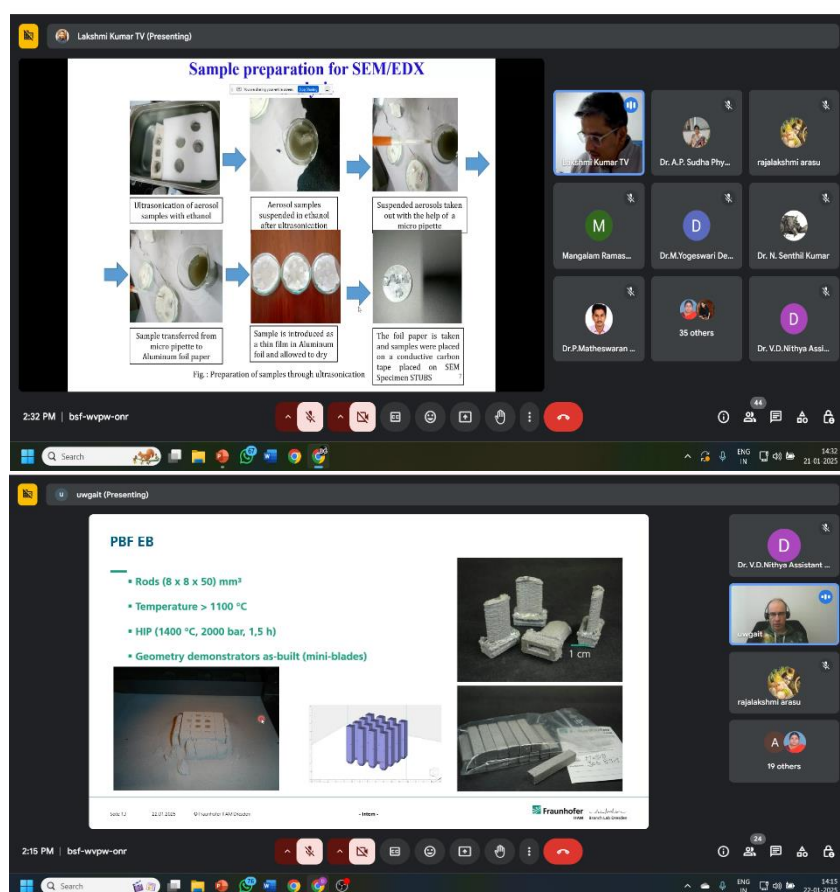
Faculty Development Programme on “Characterization of Materials”



A Training For Non Teaching Staffs On Trouble Shooting In Laboratory Instruments



Faculty Development Program On “Advanced Materials”



7. MENTOR MENTEE MEETING

Dr. M. Lavanya Addressing the Students in Mentor Meeting On 30.7.2024



Mentor *Dr. M. Lavanya*, Psgr Krishnammal College For Women discussed the Objectives Of The DBT Star College Scheme



DEPARTMENT OF CHEMISTRY

1. HANDS ON TRAINING PROGRAMMES

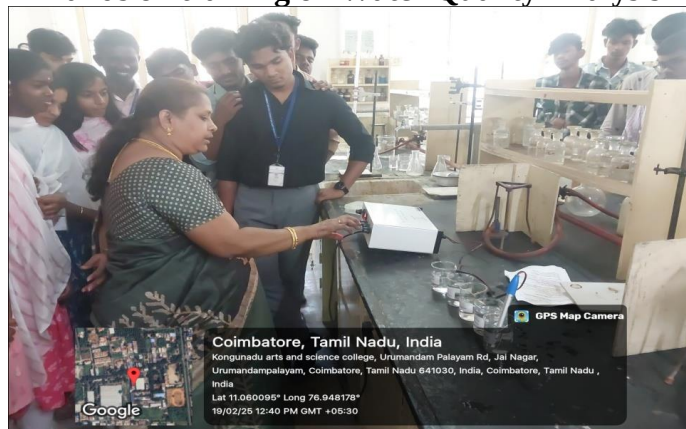
Hands on training on “Water Pollution Monitoring”



Hands on Training on “Chromatographic Techniques and their Applications”



Hands on training on Water Quality Analysis



1. INDUSTRIAL VISITS

Research Lab visit to CECRI on Open day



Regional Science Centre, Coimbatore



Visit to Chromatogram Analytical Solution, Mysuru, Karnataka



Visit to SLN Coffee Private Limited, Koppa, Karnataka



Visit to Alakappa University, Karaikudi



2. EXHIBITIONS / COMPETITIONS

Exhibition on “Exploring young minds for foster creativity”



Interdepartmental Exhibition



3. LECTURES/SEMINARS/WORKSHOPS CONDUCTED

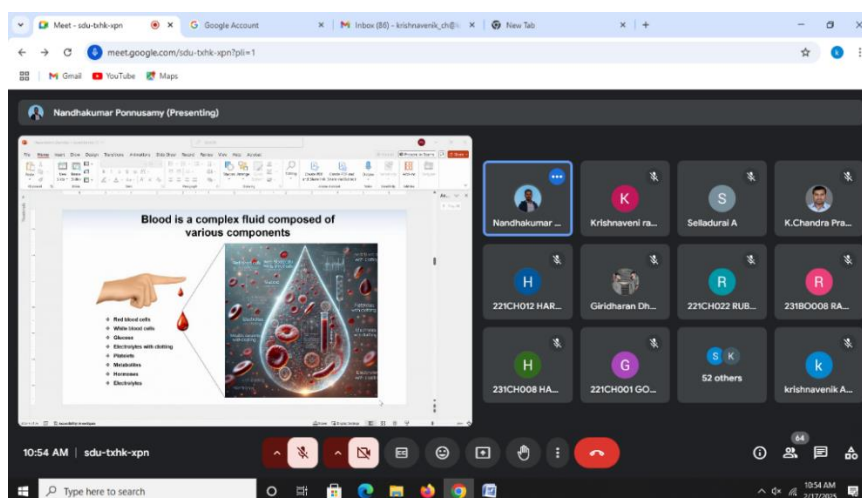
Seminar on “Scope and Opportunities in Chemical Industries”



Workshop on “ICT Tools for Teaching and Research in Chemistry”



An International Webinar on “Recent research scenario in the field of Chemistry”



Guest lecture on “Experience with Experiments in Chemistry”



Guest lecture on “Future Perspective and Challenges in Nanoscience and Nanotechnology



Guest Lecture on “Chemistry in day-to-day Life”



Guest Lecture on “State-of -the -Art: Computer Application for Science students”



Invited lecture on “Green Hydrogen production”



4. EXTENSION ACTIVITIES

Hands on training on “Biosafety & Fire safety awareness



Hands-on Chemistry Experiments for School Students



Innovation and Entrepreneurship outreach Program for School Students



5. TRAINING PROGRAMMES

Faculty training programme on “Scientific Conduct”

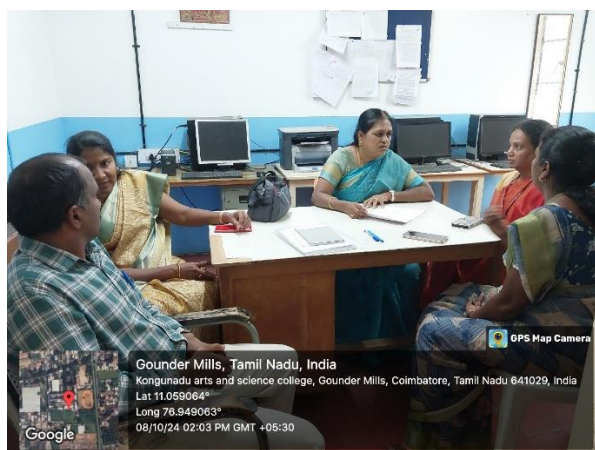


Faculty Development programme on “Reverse Mentoring”

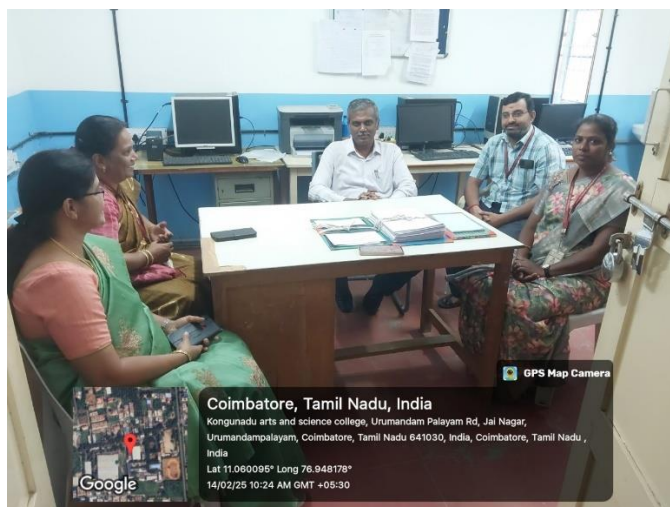


6. MENTOR MENTEE MEETING

Mentor Mentee meeting on 08.10.2024 with *Dr. D. Nalini*, Associate professor & Head, Department of Chemistry, PSGR Krishnammal College for Women, Coimbatore



**Mentor Mentee meeting on 14.02.25 with *Dr. T. Selvaraju*, Associate Professor,
Department of Chemistry, Bharathiar University, Coimbatore.**



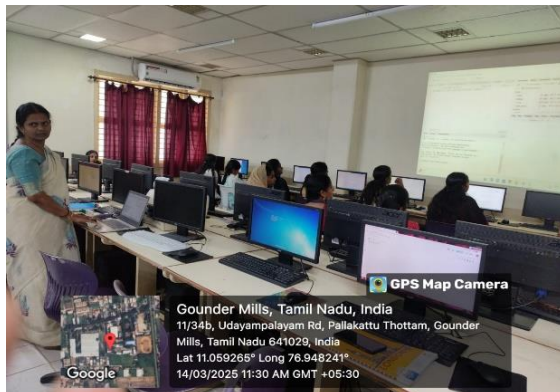
DEPARTMENT OF COMPUTER SCIENCE

1. HANDS ON TRAINING PROGRAMMES

Hands on Training Programme on Machine to Machine Communication (M2M)



A Hands on Training on “Exploring R in Data Science”



Hands on Training Programme “Problem Solving Techniques Using Mobile App”



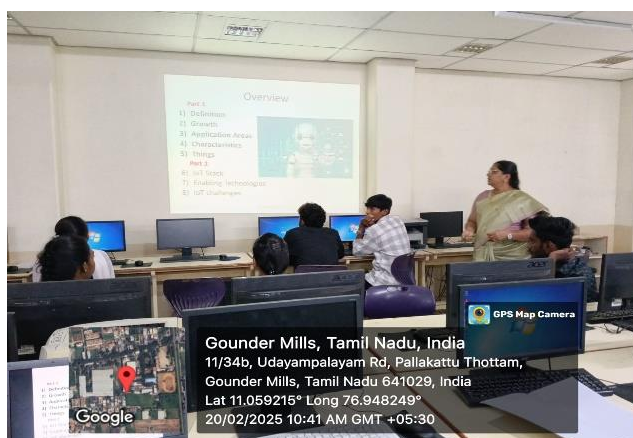
Hands on Training on Pervasive Computing



Hands on Training Programme on “DevOps and Docker”



Hands on Training Programme on “IoT & Robotics”



2. INDUSTRIAL VISITS

Industrial Visit to BSNL office, Saibaba Colony, Coimbatore



Industrial Visit to Bangalore, Mysuru, Coorg



Educational field trip to Vijyan Sagar Science and Technology Park, Thrissur, Kerala



Industrial Visit to Regional Science Centre and Science Museum



ISRO Sriharikotta



3. EXHIBITIONS / COMPETITIONS

Exhibition for School and College Students



Techno Fusion 2k24 (Interdepartmental Fest)

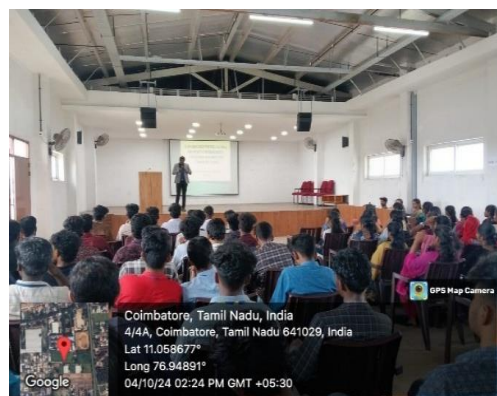


4. LECTURES/SEMINARS/WORKSHOPS CONDUCTED

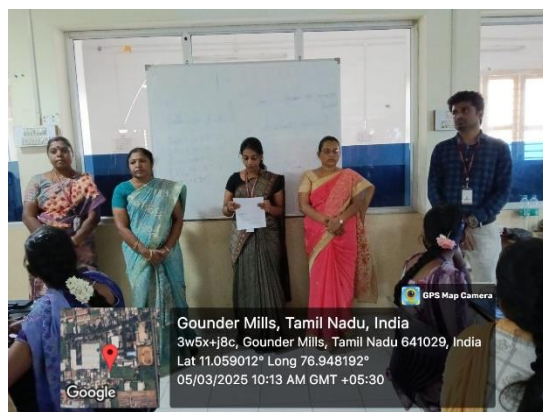
Workshop on Web Application Development



A seminar on IPR Infringement & Consumer Affairs



A Workshop on “Machine Learning Using Python”



Workshop on “Data Analytics using Tableau”



A Seminar on “Emerging trends in cyber security”



A Seminar on “Exploring the power of Gen AI tools”



Guest Lecture on “Evolution of AI in Medical Field”



Workshop on Ubiquitous Computing



Guest Lecture on Nurturing Youth Entrepreneurship- The Need Of The Hour



A Workshop on “Mobile Phone Servicing and Troubleshooting ”



A Guest Lecture on “CYBER THREATS”



5. EXTENSION ACTIVITIES

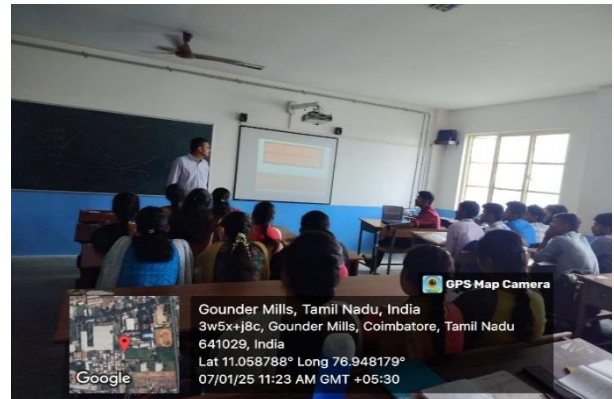
Training programme in Python and PHP XII Standard students of Greenfields Matriculation School, G.N. Mills, Coimbatore



Hands on Training programme in HTML XI Standard students of Greenfields Matriculation School, G.N. Mills, Coimbatore



A Guest Lecture on “Impact of AI”



A Seminar on “AI Applications and Practical Insights”



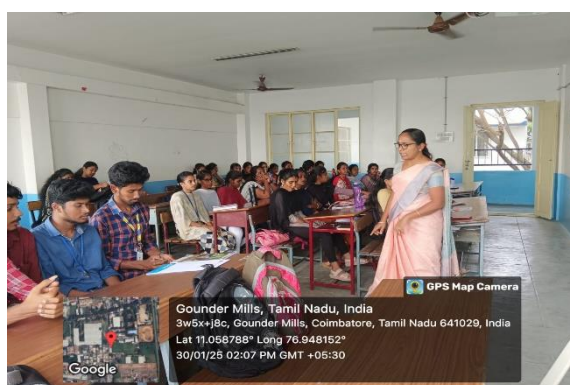
Awareness Programme On Digital Literacy



Guest Lecture on “Cyber Security & Intelligence”

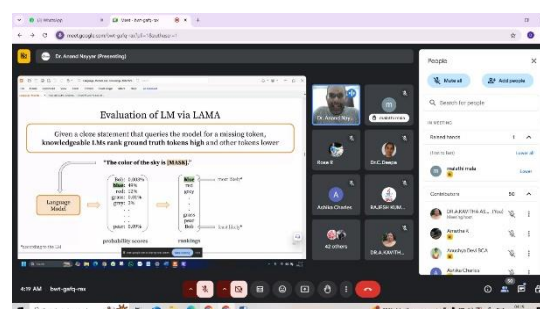
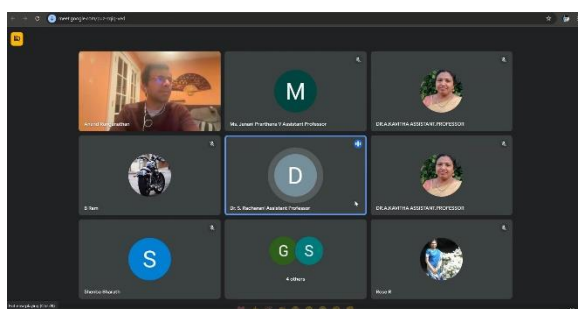


A Seminar on “Power BI: Insights and Applications”



6. TRAINING PROGRAMMES

5 Days Virtual FDP “Future Prospects of Innovations In Artificial Intelligence”



Training Programme for Lab Technician on “Laptop Servicing and Networking Credentials”



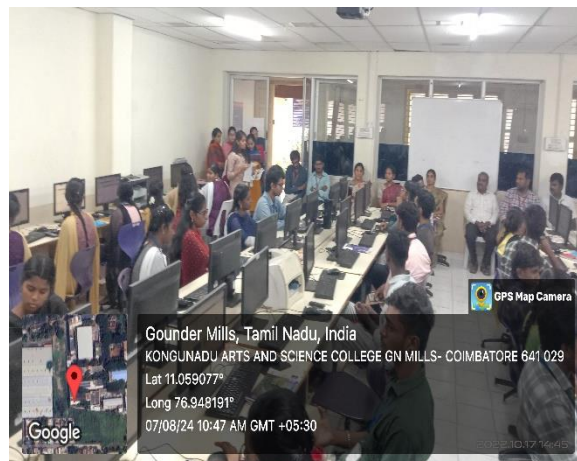
Faculty Development Programme on “IPR Insights and Digital Tools For Teaching”



DEPARTMENT OF MATHEMATICS

1. HANDS ON TRAINING PROGRAMMES

Hands on Training in MATLAB – Programming for Beginners



One Day Hands on Training on Power BI



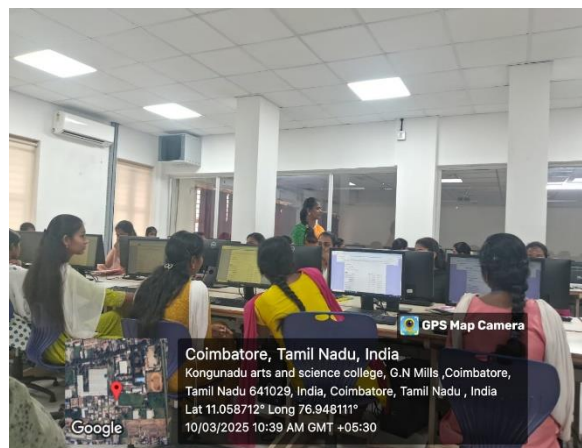
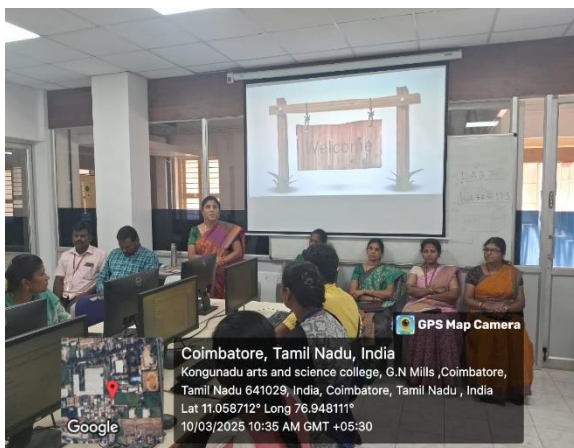
Hands on Training on R programming



Hands on Training on Data Analysis using Python



One day Hands on Training Programme on Sage Mathematics



A Hands on Training on SCILAB Programming



One day IV- Ooty



One day IV- Thrissur, Kerala



Industrial Visit to Udipi, Coorg, Calicut and Chikkmagalur



3. EXHIBITIONS / COMPETITION

Inter- school Mathematics Competitions



Inter-school Chess Competitions Chess Carnival 2k25



Inter department competition



4. LECTURES/SEMINARS/WORKSHOPS CONDUCTED

Awareness Programme on Pitching Idea for Staggering Genius



National day celebration: A Lecture on Technological Inventions by Indian scientists - An inspiration for future innovators



A seminar on “Differential Equations and its applications”



A Guest Lecture on Navigating Complexity: Interdisciplinary Learning for Non-Mathematics Students



A Guest Lecture on Student Project Ideas- Interdisciplinary Approach



One-day workshop on Vedic mathematics for Science students



Lecture Series on Algebra & Analysis – I



Lecture Series on Algebra & Analysis – II



8th International Conference on Current Scenario in Pure and Applied Mathematics



Kongunadu College conducts International Conference on Mathematics

The Covai Mail

The Department of Mathematics, Kongunadu Arts and Science College organized the 8th International Conference on Current Scenario in Pure and Applied Mathematics, recently.

Kailasam, Convener of the conference welcomed the gathering. Lakshmi, Professor, Department of Studies in Mathematics, Vijayapuri Sri Krishnadevaraya University, Bellary, Karnataka outlined the conference proceedings consisting of 93 Abstracts and delivered the Keynote Address. In his address, he highly appreciated the organizers for organizing the international conference consecutively for the 8th year.

Sangeetha, Principal of the College and Postnam, Director, Ansham Research Foundation offered the felicitation.

Venkateshram, the Organizing Secretary of the conference proposed the vote of thanks for the inaugural session.

1st Technical Session

Following the inaugural session, Prof. Professor of Mathematics, Karnataka University, Dharwad, Karnataka delivered a talk on the topic, 'Applications of Fuzzy Theory' in MCDA Problems.

In his lecture, he explained the origin of the Fuzzy Theory both in theory and discussed its advantages. He further explained various algorithms applied to MCDA problems with an interesting real-life example.

2nd Technical Session

In the 2nd technical session, Maheshram, Professor of Mathematics, The Gandhigram Rural Institute, Dislaid delivered a talk on the topic, 'Reconstructing Real-life Applications through Graph Theory: From Medical Research to Digital Substrates'.

In his lecture, he illustrated the role of graph modeling in the visualization of human anatomy. He also discussed the importance of graph theory in real-life problems like communication and biological networks.

3rd Technical Session

Lakshmi, delivered a talk on the topic, 'Applying the analogization of Topological Index with Machine Learning in the 3rd Technical session. In his lecture, he benefited about the emergence of Artificial Intelligence and Machine Learning and its types.



(From left) Kailasam, Convener of the conference; Lakshmi, Professor, Department of Studies in Mathematics, Vijayapuri Sri Krishnadevaraya University, Bellary, Karnataka; Postnam, Director, Ansham Research Foundation; Sangeetha, Principal of the college and Venkateshram, Organizing Secretary of the conference with the conference proceedings.

He listed down the role of Mathematics, especially topology and graph theory to solve the various real-world problems with the aid of machine learning. He emphasized the security of software like Python, R, Java, Java, Java, Python etc., to simplify the problem-solving techniques.

4th Technical Session

In the 4th technical session, Deepavathi, Associate Professor, DSR in Mathematics, Tirunelveli University, Karaikal delivered a talk on the topic, 'Some novel investigations on various graphs and their applications', as which he explained the various types of graphs.

He has so far presented more than 30 students to clear the CSIR NET T Examination. During his lecture, he provided the key points to remember that would help one to clear the CSIR NET examination.

Final Session

In the final session of the day, around 60 participants presented their papers in rounds discuss the graph theory, topology, differential equations, Fuzzy theory, mathematical modelling etc., in 7 parallel sessions.

Faculty members from constituent institutions served as Chairpersons for the paper presentation session and in each session, one presenter was awarded the Best Paper Award.

2nd Day

On the 2nd day of the conference, 5 eminent resource persons from Karnataka, India, Spain and Italy delivered their lectures.

1st Session

Dr. Lakshmi, Professor of Mathematics and Dean of Science, Chairman of CUSAT Research Group University of Kerala, India presented the first session and spoke on the topic, 'Super Symmetries of Hypergraphs and Its Application for Symmetric Encryptions'.

2nd Session

In the second session, Ismail Naci Cengiz, a Professor of Mathematics from Bursa Uludağ University, Bursa, Turkey, addressed the topic of 'Total Independent Graphs'.

3rd Session

Hacı Mehmet Tokdemir, Professor, Department of Mathematics and Science Education, Faculty of Education, Hattat University, Samsirli, Turkey dealt with the

final session and delivered the talk on 'Why we need to study the epidemiological models?'

4th Session

In the fourth session, Raul M. Fabian, Associate Professor, Department of Applied Mathematics, University of Seville, Spain spoke on the topic, 'A new graphical authentication scheme based on Latin squares'.

Final Session

George Natchu, Researcher and Aggregate Professor of Mathematics, Department of Mathematics, University of Seville, Spain presented the final session and delivered a talk on the topic, 'Some Computational Approaches in Neutrosophic Theory'.

More than 100 participants from various parts of the country attended the conference and benefited. Handling researchers and students had an opportunity to interact with the resource persons and clarified their suggestions.

This International Conference has proved the way for Mathematics researchers across the globe to discuss and share their knowledge, and the organization.

”

In the conference, around 60 participants presented their papers in research domains like graph theory, topology, differential equations, fuzzy theory, mathematical modelling etc., in 7 parallel sessions.

Lecture Series on Algebra & Analysis – III



Lecture Series on Algebra & Analysis - IV



5. EXTENSION ACTIVITIES

Activity Based Learning- Yuva Public School

