



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

DEPARTMENT OF PHYSICS

ACTIVITIES CONDUCTED

UNDER

DBT STAR COLLEGE SCHEME 2024-2025

HANDS ON TRAINING



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 electrical 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 (UG), 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, pentagon area calculator. It helped to improve the practical and analytical skills of students.

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.

INVITED LECTURES

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	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.
4	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.
5	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.
6	Importance of Science Innovations in Higher Education	09.10.2024	Dr. Ranjithkumar Rajamani, Ph. D, FERA 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.
7	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.

EXHIBITION / COMPETITIONS CONDUCTED

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	Competition Quiz 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	Competition Debate 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	Competition Brain Training 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	Competition Treasure Hunt 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	Competition Alternative climax 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.

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	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.
3	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.	Non-teaching Lab Assistants: 4 Faculty: 2	Non-teaching lab assistants have learnt to troubleshoot the basic Physics lab instruments.

OUTREACH / EXTENSION ACTIVITIES

S. No.	Name of the event/Activity	Date	Resource Person	Beneficiaries of the activity	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	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.
3	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.
4	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.
5	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.

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	I B.Sc. Physics 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.