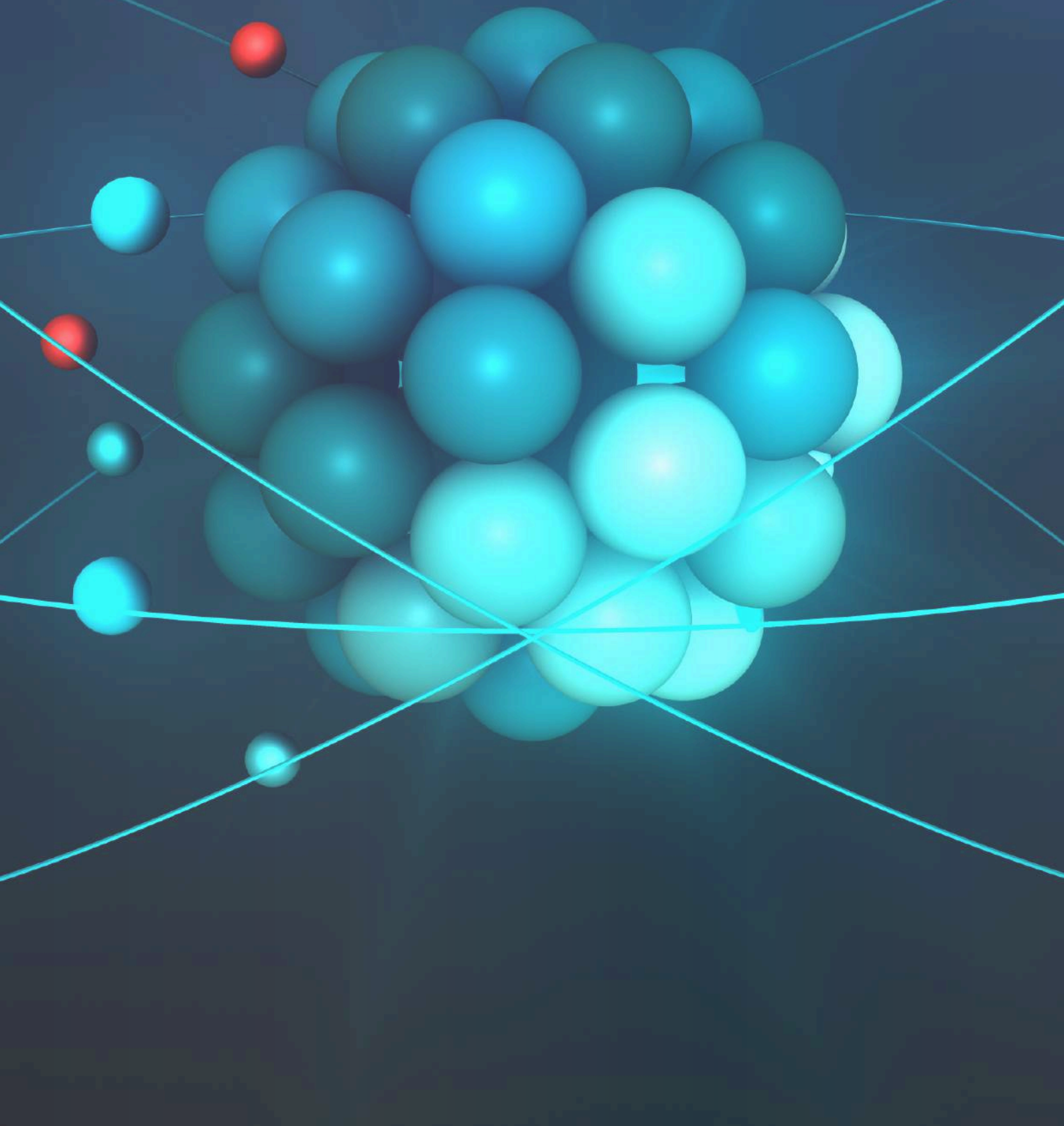
DEPARTMENT OF PHYSICAL SCIENCES

THE SCIENCE QUEST

JOURNEY OF INNOVATION



ABOUT THE DEPARTMENT

The Department of Physical Sciences at Kristu Jayanti College, Autonomous, Bengaluru offers a comprehensive academic experience with its triple major 3-year BSc Degree programme in Computer Science, Electronics, Statistics, Mathematics, Physics, and Economics. By incorporating the State Education Policy (SEP) curriculum, in line with the Karnataka Higher Education Council, the department ensures a holistic and contemporary educational structure. The commitment to high-quality education is reflected in its recognition with grade 'A++' in 2021 by NAAC in the Third Cycle of Accreditation. In the NIRF 2024, Our College has been ranked 60th place in the top 100 colleges in the country.

The B.Sc. Physical Sciences programme stands out for its multidisciplinary approach, blending core subjects such as physics, mathematics, electronics, statistics and computer science.

Here are several aspects that make this programme unique:

Flexibility and Specialization Opportunities:

The programme often allows students to specialize in one of the core areas or follow an interdisciplinary path.

Practical and Analytical Skill Development:

B.Sc. Physical Sciences programme places significant emphasis on laboratory work and hands-on experience, encouraging students to experiment, analyze data, and draw evidence-based conclusions.

Career Versatility and Adaptability:

Graduates of physical sciences programmes are prepared for a range of career options. The adaptability of a physical sciences graduate makes them well suited for emerging fields that demand multidisciplinary knowledge, such as renewable energy, nanotechnology, AI, Cyber security, Data Scientist and many more.

MESSAGE

PRINCIPAL'S MESSAGE

FR. DR. AUGUSTINE GEORGE

Physical sciences stand at the core of humanity's quest for knowledge, unraveling mysteries of the universe and paving the way for technological advancements. Through this initiative, we aim to highlight groundbreaking research, academic achievements, and inspiring stories that ignite curiosity and foster innovation.

THE SCIENCE QUEST, our department's vibrant platform celebrating the wonders of physical sciences. This newsletter embarks on a journey of innovation, showcasing the brilliance and dedication of our students, faculty, and collaborators.

As we explore emerging scientific trends, I encourage each of you to immerse yourselves in the limitless opportunities science offers. Together, let us cultivate a culture of learning and discovery, where ideas flourish, and boundaries are redefined.

VICE PRINCIPAL'S MESSAGE

FR. DR. LIJO P THOMAS

It is a privilege to introduce THE SCIENCE QUEST, a newsletter that celebrates the dynamic spirit of our Physical Sciences Department. This platform embodies our commitment to nurturing curiosity, innovation, and academic excellence.

Physical sciences inspire us to explore the mysteries of the natural world and drive advancements that shape our future. Through this newsletter, we aim to spotlight the exceptional achievements of our students and faculty, alongside cutting-edge research and emerging trends in science.

Let this be a source of inspiration for all, encouraging collaboration, creativity, and a passion for discovery. Together, we continue to push boundaries and embrace the infinite possibilities of science.

MESSAGE

DEAN'S MESSAGE

DR . CALISTUS JUDE A L

I am delighted to present THE SCIENCE QUEST, our department's initiative to spotlight the extraordinary endeavors and achievements in the field of physical sciences. This newsletter serves as a testament to our collective passion for discovery and innovation.

The physical sciences form the backbone of technological and societal progress, challenging us to understand the universe and solve real-world problems. Through this platform, we celebrate the creativity, dedication, and accomplishments of our students and faculty.

Let us continue to explore new horizons, nurture ideas, and contribute to the boundless possibilities of science.

HOD'S MESSAGE

PROF. NAGENDRA .S

It is with great enthusiasm that I welcome you to THE SCIENCE QUEST, our department's dedicated newsletter celebrating the fascinating world of physical sciences. This platform showcases the achievements, research, and creative pursuits of our students and faculty, highlighting their contributions to advancing scientific knowledge.

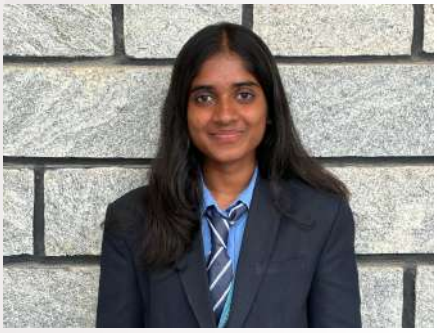
Physical sciences inspire curiosity, innovation, and problem-solving, laying the groundwork for transformative progress. Through this newsletter, we aim to share ideas, foster collaboration, and ignite a passion for discovery within our community.

Let us continue this journey together, pushing boundaries and creating a brighter future through science.

FROM STUDENT DESK

As the student coordinator for the Department of Physical Sciences, I am excited to be part of a vibrant community dedicated to exploration and discovery. Our department is a hub of innovation, and we strive to create an environment where every student can thrive. Let's collaborate, participate in upcoming events, and continue pushing the boundaries of knowledge together!

Anirudh Gowtham
22CSEL05



Miraclin Akshaya
22CSMM37

It’s a privilege to represent the Department of Physical Sciences. Our department is where curiosity meets learning, and we are constantly striving for excellence. Together, we will create meaningful experiences, share ideas, and work towards mastering the fascinating world of physics and chemistry. Let’s make the most of this journey and support each other in every step!

The Physical Sciences Department fosters academic excellence through innovative teaching, research, and hands-on learning. Offering programs in physics, chemistry, and mathematics, it equips students with analytical and problem-solving skills. With state-of-the-art laboratories and dedicated faculty, the department emphasizes interdisciplinary learning, preparing students for careers in science, technology, and research.

Asritha
22STEC13

EDITORIAL BOARD

SHUBH AARAMBH

The inauguration of the new academic year **'SHUBH AARAMBH'** for the final year and second year undergraduate and postgraduate students of BA, B.Com, BBA, BCA and BSc programme was conducted at Kristu Jayanti College, Bangalore from July 22nd to July 24th 2024 at the jubilee hall and SKE auditorium. The orientation programme was organized and conducted by the literary and cultural association along with the support of the teaching faculty from the respective deaneries. It provided the students with a renewed understanding of the jayantian code of conduct and assessment methods. In the inaugural address Fr. Dr. Augustine George, Principal, Kristu Jayanti College, insisted on the innovative pedagogy and boundary less class room education.

He stressed on the importance of upholding Indian values for the holistic development and urged students to focus on skill enhancement through the college's resources. Emphasizing on the discipline and a zero-tolerance policy towards ragging, Fr. Principal encouraged the students to embrace responsibility of their life and wished them a productive year ahead. Fr. Principal concluded his inaugural address by advising students to join hands to transform themselves and achieve their goal. He envisioned the student community by highlighting the healthy practices of our college and how it plays a pivotal role in shaping their academic and personal endeavours. He firmly insisted that no student should act as a hindrance to the academic culture and also to the healthy ambience of our campus and they should adhere to the jayantian code of conduct. The inaugural sessions were followed by department-wise orientation sessions and also orientation by the exam office.

DST-SERB SPONSORED INTERNATIONAL CONFERENCE ON RECENT TRENDS IN MATERIAL SCIENCE (ICRTMS-24)

DST-SERB Sponsored International Conference on
Recent Trends in Materials Science (ICRTMS-24)
Date: 6th & 7th, March, 2024

THE INTERNATIONAL CONFERENCE ON RECENT TRENDS IN MATRIAL SCIENCE brought together researchers, academicians, and industry experts to discuss advancements in materials science across diverse fields like nanotechnology, biomaterials, and green chemistry. The event attracted 153 participants, including international delegates from Israel, Malaysia, and Germany, along with attendees from various Indian states. A total of 60 research papers were presented on topics such as spectroscopy, nanomaterials, and quantum computations. Cash prizes for the best oral and poster presentations were sponsored by the Indian Association of physics teachers. The conference opened with a keynote on neuromorphic devices and their potential to revolutionize artificial intelligence. Technical sessions covered topics like topological insulators, phase change materials, nanostructured materials, and quantum criticality, offering deep insights into cutting-edge research and applications.

NATIONAL CONFERENCE ON RECENT TRENDS IN MATERIAL SCIENCES FOR ELECTRONICS AND ENGINEERING APPLICATIONS - RTMSEE-2024

The National Conference on Recent Trends in Material Sciences for Electronics and Engineering Applications brought together experts and researchers to share advancements in the field. Prof. Kuruvilla Joseph, from the Indian Institute of Space Science and Technology, inaugurated the event, emphasizing nanotechnology's transformative role in biomedical devices and electronics. Key sessions included Dr. Nagamony Ponpandian's insights on transition metal nanocomposites for renewable energy, Dr. B. Suresha's exploration of nanocomposite mechanical characterization, and Dr. Ranjani Viswanatha's discussion on quantum dots for advanced materials. Dr. Saritha A. Pillai highlighted the potential of two-dimensional nanomaterials in electronics and medicine. The event fostered collaboration, addressing challenges like scalability and cost-effectiveness, while inspiring future innovations in material sciences.

NATIONAL WEBINAR ON SUSTAINABLE DEVELOPMENT

The Department of Physical Sciences collaborated with the UNAI Hub for SDG-1 and Department of English to conduct a National Webinar on Sustainable Development on March 11th, 2024. The webinar aimed to shed light on critical aspects of sustainability. Distinguished speakers, Prof. Awadesh Kumar from the Department of Botany at Mizoram University, Aizawl, and Dr. Nurpen Meitei Thangjam from the Department of Pharmacy at Asian International University, Imphal, served as resource persons. Prof. Awadesh Kumar elucidated on the cultivation of Medicinal and Aromatic Plants, emphasizing their significance in sustainable practices and their potential contributions to various sectors. Dr. Nurpen Meitei Thangjam shared profound insights into the importance of Lichens, highlighting their ecological roles and applications in environmental conservation efforts. The webinar provided a platform for interdisciplinary discourse, fostering awareness and understanding of sustainable development practices among participants from diverse backgrounds. Through collaborative efforts, the event contributed to advancing knowledge and fostering a culture of sustainability.

ORIENTATION PROGRAMME PHYSICAL SCIENCES

On February 6th, a consultant team led by Dr. Baba Gnanakumar, In Charge of Consultant Services, held an orientation session. Dr. Vinoth B welcomed the meeting, and Prof. Baba Gnanakumar, highlighted the government and non-governmental consultancy projects that the faculty members can participate into and progress their careers and the institution's growth. He has educated numerous disciplines on consultancy, consultancy websites, and so on, as well as elaborated on one-nation-one data projects such as Widwan and Niti Aayog. He had addressed several programmes (DST, SERb, and startup awards) and worked with North East universities.

He has concentrated on further initiatives supported by IFCPAR, CEFIPRA, UKRI, the European Commission, Canada Project Funds, CSR, Invest India, Tech Mahindra, Hindustan University, Biocon Vikshit Bharat, UNESCO, and others.

PLUTONIA SCIENCE EXHIBITION

The physical sciences department in association with Jawaharlal Nehru Planetarium, Bangalore Association for Science Education (BASE) held a science exhibition called Plutonia-2024 on January 23, 2024, as part of the department's objective to provide quality education that improves intellectual capabilities in technical areas as well as employment chances. Vinod Kumar, Associate Vice president, Driving Technological innovation in Life science R & D, Accenture, Bengaluru. Fr. Lijo P Thomas, Vice principal & CFO, Prof Nagendra S, Coordinator for physical sciences and Prof. Sevuga Pandian, Head department of computer science (UG) were present during the inauguration of Plutonia-2024. Exhibition included Computer Science, Electronics, Statistics, Mathematics and Physics Projects. Projects created by department students serve as an example of their talents. The goal of this exhibition is to close the knowledge gap between academic and industry needs. There were 54 active projects on display during this event. Through these projects, the physical sciences department's undergraduate students demonstrated their technical expertise. Neighbouring college and school students were invited to visit the stall and requested to give the feedback about the project. Children of the migrant workers also visited the exhibition and were very enthusiastic to see the projects. “Pong game”, “Drowsiness detection system”, “Safety Helmet”, “Military Bot”, “RSA - Cryptosystem”, “Chaotic theory” were some of the working models included in the exhibition which grabbed the attention of visitors. There was a tough competition among the contestants of the working models in the exhibition; as 54 teams competed for the 1st three prizes of the exhibition. Three best projects from each subject were selected.

INDIA'S MOON MISSION

National Space Day is celebrated on 23rd August, 2024. National Space Day in India is celebrated to honor the country's achievements in space exploration, promote awareness and education about space science, inspire innovation and scientific inquiry, and foster national pride and unity. Our celebration is even more special as we bask in the success of the Chandrayaan-3 mission. The successful landing of Chandrayaan-3 on the Moon's South Pole has paved the way for future lunar missions and created new opportunities for scientific study. It has also provided invaluable information on the composition of the Moon. National Space Day was celebrated with the theme “Touching Lives while Touching the Moon: India's Space Saga”. To engage and inspire the youth of the nation towards space technology and its applications, Mr. P Vijaya Ganesh, Scientist, U R Rao Satellite Centre, Indian Space Research Organisation (ISRO), Bengaluru was delivered an expert talk on “India’s Moon Mission”.

Mr. P Vijaya Ganesh, Scientist, U R Rao Satellite Centre, Indian Space Research Organisation(ISRO) elaborated on the sophisticated technology underpinning these missions, the innovative approaches employed, and the meticulous execution processes that have driven their success. He offered insights into the innovative engineering solutions and strategies that were pivotal in overcoming various challenges. The session highlighted the significant impact of these missions on scientific advancements and their broader implications for space exploration and technology development.

NATIONAL SPACE DAY GUEST LECTURE

National Space Day is celebrated on 23rd August, 2024. National Space Day in India is celebrated to honor the country's achievements in space exploration, promote awareness and education about space science, inspire innovation and scientific inquiry, and foster national pride and unity. Our celebration is even more special as we bask in the success of the Chandrayaan-3 mission. The successful landing of Chandrayaan-3 on the Moon's South Pole has paved the way for future lunar missions and created new opportunities for scientific study. To foster scientific temper among students, two competitions were conducted such as Galactic Rescue Mission and Cosmic Conundrums –QUIZ. Total of 70 Students were participated in the prelims and twenty students were selected for final round. The final of National Space day competitions were conducted on 23-08-2024 (Friday). Mr. K. N. Venkatesh, Senior Project Engineer, Programme Co-ordinator - Student Project Programme, Karnataka State Council for Science and Technology (KSCST) was the resource person and delivered a valedictory address. He explained the programmes, projects offered by the KSCST for the promotion of the science and technology. Students were encouraged by the resource person to utilize the facilities and financial support offered by KSCST. Winners received cash prize and certificate from the resource person.

NATIONAL MATHEMATICS DAY

In observance of National Mathematics Day, the Department of Mathematics organized an illuminating expert lecture, exploring the captivating discoveries within the intricate realm of the number system. Dr. A. Ponmana Selvan, Associate Professor, Department of Mathematics, Raja Lakshmi Engineering College, Chennai, served as the resource person, bringing a wealth of knowledge and expertise to the virtual stage.

His expressive clarifications and illustrative examples not only clarified the complexities of the number system but also instilled a sense of wonder and appreciation for the beauty inherent in mathematical structures.

WORLD HEARING DAY

The Department of Electronics organized an Awareness talk on “Changing mindsets, Let’s make ear and hearing care a reality for all” for the NSS student volunteers to observe World Hearing Day on 1st March 2024.

The program was started with a welcome speech by student coordinator and the Prof. Nagendra S Coordinator-Physical Sciences delivered the presidential address. After the introduction, Ms. Priyanka, clinical supervisor from Dr. S R Chandrasekhar Institute of Speech And Hearing started the session with the importance of World Hearing day and reminded the students how to prevent hearing loss. Later Ms. Deena Priya explained about the hearing habits among the youngsters that are causing the hearing loss. She also explained the various hearing guards to prevent hearing loss due to high noise levels.

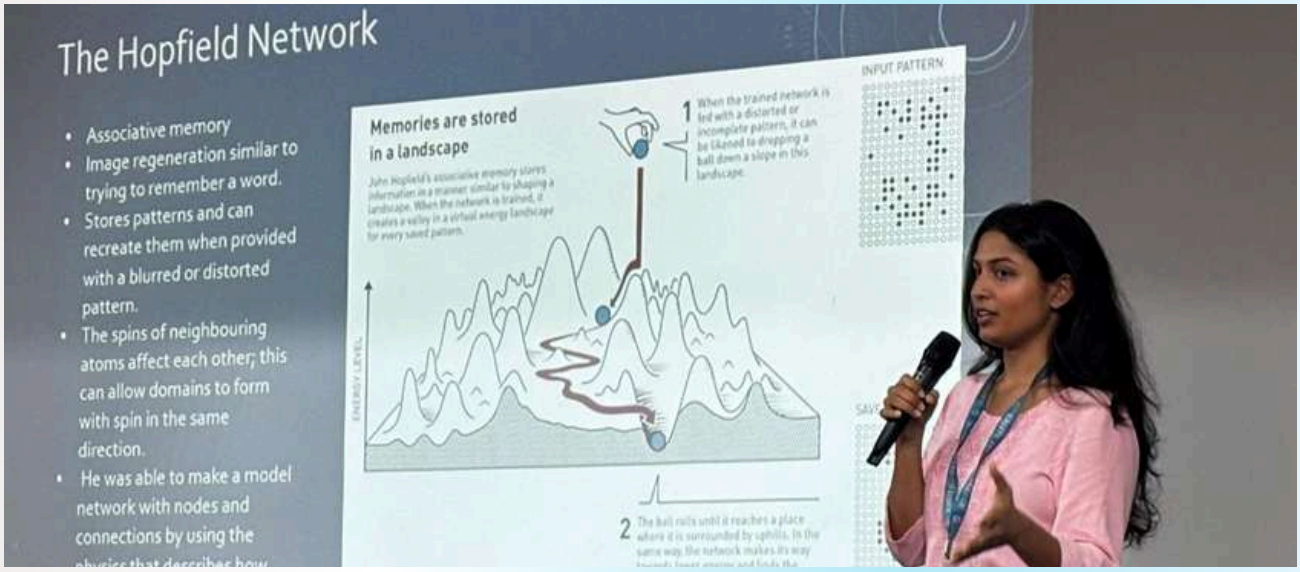
After the session, they demonstrate the mannequin developed by their institute called the 'Karna'. It gauges the volume of music played in the ears by an individual's personal music system. Many of our students use their earbuds to check the decibel level. Following this, there was an interactive session when students asked the resource person several questions, and the person responded to each one. A vote of thanks concluded the Programme.

INTERNATIONAL LECTURE SERIES: MATHEMATICAL MODELING: APPLICATIONS IN SCIENCES

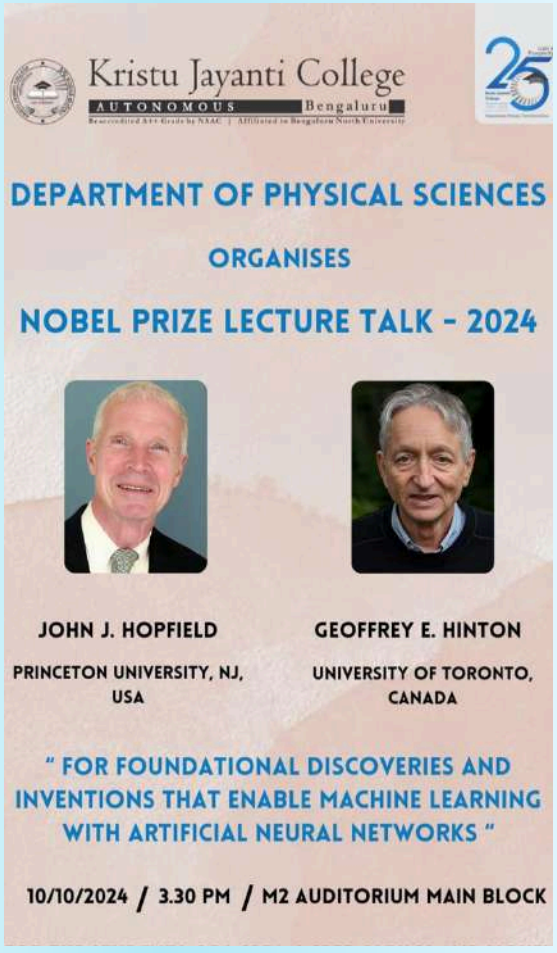
The talk provided a comprehensive overview of the pivotal role that mathematical modeling plays in advancing scientific understanding and problem-solving. The presenter opened the session by defining mathematical modeling as the process of translating real-world phenomena into mathematical structures, setting the stage for a journey into its diverse applications mathematical modeling involves the art of translating real-world complexities into mathematical structures, unleashing the potential to unravel the mysteries that surround us. The department of Physical Sciences in collaboration with Applachian State University has organised an International Lecture Series on the topic “Mathematical Modeling: Applications in Sciences” on 6th March, 2024 for all B.Sc. Physical Sciences Students. The resource person was Dr. Quinn A Morris, Assistant Professor, Department of Mathematical Sciences, Applachian State University.

The resource emphasis on the interdisciplinary nature of mathematical modeling. Successful collaborations across different scientific fields were explored, showcasing how diverse expertise contributes to the development of robust and comprehensive models through pictures and videos. He has also interacted with the students and answered their questions. He motivated them towards research in the field of mathematical modeling. Overall, the session was informative and engaging, and provided a spark in students in the field of science. Total 103 students have attended and benefitted from the event. The combination of theoretical insights and practical examples created an engaging and informative session for all participants.

NOBEL PRIZE IN PHYSICS LECTURE TALK - 2024



The 2024 Nobel Prize in Physics was awarded to John J. Hopfield and Geoffrey E. Hinton for their foundational work on artificial neural networks, which are now crucial for modern machine learning. On this occasion, the department of Physical sciences organized Nobel Prize in Physics Lecture Talk - 2024 on 10th October 2024 for the students of I CPE and V PHCS/PHEL class. The resource persons were Ms. Daya Janardhanan from V PHCS and Arnav S Madanan from V PHEL. In total, 118 students have been benefitted from the program. It was briefly introduced the key scientific contributions and the scientific background leading up to their discovery and innovations. John Hopfield developed an associative memory network, now known as the Hopfield Network. This model utilizes principles from physics, to retrieve stored data even when the input is incomplete or noisy. Geoffrey Hinton built upon Hopfield's work by introducing the Boltzmann Machine, another type of neural network that applies statistical physics principles to identify patterns within data. These discoveries have revolutionized the use of AI, not just in physics, but across fields such as materials science, where neural networks help design new materials with specific properties.



CAPACITY BUILDING TRAINING ON LIFE SKILLS

The Department of Physical Sciences, in collaboration with the Centre for Life Skills Education, successfully organized a comprehensive Capacity Building Training program on life skills for all first-year students. This engaging program took place in the M3 and M1 Auditoriums and was meticulously designed to address a wide range of essential skills.

The primary objectives of the training were to foster self-awareness, enhance critical and creative thinking, and improve problem-solving and decision-making abilities. Additionally, the program aimed to develop effective communication skills, strengthen interpersonal relationships, and provide strategies for coping with emotions and managing stress.

Faculty members led a variety of interactive activities, ensuring that each session was dynamic and participatory. These activities were crafted to engage students actively, encouraging them to apply the skills being taught in practical scenarios.

The program's interactive nature made it particularly enjoyable for the students, who appreciated the opportunity to engage deeply with the material and with their peers. The sessions were designed not only to be educational but also to be enjoyable and enriching, contributing significantly to the students' personal and academic growth. The positive feedback from the students highlighted the effectiveness of the program and its impact on their development.

PLACEMENT ORIENTATION TRAINING PROGRAM

This Session was conducted by Mr Bijin Philip and Mr Jinu Mathew, coordinator and placement executive of Kristu Jayanti College respectively.

They provided the students with proper insight into the placement process and aptitude training, along with briefing them on the essential criteria to be adhered to.

The session focused on how the centre will be prioritizing the students interested in placement and how they will be provided with specific training. The students were provided with comprehensive guidelines to craft professional resumes that effectively showcase their skills, experiences and achievements to potential employers. They also provided a glimpse of potential recruiters. Overall, the session was valuable and provided students with a glance at the numerous opportunities available in the corporate world.

CAREER ENHANCEMENT SESSION ON RESEARCH AND HIGHER EDUCATION OPPORTUNITIES IN GERMANY

The Department of Physics of Kristu Jayanti College has been very keen in organizing student enrichment programs to provide an excellent view of future opportunities to the students. This Career Enhancement session focused on exploring research and higher studies opportunities in Germany. The resource person, Mr. Kaushikk V N, M.Sc. Student, Department of Physics, Universität Hamburg, Germany, and a proud alumni of 2018 batch of our institution, shared valuable insights and guidance for those interested in pursuing academic careers in Germany.

Key Points Covered during the session:

The German Education System: The session provided an overview of the German education system, highlighting the different types of universities (public and private), research institutions, and postgraduate programs available.

Research Opportunities: Mr. Kaushikk V N, discussed the diverse research landscape in Germany, focusing on areas of German strength and potential collaborations between Indian and German institutions.

Funding Opportunities: Information on scholarships, grants, and financial aid options for international students pursuing research or higher studies in Germany was provided.

IDEATHON ’24

The Department of Physical Science organized Ideathon 2024 in collaboration with Kristu Jayanti Incubation Center and Institute Innovation Council. This initiative aimed to cultivate a culture of innovation and problem-solving, emphasizing creativity, teamwork, and the ability to address pressing real-world challenges.

The Ideathon consisted of two distinct rounds: Idea Generation Round. In this round, students were encouraged to form teams of six to develop feasible solutions and workable models for the problems listed on the Smart India Hackathon (SIH) 2024 website. A total of four teams registered their ideas through a Google Form distributed by the Ideathon team. Participants engaged deeply with the provided challenges, showcasing their innovative thinking.

In Presentations Round the shortlisted teams presented their ideas in a concise format to a panel, which included

Dr. Ramanathan. Each presentation provided an opportunity for teams to articulate their concepts and receive feedback. The ideathon team carefully analyzed each proposal, resulting in the nomination of four standout teams. These nominated ideas have been uploaded to the Smart India Hackathon website, and we are currently awaiting results from the competition.

CPR TRAINING

On October 21, 2024, Physical Sciences students organized an impactful Cardiopulmonary Resuscitation (CPR) training session in collaboration with healthcare professionals from Bangalore Baptist Hospital. This training was designed to equip participants with essential life-saving skills, crucial in situations where immediate intervention can make a life-or-death difference. The session aimed to build both competence and confidence in handling cardiac emergencies, empowering students to step up and provide assistance if someone experiences sudden cardiac arrest.

Expert instructors from Bangalore Baptist Hospital guided students through key CPR techniques, including chest compressions and rescue breaths, in a blend of theoretical and practical exercises. Students practiced these techniques on CPR dummies, learning the importance of maintaining proper rhythm, compression depth, and the timing of breaths. The training also covered the use of Automated External Defibrillators (AEDs) and emphasized the need for rapid action to ensure blood circulation and oxygen supply to vital organs.

This CPR training initiative not only enhanced the life-saving capabilities of the students but also promoted a greater awareness of emergency response readiness within the community. The session reinforced the idea that immediate, informed actions can significantly improve survival rates in cardiac emergencies, creating a safety-oriented and responsive community.

JNANADARSHAN BOOK REVIEW SESSION

The Library and Information Centre at Kristu Jayanti College (Autonomous) in collaboration with the Department of Physical Sciences organized a book review session as part of "JNANA DARSHAN, 2024-25" on 22nd August 2024 at M1 Auditorium Main Block. The JNANADARSHAN book review session showcased insightful analyses from Dr. Vinoth B and Dr. Mayank Pandey, each offering a deep dive into their specialized areas. Dr. Vinoth B focused on the book's contributions to Machine Learning, emphasizing its exploration of advanced algorithms and their practical applications. Meanwhile, Dr. Mayank Pandey provided a critical evaluation of the book's coverage of Polymer Nanocomposite Films, Coatings, and Two-Dimensional Nanomaterials, highlighting its significance in both current research and industry practices. The session wrapped up with an engaging Q&A, which underscored the book's interdisciplinary approach and its role in tackling modern scientific challenges.

UNLOCKING POTENTIAL: THE SCOPE AND OPPORTUNITIES IN BSC PHYSICAL SCIENCES

The session included a broad range of topics, from the core structure and scope of the program to the diverse career opportunities that await graduates.

Mr. Kurian focused on the need to discover the fundamental subjects that form the basis of a Computer Science, including programming, algorithms, data structures, and more.

He also spoke about the importance of hands-on experience through projects, internships, and real-world applications that enhance learning and prepare students for the industry.

He stressed on the need to explore the wide array of career paths available to BSc CS graduates, ranging from software development and cybersecurity to data science and artificial intelligence.

Mr. Marian informed about the latest trends in the tech industry, such as cloud computing, machine learning, and block chain technology.

He also talked about the critical technical and soft skills required to excel in the tech industry, including problem-solving, teamwork, and effective communication.

AURORA, AN E-POSTER DESIGN COMPETITION (ANTI-RAGGING WEEK)

The Department of Physical Sciences is organizing an innovative e-poster design competition, "Aurora," focused on the pivotal theme of "Anti-Ragging: Isn't it kind?" This event aims to encourage Physical Sciences students to creatively express their thoughts and ideas on the significance of preventing ragging and promoting a culture of kindness.

Scheduled to take place on August 16, 2024, from 4:30 PM to 5:30 PM at the M1 Lab, First Floor, Main Block. This competition invites individual participants to showcase their design skills. To ensure a level playing field, participants are required to create their posters from scratch, without using pre-made templates.

The competition guidelines specify that participants can utilize any design platform of their choice, adhering to the prescribed aspect ratios (9:16/16:9). To maintain the integrity of the competition, any form of malpractice will result in disqualification. The judges' decisions will be final and binding.

KNOWLEDGE ENRICHMENT PROGRAMMEE: EXO PLANETS, TRANSIT CURVE ANALYSIS AND ADVANCED IMAGINING

The Department of Physical Sciences conducted a Knowledge enrichment program on 14th October 2024 for the first-year BSc CPE students. The session, titled "Exoplanets: Transit Curve Analysis and Advanced Imaging" was led by Harshith VH and Vaishnavi K from III BSc PHCS (Members of NASA Exoplanet Watch). The program began with an introduction to astronomy and astrophysics, followed by a detailed explanation of exoplanets. The students were introduced to various detection methods for exoplanets, including transit curve analysis, as well as a few algorithms relevant to the field. An introduction to NASA's citizen science project "The NASA Exoplanet Watch" was also discussed, providing insights on how students can get involved in the project. The session concluded with a brief explanation of how participants can start contributing, with a hands-on workshop to follow in the next session for further exploration.

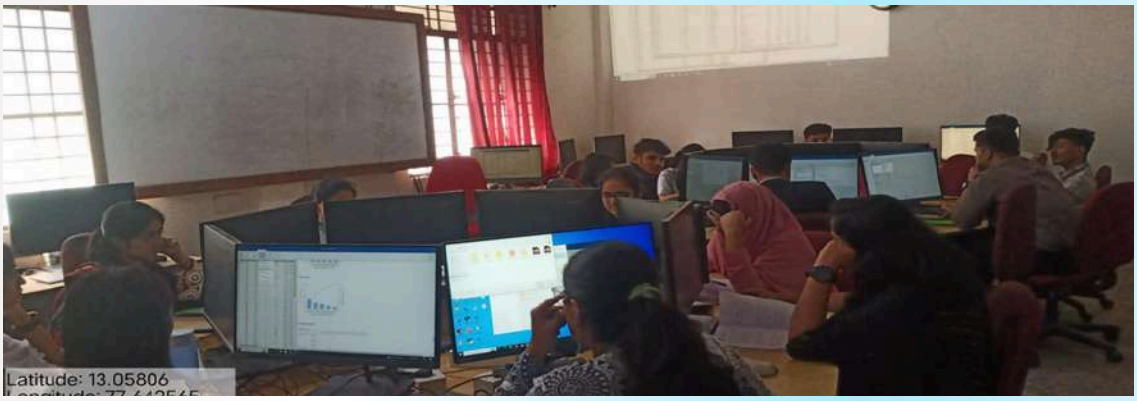
WORKSHOP ON SPSS

A comprehensive training in the Statistical Package for the Social Sciences (SPSS) was provided to undergraduate statistics students. Giving students a basic understanding of statistical procedures utilizing SPSS, data analysis, and visualization was the aim of the workshop. A succinct overview of the goals and timing of the program. a thorough tutorial on using the toolbars, menus, and interface of SPSS. Data input techniques are demonstrated, and datasets from different sources are imported. Methods for organizing datasets, managing missing values, and cleansing data. In order to put their knowledge to use, students worked on their own prepared datasets. Exercises and real-world examples provide practical experience to support learning.

Enhanced ability to use statistical techniques to address research issues and reach data-driven conclusions.

WORKSHOP ON JAMOVI

Familiarize students with the user-friendly interface of JAMOVI, enabling them to navigate the software efficiently and perform basic statistical analysis. Guide students through the main sections of JAMOVI, including the data view, analysis options, and output sections. Demonstrate how to import data from various sources (e.g., CSV, Excel) and manage datasets within JAMOVI (e.g., sorting, filtering, and creating new variables). Show students how to perform fundamental statistical analyses such as descriptive statistics, t-tests, chi-square tests, ensuring they understand how to interpret the results. Provide hands-on practice with advanced statistical techniques available in JAMOVI, such as correlation and regression analysis. Teach students how to create and customize a variety of data visualizations (e.g., histograms, box plots, scatter plots) to enhance the presentation of their statistical results.



KNOWLEGDE ENRICHMENT SESSION ON R SOFTWARE

The R software session aimed to provide participants with a comprehensive understanding of R programming language for statistical analysis. The session covered essential topics including R installation, basic R structure and coding, descriptive statistics and graphs, scatter plots, correlation, and regression analysis.

Overall, the session proved to be informative and valuable in enhancing participants' understanding and application of statistical analysis techniques using R software.

HANDS-ON SESSION ON EXOPLANETS: FROM OBSERVATIONS TO LIGHT CURVES

In continuation of the enrichment programme, the department of physics has organized the “Hands-on Session” on the topic “Exoplanets: From Observations to Light Curves” on 18th January, 2024 for all I, II and III B.Sc. Physics Students. The resource person was Avinash S. Nediyedath, Member of NASA Exoplanet Watch, American Association of Variable star Observers. The main objective of this event was to provide the fundamental understanding of exoplanets and how to take real time telescope observations and generate light curves to find exoplanets. Also, aimed to motivate the students towards research and find the research opportunities in the field of astronomy and astrophysics.

KNOWLEGDE ENRICHMENT SESSION ON R WORKSHOP

Department of Statistics organized R Workshop. The Resource Person is Prof. Keerthi Vijayan, and Dr. Yuvaraj V Assistant Professor, Department of Physical Sciences. The aim of the event is to focuses on the basics of R. The event is held in an Offline mode. The session aims to educate participants about the fundamental concepts of basic statistics using R and how it can be achieved using various simple program.

KNOWLEDGE ENRICHMENT SESSION INTRODUCTION TO PYTHON

The Department of Mathematics organized a Knowledge Enrichment Session on Introduction to Python to the students of I BSc CSMM A and B Section. The resource persons were the students of final year BSc CSMM - Neetha, Francin, Devika and Richi. They introduced and explained Python's syntax. Neetha introduced PYTHON libraries like NumPy, SciPy, and Matplotlib that simplify mathematical computations and visualizations. Devika explained Python fundamentals—variables, data types, and basic operations. Francin demonstrated how to use Python's built-in functions and the math module to perform calculations like exponentiation, logarithms, and trigonometry. Richi introduced NumPy, a powerful library for numerical computing. Students were given hands-on training for all the concepts introduced. Python is a tool that can combine thinking and problem-solving in mathematics.

BRIDGE COURSE ON BASIC CONCEPTS IN MATHEMATICS

The Department of Physical Sciences (Statistics) conducted a bridge course on "Basic Concepts in Mathematics" for I semester BSc students majoring in Statistics from 05/08/2024 to 06/08/2024. The bridge course successfully equipped students with essential mathematical skills and knowledge required for their upcoming studies in statistics.

The was structured around five key units, namely: Laws of Indices, Laws of Logarithms, Algebraic Identities, Solving Simultaneous Equations: Arithmetic and Geometric Progression. Feedback from participants indicated a significant improvement in their confidence and competence in handling fundamental mathematical concept

NATIONAL MATHEMATICS DAY – WORKSHOP

In celebration of National Mathematics Day, the Department of Mathematics hosted an enlightening workshop focused on the contemporary mathematical tool, GeoGebra. Dr. Vignesh, Assistant Professor, Department of Mathematics, CMR University, Bengaluru, served as the resource person for the event, guiding participants through the intricacies of plotting and highlighting the various features of GeoGebra. The workshop provided a hands-on experience for attendees, offering practical insights into utilizing GeoGebra for mathematical applications. Dr. Vignesh's expertise was showcased as he navigated through diverse examples, demonstrating the versatility of GeoGebra and its potential in enhancing mathematical understanding.

National Mathematics Day was aptly marked by this workshop, reinforcing the department's commitment to fostering contemporary tools and methodologies in the pursuit of mathematical knowledge. Dr. Vignesh's expertise and the interactive nature of the workshop contributed to a deeper appreciation for the role of technology in advancing mathematical understanding.

BRIDGE COURSE ON BASIC CONCEPTS IN MATHEMATICS

The Department of Physical Sciences conducted bridge course on BASIC CALCULUS from 05/08/2024 to 06/08/2024. This bridge course in Basic Calculus helped first year BSc (CSMM) students with a solid understanding of key concepts such as differentiation, the chain rule, the product rule, implicit differentiation, and logarithmic functions.

The course helps to recall the basic differentiation rules, including the power rule, constant rule, and sum/difference rules. These rules form the foundation for more complex differentiation techniques. Students were able to apply basic differentiation techniques to a variety of functions, including using the power rule, product rule, and chain rule.pt

SYNERGIA INTRA COLLEGIATE FEST 2024

Synergia is an annual intra-collegiate fest organized by the department of Physical Sciences. The final year students of the department under the guidance of program coordinator and faculty members have organized the events for 1st and 2nd year B.Sc. students. The main objective of Synergia was to foster collaboration and teamwork among students from various disciplines within the Physical Sciences department, highlighting the interdisciplinary nature of subjects like Computer Science, Math, Electronics, Economics, Physics, and Statistics. It aimed to provide a platform for students to showcase their skills, exchange ideas, and engage in enjoyable yet intellectually stimulating activities, striking a balance between learning and entertainment.

STATXPLORE

The Physical Sciences Department at Kristu Jayanti College hosted StatXplore, a statistics event that provided a platform for participants to showcase their statistical expertise and problem-solving skills. The event's preliminary round featured a diverse range of challenges, including riddles, logical reasoning, crosswords, graphical interpretation, and word searches, which tested the participants' knowledge and creativity. The final round tested observation skills, time management, and quick decision-making, culminating in a buzzer round. StatXplore provided a unique platform for learning and celebrating statistical expertise.

RESISTORIX BITWIZ

The Department of Physical Sciences at Kristu Jayanti College hosted the Resistorix Bitwiz event, a thrilling competition that brought together students from various disciplines to showcase their knowledge and skills in electronics. The four-stage competition, comprising Resistor Coding, Bit Conversion, Components Talk, and Ohm's Law Bingo, provided a comprehensive platform for participants to demonstrate their expertise. Throughout the event, participants displayed remarkable enthusiasm and dedication, tackling complex problems with ease and precision. The competition was fierce, yet friendly, with participants cheering each other on and sharing knowledge and insights. The event concluded with the announcement of winners, who were awarded prizes and recognition for their outstanding performance. Overall, the Resistorix Bitwiz event was a testament to the power of innovation, teamwork, and healthy competition, inspiring participants to pursue their passions in electronics and beyond.

PHYSTRIX

The Department of Physical Sciences at Kristu Jayanti College recently hosted PHYSTRIX, an electrifying physics event that brought together students from various disciplines. The event was a resounding success, with participants showcasing their knowledge, creativity, and problem-solving skills in physics. The competition consisted of three rounds, each designed to test the participants' understanding of physics concepts. The preliminary round, Newton's Box, was a crossword puzzle that required participants to solve clues related to physics. The final rounds, Collision and Loopscape, were a debate and an escape room challenge, respectively. Throughout the event, participants displayed remarkable enthusiasm and dedication, tackling complex problems with ease and precision. The competition was fierce, yet friendly, with participants cheering each other on and sharing knowledge and insights. The event concluded with the announcement of winners, who were awarded prizes and recognition for their outstanding performance. Overall, PHYSTRIX was a testament to the power of innovation, teamwork, and healthy competition, inspiring participants to pursue their passion in physics.

TANGENTIZE

The Department of Physical Science at Kristu Jayanti College has consistently demonstrated a strong commitment to provide a platform for students to showcase their mathematical skills, problem-solving abilities, and creativity in a competitive yet supportive environment. In line with this dedication, the department proudly organized the "Tangentize" event on 23rd September 2024, a remarkable occasion for math whiz across all academic levels. This event, "Tangentize" embarked on a captivating journey through the realms of mathematics, offering a three-stage expedition that aimed to challenge, engage, and inspire participants from diverse backgrounds and levels of expertise. The adventure began with the exhilarating "Quiz Round" where participants have to answer basic questions across the mathematics domain. This stage served as a litmus test for problem-solving skills, creativity, and resourcefulness. The second stage of the event was “Guided Navigation & Problem Solving Round” that helped participants to unveil their problem solving and co-ordination skills. The third and the final round of the event was a rapid fire round named “Buzzer Round” which was a buzzer event testing the accuracy and teamwork of the participants.

PIXELPERFECT

PixelPerfect, a computer science event organized by the Physical Sciences Department at Kristu Jayanti College, provided a platform for participants to showcase their coding skills and creativity. The event comprised an online quiz that tested participants' knowledge of programming languages, frameworks, and computer science concepts. The subsequent website development challenge pushed participants to replicate and enhance a sample website, adding innovative features and functionality that demonstrated their problem-solving skills and coding prowess. Through this challenge, participants demonstrated their ability to think critically, work under pressure, and showcase their technical expertise, making PixelPerfect a resounding success.

R2R RAW TO RICHES

Raw to Riches is an exhilarating event that combines strategy, surprise, and teamwork, providing an unparalleled platform for participants to showcase their skills. The event consists of two rounds: Bingo and the Blind Bidding Battle. In the first round, participants receive bingo cards featuring general knowledge questions and current affairs, testing their knowledge and speed. The second round takes it up a notch, where teams receive a set amount of virtual currency and must bid on mystery items without knowing their teammates' bids. This unique challenge demands trust, intuition, and strategic decision-making, pushing participants to think critically and make quick decisions. Throughout the event, participants must demonstrate adaptability, quick thinking, and effective collaboration, making Raw to Riches an electrifying experience that truly separates the strategists from the rest.

ARTICULATE ARENA

Articulate Arena is an exhilarating public speaking competition organized by the Physical Sciences Department at Kristu Jayanti College, pushing participants to think critically, articulate their ideas effectively, and demonstrate exceptional communication skills. This captivating event is designed to assess participants' ability to think on their feet, showcase creativity, and demonstrate spontaneity. Through its unique format, Articulate Arena provides a platform for participants to hone their public speaking skills, build confidence, and foster creative expression. As participants navigate the challenges of Round Robin Storytelling and Blabber Jabber, they will be evaluated on their content, clarity, spontaneity, and delivery, making Articulate Arena an unforgettable experience that truly showcases the art of public speaking. By participating in this event, individuals will not only refine their communication skills but also develop essential life skills, such as critical thinking, problem-solving, and adaptability, ultimately enriching their academic experience at Kristu Jayanti College.

THE ENCHANTED CAMPUS

"The Enchanted Campus" treasure hunt was a resounding success, bringing together four teams of five members in a thrilling competition that tested their teamwork, creativity, and problem-solving skills. On September 17th, the campus transformed into a vibrant playground as participants gathered at eight strategically selected locations, each hosting challenging clues, puzzles, and brain teasers. These locations included the bustling Cafeteria, serene Green Park, action-packed Basketball Court, intellectually stimulating Classrooms, knowledge-rich Library, spiritually uplifting Chapel, technologically advanced Electronics Lab, and the cutting-edge Forensic Science Lab. Throughout the contest, teams demonstrated remarkable collaboration, communication, and critical thinking, deciphering codes, unraveling mysteries, and overcoming obstacles in a bid to reach the treasure. The air was electric with excitement as teams raced against time, showcasing their skills and strategies. The event culminated in a celebration of the spirit of friendly competition, forging unforgettable memories and strengthening campus bonds.

ZENITH

ZENITH, the highly anticipated team gaming event, was organized by the Physical Sciences Department of Kristu Jayanti College, bringing together aspiring gamers to compete in an electrifying battle royale. The event, featuring a single game chosen from a recent survey, provided a platform for participants to showcase their talents and skills. With teams battling it out in a series of matches, the competition was fierce, and the energy was palpable. As teams earned points and secured their position on the leaderboard, the tension built, culminating in a thrilling finale that crowned the top team as the championship winner. The event was a resounding success, with participants and organizers alike praising the seamless execution and exciting gameplay. The ZENITH event not only provided a platform for gamers to compete but also fostered a sense of community and camaraderie among participants. As the gaming community continues to grow, events like ZENITH play a vital role in promoting healthy competition, teamwork, and sportsmanship at Kristu Jayanti College.

INDUSTRIAL VISIT TO NIMHANS SCIENCE EXHIBITION

On March 1st, 2024, students of II Sem BSc (CSMM, CSEL) along with their class teachers visited NIMHANS Science Exhibition. It was a captivating showcase of innovation, creativity, and scientific exploration. The exhibition aimed to promote scientific curiosity and awareness among students, professionals, and the general public.

Cutting-edge research in neuroscience was a focal point of the exhibition, with exhibits showcasing breakthroughs in understanding the brain, its functions, and disorders. Demonstrations of neuroimaging techniques, brain-computer interfaces, and innovative therapies sparked discussions on the future of mental health and neurosciences.

INDUSTRIAL VISIT TO HINDUSTAN AEROSPACE MUSEUM (HAL)

Students in II BSc (STEC, STMM, STCS, PHCS, and PHEL) went on an industrial visit to the Hindustan Aerospace Museum on March 5, 2024, accompanied by their class teachers. The purpose of this visit was to give students real-world knowledge on a range of engineering, technology, and industrial development themes.

The visit highlighted the historical significance of India's aerospace industry and its role in national defence, scientific research, and technological innovation. Participants gained insights into the latest advancements in aerospace technology, including composite materials, digital avionics, and unmanned aerial vehicles (UAVs). The visit emphasized the importance of collaboration between government agencies, research institutions, and private companies in advancing aerospace capabilities and fostering innovation.

INDUSTRIAL VISIT TO VISVESVARAYA INDUSTRIAL AND TECHNOLOGICAL MUSEUM, BANGALORE

On 13 March 2024 , students from embarked on an industrial visit to Visvesvaraya Museum. This visit was organized to provide students with practical insights into various subjects related to engineering, technology, and industrial development.

Highlights of the Visit: Historical Evolution of Engineering: The museum provided a comprehensive overview of the historical evolution of engineering, starting from ancient civilizations to modern times. Students learned about significant engineering achievements throughout history, including the development of tools, machinery, and infrastructure.

EXCURSION TO KMF DIARY, MANDYA AND MYSURU

The Department of Physical Sciences successfully organized an Excursion to KMF Diary, Mandya and Mysuru . The students from the following programs III Semester CSMM B, III Semester STMM, V Semester CSMM A had visited the places. The visit was to the Mandya District Co-operative Milk Producers' Societies Union Ltd. located at Product Dairy, Gejjalagere, Maddur Taluk, Mandya – 571428. The aim was to give students a firsthand understanding of the dairy industry, milk processing, and quality control techniques. After the visit to the dairy plant, the students also toured the Ranganathittu Bird Sanctuary and Mysuru Palace, providing a balance of industrial knowledge, environmental education, and cultural exploration.

NATIONAL SPACE DAY: INDUSTRIAL VISIT

On account of National Space Day, students of III and V SEM PHCS and PHEL participated in an informative industrial visit on 27th August to two distinguished research institutions. The day began at the Gauribidanur Radio Observatory, where engineers provided a detailed overview of the different types of antennas used in radio astronomy. Students learnt functions of antennas and how they are processed and calibrated in the lab to gather and analyze astronomical data. ific principles behind these cutting-edge fields.The visit included a tour of the observatory's facilities, offering students a firsthand look at the complex systems involved in radio observations. The second part of the day was spent at the Vishveshwaraiah Research Centre for Nanoscience and Technology. Here, students explored a range of advanced equipment and apparatus employed in the synthesis and characterization of nanomaterials. They observed demonstrations of techniques used in thin film coating and learned about the critical processes involved in nanotechnology research. This visit provided students with practical insights into the application of theoretical knowledge in real-world research settings, enhancing their understanding of the technological and scientt

On the occasion of National Space Day, students of V semester B.Sc. CSEL visited two distinguished research institutions on 20th August 2024. Firstly, Gauribidanur Radio Observatory, Indian Institute of Astrophysics, Gauribidanur, Chikkaballapur District. Here, engineers provided a detailed overview of the different types of antennas used in radio astronomy. Students learnt functions of antennas and how they are processed and calibrated in the lab to gather and analyze astronomical data. The visit included a tour of the observatory's facilities, offering students a firsthand look at the complex systems involved in radio observations. Secondly, students visited Visvesvaraya Centre for Nanoscience and Technology, Muddenahalli, Chikkaballapur. Here, students explored a range of advanced equipment and apparatus employed in the synthesis and characterization of nanomaterials. They observed demonstrations of techniques used in thin film coating and learned about the critical processes involved in nanotechnology research. This visit provided students with practical insights into the application of theoretical knowledge in real-world research settings, enhancing their understanding of the technological and scientific principles behind these cutting-edge fields. The faculty members Dr. Shivaraj Maidur and Dr. Mayank Pandey accompanied the students and total 50 students have benefited from the visit

EXTENSION ACTIVITY COMMUNITY ENGAGEMENT

The Science Demonstration for Migrant Workers' Children exemplified an outstanding community engagement effort, meticulously planned and hosted by Manasa, a dedicated BSc Physics student. The event kicked off with a vivid introduction to the solar system, engaging children from non-students up to 7th graders. Assisted by Dr. Shivaraj Maidur and Dr. Vadhana Sharon from the Physical science Department, the program featured hands-on activities like building string telephones and crafting straw flutes, making complex scientific principles accessible and enjoyable. This community engagement program not only ignited the children's curiosity but also highlighted the practical and fun side of science, ending with a group photo that captured the spirit and success of the day.

EXTENSION SCIENCE EXHIBITION - 2024

National Science Day is celebrated in India on February 28th every year to mark the discovery of the Raman Effect by Indian physicist Sir C.V. Raman on February 28, 1928. This discovery earned him the Nobel Prize in Physics in 1930. National Science Day aims to spread the importance of science and its application in daily life among the people of India. It is celebrated with various events, seminars, workshops, exhibitions, and competitions organized by schools, colleges, universities, scientific institutions, and government organizations across the country.

The Department of physical sciences of Kristu Jayanti College (Autonomous) organized an extension science exhibition at Government Lower Primary School, K.Narayapura, and Bengaluru on 28th Feb 2024 from 10.00 AM onwards. The exhibition consisted of 5 major divisions: Electronics, Physics, Mathematics, Statistics, and Computer science. The school students visited the exhibition and were very enthusiastic to see the projects. “Pong game”, “Drowsiness detection system”, “Safety Helmet”, “Military Bot”, “RSA - Cryptosystem” “Chaotic theory” were some of the working models included in the exhibition which grabbed the attention of school students.

The students actively participated in the exhibition to understand the concepts of physical sciences demonstrated through the working models

EXTENSION ACTIVITY - “GREEN INITIATIVES”

The Department of Physical Sciences organized an extension activity focusing on green initiatives. The activity aimed to instill a sense of environmental responsibility among students by immersing them in the serene beauty of Bio Diversity Lake, Nageshwara Nagenahalli Lake. The outing served as an educational and hands-on experience for students to understand the significance of preserving biodiversity and adopting eco-friendly practices. The primary goal of the extension activity was to raise awareness about environmental conservation and sustainable living. By visiting Nageshwara Nagenahalli Lake, students were given the opportunity to witness firsthand the importance of protecting natural ecosystems and to engage in discussions about the role of individuals in promoting green initiatives.This hands-on experience allowed them to appreciate the rich biodiversity supported by the lake and its surroundings

MIGRANT WORKER’S CHILDREN VISIT TO SCIENCE EXHIBITION PLUTONIA-2024

On January 23, 2024, the Physical Sciences Department, in collaboration with the Jawaharlal Nehru Planetarium and the Bangalore Association for Science Education (BASE), organized a science exhibition named Plutonia-2024. This event was a testament for the department's commitment to providing top-tier education aimed at bolstering students' technical prowess and career prospects. Notable figures such as Vinod Kumar, Associate Vice President of Driving Technological Innovation in Life Science R&D at Accenture, Bengaluru, alongside Fr. Lijo P Thomas, Vice Principal & CFO, Prof. Nagendra S, Coordinator for Physical Sciences, and Prof. Sevuga Pandian, Head of the Department of Computer Science (UG), graced the inauguration ceremony.

Plutonia-2024 showcased an array of projects spanning computer science, electronics, statistics, mathematics, and physics. These projects, conceived and executed by students, not only highlighted their skills but also aimed to narrow the gap between industry requirements and academic curricula. With a total of 54 active projects on display, the exhibition drew interest from various segments of society, including children of migrant workers, who exhibited great enthusiasm towards the showcased projects.

Among the standout exhibits were working models such as the "Pong Game," "Drowsiness Detection System," "Safety Helmet," "Military Bot," "RSA - Cryptosystem," and "Chaotic Theory," which particularly captivated the attention of the migrant workers' children, offering them insights into cutting-edge technological advancements.

"UNIVERSAL ETHICS AND VALUES"
TITLE: ETHOSPHERE

The Department of Physical Sciences conducted the poster making competition for all the students in our department to develop creative skill and to know more about the universal ethics and values. The session was held in computer science lab and the participants uses the online platform to create the poster to project their skill. Participants are encouraged to visually express their interpretation of the core ethical principles that transcend borders. The program emphasizes the importance of understanding and respecting cultural differences while identifying common ethical threads that unite people.

VAC COURSE ON FUNDAMENTALS OF COMPUTER SCIENCE AND PROGRAMMING

The "Fundamentals of Computer Science and Programming" course, held over three days in the M1 Auditorium, offered first-year students a comprehensive introduction to essential computer science concepts and programming skills. The first day focused on computer hardware, architecture, and operating systems, featuring a troubleshooting quiz to reinforce learning. The second day covered ASCII, Unicode, number systems, the Software Development Life Cycle (SDLC), syntax, algorithms, and flowcharting, with practical activities and brainstorming sessions to solidify these concepts. The final day delved into programming semantics, various computer science domains, and career opportunities, culminating in a revision session, a final exam, and a feedback discussion to gather student insights and suggestions.

VAC COURSE ON APPLICATIONS OF MODERN PHYSICS

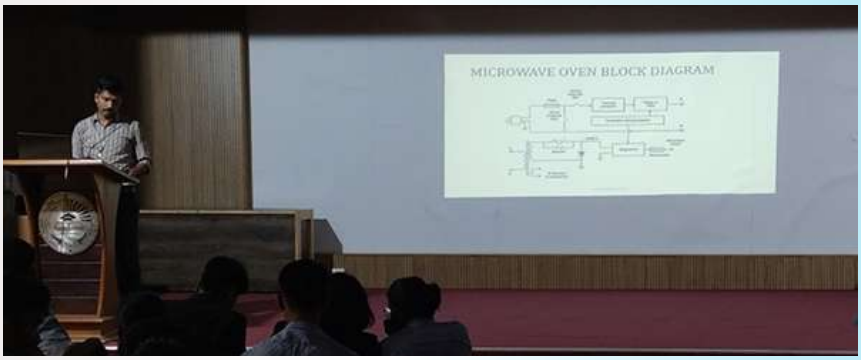
The VAC course titled "Applications of Modern Physics" was offered to the B.Sc. III and V semester PHCS and PHEL students during 24 – 27, July 2024. The main objective of this course was to provide the fundamental concepts of modern physics and their applications in the current world. It was also focused on solving mathematical problems which are essential in learning physics. Most of the students showed their interests in understanding the nanomaterials and their applications. The course duration was about 30 hours and 46 students got benefited from this course.

VALUE ADDED COURSE ON MEDICAL STATISTICS

The Value Added Course on Medical Statistics was successfully conducted from July 24 to July 27, 2024, specifically tailored for V Semester STMM and STEC students. This comprehensive program aimed to enhance students' understanding of statistical methodologies essential for medical research and practice. Through a series of interactive lectures, hands-on workshops, and case studies, participants gained valuable insights into data analysis techniques, including hypothesis testing, regression analysis, Odds ratio Risk relative, and ROC Curve. The course was designed to bridge the gap between theoretical knowledge and practical application, equipping students with the skills needed to critically evaluate and interpret medical data.

Feedback from participants highlighted the course's effectiveness in deepening their understanding of medical statistics and its relevance to their future careers. Overall, the course provided a robust foundation for students to contribute meaningfully to medical research and evidence-based practice.

VAC COURSE ON PRINCIPLES OF ELECTRONIC APPLIANCES



The department of physical sciences (Electronics) offered a Value added Course (VAC) on Principles of Electronic Appliances for the students of III semester B.Sc. (CSEL) and V semester B.Sc. (CSEL) from 24th July 2024 to 27th July 2024. The course was designed to provide dynamic educational experience for students in understanding the working principle of electronics appliances used in daily life. The topics covered during this course were fundamental concepts and working principles of Audio system covering Microphone, Headphone, Loudspeakers and Air conditioner, Microwave oven, Refrigerators. This VAC aimed to enhance the technical skills of students. The in-house faculties of the department were the resource persons for the course. After successful completion of the course, exams were conducted to check the understanding level of the students and e-certificates were provided for the students.

VALUE ADDED COURSE ON MATHEMATICS IN INDIA (INDIAN KNOWLEDGE SYSTEM)

As part of an endeavour honouring the Indian Knowledge System, the Department of Mathematics offered a value-added course with an emphasis on "Mathematics in India" for fifth-semester students enrolled in mathematics combination. The goal of this course was to increase students understanding of the rich mathematical legacy and historical contributions made by Indian intellectuals.

The course provided a perceptive examination of traditional Indian mathematics, covering antiquated methods, formulas, and prominent individuals like Aryabhata, Bhaskara, and Brahmagupta. Students interacted with the historical evolution of mathematical concepts and their influence on contemporary mathematics through a sequence of lectures, discussions, and case studies.

The course included practical sessions where students examined old mathematical documents and used antiquated techniques to solve problems in addition to theoretical instruction. At the conclusion of the course, a thorough examination was carried out to gauge their understanding of the subject.

VALUE ADDED COURSE ON MATHEMATICAL FOUNDATION FOR STATISTICS

The Department of Statistics conducted a value-added course titled "Mathematical Foundation for Statistics" for III BSc STCS, STEC and STMM students. This course aimed to strengthen the mathematical foundation necessary for the study and application of statistics. The comprehensive coverage of fundamental mathematical concepts like laws of indices, exponents, solving linear inequalities, basic differentiation and integration equipped students with the necessary tools to tackle advanced mathematical problems in their academic and professional careers.

At the conclusion of the course, an assignment was conducted to evaluate the students understanding. The course successfully enhanced their mathematical skills, laying a strong foundation for further studies in statistics. The active involvement of students throughout the programme reflected their eagerness to improve their mathematical abilities.

VALUE ADDED COURSE ON BASIC CALCULUS

A value-added course on the foundations of Basic calculus was recently organised by the Department of Mathematics for third-semester students pursuing a mathematics combination. The goal of this specialised course is to improve student's comprehension and utilisation of fundamental calculus ideas, such as integrals, derivatives, and limits.

The course gave students a foundation in calculus by combining theoretical education with real-world problem-solving tasks spread across multiple interactive sessions. At the conclusion of the course, an assignment was given to the students to determine their level of understanding. This assignment not only examined their comprehension but also indicated areas in which they still needed to improve.

The learners willingness to improve their mathematics abilities was evident from their active involvement in the programme.

Students Achievements

Ben Joseph (23CSEL13) and Nathan Sam Joseph (23CSEL32) secured first place in the La Circuit event at the Vaiddyathak MCC Fest 2024.

Kevin Ruben (22CSMM76) , IV Sem CSMM B who has won the first prize in (Chess) Scintillation 2024 held at Jyothi Nivas College, Autonomous Bengaluru.

Goutham M Yadav, Harsh Minj and Uzair Ali for winning the Second prize in Creative Bazaar- E- Stall in E- Week 2024 organized by EIC of our college.

M. Bijin (24CEPA18) secured the Best Player at the Annual National Sports Fest 2024, held at PES University.

Students Achievements

In the Asian Fest, Samarth M D (21PHCS15) secured a Silver medal in Kyurugi under 60 kg.
At the District level, Samarth M D (21PHCS15)won a Bronze medal in Kyurugi under 58 kg.
At the National level, Arshida Ashraf C (22PHCS04) achieved

- Silver medal in Individual Sparring
- Silver medal in Individual Tuls.

Avinash Salguneswaran, secured 2nd place in Leptoons, and the team of Avinash, Kavya, and Alex, secured 2nd place in Plutonium Playbook, participated in Tek Olma 2024, the physics fest conducted by the PG Department of Physics at St. Joseph's University.

Singam Reddy Vibhavari (21STMM10), Anusha Kerur (21CSMM07) , Bhoomi Agarwal (21CSMM46) who won first prize in Number Games in Fractals (Inter Collegiate Fest) organized by the department of Mathematics, Christ University, Yeshwantpur Campus.

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