

VISION

To provide a sound basic education in physics acquirement of new knowledge through scientific and social awareness for students planning a career in engineering.

MISSION

- To offer high quality education in engineering physics with practical knowledge for all branches of engineering.
- To induce a research environment in which scientific and technical advances are created.
- To respect and care for each other scientifically with social responsibility.

Chairman's Message

The "Physics Magazine" newsletter of the department PHYSICS is providing great space for the faculty and students to pen down their innovative ideas, imagination and perceptions to show case their creativity. So, I take the opportunity to congratulate the department of ISE and its editorial team to successful release of this issue. I am sure that students and faculty will find the content of this edition very interesting and educating.



Chairman: Sri G. Dayanand

Executive Director's Message

I am indeed happy to know that the department of PHYSICS taken initiative in realizing its monthly newsletter "Physics Magazine" and urge faculties and students to make use of the platform to share and educate among themselves in publishing article pertaining to the emerging domain and articles of interesting. I congratulate the team of editorial community and department of PHYSICS



Executive Director: Sri G. D. Manoj

Principal's Message

It gives me immense pleasure to note that, SCE has been publishing bi-annual newsletter and I am sure, this will provide an opportunity for the faculty and students to share their knowledge and beacon the information about various issues and activities that are being taking place in the department. I look forward for more activities and achievements for the department to march towards excellence in the future. I would like to thank all teaching, supporting staff and our beloved students for their active participation in publishing this magazine. My special compliments and congratulation to the editorial team of the department for their consistent effort in publishing this newsletter.



Dr. H Ramakrishna Principal



Dr. Jagadeesha Gowda G V

The Department of Physics has come into existence since the inception of the Institute. The department is involved in teaching the Engineering Physics Theory and Laboratory courses to the students of different Engineering disciplines. The department has five active faculty members and engaged in research and teaching at the frontier areas of experimental physics. Our exceptional research profile directly feeds into our teaching experience. This ensures good academic performance of the students. The Department has been getting excellent results both in theory and practical examinations.

Events Conducted in the Department

Student Induction Program (SIP) 2021-22 P & C – cycle Students

Student Induction Program was conducted through online mode (Cisco WebEx Platform) for first-year students for the AY 2021-22 from 13-12-2021 to 24-12-2021 (11days). The purpose of the induction program is to make the newly joined students feel comfortable in the institution and set a healthy daily routine, enhance awareness regarding social and human values, and establish a better bonding.

Student Induction Program (SIP) 2021-22 (Virtual) Time-table: (P & C -cycle)

Day/Date	Session Time: 10 am to 12 pm
Monday 13.12.2021	Inaugural Function, By, Dr. H. Ramakrishna, Principal, SCE Chief Guest: Dr. M A Narasimha Murthy Quality Head, Infineon Technologies, Bengaluru
Tuesday 14.12.2021	Topic: Civil Services as Carrier Speaker: Mr. Prakhar Pandey, Assistant Registrar, Department of co-operative Government of Karnataka. Address by HOD's of Department of Physics, Chemistry and Mathematics
Wednesday 15.12.2021	Topic: Values and Ethics in Decision Making Speaker: Vallabha Chaitanya Dasa, Youth guide and presenter, Youth Empowerment Club, ISCKON, Bengaluru. Topic: Health & Hygienic Speaker: Dr. Sharvani R, Associate Professor, Department of Microbiology, SIMS&RC Bengaluru.
Thursday 16.12.2021	Topic: Department Profile By all seven branch HOD's Topic: Women Empowerment cell & Prevention of Sexual harassment Cell Speaker: Prof. Prerana Chaitra, Department of ISE, Sapthagiri College of Engineering Bengaluru.
Friday 17.12.2021	Topic: Psychology Speaker: Dr. Varsha B G, Assistant Professor, Department of Psychiatry, SIMS&RC Bengaluru. Topic: Cultural Club Speaker: Dr. Veena S More, Professor & Head Department of Biotechnology Sapthagiri College of Engineering Bengaluru.
Saturday 18.12.2021	Topic: NSS & Community Club Speaker: Dr. Tulsidas, Associate Professor Department of Mechanical Engineering Sapthagiri College of Engineering Bengaluru. Topic: Proctoring System Speaker: Prof. Rekha S N, Associate Professor Department of EEE Sapthagiri College of Engineering Bengaluru Topic: Health Club Speaker: Dr. Raghavendra, Associate Professor Department of EEE Sapthagiri College of Engineering Bengaluru
Monday 20.12.2021	Topic: Importance of Sports Speaker: Mr. Prasad D, Lecturer & Athletics Coach, University College of Physical Education, Bangalore University, Bengaluru.
Tuesday 21.12.2021	Topic: Human values and Ethics Speaker: Swamy Mangalanathananadaji Maharaj, Ramakrishna Math, Basavanagudi, Bengaluru
Wednesday 22.12.2021	Topic: Communication Skills Speaker: Mrs. Pallavi T S, Assistant Professor, Sapthagiri College of Engineering Bengaluru
Thursday 23.12.2021	Topic : Interaction with Alumni By all seven branch Alumni Campus Tour (Video play)
Friday 24.12.2021	Valedictory Function

Inauguration of Student Induction program (SIP) Phase-I: Program was inaugurated by our beloved Dr. H Ramakrishna, Principal, SCE. In the inauguration function, more than 300 participants were actively participated in online mode. The students have been welcomed by invocation song, sung by Sushma S and Chethana, (3rd semester BT). The introduction of the chief guest was given by Mrs. Shashikala B S, Department of Physics.

SIP Glimpses

Talk on “4E learning Approach of today”



Dr. M A Narasimha Murthy,
Quality Head, Infineon Technologies

Talk on “Civil Services as Carrier”



Mr. Prakhar Pandey's
Assistant Registrar, Department of co-operative

Talk on “Human Values and Ethics”



Vallabha Chaitanya Dasa, Youth guide and presenter, Youth Empowerment Club, ISCKON, Bengaluru.

Talk on “Health and Hygiene”



Dr. Sharvani R, Associate Professor, Department of Microbiology, SIMS&RC Bengaluru.

Talk on “Phycology”



Dr. Varsha B G, Assistant Professor, Department of Psychiatry, SIMS&RC Bengaluru.

Talk on “Importance of Sports”



Mr. Prasad D, Lecturer & Athletics Coach, University College of Physical Education, Bangalore University, Bengaluru.

Talk on “Human Values and Ethics”



Swamy Mangalanathananadaji Maharaj, Ramakrishna Math, Basavanagudi, Bengaluru

SIP Coordinators

Convener:

Dr. Jagadeesha Gowda G V,
Professor & Head,
Dept. of Physics.

Coordinator:

Dr. Devaraja C, Asst. Prof., Dept. of Physics.

Technical Coordinator:

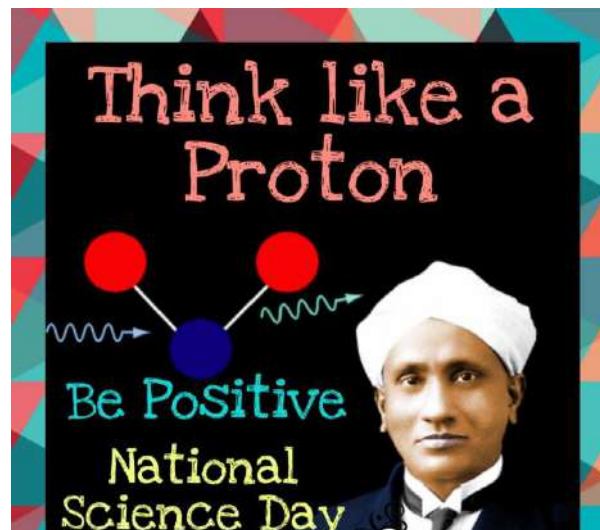
Mr. Gnanendra D S, Asst. Prof., Dept. of Physics.

Mini Project Exhibition for Odd & Even Sem 2021-22

Department of Physics, Sapthagiri college of Engineering, Organized Mini Project Exhibition as a part of PHOTON CLUB Activities on 28-2-2022 for 1st semester students and on 02-8-2022 for 2nd semester P-cycle students. The Mini Project exhibition was conducted on National Science Day (28 February) in the memory of great Indian Physicist Sir C. V. Raman. Nearly 40 group of student from all sections of P-Group involved and exhibited their mini project, models etc., out of which many projects are working projects.

The Principal, Various departments HODs, Faculty members, Non Teaching staff and students from all branches visited the exhibition and Interacted with the students.

Glimpses of Odd Sem Mini Project Exhibition



The Photon Club had organized Mini Project Exhibition for Even sem P-cycle students on Friday, 29th July 2022. The students of first semester BE belongs to ECE, ME, BT, and CV have participated with their working projects. It was organized in the 5th and 6th floor of Sir M V Block between 2 PM and 4 PM, More than 40 teams participated in the exhibition. As a part of their Academics, students completed the projects under the guidance of faculty members of the P-Cycle.

They demonstrated the working of their projects using models to the Principal, HOD's of various departments, Professors and visitors.

Glimpses of Even Sem Mini Project Exhibition



Department of Physics conducted four days bridge course for 1st sem students from 13-12-2021 to 16-12-2021 through online mode.

The following points were discussed in the bridge course.

- College academic calendar inline with VTU calendar.
- Time table for P and C- cycle.
- Course and Scheme of evaluation.
- Theory Syllabus and Lab experiments.
- Highlighted about Various committees.

Department of Physics conducted **Skills Development Program on “Usage of Scientific Calculator”**

The program was conducted for first semester engineering students month of January 2022 to make convenient towards operating scientific calculator for solving academic related problems/Numerical and also to give a wider view on usage of scientific calculator.

Skills Development Program on Usage of Scientific Calculator was conducted in offline class for first-year odd Semester students for the AY 2021-22 in the month of January 2022. Faculties of Physics and Mathematics department of P-Cycle have taken minimum 2 hours class to discuss on Usage of Scientific Calculator based on Skills Development Program for the respective section. All students are actively participated and they were benefited by this hands-on training session on usage of the scientific calculator.

They have clarified many doubts towards the operation of scientific calculator, on

- How to change to different modes,
- How to reset to degree mode,
- How to use exponential/power terms,
- Usage of brackets,
- How to simplify numerator and denominator terms (ratio),
- Learnt about solving mathematical problems, etc.

Glimpses of Usage of Scientific Calculator:



Explaining on usage of calculator with an example

Students of P-group have benefitted by these hands - on session and all of them received E-certificates after filling the Google feedback form.

1. “Influence of SiO_2 on structural and morphological properties of cobalt and tin embedded calcium Nano-ferrites”. G. Harisha, C Devaraja, G V Jagadeesha Gowda, K M Rajashekara. GIS science Jouranl (Scopus) Vol. 4(9)1207-1215, 2022
2. “Manganese ferrite - polyaniline nanocomposites for microwave absorbers in X band”. K. Praveena, G. V. Jagadeesha Gowda, Journal of Material science, (Springer). Vol. 33 5678–5685, 2022.
3. “Structural, microstructural and temperature dependent magnetic properties of Mg–Ni doped CoCr_2O_4 ceramics”. K. Manjunatha, Ping-Zhan Si, G.V. Jagadeesha Gowda, Ceramic International, Vol. 48(8) 11654-11661, 2022
4. “ Dy^{3+} ions activated CaAl_2O_4 nanophosphors: Photoluminescent and photometric properties prompted manifold applications”, B. S. Shashikala, H B Prem Kumar, Inorganic Chemistry Communications, Vol.142, Page No.109619, 2022.
5. “Structural Conductivity and dielectric properties of Europium Oxide Doped Lead Boro-Tellurite Glasses”. C. Devaraja G.V. Jagadeesha Gowda , , B. Eraiah , A. Dahshan, S.N. Nazrin. Journal of Alloy and Compound (Elsevier), Vol. 898, pp.162967, 2021.
6. “Experimental and theoretical elastic studies on neodymium-doped zinc tellurite glasses”. S N Nazrin, G. V. Jagadeesha Gowda, C. Devaraja , B. Eraiah , A. Dahshan, S.N. Nazrin, Journal of Non Crystalline Solids, Vol. 47, pp.4792-4795, 2021.
7. “Structural, Thermal and Spectroscopic studies of Europium Trioxide Doped Lead Boro-Tellurite Glasses”. G.V. Jagadeesha Gowda , C. Devaraja , B. Eraiah , A. Dahshan, S.N. Nazrin. Journal of Alloy and Compound (Elsevier), Vol. 871,159585, 2021
8. “Optical properties of bismuth tellurite glasses doped with holmium oxide”. C. Devaraja, G. V. Jagadeesha Gowda*, B. Eraiah, K. Keshavamurthy, Ceramic International (Elsevier), Vol. 47 7602-7607. 2021.

Papers Presented in International Conferences:

1. “D C Conductivity of Europium Oxide Doped Alkali Boro-Tellurite Glasses” presented by G.V. Jagadeesha Gowda at Online International Conference on Futuristic Research in Engineering Smart Materials (FRESM-21) organized by Department of mechanical engineering, CMRIT, Bengaluru, Karnataka, India during 23rd - 24th April 2021.
2. Temperature Dependent Transport Properties Eu^{3+} Doped Borate Based Tellurite Glasses Presented by C. Devaraja at International Conference on “Global Convergence in Technology, Entrepreneurship, Computing and Value Engineering: Principles and Practices (ICGCP—2021)
3. Photoluminescence Studies of Strong Red Emitting $\text{CaAl}_2\text{O}_4:\text{Eu}^{3+}$ Nanophosphor for Display Applications presented by Shshikala B S at International Conference on “Global Convergence in Technology, Entrepreneurship, Computing and Value Engineering: Principles and Practices (ICGCP—2021)

Editorial board:

Chief Co-ordinator: Dr. Jagadeesha Gowda G V, Prof & HOD, Dept of Physics
Dept Co-ordinator: Mr. Gnanendra D S, Asst Professor, Dept of Physics