



**S.I.W.S.**  
**N.R. SWAMY COLLEGE OF COMMERCE & ECONOMICS**  
**AND**  
**SMT. THIRUMALAI COLLEGE OF SCIENCE**  
**WADALA MUMBAI-400031**

Date : 1<sup>st</sup> August ,2023

**Department of Physics**  
**Report for Academic Year: 2022-23**

**Academic Activities:**

The department of Physics carried out various activities during the Academic Year 2022-23.

1. Department of Physics was a part of 3<sup>rd</sup> Cycle of NAAC process. All department members (teaching faculty, non-teaching staff members) along with students, Alumni members contributed at different levels during NAAC Peer Team Visit on 21<sup>st</sup> and 22<sup>nd</sup> October 2022.
2. The department organized **guidance lecture about JAM examination** to create awareness about higher study opportunities at Indian Institute of Technology. Indian Institute of Technology is a prestigious institute having global recognition. The students of science faculty can join this institute for Postgraduate and doctoral research programs through JAM examination.

A guidance lecture about JAM examination was organized by department of Physics on 16<sup>th</sup> July 2022 at 11.30 am in MB 301. Mr. Rohit Sharma was the resource person. Rohit explained the entire pattern of JAM examination and guided the students regarding study pattern and resource material. Mr. Rohit Sharma is an Alumni of Department of Physics from 2019-20 batch. He secured admission for M.Sc. –Ph.D. program 2022-23 after clearing JAM examination in March 2022. 23 students from T.Y.B.Sc. and S.Y.B.Sc. attended the guidance session. Students had good interaction with resource person.

3. Department of Physics organized an **Essay writing competition “Know Our Scientists”** on 1<sup>st</sup> August 2022 to create awareness about these scientists and their achievements among undergraduate science students.

Ms. Ramya Rao was the in charge of the Essay competition. 22 students from S.Y.B.Sc and T.Y.B.Sc. Participated in Essay competition.

Winners of Essay competition:

1. Shaikh Amina Shaban Ali                      S.Y.B.Sc.                      8005

2. Dudam Niraj	T.Y.B.Sc.	9004
3. Pawar Rajas	T.Y.B.Sc.	9012

3. Department of Physics & Internal Quality Assurance Cell of S.I.W.S. College organized a **BRIDGE COURSE – BASIC MATHEMATICAL TOOLS APPLIED IN PHYSICS**. The main objective of the bridge course was to develop among students basic mathematical concepts applied in Physics and inspire students to solve mathematical problems and actively participate in learning. The course was conducted between 25<sup>th</sup> August and 10<sup>th</sup> September 2022. The entire course was of 15 Hours duration. It included concepts from Calculus, Algebra, Graph plotting and use of scientific calculator in an effective manner. The staff members of department of Physics Mrs. Anagha Bapat, Mrs. Mariama Danny, Dr. Sandeep Vansutre and Mrs Ramya Rao were the resource person for the said course. 65 Students from F.Y. B.Sc. class successfully completed the bridge course. The department received excellent feedback from the participants.
4. Department of Physics conducted a bridge course in **MICROPROCESSOR 8085 –Architecture and Basic Programming**. The T.Y.B.Sc. Physics students attended this course. The bridge course was conducted from **21<sup>st</sup> November to 9<sup>th</sup> December 2022** between 10.20 am to 1.40 pm. The bridge course included theory lectures as well as practical sessions. The course duration was of **22 hours**. The theory lectures were engaged by Mrs. Anagha Bapat and the practical sessions were conducted by Mrs. Anagha Bapat and Mrs. Ramya Rao. 12 T.Y.B.Sc. Physics students successfully completed the bridge course. Certificates were awarded to successful participants. The student feedback was very satisfying and encouraging for the department members.
5. Department of Physics & Internal Quality Assurance Cell of S.I.W.S. College organized a CERTIFICATE COURSE titled **“PROGRAMMING WITH PYTHON”**. The short term course “Programming with Python” was designed to give undergraduate students a flavour of computer programming and to develop job oriented programming skill to make them ready for placement. All the sessions were conducted by Mr. Nikhil Mamaniya who has a wide teaching experience of 10 years in the field of I.T. and Computer science at U.G. and P.G. level.

The course was of 40 Hours duration. It was conducted from 5<sup>th</sup> August to 10<sup>th</sup> September, 2022 between 2.30 pm to 4.30 pm on working days. Lectures were conducted as a combination of online and offline mode. Practical sessions were arranged in computer laboratory CB 301 and CB 309.

Evaluation was based on scores obtained Test as well as evaluation of Project submitted by participants. There were two MCQ tests after completion of module I and II. Students submitted a project at the end. Certificates were awarded to successful participants.

20 students from S.Y.B.Sc. (PHYSICS), T.Y.B.Sc. (PHYSICS) and T.Y.B.Sc. (I.T.) had enrolled for the course. Certificates were to successful participants.

The participants were very satisfied with all sessions. Some participants have shown interest in advanced python course and requested for the same.
6. Department of Physics and IQAC organized intra-collegiate festival **“PHYSICA 22-23”** on **28<sup>th</sup> January 2023**. The event comprised of different competitions to judge certain concepts and

skills in Physics. PHYSICA 22-23 included three competitions. **PHYSICA CIRCUIT GENIUS** examined electronic circuit building skills of First year students. **PHYSICA MAGNIFIER** helped the students revise and understand basic laws and definitions in Physics in a fun manner. **PHYSICA REMEMBER ME** was an attempt to introduce undergraduate students to variety of components and instruments used routinely in practical courses of Physics. Students got an opportunity to relearn the applications and uses of these components and instruments.

The organizing committee consisted of Ms. Mariamma Danny , Dr. Sandeep Vansutre, Ms. Ramya Rao and Mr. Selvakumar Palani. Ms. Anagha Bapat was the convener of PHYSICA 22-23.

Physica 22-23 started with inauguration program at 9.30 a.m. Dr. Radha Srinivasan was the chief guest. Dr. Radha is associated as Professor with Department of Physics University of Mumbai (Autonomous). She has been teaching undergraduate and postgraduate students for past 28 years. She is also actively involved in research activities. She has guided many M.Phil. & Ph.D. students in past 10 years. Her expertise is in areas like, experimental condensed matter physics, material science, magnetism and nanotechnology. Dr. Radha in her speech motivated students to identify their skill sets and further develop these skills to succeed their life.

**PHYSICA 22-23** concluded with valedictory function where winners of all competitions were felicitated by Vice Principal Ms. Neeta Khanolakar.

64 F.Y.B.Sc. Students participated in various competitions. All the participants enjoyed learning physics through games.

7. Physics Department organized an Educational visit to Indian Institute of Geomagnetism located at New Panvel, new Mumbai on 28<sup>th</sup> February 2023. It's an autonomous research institution established by Government of India's department of science and technology. The institute is primarily engaged in basic and applied research in geomagnetism as well as geophysics, atmospheric physics and space physics.

The visit included the informative sessions by Prof. A.P. Dimri , Director of IIG as well as Poster display, rock display, 3D projections of Planets/Sun, Solar observations and visit to Magnetometer and GPS labs. The visit was very informative and useful to students as Geomagnetism is a part of S.Y.B.Sc. Physics syllabus. Posters and displays enhanced the learning experience. Students got an opportunity to visit the state of art laboratories and high tech instruments at the institute.

Fifteen students from S.Y.B.Sc. and T.Y.B.Sc. Physics courses joined for the visit. Ms. Mariamma Danny accompanied the students.

#### **Staff Achievements:**

##### **Mrs. Anagha Bapat:**

- Member of panel formed by University of Mumbai for framing of NEP Science Subject Framework
- Appointed as the Paper setter for T.Y.B.Sc. Physics Paper II ( Semester V and Semester VI ), University of Mumbai for Winter 2022

- Appointed as the Paper setter for T.Y.B.Sc. Physics Paper II ( Semester V and Semester VI ), University of Mumbai for Summer 2023
- Examiner and Moderator for T.Y.B.Sc. Physics Paper II ( Semester V and Semester VI ) , University of Mumbai for Winter 2022
- Examiner and Moderator for T.Y.B.Sc. Physics Paper II ( Semester V and Semester VI ) , University of Mumbai for Summer 2023
- Paper Setter and Examiner for Applied Component Paper , University of Mumbai, Winter 2022
- Paper Setter and Examiner for Applied Component Paper , University of Mumbai, Summer 2023
- Examiner for T.Y.B.Sc. Physics Practical Examination of University of Mumbai ( Semester V ) Winter 2022
- Paper setter for T.Y.B.Sc. Physics Practical Examination of University of Mumbai ( Semester VI) for Summer 2023
- Paper setter and Examiner for T.Y.B.Sc. Applied Component Practical Examination of University of Mumbai ( semester V and semester VI ) for Winter 2022
- Paper setter and Examiner for T.Y.B.Sc. Applied Component Practical Examination of University of Mumbai ( semester V and semester VI ) for Summer 2023
- Organised Swastika 2022-23 as convener of Cultural Association
- Ms. Anagha Bapat was the convener for the short term course “**PROGRAMMING WITH PYTHON**” organised by Department of Physics along with IQAC of SIWS College.
- Convener of Autonomy Committee
- Member of IQAC and NAAC committee
- Member of Alumni Association
- Member of admission committee

**Mrs. Mariamma Danny:**

- Appointed as the Paper setter for T.Y.B.Sc. Physics Paper I (Semester VI ), University of Mumbai
- Examiner and Moderator for T.Y.B.Sc. Physics Paper I (Semester V and Semester VI), University of Mumbai, for Winter 2022
- Examiner and Moderator for T.Y.B.Sc. Physics Paper I (Semester V and Semester VI), University of Mumbai, for Summer 2023
- Organised the convocation ceremony for SIWS college students as convener of Prize distribution committee
- Member of admission committee

**Dr. Sandeep Vansutre:**

- Examiner and Moderator for T.Y.B.Sc. Physics Paper IV (Semester V and Semester VI), University of Mumbai, for Winter 2022
- Examiner and Moderator for T.Y.B.Sc. Physics Paper III & IV (Semester V and Semester VI), University of Mumbai, for Summer 2023
- Examiner for T.Y.B.Sc. Physics Practical Examination of University of Mumbai ( Semester V ) Summer 2023

- Co-convenor of Examination committee
- Member of admission committee

**Student Achievement:**

- The Pass Percentage for TYBSC for the Academic Year 2022-23 was 25 %.
- DUDAM NIRAJ TIRUPATHI REKHA of T.Y.B.Sc. Secured B+ grade with SGPA of 7.93 in Semester 6 examinations and SHELAKE JANHAVI JAGANNATH secured B+ grade with SGPA of 7.80 in Semester 6 examinations.
- Namdev Gautamrishi of S.Y.B.Sc. successfully completed disaster management course titled "Apada Mitra" organised by B.M.C.
- Mr. Khalid Toya of T.Y.B.Sc. Secured first place in kick boxing championship 2022 organised by Indian Muay Thai Organisation in 69 Kg weight category.
- Mr. Kamble Siddharth of F.Y.B.Sc. secured third place in intercollegiate shooting tournament organized by University of Mumbai and D. G. Ruparel college.

**Mrs. Anagha Bapat**  
HOD , Department of Physics  
Date : 1<sup>st</sup> August ,2023

**Dr. Manali Londhe**  
Principal