

I. Extension, Co-curricular & Field based Activities

- S Mendes took **two online lectures** for the Add-on Course in Social Research Methodology conducted by the department of Sociology. The topic was Quantitative Methods in Social Research and conducted on February 6th & 7th , 2023. Students were introduced on conducting data analysis using Excel.
- S Mendes took **three lectures** for the students of QAFI Batch 21 on the **Statistical Tools used in Quality Control** in the month of October. The topics involved basic data collection methods, statistical measures and their applications in Food Tests.
- V Konar organized and took 11 sessions for the online Add-on Course “**Data Analysis Using Excel**” from July 19 to August 31,2022.

- **Data Analytics in Financial Sector**

A talk was organized by the Department of Mathematics and Statistics to inform the students of the importance of data analytics in the field of Finance. Mr. Abhishek Sharma was invited to talk to students on the topic 'Data Analytics: A basic guide to understanding analytics in finance'. It was held on July 23rd, 2022. With over 12 years of experience in Enterprise Sales, Mr. Abhishek Sharma is now working towards enabling Lenders and Fintech Players save on costs by improving efficiency in their consumer life cycle with inputs to aid better quality onboarding and collections. The talk was attended by the students of SYBA. The students gathered in the computer lab of Sophia college and listened to the speaker who communicated with them via Zoom meeting. 21 students attended the talk.

The talk highlighted the skill requirements for data analytics and how the students can be open to new opportunities. The speaker gave an insight on the functional areas of different finance segments such as risk, fraud and forecasting models, financial planner and so on.

The talk lasted one hour and twenty minutes- from 11:30am- 12:50pm. The talk was followed by a Question and Answer session. The students found the talk stimulating and concurred that they had been given a lot of relevant information which would help them to plan and strategize for the future.

- **APPLICATION OF QUANTITATIVE TECHNIQUES**

The Department of Math and Statistics hosted a discussion on "Application of Quantitative Techniques" and vocations related to it on August 5, 2022. As the session's speaker, Ms. Pinky Dubey, a former department and college student and vice president (regional head of Kotak Priority Banking), was invited. Ms. Dubey concentrated on the application of statistics and data analytics in the banking industry. She also expanded on the potential career paths for statisticians and data analysts. The engagement gave the students the chance to increase their understanding of how quantitative methods are used in diverse sectors. The zoom meeting took place from 1:00 to 2:00 pm and lasted one hour. The meeting featured 17 attendees. The speaker engaged the audience in a lively discussion and gave us a basic understanding of the subject. She encouraged the audience to participate fully and ask questions, and she answered all of their questions.

- **A TALK ON DATA ANALYSIS IN RETAIL SECTOR**

The Department of Mathematics and Statistics organized an online talk on "Data Analysis in the Retail Sector" by Mr. Pranav Sharma. The talk was conducted through Zoom online Meeting platform . The talk was attended by students of the first year and second year Statistics of Sophia College. The talk began at 12.25 PM and ended at 2 PM. The speaker of this talk, Mr. Pranav Sharma is working as a Data Analytics Strategist at Deloitte Dubai. He gave us an interactive and innovative talk in which he cited several examples in the domain of Retail business where Data Analytics was applied. He answered questions raised by the students related to the field of Data Analysis. He explained the difference between Data Science and Data Analytics in detail and the importance of both the fields in the retail market and touched upon the requirements of these in the financial sector. He also spoke about the skills and the courses that students could take up in order to have a career in Data Analytics. He explained the recent trends which are used by the field of Data Science in retail which included Source and Manufacture, Supply and Logistics, Store Operations, Sales and Marketing and Post Sales services. Then he made us aware of the lifecycle of a typical data science project and stressed upon the applications of Business Modelling. The session ended with a question-and-answer segment where

students were able to clear their doubts and curiosities. Students also asked questions regarding various other fields closely related to Data Analysis. This talk ensured that the students were able to understand and comprehend the use of Data Science and Data Analysis in different fields, including the retail sector.

- **CONFERENCE: LEGAL RIGHTS AND REMEDIES FOR WOMEN**

Department of Mathematics and Statistics in collaboration with IQAC, Sophia College organized a RUSA supported conference on 'Legal Rights and Remedies for Women'. The conference was held at the Convention Centre, Sophia College on 24th November, 2022. This conference highlighted women's responsibilities and obligations within India's legal system in order to reinforce the importance of women's rights to everyone in the globe. It has been felt that the world would advance genuinely whenever women are given equal rights.

Everyone has the right to human rights and hence, women and girls will not be able to live secure lives until they have complete access to their rights. Furthermore, a nation can only change when its women have a voice in everything and receive equal treatment. These rights cover a wide range of topics, such as right to land ownership, fair compensation, equal treatment at workplaces, matrimonial rights, intellectual property rights and a whole lot of other fundamental rights.

The conference covered a wide range of topics, such as a women's right to land ownership, fair compensation, equal treatment at workplaces, matrimonial rights, intellectual property rights and a plethora of fundamental rights. The organizing committee of the conference included Ms. Sandra Mendes Head of the department of Mathematics and Statistics, Ms. Vidya Konar, Assistant Professor of Statistics, the IQAC Program Committee along with the student organizers and volunteers.

The conference commenced by an introductory note and lighting of the lamp along with a song. The Principal welcomed the gathering. Ms. Sandra Mendes spoke on the relevance of the topics and thanked the speakers for accepting to share their experiences and knowledge with the students.

Our keynote speaker, Ms. Flavia Agnes, addressed the gathering. She has practised law at the Mumbai High Court and has presided over Majlis, a cultural

and legal centre for the defence of women's rights, since 1988. She participated in anti-rape campaigns and the Forum Against Oppression of Women, a group founded in 1979 that addresses rape, dowry murder, and domestic abuse. In the keynote address, Ms. Flavia Agnes focused on the importance of marriage laws and its significance for women. She emphasized on the practice of exercising these rights and encouraged individuals to come out of toxic environments and take control of their own lives. Her intuitive words and the presentation highlighted the years of experience she has worked in this field while sharing her personal story. The keynote address was highly engaging for the audience.

Advocate Ms. Vrinda Daga the founder of VR Laws spoke following the keynote address. Ms. Vrinda Daga graduated with BA Economics from Sophia College, Mumbai and then completed her law degree from Kishinchand Chellaram College, Mumbai. Ms Vrinda focused on the fundamental rights of women and their importance. This session enabled the students to enhance their knowledge about their rights and how they can protect and exercise regarding family, property and fundamental rights. She also gave an insight into the rights of senior citizens, help and protection of these rights by society. In the question and answer session, students interacted with her and clear their doubts.

Ms. Rutuja Shinde spoke about POSH, Law and Diversity. She detailed the POSH Act (Sexual harassment of women at work place - Prevention, prohibition and redressal) 2013 briefly. She described how the law shields women from sexual harassment at the workplaces and in universities as well she said. She requested the audience to find out about the means of legal redressal and also some measures of preventing sexual harassment.

The following session on Matrimonial Laws and Relief to Women was given by Ms. Shaily Mazoomdar, Advocate (Matrimonial Laws, Adoption, Surrogacy). It detailed the different kinds of reliefs that can be sought from the court, that include divorce, judicial separation, surrogacy, maintenance, and child custody. It also covered divorce and maintenance in great detail. Students learnt about legal adoption and Hindu Adoption and Maintenance Act. She shared several slogans such as, 'Do not let the society tell you what not to do, show the society how it is done'. Be affirmative, not aggressive. Be confident, not callous'. The session on Intellectual Property Rights was given by Ms. Ujwala Shetty, a senior associate at VR Law since 2017. Ms. Ujwala Shetty holds an LLM degree in

Intellectual Property Rights from University of Mumbai and a BLS/ LLB degree from Rizvi Law College, Mumbai. She descriptively expanded on the protection of Intellectual Properties and briefly explained all topics including Copyrights, Trade Secrets, Trademarks and Patents. She explained the procedure of safeguarding the Intellectual Property Rights of a firm and of an individual. She answered queries from students and teachers present in the conference.

- **Field visit to BSE**

On February 14, 2023, the Bombay Stock Exchange hosted a Data Science workshop organised by the Department of Mathematics and Statistics. Along with Ms. Vidya Konar, 35 first- and second-year BA students attended the conference. The programme started at 3 PM and lasted at about 5:30 PM. Two employees from the BSE delivered enlightening and beneficial sessions to the students. Mr. Suhas conducted the first session on the BSE . He mostly spoke on the operation of the BSE , trading and finances and offered the pupils guidance on how to invest in various stocks. He informed the students about the salient features of the BSE in addition to Applications of Data Science at BSE.

The second session was held in the same area where stock market transactions once took place. The students had the chance to learn about the functions, development, and operation of the stock exchange thanks to this. The session was delivered by Ms. Isha Prakash, who focused mostly on the goals, components, and potential careers for Data Science. She provided crucial knowledge on the applications of data science in business intelligence, artificial intelligence, machine learning, and other domains, as well as the technologies used in the field, such as big data, Hadoop, Tableau, and Power BI.

Students were able to learn and understand the application of many statistical techniques in various industries, including the stock exchange, with the aid of this workshop.

- **ANANYA EVENT - A talk on CAREERS IN EDUCATION by Ms Lamiya Tambawala**

The departments of History, Mathematics and Statistics organised a talk on “Careers in Education – Options and Opportunities” under the aegis of Ananya 2023. Our Guest speaker was Ms Lamiya Tambawala, Senior Vice President, Academics at JBCN Education. The talk was held on January 28, 2023 from

10.30 am to 12.30 pm. Over 80 students from the college including students studying

History, Mathematics and Statistics attended the talk. Dr. (Mrs.) Rashna Poncha, Vice Principal Arts and professor from the History faculty welcomed the gathering. Ms. Tambawala began by recalling her student days and the role her college professors played in helping her to graduate. Ms Tambawala gave insights into the current scenario in the Education sector with the involvement of Information Technology, Artificial Intelligence and Machine Learning. She spoke about the various career option in the field of Education and said that the Education Sector was opening up and bringing about various opportunities for those wishing to work in the Sector. She focused on the numerous aspects of the education job sector and the varied abilities required in the current environment.. She drew from her personal experiences and recalled her career path in this Sector.

Students actively participated in the lesson by asking questions and looking for advice. Her knowledge and ability to clearly explain the various parts of the topic were highly praised by the audience, according to their feedback.

- **Certificate course: Data Analysis Using Excel**

A Certificate course(one credit) on Data Analysis Using Excel was conducted for students of Sophia College for academic year 2022-23. The course was of 11 sessions, each session of two hours along with assignments conducted through ZOOM . Each session was thorough and allowed students to perform functions simultaneously on their workbooks and get their doubts and queries cleared immediately by the instructor. In the end of each session post the doubt clearing, regular feedbacks were required to be submitted. There were 10 minutes quick quiz per week to be answered based on the session held. After the sessions, assignments were needed to be submitted per week before upcoming sessions. The assignments had sample data to perform the functions taught and explained in the session which were helpful for practice. At the end of the course, a project work was assigned with few sample data to choose from to perform a given number of functions of student's choice . The course enabled students to move from Beginner to Advance level in learning Excel. The course was organized and conducted by Ms Vidya Konar .

II] Contribution to Department and college administration/activities :

Ms S Mendes:

- Head, Department of Mathematics & Statistics
- Member EXSP panel
- Member of Time table Committee (Science)
- Member of Admission Committee (Science)
- IQAC
- NAAC Quantitative Data Collation Committee
- Junior Supervisor for the College Examinations Theory

Ms V Konar

- Member of Attendance Committee (Arts)
- Member of Remedial Teaching Committee (Arts)
- Member of Criterion-1 (NAAC)
- Junior Supervisor for the College Examinations Theory