



**‘Winter School’– A School of Unlearning**  
**Department of Bioanalytical Sciences & Department of Zoology**  
**Organizes National Workshop on**  
**‘Vocational and Skill Based Certificate Course in Instrumentation’**  
**To provide hands-on training and develop skills in science students**  
**Under the aegis of National Education Policy (NEP)**  
**SIES College of Arts, Science and Commerce (Empowered Autonomous), Sion (West), Mumbai**

**Fees:** Registration and participation fees for 6 days – Rs. 900/- (Inclusive of refreshments, study material, certificate)

**Schedule:** From 26<sup>th</sup> December 2024 to 31<sup>st</sup> December 2024 (Inclusive of Sunday); **Time:** 9.00 AM to 5.00 PM

**Venue:** Bioanalytical Sciences Laboratory and Biology Labs, 3<sup>rd</sup> floor, SIES College, Sion (West), Mumbai

Brochure and Photograph Gallery of previous Winter School workshops:

<https://drive.google.com/drive/folders/10uTfkushLBzYbfR2fscRpH9XL8apD58z?usp=sharing>

**Program beneficiaries (Target group):** T.Y.B.Sc students studying in subjects such as Bioanalytical Sciences, Biochemistry, Biological Sciences, Biotechnology, Botany, Chemistry, Environmental Science, Life Sciences, Microbiology, and Zoology; M.Sc Part I students studying in subjects such as Applied Biology, Bioanalytical Sciences, Biochemistry, Biological Sciences, Biotechnology, Botany, Chemistry, Environmental Science, Life Sciences, Microbiology, Nutraceuticals and Zoology.

**Number of participants:** 50 (Participants will be selected based on their statement of purpose and justification for attending this workshop, kindly refer to the registration link and online registration form for instructions regarding registration and payment of fees).

**Background:** In the context of the National Education Policy (NEP), undergraduate and postgraduate programmes are required to include and integrate Vocational and Skill Based Courses in their curriculum, which are aimed at providing hands-on training and proficiency to students, whereby it would enhance their skills and make them employable.

**Objectives:** The workshop aims to make students understand the relevance of standard operating procedure, calibration, use, care and maintenance of laboratory instruments. It will inculcate critical thinking, analytical reasoning and interdisciplinary approach in students. Moreover, it will also develop problem solving ability in students.

**Topics:** Concept based learning approach supported by activity based/experiential learning to understand the principle, standard operating procedure, calibration, method development, applications/use and hands on training of laboratory instruments/techniques such as pH meter, colorimeter/spectrophotometer, chromatography, electrophoresis, micropipettes, centrifuge, analytical balance, preparation of molar/normal solutions, calculations involving units of concentrations, demonstration of bioanalytical instruments such as gas chromatography (GC), high performance thin layer chromatography (HPTLC), disintegration / dissolution apparatus, friability / hardness unit, demonstration of aseptic techniques and microscopy etc.

**Relevance:** The workshop will create awareness regarding the need and significance of Vocational and Skill based courses. It will also impart training of laboratory instruments/equipments to students, and equip them with fresh skills/techniques necessary for handling of laboratory instruments/equipments. Moreover, it will increase the proficiency of students, and make them employable, whereby, they can explore job opportunities as a Lab Technician/Lab Assistant/Lab Analyst in areas related to Skill Development and other Industries.

**Registration link:** <https://forms.gle/jcmKiRHWN9mCEqkX7>

**Faculty details for registration:** Ms. Pracheta Salunkhe (Faculty, Bioanalytical Sciences; 9833239320); [prachetas@sies.edu.in](mailto:prachetas@sies.edu.in)  
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**Workshop Coordinator:**

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