



Children's Education Society (Regd.)

## The Oxford College of Science, Arts, Commerce & Management

Accredited by NAAC with A<sup>+</sup> GRADE in cycle III

Recognized by the Govt. of Karnataka, Permanently affiliated to Bangalore University

& Approved by AICTE, New Delhi, Recognized by UGC under section 2(f) & 12 (B)

Supported by DST GoI under FIST program, Supported by DBT GoI under DBT-STAR College

### DEPARTMENT OF BIOTECHNOLOGY

SL. NO	DETAILS OF THE EVENT	
1.	TITLE OF THE EVENT	HANDS ON TRAINING IN MODERN BIOTECHNOLOGY BY THE STUDENTS FOR THE STUDENTS
2.	YEAR / SEMESTER	2024-2025 / ODD SEM
3.	DAY AND DATE	FRIDAY 13.11.2025
4.	VENUE	BIOTECHNOLOGY LABORATORY
5.	ORGANIZED BY	THE OXFORD BIOTECHNOLOGIST'S SOCIETY, DEPARTMENT OF BIOTECHNOLOGY
6.	CO-ORDINATED BY	DEPARTMENT OF BIOTECHNOLOGY
7.	FACULTY INCHARGE	DR.SHIVAJI BOLE, DR .SUSMITA SRIVATSAVA
8.	PARTICIPANTS	M.Sc. III SEMESTER AND UG VTH SEMESTER BIOTECHNOLOGY STUDENTS
9.	BRIEF SUMMARY OF THE EVENT	REPORT ENCLOSED
10.	PHOTOS	PHOTOS ENCLOSED
11.	NAME & SIGNATURE OF STUDENTS WHO ALL ATTENDED	ENCLOSED

Name of the Co-ordinator

Dr.Shivaji Bole, Dr .Susmita Srivastava

HoD, Biotechnology



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The Oxford Biotechnologist's Society, Department of Biotechnology, The Oxford College of Science organized a workshop on hands training in modern Biotechnology, with a tagline "By students – For students: An Unique Approach".

As the name suggests this workshop was conducted by the final year M.Sc students for the final year B.Sc students in order to provide the B.Sc students an exposure to understand the basic skill, principle and applications of modern techniques in field of biotechnology which are routinely used in the industries/academic research, and in return the M.Sc students gain teaching skills and knowledge that would enhance their employability in various areas pertaining to the field of Biotechnology.

### **Objectives of the workshop:**

To gain and enhance more practical knowledge on modern bioanalytical techniques

To understand the basic principle of modern bioanalytical techniques in the field of biotechnology

To understand the operational procedure of modern bioanalytical techniques

To know about the various industrial and diagnostic applications of modern bioanalytical techniques

### **The techniques conducted by the workshop included:**

Biochemical Approaches – Buffers & Solutions preparation and Industrial Application

Molecular techniques PCR and Bioinformatics tools

Electrophoresis - (DNA and Protein) and Chromatography

Basic microbial Techniques & MIC

Phyto-chemical extraction - Soxhlet Extraction and analysis

Basics of Animal cell culture

### **Details of the workshop**

There is a greater necessity to create a scientific platform for various categories of people of biological sciences to expose them to this emerging field of Biotechnology with special reference to, practical methodologies. This workshop intends to enhance the prospects of student employability.

The program was scheduled from 10.am. M.Sc I sem and III sem students were organized inaugural ceremony in room no 321. The inauguration was began with light lamping from the dignitaries along with invocation song followed by welcome address given by the students. The Programme coordinator Dr Shivaji Bole and HOD Dr. C. Kamatchi addressed the gathering about the programm



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The program was scheduled from 10:00am to 4:00pm. There were both theoretical and practical sessions that were held for the students prior to and after lunch respectively.

A team of six M.Sc students were assigned to each of the faculty members as an Incharge guide who mentored them in order to train and equip the M.Sc students with necessary knowledge and the technical skill which they would use to teach and train B.Sc students.

### Biochemical Approaches – Buffers and Solutions- Industrial Application

Buffer solutions are also widely used in industry. Industrial processes requiring buffer solutions include fermentation, controlling dye processes and manufacturing pharmaceuticals. Enzymes are very complex compounds often requiring precise pH levels in order to react properly, a role filled by organic buffers produced by your body. For this same reason, buffers are vital for a biologist or chemist performing experiments in the lab.

### Molecular Approaches - PCR Methodology

Polymerase chain reaction is the standard diagnostic and research tool in molecular characterization

Electrophoresis –Agarose Gel Electrophoresis for DNA & SDS-PAGE for Protein Separation

Phytochemical extraction – Soxhlet Extraction for extracting valuable bioactive compounds

Animal Cell Culture Techniques- process by which human, animal cells are grown in favourable conditions.

Experiments were carried out initially by explaining the principle in the form of charts, video, audio and then performing the experiments with the help of various laboratory equipments and finally interpreting the results to the student. The curiosity and enthusiasm shown by the students motivated both the faculty and the students to explain and demonstrate the techniques to the best of their abilities.

Afternoon feedback given from both seniors and juniors and conducted quiz competition to judge the students and bridge the gap between theoretical knowledge and its practical application, preparing individuals for the dynamic world of modern biotechnology research and diagnostics followed by distribution of certificates to the students as a gesture of encouragement. To spread the knowledge of Biotechnology, many such workshops are to be held under the Oxford Biotechnologist's Society, Department of Biotechnology.



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Workshop was very useful, knowledgeable and helped the students in understanding the principle and applications of modern bioanalytical techniques in biotechnology field and its uses in research which is ongoing in biotechnology field

### "HANDS - ON TRAINING IN MODERN BIOTECHNOLOGY" BY THE STUDENTS - FOR THE STUDENTS - 2025

#### INAUGURATION



#### EXPLANATION WITH UG STUDENTS







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**HOD**

**Vice Principal**

**Principal**