

## MARIS STELLA COLLEGE (AUTONOMOUS)

### Department of Chemistry

**2017-2018**

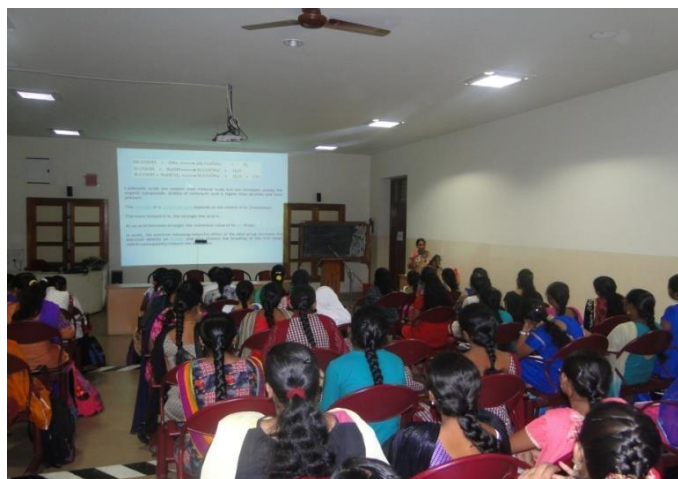
1. Organized a guest lecture on 'Structural theory in organic chemistry' for IB.Sc chemistry combination students on 15.07.2017

**Resource person:** Dr.G.Krishnaveni, HoD, Dept. of Chemistry, KBN College, Vijayawada.

#### **Outcomes of the programme:**

Students are enlightened with the basic concepts of Structural theory in Organic Chemistry.

- Types of Bond fission
- Factors influencing bond polarization
- Types of Organic Reactions [Addition, Substitution, Elimination, Rearrangements.]



Delivering lecture on Structural theory in Organic Chemistry d

2. Organized a guest lecture on 'Basic concepts of atomic absorption spectroscopy and paper electrophoresis' for III B.Sc chemistry combination students on 12.12.2017.

**Resource person:** Dr Vijaya Lakshmi Marella  
Associate professor, Dept. Of pharmaceutical analysis KVS  
Siddhartha college of pharmaceutical sciences Vijayawada.

#### **Outcomes of the programme:**

Students are enlightened with the basic concepts of instrumental methods

- Atomic Absorption Spectroscopy (AAS) – principle, components of instrumentation, applications of AAS
- Paper electrophoresis – principle, components of instrumentation, applications of paper electrophoresis.



Delivering lecture on instrumental methods

3. Organized a guest lecture on ‘Fundamental concepts of UV-Visible, IR and NMR spectroscopy’ for II B.Sc chemistry combination students on 12.01.2018.

**Resource person:** *Mr. Ch Siva Prasad*  
*PG-Dept. Of Chemistry,*  
*SRR & CVR College,*  
*Vijayawada.*

#### **Outcomes of the programme:**

Detailed inputs of UV-Visible, IR spectroscopy and fundamental concepts of NMR have been delivered.

- Types of electronic transitions
- Chromophore, auxochrome concepts
- Modes of vibrations in IR
- Discussion of IR bands for different functional groups
- NMR principle
- Equivalent, non – equivalent protons
- Briefly about chemical shift, spin – spin coupling



Delivering lecture on spectroscopic methods

4. Organized an extension activity 'Skill Enhancement Programme' on 09.1.2018 by sharing our lab resources to intermediate students of other colleges.

**Outcomes of the programme:**

- III-B.Sc chemistry cluster students and chosen II BSc students served as mentors for the programme.
- UG students have trained 73 students of senior intermediate from other colleges in intermediate chemistry practicals by guiding them in salt analysis, volumetric analysis, sol preparations and chromatography experiments.
- This activity helps in enhancing the practical skills of other college students and is a means of developing confidence, teaching skills, organizing skills and deep understanding of the concepts in our UG students by their role of mentors.



Sharing our lab resources with other college students



Explanation and demonstrations by UG students

- Organized an industrial visit cum study tour to CIPET (Central Institute of Plastic Engineering and Technology) located at Enikepadu on 3.1.2018 for Chemistry cluster students.

**Outcome of the programme:**

- Mr. Anjaneya Sharma, Sr Technical Officer at CIPET has coordinated the visit at CIPET.
- Mr. K.P. Singh has given orientation about CIPET, PG-Diploma courses at CIPET and career opportunities in this field.
- Students were given inputs about different instruments used in two testing laboratories.
- Then students were exposed to production unit which consists of recycling- equipment and different modes of moulding systems (injection moulding, compression moulding film moulding etc.).
- Students were witnessed the production of jars, stools, folder clips etc.
- A live demo was given exclusively for students by preparing ‘poly propylene dust pan’ by running an injection moulding system.
- Students were also witnessed the task of changing the moulds in one of the moulding systems.



Students at CIPET