

# Report on

## Add-On Course Training: Avogadro

**Date:** February, 2024

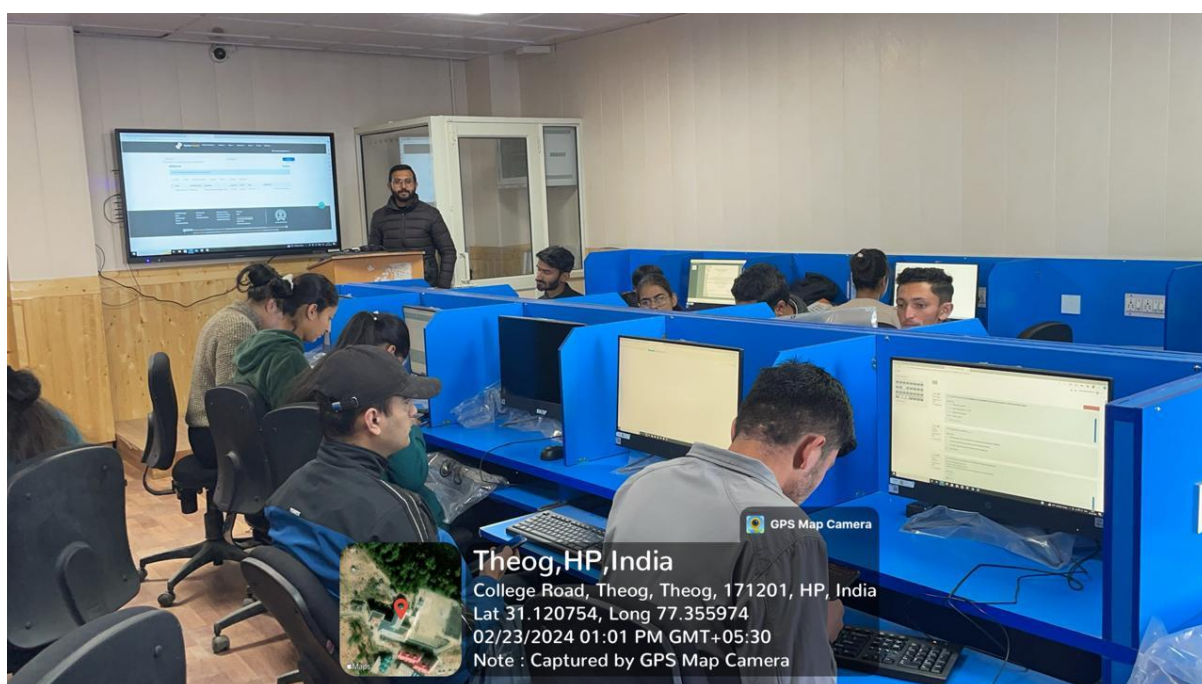
**Course:** Add-On Course: Avogadro for BSc 2nd Year Students

**Instructor:** Dr. Vikas Nathan

**Location:** [Classroom/Online Platform]

### 1. Introduction

The add-on course focused on Avogadro, a molecular modeling software, and was delivered through IIT Bombay's Spoken Tutorials. The training aimed to enhance students' skills in molecular visualization and computational chemistry using Avogadro.



### 2. Course Overview

#### Course Content:

- **Introduction to Avogadro:** Basic features, user interface, and installation.
- **Molecular Visualization:** Techniques for visualizing molecular structures, including bonds and atom types.
- **Molecular Modeling:** Building and editing molecular models, applying force fields, and conducting molecular simulations.
- **Practical Applications:** Use of Avogadro in research and practical scenarios.



### Teaching Method:

- **Pre-Recorded Tutorials:** Instructional videos provided by IIT Bombay Spoken Tutorials, covering various functionalities of Avogadro.
- **Hands-On Sessions:** Practical exercises and assignments for students to apply what they learned.

### 3. Training Activities

#### 1. Tutorial Viewing:

- Students watched pre-recorded videos demonstrating Avogadro's features and functionalities.

#### 2. Practical Exercises:

- **Basic Tasks:** Building simple molecular structures and exploring basic features.
- **Advanced Tasks:** Performing molecular simulations and analyzing results.

#### 3. Interactive Sessions:

- Q&A sessions to address queries and clarify doubts regarding the use of Avogadro.

#### 4. Assignments:

- Students completed assignments that involved using Avogadro to model and analyze various molecules.

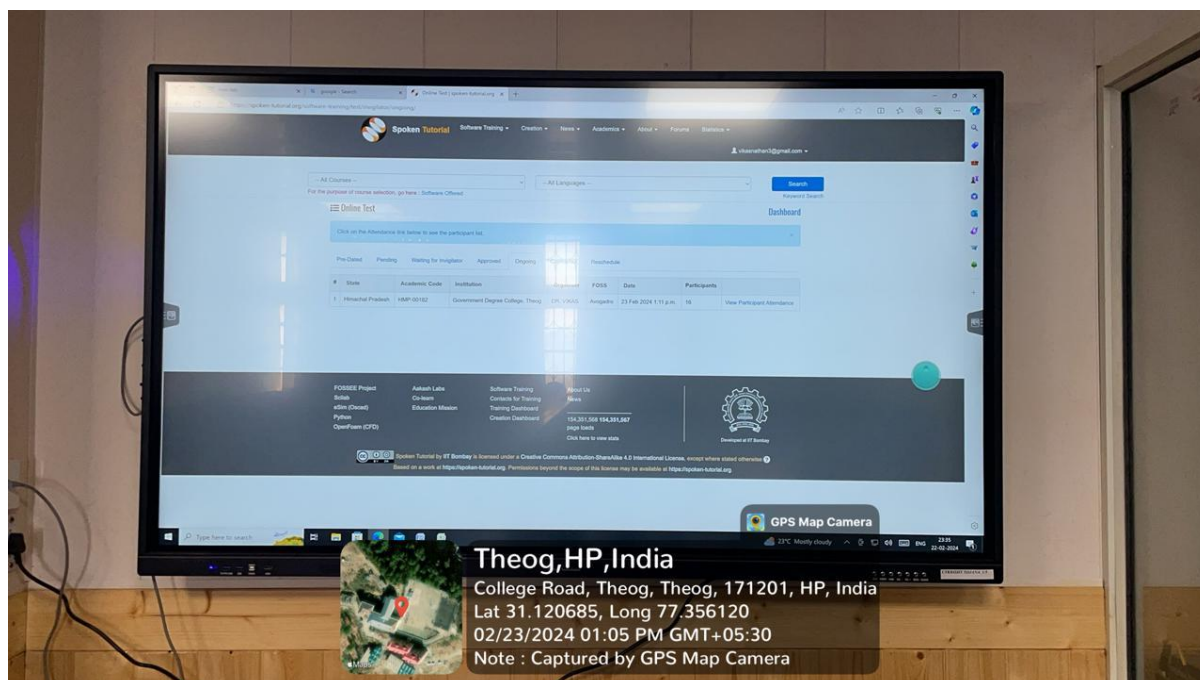
### 4. Outcomes and Observations

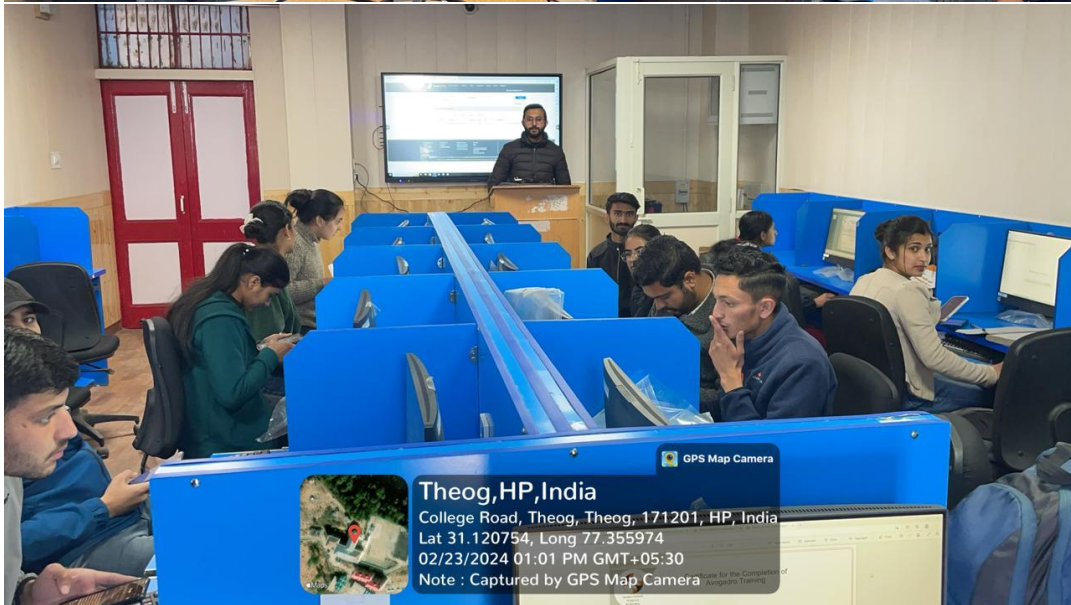
- **Skill Development:** Students gained practical skills in molecular modeling and visualization using Avogadro.
- **Engagement:** High engagement in practical exercises and active participation in interactive sessions.
- **Application:** Improved ability to use computational tools for understanding molecular structures and simulations.

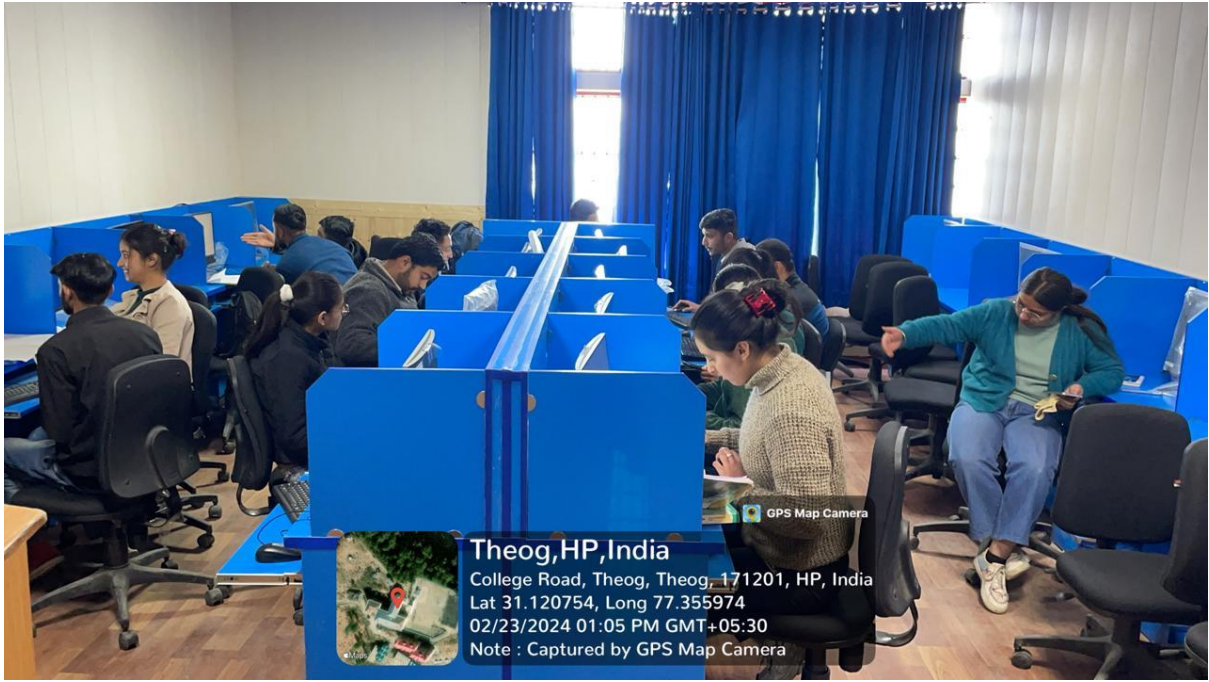
## 5. Conclusion

The add-on course on Avogadro effectively introduced BSc 2nd-year students to advanced molecular modeling techniques. The integration of IIT Bombay's Spoken Tutorials with hands-on practice facilitated a comprehensive learning experience.

This report highlights the key aspects and outcomes of the Avogadro add-on course, emphasizing its impact on students' learning and practical skills.







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