



**IP 214 AUG 2;1**

## **CRYSTALLOGRAPHY FOR CHEMISTS**

### **Instructor**

DR M NETHAJI

Email: mnetaji@iisc.ac.in

### **Teaching Assistant**

nil

Email: nil

### **Department: I P C**

Course Time: Tue, Thu 9:30-11:00 AM

Lecture venue: IPC LECTURE HALL

Detailed Course Page:

## **Announcements**

### **Brief description of the course**

Basic of X-ray diffraction for the Students of Chemistry Background

### **Prerequisites**

nil

### **Syllabus**

UNIT CELL, POINT GROUPS, SPACE GROUPS, SYMMETRIES, BRAGG EQUATION, LAUE EQUATION, PRODUCTION AND PROPERTIES OF X-RAYS, DIFFRACTION BY CRYSTALS, MILLER INDICES, INTENSITY DATA COLLECTION AND INTEGRATION, SCATTERING BY ELEMENTS, ABSORPTION, STRUCTURE FACTOR EQUATION, PHASE DETERMINATION, STRUCTURE SOLUTION, FOURIER SYNTHESSES, ELECTRON DENSITY CALCULATION, LEAST SQUARES REFINEMENT, CONFORMATIONAL ANALYSIS. COMPLETION OF THE STRUCTURE.

### **Course outcomes**

TO THE STUDENTS OF CHEMISTRY BACK GROUND AFTER THE COURSE, THEY WILL BE CONFIDENT TO DO THE SINGLE CRYSTAL X-RAY DIFFRACTION STUDIES THEMSELVES.

### **Grading policy**

25% ASSIGNMENTS+25% MID TERM+50% FINAL EXAM

## **Assignments**

## **Resources**

AUTHOR NAMES: STOUT AND JENSEN, M J BUERGER, D SHERWOOD, JACK DUNITZ