

ES 311A: Mineralogy & Crystallography

Lecture: Monday/Wednesday/Friday Lecture Time: 12:00 p.m. – 1:00 p.m. Lecture Location: Tutorial Complex (T-108)	Instructor: Deepak Dhingra Email: ddhingra@iitk.ac.in Office: Old SAC Building Room# 206 Office Hours: Tuesday (or by appointment) 3:00 – 4:00 p.m. Teaching Assistants: Prabhat Kumar, Mahesh Halder, Arjit Mitra, Saroj Kumar Das
Lab: Wednesday/Thursday Lab Timings: 2:00 p.m. – 4:00 p.m. Lab Location: Western Lab Room: 305/306	

Course Components

- A. *Lectures*: Will mostly cover the descriptive part of the course but might include demonstrations. It will also help you in getting ready for the laboratory exercises.
- B. *Labs*: It will include studying mineral properties in hand specimens and as thin-sections under the microscope.
- C. *Independent Project*: You will be required to pick one favorite mineral and prepare a 5-page document describing its properties, uses (scientific/industrial) and justify your selection. You may be asked to give a short presentation on the same.

Class Policies:

Attendance: Regular attendance in lectures and labs is compulsory. If you cannot attend the class (lectures/labs) for a valid reason, please email the course instructor in advance.

Grading: Class grade will be based on the following:

- i. Attendance (5%)
- ii. Class Quiz (10%)
- iii. Homework (25%)
- iv. Mid-Term (20%)
- v. Final Exam (25%)
- vi. Project (15%)

Resources:

Teaching Assistants: Teaching assistants can be approached for seeking help regarding understanding any concepts or problems.

Course Instructor: You are welcome to approach me to seek clarification on anything taught in the class, about homework or other academic problem. I will be available during my office hours or through prior appointment (send me an email with subject line ES311A).

Textbook: *Manual of Mineral Science, 23rd Edition*; Authors: Cornelis Klein, Barbara Dutrow
Publisher: John Wiley & Sons

Laboratory Reference: *A Colour Atlas of Rocks and Minerals in Thin Section*

Authors: W. S. Mackenzie, A. E. Adams

Publisher: John Wiley & Sons

Minerals in Thin Section (2nd Edition) 2nd Edition

Authors: Dexter Perkins, Kevin R. Henke

Publisher: Pearson