

SIO 120 Schedule (Subject to change as necessary)

LECTURE:

WEEK 1: JAN. 6-8

TU- Introduction to mineralogy: what is a mineral, why are we interested?

TH- Introduction to mineralogy: what is a mineral, why are we interested?

WEEK 2: JAN. 13-15

TU- Physical properties of minerals (**Ch.2**)

TH- Mineral chemistry and bonding (**Ch. 3+4**)

WEEK 3: JAN. 20-22

TU- Crystallography: symmetry operators,
Hermann-Mauguin notation, 32 crystal classes (**Ch. 6-10**)

TH- Crystallography: 6 crystal systems, crystal axes, miller index (**Ch. 6-10**)

WEEK 4: JAN. 27-29

TU- Crystallography: Miller index, defects, twins (**Ch. 6-10**)

TH- Analytical techniques in mineralogy: XRD, XRF, ICP,
Ion microprobe, SEM (**Ch. 14**)

WEEK 5: FEB. 3-5

TU- Introduction to systematic mineralogy

TH- Nesosilicates and sorosilicates (**Ch. 19**)

WEEK 6: FEB. 10-12

TU- **EXAM #1**

TH- Cyclosilicates and phyllosilicates (**Ch. 19**)

LAB:

TU- NO LAB

TH- Introduction to mineral science

TU- Hand sample identification of common minerals

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TU- Crystallography I- Symmetry patterns

TH- Crystallography II- Crystal models and systems

TU- Crystallography II- Crystal models and systems

TH- Crystallography- Miller indexes

TU- Introduction to systematic mineralogy/Review for quiz

TH- **LAB QUIZ 1 (mineral ID's and crystallography)**

TU- Nesosilicates and sorosilicates

TH- Cyclosilicates and phyllosilicates

LECTURE:

WEEK 7: FEB. 17-19

TU- Inosilicates and tectosilicates (**Ch. 19**)

TH- Native elements and sulfides (**Ch. 15**)

WEEK 8: FEB. 24-26

TU- Halides, carbonates, oxides (**Ch. 16-17**)

TH- Sulfates, phosphates, arsenates, and vanadates (**Ch. 17**)

WEEK 9: MAR. 3-5

TU- Introduction to optical mineralogy and the petrographic microscope (**Ch. 13**)

TH- Optical mineralogy (**Ch. 13**)

WEEK 10: MAR. 10-12

TU- Optical mineralogy (**Ch. 13**)

TH- Optical mineralogy (**Ch. 13**)

LAB:

TU- Inosilicates and tectosilicates

TH- Native elements and sulfides

TU- Halides, carbonates, oxides

TH- Sulfates, phosphates, arsenates, and vanadates

TU- Introduction to the petrographic microscope

TH- Uniaxial minerals in thin section

TU- LAB QUIZ 2 (systematic mineralogy)

TH- Biaxial minerals in thin section

FINAL EXAM Tuesday, March 19th 8:00-11:00 AM in Vaughan 100