

Syllabus of the Optical Mineralogy (G200)

Department of Geology

College of Science

University of Basrah

- Introduction to the general physical properties of the visible light.
- A general overview of the optical properties.
- Identification of the optical properties of minerals under the Plane polarized light.
- Forms, relief, twinning, and cleavage under the plane polarized light.
- Classification of minerals according to their optical properties.
- Identification of the Isotropic minerals.
- Identification of the anisotropic minerals.
- The indicatrix of the uniaxial and biaxial minerals.
- Interference colors and their properties.
- The addition and subtraction in colors under the crossed-polarized light by using the accessory plates.
- Variation of the interference colors under the crossed-polarized light.
- Extinction angle and its types.
- Identification of the uniaxial minerals.
- Identification the optic figure of the uniaxial minerals.
- Identification of the optic sign of the uniaxial minerals.
- Identification of the optic figure of the biaxial minerals.
- Identification of the optic sign of the biaxial minerals.
- Identification of the sign of elongation.
- Pleochroism, how we obtain the vibration directions and their colors.
- Some optical properties of feldspar group.