



Course Specifications

General Information

Course name	Optical Mineralogy
Course number	GEOL2307
Faculty	
Department	
Course type	Major Needs
Course level	2
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - Study minerals under the microscope, visual discrimination minerals and their properties, the study of the properties of light and the nature of light, polarized microscope, study Alaizotwin Alaizotwin and non-metals

Intended Learning Outcomes

Knowledge and Understanding	* Discrimination student of metals under the microscope, the students knowledge of light and its properties, knowledge of the properties of metals and distinguished under the microscope and the ability of the student to know the dark minerals from transparent Alaazutrobah metals and minerals from third parties Aazutrobah metals.
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Course Contents

1 - A brief properties of light , refractometry ,isotropic material (optics, Indicatrix and isotropic vs. Anisotropic) Anisotropic minerals introduction, ,packing, interference phenomena, Optical properties (Extinction, Accessory plates ,vibration direction in minerals, relief and Pleochroism, Uniaxial minerals and Biaxial Minerals, optics, optic sign ,Indicatrix ,extinction, Pleochroism, interference figures, optic axis figure, interference figure ,formation of the isoglyres ,optic sign determination, flash figure, summary of uniaxial and biaxial interferons figures, rotation of the isoglyr, obtuse bisectrix figure (Bxo) and properties of uniaxial and biaxial minerals. Practical part The practical study includes a description of thin sections of important minerals (isotropic and anisotropic minerals).

Teaching and Learning Methods

1 - Lectures from light and its properties, minerals and their properties, discussions, all images of minerals under the microscope, writing reports on each of the metal minerals, display distinct segments of metals and optical properties and titles and access to the latest scientific publications optical properties of metals

Students Assessment

<u>Assessment Method</u>	<u>TIME</u>	<u>MARKS</u>
final exam	Seventh week	10
Have second exam.	Ten atheist week	10
Activity reports and lectures	Fourteenth week	10
Practical final exam	Fourteenth week	20
final exam	Seventh week	50

Books and References

Course note	science Optics minerals metals and non-Aizotropic and aizotropic minerals, Optical Science
Essential books	Optical mineralogy