Course Specifications

General Information

Course name	Remote Sensing
Course number	GEOL2332
Faculty	
Department	
Course type	Major Needs
Course level	2
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - To provide an introduction to the principles and practices of photo interpretation and digital remote sensing for use in environmental monitoring, measurements of structural parameters, and natural resource management

Intended Learning Outcomes

Knowledge and Understanding

* Understand the principles of remote sensing and digital image processing
* To understand the different types of airborne and satellite remote sensing systems and their missions
* Gain experience in the applications of remote sensing to solving problems in the environmental and life sciences
* Gain experience in the use of image processing software
* To develop basic remote sensing image interpretation and processing skills
* Ability to discuss the various types of remote sensing data that are available for environmental applications and the various processing procedures for extracting information from remote sensing data

Course Contents

1 - Fundamentals of Remote Sensing
2 - Satellites characteristics
3 - Resolution, pixel size and scale
4 - Cameras and Aerial photography
5 - Multispectral scanning
6 - Weather satellite
7 - Data reception, transmission and processing
8 - Microwave remote sensing
9 - Image interpretation and analysis
10 - Remote sensing application
11 - Practical part: Study the satellite images and aerial photographs – Stereoscopic study of aerial photos and satellite images – Using remote sensing programs for interpretation and analysis of the satellite images

Teaching and Learning Methods

1 - LCD
2 - Stereoscope
3 - Satellite images
4 - Aerial photographs
5 - Remote sensing softwares

Students Assessment

Assessment Method	TIME	MARKS
Two Midterm exams	First month and second month of the semester	30
Attendance and training	During the semester	10
Final Practical exam	End of the semester	20
Final exam	End of the semester	40

Books and References

Course note	Introduction to Remote Sensing: Lecture Notes
Recommended books	Remote Sensing in Geology (1980), Barry siegal, Alan Gillespie
	Remote Sensing and Geographic Information system (1994), Christopher Legg