

Course GISC 4325: Introduction to Remote Sensing

Professor Dr. Scott Horn

TermSpring 2016MeetingsTuesdays 1:00-3:45 PM, GR 3.602

Instructor's Contact Office Phone Office Location Email Address Office Hours Other Information Teaching Assistant	Information Scott.Horn@utdallas.edu After class or by appointment. We will be using the eLearning system for this class. Please contact me through eLearning email for all class related issues.
General Course Info	rmation
Pre-requisites, Co-requisites, & other restrictions	Basic computer skills are required. Some prior experience with GIS software is beneficial, but not required.
Course Description	This course is an introduction to the rapidly changing field of remote sensing. The course covers the nature of the electromagnetic spectrum, the absorption and emission of electromagnetic radiation from and by natural materials, and techniques for using these characteristics to visualize natural and artificial surfaces. The emphasis in the course will be placed on understanding modern techniques for imaging the Earth using passive visible and infra-red imaging systems and active radar systems, predominantly from satellites. The laboratory part of this course will give the student experience in interpreting and processing digital imagery.
Learning Outcomes	The student will gain experience in the strengths and weaknesses of remote sensing for a wide range of problems and studies of Earth's surface. The student will learn about sensor types and gain experience using computers to process a variety of remote sensing data sets.
Required Texts & Materials	 Campbell, James B. and Wynne, Randolph H. (2011). <i>Introduction to Remote Sensing</i>, <i>Fifth Edition</i>. New York, NY: Guilford Press. ISBN: 9781609181765

Assignments & Academic Calendar

[Topics, Reading Assignments, Due Dates, Exam Dates] Students are expected to have read the assigned chapters prior to coming to class.

Week	Date	Day	Торіс	Assignment
1	10-Jan	Т	Introduction to the course & Lab 0	
2	17-Jan	Т	History of Remote Sensing	Chapter 1
3	24-Jan	Т	Basics - Energy, Wavelengths & Lab 1	Chapter 2
4	31-Jan	Т	Basics - Atmosphere, Emission, Spectral Bands & Lab 2	Chapter 2
5	7-Feb	Т	Characteristics of Remotely Sensed Imagery	Chapters 4 & 10
6	14-Feb	Т	Photographic Sensors	Chapter 3
7	21-Feb	Т	Digital Sensors & Lab 3	Chapter 4
8	28-Feb	Т	Midterm Exam	
9	7-Mar	Т	Satellites & Lab 4	Chapter 6
10	13-18 Mar	Т	No Class - Spring Break	
11	21-Mar	Т	Active Sensors – Radar & Lidar	Chapters 7-8
12	28-Mar	Т	Active Sensors – Sonar & Lab 5	Chapter 19
13	4-Apr	Т	Thermal, Image Interpretation & Lab 6	Chapters 5, 9 & 15
14	11-Apr	Т	Image Analysis & Lab 7	Chapters 11-13
15	18-Apr	Т	Accuracy Assessment & Change Detection	Chapters 14 & 16
16	25-Apr	Т	Applications, Organization, & Lab 8	Chapters 17-18,20-21
17	2-8 May		Final Exam	

Course Policies

Grading (credit) Criteria	 10% Quizzes, Attendance, & Participation 30% Laboratory Exercises 60% Exams A+ > 95; A = 93-95; A- = 90-92; B+ = 87-89; B = 83-86; B- = 80-82; C+ = 77-79; C = 73-76; C- = 70-72; D+ = 67-69; D = 63-66; D- = 60-62; F = <59
Make-up Exams	No Make-up project will be given without a legitimate excuse accompanied by proper formal documentation (e.g., a doctor's excuse).
Extra Credit	TBD
Late Work	Late submission for labs will be penalized 10% per day late

Special Assignments	TBD
Class	Class attendance is required. Students are expected to actively participate in class
Attendance	
Classroom Citizenship	Please make sure you turn off your cell-phone before coming to the classroom. Viewing anything that is not related to class and communicating with others using instant messenger are prohibited during the class.
Academic Dishonesty	All suspected cases of academic dishonesty (cheating, plagiarism, collusion, etc.) will be immediately forwarded to the Office of Judicial Affairs. Students have a right to due process through Judicial Affairs, but if the accused student is found guilty of misconduct, Judicial Affairs has sole authority for determining punishment.
UT Dallas Syllabus Policies	http://coursebook.utdallas.edu/syllabus-policies/

These descriptions and timelines are subject to change at the discretion of the Instructor.