

GIS 3702 - Introduction to Remote Sensing

Fall 2026 Syllabus, Section 01, CRN 43150,

Credit hours: 3

Instructor

Bradley Shellito

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Public Instructor Information

Instructor Title: Professor

Instructor Professional Qualifications:

FAA Certified Remote Pilot, 2025

YSU Distinguished Professor, 2024

Ph. D., Michigan State University, 2001

M.A., The Ohio State University, 1996

Bachelor's of Science, Youngstown State University, 1994

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Course Description

3702. Introduction to Remote Sensing. Analysis and interpretation of earth features from both airborne and satellite observation platforms. Topics include photogrammetry, digital data manipulation, multispectral imagery analysis, and interpretation of environmental features. Credit will not be given for GIS 3702 if a student has already received credit for GIS 5805. Prereq.: GEOG 2611. Prereq. or Coreq.: GIS 2611. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Imagery and GIS	Green, Congalton, and Tukman	978-1589484542

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Day	Date	Reading(s)	Proposed Topic	Due/To Prepare for Class
Tue	8/25	p. 3-9, 107-109	What is Remote Sensing?	
Thu	8/27		Remote Sensing Online and HOA 1	
Tue	9/1	p. 179-185, 229-242, 267-274	Image Interpretation	ArcGIS Accounts Completed
Thu	9/3		Image Interpretation Continued and HOA 2	HOA 1 Due
Tue	9/8	p. 45-50, 57-61, 80-85, 107-109, 172-175	UAS, Aerial Photos, and Photogrammetry	
Thu	9/10		Photogrammetry Continued and HOA 3	HOA 2 Due

Tue	9/15	p. 13-22, 27-37, 50-57, 62-63, 146-150	EMR and How an Image is Created	
Thu	9/17		Working With ArcGIS Pro and HOA 4	HOA 3 Due
Tue	9/22		Exam 1	
Thu	9/24	p. 231-232	Digital Color Generation	HOA 4 Due
Tue	9/29	p. 51-53, 119-123	Band Combinations and Radiometric Enhancement	
Thu	10/1		Multispectral Imagery in ArcGIS Pro and HOA 5	
Tue	10/6	p. 44, 62-68, 94-98, 107-109	Satellite Remote Sensing, Landsat, and Sentinel	
Thu	10/8		Landsat Level 2 Data and HOA 6	HOA 5 Due
Tue	10/13	p. 151-171, 180-189, 280-298	Image Correction and Classification	
Thu	10/15		Image Classification in ArcGIS Pro and HOA 7	HOA 6 Due
Tue	10/20	p. 60-61, 84-94	High Resolution Satellite Imagery	
Thu	10/22		Working with Commercial Imagery and HOA 8	HOA 7 Due
Tue	10/27		GeoAI and HOA 9	
Thu	10/29		Test 2	
Tue	11/3	p. 98-99	Thermal Remote Sensing	HOA 8 Due
Thu	11/5		Thermal Remote Sensing Continued and HOA 10	HOA 9 Due
Tue	11/10	p. 72-73, 246-248, 261-263	Environmental Monitoring with Remote Sensing	
Thu	11/12		Environmental Monitoring Continued and HOA 11	HOA 10 Due
Tue	11/17	p. 96-98	Climate and Environment Applications in Remote Sensing	
Thu	11/19		Earth Science Satellite Missions and HOA 12	HOA 11 Due
Tue	11/24	p. 38-42, 100-103, 219-224	Microwave, Radar, and SAR Analysis	
Thu	11/26	No Class		
Tue	12/1	p. 38-42, 100-103, 219-224	Lidar and HOA 13	HOA 12 Due
Thu	12/3		Remote Sensing Today and Looking Ahead	
Tue	12/8		Finals Week - Class Does Not Meet	HOA 13 Due
Thu	12/10		Test 3: 1030am - 1230pm	

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