The University of Wisconsin- Milwaukee
Geography 750: Remote Sensing and Urban Analysis
(Geography 960: Geographical Techniques)
Fall 2004

Class Place & Time: 92341 (R 5:30 pm- 8:10 pm) at Bolton Hall (BOL) 487
Credit hours: 3

Instructor

Professor Changshan Wu

Office: 462 Bolton Hall
Phone: 229-4860
Email: cswu@uwm.edu
Office Hours: Tuesday, Thursday 11:00 am – 12:00 pm or by appointment

Lecture Time and Location

Thursday 5:30 pm – 8:10 pm
Bolton Hall 487

Course Description and Objectives

This course requires students to read assigned materials prior to class and fully participate in class discussion. Students are also encouraged to bring related journal articles or book chapters for class discussion. Two critical review papers and a final project are expected from each student involving remote sensing applications in urban areas. A presentation for each critical review paper is required. Moreover, a report and summary presentation for the final project is required. Grades will be based on participation, discussion, critical review papers, and the final project and summary presentation.

Textbook

There is no textbook for this class. Required readings (book chapters and journal papers) will be reserved in the Library.

Grading formula

1) Class activities: 30% (class attendance and discussion)
2) Two review papers and presentations: 40% (20% each)
3) Final project and presentation: 30%

In the final project, each student is required to address urban issues with remote sensing technologies. Any remote sensing image processing package or programming language is acceptable for project implementation. Remote sensing data can be acquired from the AGS library or from the instructor. A report and summary presentation describing project implementation is required. Students are welcome to discuss project topics with the instructor.

Prerequisites

Geography 403, or equivalent, or permission of the instructor. Permission to take this course may be granted based upon remote sensing courses taken elsewhere.

Grading Scale

- A = 90-100%, A- = 87-89.99%
- B+ = 83-86.99%, B = 80-82.99%, B- = 77-79.99%
- C+ = 73-76.99%, C = 70-72.99%, C- = 67-69.99%
- D+ = 63-66.99%, D = 60-62.99%
- F = 0-59.99%

Schedule (tentative)

Week	Dates	Topic(s)	Due
1	September 2	Introduction to Remote Sensing	
2	September 9	Remote Sensing Principals	
3	September 16	Overview of Land Observation Satellites and Introduction to Satellite Urban Remote Sensing	
4	September 23	Urban land use and land cover classification	
5	September 30	Land use land cover classification with texture information	
6	October 7	Land use land cover classification accuracy assessment	
7	October 14	Critical review presentation 1	Critical review paper 1
8	October 21	Population estimation	
9	October 28	Population Interpolation	

10	November 4	Socio-economic information estimation	
11	November 11	Critical review presentation 2	Critical review paper 2
12	November 18	Urban vegetation estimation	
13	November 25	Thanksgivings day, no class	
14	December 2	Impervious surface estimation	
15	December 9	Urban Sprawl Monitoring	
16	December 14	Final project presentation	Final project report