FUNDAMENTALS OF REMOTE SENSING
COURSE SYLLABUS

Instructor: Marc Zamkotowicz **Phone**: (609) 894-9311 ext. 1622
Office: Parker Center Room 413M **Email**:Mzamkotowicz@bcc.edu
Web page: http://staff.bcc.edu/mzamkoto
GIS Bulletin Board: http://webboard.bcc.edu/~mzamkotowicz
Office Hours:

Course Description:
Remote Sensing is the science of obtaining information about an area or object without being in direct physical contact with that area or object. Many forms of remote sensing include aerial photographs, satellite images, and infra-red viewing.

This class will be run as a directed study class. All communications between the student and the instructor will primarily be done through email. In-person meetings will be done regularly to evaluate students progress and to discuss any questions or issues.

Lecture notes, assignments, and lab activities will be provided through email and exams will be completed in the test center on the Mt. Laurel campus. It is the student's responsibility to thoroughly read all lecture notes provided, textbook readings, and initiate questions if any arise.

Required Text:
Remote Sensing of the Environment, John R. Jensen, Prentice Hall, 2000
Additional information on class topics can be viewed on the Internet at http://rst.gsfc.nasa.gov/ (The Remote Sensing Tutorial (RST)).

Method of Instruction:
Weekly classroom lectures will be supplemented with audio-visual materials and group discussions. Laboratory sessions will be conducted immediately following the lecture.

Course Evaluation:
You will be evaluated based on several components. The percentage each component will contribute to your final grade is shown below:

Tests	50%
Laboratory Exercises	30%
Assignments	20%

The following grade scale will be used:

A = 90% - 100%
B = 80% - 89%
C = 70% - 79%
D = 60% - 69%
F = 59% and below

X and I grades will not be given during this course.

Tests (50%)
There will be three tests in this course. The first test will include information covered during the third of the class, the second test will include information covered after the first test, and the third test will cover information discussed during the latter portion of the class.

Test may only be taken on assigned test dates. Permission to take a test on a different date will be granted only under extraordinary circumstances. You must make arrangements ahead of time to take a test on a different date.

If you miss a test and do not have an excused absence, then you will receive a zero for the test.

Laboratory (30%)
The laboratory portion of the course allows students to practice remote sensing operations using an extension of ArcView called Image Analyst. This software will be used to analyze and manipulate satellite imagery to enhance the image and allow for better interpretation. The laboratory portion of the class will meet in room 322 and take place immediately following the lecture. Upon completion of each assignment, the lab assignment will be submitted to the instructor for review.

Assignments (20%)
Assignments will be given on topics learned throughout the semester. These assignments may include research projects, reports on current events that demonstrate the utilization of remote sensing products or processes, worksheets, or other similar type of assignment. Additional information on class assignments will be provided at a later date.

CLASS SCHEDULE

Tentative – Subject to Change

DATE	LECTURE TOPIC	CHAPTER	LABORATORY
Jan. 24	Class Introduction	1	Introduction to Remote Sensing
	History of Remote Sensing	(RST: Introduction)	
Jan. 31	Electromagnetic Spectrum	2	Reflectance Curves
		(RST: EM Spectrum)	
Feb. 7	Aerial Photography	4 / 5	ID of Features
		(RST: Section 10)	
Feb. 14	Photogrammetry	6	Stereoscopy and Measurements
		(RST: Section 10)	
Feb. 21	Exam I		Intro to Image Analyst
Feb. 28	Satellites and Sensors	7	Image Processing
		(RST: RS Systems)	
Mar. 7	Digital Images	7	Image Processing
	Radiometric and Geometric Correction	(RST: Section 1)	
Mar. 14	Image Enhancement	(RST: Section 1)	Image Enhancement
Mar. 21	Spring Break		
Mar. 28	Thermal Sensing	8	Analyzing Thermal Images
		(RST: Section 9)	
Apr. 4	Exam II		No Lab
Apr. 11	RADAR Sensing	9	Analyzing RADAR Images
		(RST: Section 8)	
Apr. 18	Applications	10	Environmental Change
	Environmental		
Apr. 25	Applications	12	Urban Landscapes
	Urban and Regional		
May 2	Future Trends	(RST: Section 15)	Remote Sensing and GIS
		(RST: Section 21)	
May 9	Exam III		No Lab