PLSC 481 Vegetation Assessment and Analysis
TH, 2:00 to 5:50
Room PLS 1119, Fall 2010

COURSE GOALS: This course is required for completion of the Urban Forestry track of the B.S. degree in Plant Sciences. It is also appropriate for any students interested in gaining hands-on laboratory experience in quantifying vegetation patterns in natural and urban settings based on field-collected and remotely sensed data.

GENERAL CLASS FORMAT: This two-credit course consists of a series of lectures, field sampling, and computer-based analysis exercises. Class will consist of one, three-hour laboratory each week during which students will either be in the field or in the computer laboratory. Lectures will provide the theoretical background to the activities and students will immediately apply their knowledge through completion of hands on exercises.

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APPOINTMENTS: WE are typically in or around our offices on the second floor of the Plant Sciences Building between 9:00 to 4:30 daily and you are welcome to drop by anytime. However, because our research tends to be off campus and we might be busy with other students, it is best to make an appointment at a mutually agreeable time. You can also send email 24 hr. a day every day, but you likely will not get a response immediately at some of those hours.

REQUIRED TEXT: To Be Determined.

GRADES: This course will provide field and computer experience and will develop critical thinking and communication skills that are essential for success in urban forestry, ecology and conservation. Grades will be earned through completion of reports and presentations for each of three group projects. Although projects will be completed in small groups, each student will write an **independent** project report in standard publication format (introduction, materials and methods, results, discussion, and literature cited). Each report will count for 20% of the student's grade. Oral presentations will be developed and given as a group and will each count for 10% of the grade. The final 10% of the grade will be based on class and group participation. Grades will be based on a straight percentage scale as follows: A $\geq$ 90%, B = 80% to 89%, C = 70% to 79%, D = 60% to 69%, and F<60%.

COURSE POLICIES: NO Make-up laboratories will be given. Students will be responsible for all laboratories and all data collection whether they attend a particular class or not. Absences that cannot be avoided or that are documented with PRIOR PERMISSION may be made up on the students own time and transportation to any field site visited. Lecture outlines and other course materials will be available online.

COURSE SYLLABUS

Date	**Lecture/Lab Topic**	**Lab Activity**	**Assignments Due**
Sept. 3	Course Organization. Introduction to vegetation sampling in natural environments: Plots, transects, random and non-random sampling techniques. Issues of scale, sample size and variable selection will be discussed.	Field sampling - forest	
Sept. 10	Measuring vegetation composition: cover, basal area, frequency, height, density. Field sampling: forest composition.	Field sampling - forest	
Sept. 17	Field sampling: meadow/grassland composition.	Field sampling - meadow	
Sept. 24	Analyzing vegetation data: frequency, importance, diversity indices, classification, and ordination. Spatial autocorrelation. **Begin Project 1: Analyzing vegetation data**	Computer Lab	
Oct. 1	Continue working on Project 1	Computer Lab	
Oct. 8	Continue working on Project 1	Computer Lab	
Oct. 15	Inventory and assessment of trees in the built environment. **Begin Project 2: Quantifying ecosystem services of vegetation in built environments.**	Field sampling - campus	Project 1 report and presentation
Oct. 22	Street Tree/UFORE Model analysis. . Field sampling of campus trees.	Field sampling - campus	
Oct. 29	Continue work on Project 2	Computer Lab	
Nov. 5	Continue work on Project 2	Computer Lab	
Nov. 12	**Begin Project 3: Assessing sustainability using vegetation patterns from remotely sensed imagery: measuring fragmentation and connectivity using landscape pattern indices and graph theoretic approaches.**	Computer Lab	Project 2 report and presentation
Nov. 19	Continue with landscape pattern analysis.	Computer Lab	
Nov. 26	**Thanksgiving Break, no class**		
Dec. 3	Continue working on Project 3	Computer Lab	
Dec. 10	Presentations of Project 3. Concluding discussion.		Project 3 report and presentation

Honor Code: The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is essential that you be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://www.shc.umd.edu.

To further exhibit your commitment to academic integrity, remember to sign the Honor Pledge on all examinations and assignments: "I pledge on my honor that I have not given or received any unauthorized assistance on this examination (assignment)."

Disability Support Services: The University of Maryland is committed to making reasonable accommodations to individuals with disabilities that have been documented by Disability Support Services (0126 Shoemaker Hall). Any student seeking accommodations must register with Disability Support Services. If you wish to discuss academic accommodations for this class, please contact the professor as soon as possible.

Course Evaluations: Your participation in the evaluation of courses through CourseEvalUM is a responsibility you hold as a student member of our academic community. Your feedback is confidential and important to the improvement of teaching and learning at the University as well as to the tenure and promotion process. CourseEvalUM will be open for you to complete your evaluations for fall semester courses between Tuesday, December 1 and Sunday, December 13. You can go directly to the website (www.courseevalum.umd.edu) to complete your evaluations starting December 1. By completing all of your evaluations each semester, you will have the privilege of accessing the summary reports for thousands of courses online at Testudo.