
Spring 2009 Turfgrass Nutrition Soils 922A

Instructor:	Max Schlossberg	Meeting Places:	Lab	3:35 pm Mondays, 13 ASI
Office:	403 ASI Building		Lecture	11:15 am Weds—Wagner 201
Phone:	(814) 863-1015			11:15 am Thurs—Ag Eng 124
Email:	mjs38@psu.edu	Office Hours:	Friday	3:30–5:00 pm, or by appointment

Course Objectives:

1. To distinguish the function and requirements of plant nutrients in the turfgrasses.
2. To describe how physical and chemical properties of soil affect nutrient availability, and select soil amendments to remedy soil chemical limitations.
3. To discover how best to sample soil, tissue, and water; submit samples, choose appropriate specialty tests, and interpret reports.
4. To identify the best fertilizers and application method to satisfy site-specific nutritional requirements.
5. To prepare nutrient management plans by appraising edaphic and environmental conditions and current cultural management and use.

Course Materials: A course packet has either been provided to each of you (or will be by Weds, Jan. 14). Laboratory exercises and associated handouts will be provided either as hard copy or as printable files on ANGEL. I may post supplemental lecture material on the ANGEL website as necessary. Purchase a sturdy 3-ring binder to organize the course packet, supplements, and your written notes. A reference text titled: Turfgrass Soil Fertility and Chemical Problems, by Carrow, Waddington, and Rieke, is available at the Paterno Library Reserve, or for purchase online. The text is a fantastic reference, but is NOT required.

Evaluation Methods and Grade Assignments:

All exams will be written and will evaluate your comprehension of the subject matter through multiple choice, essay, and problem solving questions. A short quiz will be given during most class periods. These quizzes will require one or more computations, so bring your calculator EVERYDAY! No opportunities to retake missed quizzes will be provided, so please don't ask.

Final grades will be assigned based on your performance in the following components:

<u>Grade Components</u>		<u>Grade Assignments (%)</u>	
Online and/or class quizzes, Laboratory hand-ins	40 %	100-93	A
Exam #1	25 %	92.9-90	A-
Exam #2 (Final)	35 %	89.9-88	B+
		87.9-82	B
		80-81.9	B-
		79.9-78	C+
		77.9-70	C
		69.9-60	D
		≤59.9	E

Notices

This syllabus is tentative and subject to change. If a change is required, verbal notice will be provided at the first opportunity to all students in attendance. Students requiring special accommodations due to documented disabilities should arrange to meet with the instructor in the first week of classes.

At your earliest opportunity, visit '<http://www.psu.edu/oue/vibrant.html>' and please read the 'Expectations of PSU Students in the Learning Process' and the Academic Honesty Policy 49-20.

Turfgrass Nutrition 922A will be facilitated using the ANGEL Course Management System. Soon you will be receiving a confirmation email from the friendly folks of the Penn State Course Management system (so check your email regularly!!!). Logon at <http://cms.psu.edu> (if you are on the University network), and search for 'Soils 922a'. You will find announcements, info, schedules, chat rooms (let's keep it professional), or any special change in plans or venue.

The final examination (Exam #2) will be administered at 11 am on Friday, Feb. 27.

Attendance in laboratory is mandatory. Due to the large number of classes utilizing the soils lab (ASI 13), make-up of 922A labs is not possible. Plan on attending laboratory every Monday, or your opportunity to complete the laboratory assignment (and earn the associated points) will be forever lost.

Enhanced-memory calculators, PDAs, or cellular phone calculators may not be used during quizzes or exams. Please acquire and retain a simple, dedicated calculator for use in SOILS 922A.

Tentative Course Schedule:

Week(s)	Unit(s)	Description
1	0-1	An Introduction to the Turfgrass System, and The 17 Plant Essential Nutrients
1-2	2	Soil Properties Governing Turfgrass Nutrition <ul style="list-style-type: none"> • The mineral fraction and organic matter (OM) • Cation exchange capacity (CEC) • Soil pH and the exchangeable cation suite—base saturation v. exchangeable acidity • Soil salinity and/or alkalinity • Improving soil chemistry through amendment
3	0-2	*****Examination #1 (Thursday, 1/29/2009)*****
3-4	3	Nitrogen (N) <ul style="list-style-type: none"> • The N cycle, growth and color responses • Nitrogen (N) fertilizers (and general fertilizer information)
5	4	Phosphorus (P) <ul style="list-style-type: none"> • The P cycle • P and turfgrass growth response, and P fertilizers
5-6	5	Potassium (K) <ul style="list-style-type: none"> • K availability, turfgrass growth response, and K fertilizers
6	6	The Macronutrients <ul style="list-style-type: none"> • Ca, Mg, & S availability, turfgrass growth response, and fertilizers
7	7	The Micronutrients <ul style="list-style-type: none"> • Micronutrient availability, turfgrass growth response, and fertilizers
7	8-9	Fertilizer Requirement Assessment and Application <ul style="list-style-type: none"> • Soil & tissue test reports • Spreaders, sprayers, and fertigation
7	3-9	*****Examination #2 (Friday, 2/27/2009)*****