

PGEOG 212: Soils & Vegetation Syllabus

Tuesdays & Fridays 2:10pm to 3:25pm

Room 1022 North

Fall 2018

(revised: 8/16/2018)

Instructor:

Thomas Walter

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www.geography.hunter.cuny.edu/tbw

Primary Text: Sheaffer, Craig C. & Moncada, Kristine M.; *Introduction to Agronomy: Food, Crops, and Environment, 2nd Edition*, 2012, Cengage Publishers. ISBN: 9781111312336.

Reference Texts: Singer, Michael J. & Munns, Donald N.; *Soils: An Introduction, 6th Edition*, 2006, Pearson/Prentice Hall Publishing. ISBN-10: 0131190199 • ISBN-13: 9780131190191

Smith, Thomas M. & Smith, Robert Leo; *Elements of Ecology, 8th Edition*, 2012, Pearson Publishing. ISBN-10: 0321736079 • ISBN-13: 978032173607

The texts are expensive if purchased new. I suggest renting an electronic copy of Introduction to Agronomy: Food, Crops, and Environment, 2nd Edition (\$20 for 6 month rental from Cengage web site) or purchasing used and I encourage sharing. Earlier editions of the texts are OK. Texts are on reserve in library.

Informed Registration Statement

This course is an introduction to soils science, ecology, biogeography and agronomy (farming). We will explore soil as a complex community of living and non-living entities and see how they relate to plants. We will have an introduction to the scientific method and ecological principles leading to an introduction to plant biogeography and habitat loss, biodiversity and conservation. All of these subjects will have agronomy (farming) as a common theme.

The most important take from this course will be to understand the relationship between soils and plants and how the ecosystem that is created in soils is essential to the success of human beings. We can flood our soils with synthetic fertilizers, insecticides and herbicides, severely interrupting these ecosystems or we can nurture them by harnessing the awesome capabilities of the natural world to create an environment that is sustainable.

Learning Objectives and Outcomes:

The student who successfully completes this course:

- Will be able to apply basic chemistry and biology of soils and plant biogeography to farming
- Will be able to explain how global climate change is causing changes in world vegetation groups and how farming contributes and can be a solution
- Will be able to explain the importance of soils to vegetation in general and farming in particular
- Will be able to apply soils science and ecology to farming and its impacts on the environment

Course Background

This course is an introduction to soils science, ecology, biogeography and agronomy (farming). The official prerequisite is PGEOG 130, Weather & Climate. I will consider waiving this prerequisite for students having a completed a college-level science course. This course is a prerequisite for PGEOG 313, Biogeography. This course may also be used as part of the geography major: **Track B: Physical and Environmental Geography** and is an elective course in the **Environmental Studies major, Environmental Earth Science Concentration.**

A good background in general biology and basic chemistry will be very helpful. We will also be using some basic physical geology and mineralogy. This is definitely a multi-disciplinary course!

A general rule of thumb of how much time outside the classroom you can expect to spend is 1-2 hours per credit per week. So, for our 3-credit course you can expect to spend, *on average*, 3-6 hours per week on assignments and studying.

Course Evaluation

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|---|---------------------|
| • (11) Chapter Study Question Assignments | 30% |
| • (5) Video Documentary Summaries | 15% |
| • Soils GIS Lab | 10% |
| • Midterm Exam (<i>possible questions revealed 10 days prior</i>) | 20% |
| • Informative Literature Review, Web Site & Presentation | 25% |
| • <i>Optional Field Trip(s)</i> | <i>Extra Credit</i> |
| • <i>Optional Farming Video Game Review</i> | <i>Extra Credit</i> |

Class participation is a required component of this course.

Assignments are due by 11:00 pm on the submission date. Late assignment grades will be reduced by 10% for each day late. Assignments are to be submitted to BlackBoard. Details provided in class.

Plagiarism and Cheating

Be advised that plagiarism, dishonesty, or cheating in any portion of the work required for this course will be punished to the full extent allowed according to Hunter College regulations. Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.

Grades of **IN** (incomplete) are not normally given in this course. If you have not completed all of the course work, you have not met the requirements of the class and will be given a final grade of "F". Credit/No Credit forms will not be honored under these circumstances.

Hunter College Grading System can be found at

<http://catalog.hunter.cuny.edu/content.php?catoid=32&navoid=7880#>

To receive a CR/NC you must have completed all the course requirements (exams, quizzes, etc.) and have requested the CR/NC option prior to beginning the final exam. If you choose this option, then all grades

above 70% will be assigned CR and below 69.9% will be assigned NC unless you choose the assign D option for grades between 60 and 69. More information and the appropriate credit/no credit form can be found at <http://www.hunter.cuny.edu/advising/how-to/file-credit-no-credit-cr-nc>.

ADA Policy

In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational access and accommodations for its registered students. Hunter College students with disabilities and medical conditions are encouraged to register with the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772- 4857 or (212) 650-3231.

Hunter College Policy on Sexual Misconduct

In compliance with the CUNY Policy on Sexual Misconduct, Hunter College affirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

- a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (212-267-7273) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444)
- b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link: <http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf>

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Schedule subject to change. Two or three videos will be shown in class and schedule will be adjusted.

			Subject	Chap .	Assignment Due Date
Aug	28	Tu	Intro, Earth's Environment	10	
	31	Fr	Earth's Environment (cont)	10	Writing Sample Assignment due
Sep	4	Tu	Earth's Environment (cont)	10	
	7	Fr	Earth's Environment (cont)	10	
	11	Tu	No Classes		
	14	Fr	Agroecosystems	11	Chapter 10 Review Questions Due
	18	Tu	No Classes		
	21	Fr	Agroecosystems (cont)	11	
	25	Tu	Soils	12	Chapter 11 Review Questions Due
	28	Fr	Soils (cont)	12	
Oct	2	Tu	Library Database Intro	12	
	5	Fr	Soils (cont)	12	Chap. 12 Part 1 Review Questions due
	9	Tu	Rhetorical Analysis of Writing Sample	12	
	12	Fr	Soils (cont)	12	Informative Literature Review Paper Topic Due
	16	Tu	Plant Anatomy & Morphology	7	Chapter 12 Part 2 Review Questions Due
	19	Fr	Plant Anatomy & Morphology	7	
	23	Tu	Plant Anatomy & Morphology	7	Soils GIS Assignment Due
	26	Fr	Plant Physiology and Growth	8	
	30	Tu	Plant Physiology and Growth	8	Chapter 7 Review Questions Due
Nov	2	Fr	TBA		Possible Midterm Questions Revealed
	6	Tu	Plant Physiology and Growth	8	
	9	Fr	History of Agriculture	1	
	13	Tu	Midterm Exam		Midterm Exam: Chapters 10-12, 7-8
	16	Fr	Agriculture Today /Feeding the World	2/3	Chapter 8 Review Questions Due
	20	Tu	Improving Plants	9	
	23	Fr	No Classes		
	27	Tu	Improving Plants (cont)	9	Informative Literature Review Paper Due
	30	Fr	Cropping Systems	13	Chapter 9 Review Questions Due
Dec	4	Tu	Cropping Systems (cont)	13	
	7	Fr	Organic Agriculture	18	
	11	Tu	Organic Agriculture (cont)	18	Chapter 13 Review Questions Due
	18		Final Exam: Presentations		11:30 am to 1:30 pm

Assignments are due by 11:00pm on the submission date. Late assignment grades will be reduced by 10% for each day late. Assignments are to be submitted to BlackBoard. Details provided in class.