



## **Plant Ecology**

**21:120:370:01 — 3 credits**

**Subject Syllabus for Lecture**

**Spring 2016 - Prof. John H. Crow**

The course covers essential information required for a basic understanding of plant ecology and includes both synecology and autecology disciplines covering all the fundamental environmental factors. The subject matter is rich with respect to scientific and practical applications. Lectures include original graphic materials and the professor has vast experience from Alaska to the tropics that are put to use in the classroom.

The course will prepare students for more specialized courses in ecology and will broaden their knowledge base and perspective regarding ecology in general. Students will learn many practical things that might be readily applied to field studies in the sciences. The course draws attention to the scientific method and distinctions between data and opinion, statements and science.

### **Class goals**

The class will further the students knowledge of science, especially plant ecology, improved ability to think critically, and evaluate data and ideas. The nature of the lectures and the report research experience will challenge the students to gather information and assemble that information into a formal report and presentation. Students will leave the course knowing a lot more about science and, in particular, plant ecology than when they entered.

### **Class Format**

The class includes lecture and library/on-line research in an integrated format. The lectures are designed to encourage discussion and interaction. There is no book, but there will be assigned readings from selected resources including those from the web and handouts. A term paper is required that will also result in a formal presentation to the entire class. There will be two to four extra-class assignments.

Quizzes are given frequently (usually 5 to 7) that will be reviewed immediately in class after the quizzes. The quizzes are viewed as a learning tools in addition to their grading value. There is a final exam, but no midterm. The examinations will address material relative to the class content and goals.

There are no make-up quizzes or exams whatsoever, so do not ask.

### General information

Professor: John H. Crow, Ph.D.

Office: 139 Boyden Hall, 973-383-1315, and off-campus office 908-852-4855 (Susan).

Office hours: Tuesday to Thursday 8:45-9:45 AM and by arrangement by email, or direct contact.

Email: [drcrow@verizon.net](mailto:drcrow@verizon.net); all students can expect to be contacted regularly through Blackboard and it will be the student's responsibility to make sure that their Blackboard account is working. Email is the best way to contact me. You must **put the code PEs16 at the beginning of the subject line followed by your last name and then the purpose of the email**; e.g., PEs16 Clinton cigars. If you do not follow this procedure, I may never see your email. No excuses, use the code. Your assignment attachments must match the subject line of the email!

Website: <http://drcrow.org> is the course website. Many materials will be supplied on the web so be watchful.

Supplies: Make sure you have a number 2 lead pencil with you in class for the ScanTron quiz sheets and final exam.

Location: Lecture - Hill 107

Credits: 3 credits for lecture.

Meetings: Lecture meets T & Th from 11:30 AM to 12:50 PM; you must be on time.

Attendance is required for all lectures and is worth points, so don't miss. Attendance will be taken and you must be **on time**. Two missed lectures can be made up without penalty by submitting handwritten notes based upon notes obtained from other students. The notes must be submitted within 2 weeks of an absence to obtain credit. Otherwise, a 5-point penalty will be taken from your overall total in the course for missed lectures up to 20 points. A more severe penalty of an additional one-grade reduction will be made for 5 or more lecture absences. Do not leave early without permission of the professor; leaving early will result in a penalty for that day. You cannot pass the course without attending.

Recording of lectures in any fashion is not allowed, but you may photograph the board at the end of the lecture.

- Field Trip: We will have a field trip for those who can attend. It will be on official class trip, but there will be no penalty for those who cannot attend.
- Other: A term paper is required in order to pass the course. The subject matter will be a state or region chosen for each student by Professor Crow. The report must be presented in Microsoft Word (.doc or .docx) or Apple's Pages at 1.5 spacing in the Times or Times New Roman font. Other forms of presentation will not be accepted or marked down considerably. The reports should be submitted via email to Prof. Crow. At least 5 non-web resources and 7 web resources are required as reference materials. Detailed instructions about the format will be made available prior to the assignment. The report is required to pass the course and a penalty of one-half grade per day on the assignment will be made for late term paper reports. Papers will not be accepted after the Thursday before the class presentations begin.
- The report grade will be based upon the following: quality and thoroughness of the subject research, organization, use of references, appropriate use of citations (no plagiarism!), writing skills, and presentation (make it look great). The oral presentation will be based upon the professor's evaluation of the content presented and its organization.
- Misc.: It is assumed that each student enrolled has had sufficient botany or biology and some background in ecology to undertake the study of plant ecology. Recording of lectures. Remember to turn off all cellphones, tablets, recording devices, vibrating signal equipment, iPads and imitation versions, and all other disruptive equipment. To use a computer or electronic device for note taking, you will need to obtain special permission from Prof. Crow. That permission will require you to send Prof. Crow a copy of the notes immediately after the lecture.
- Text: As noted previously, there is no book, but there will be assigned readings from selected resources including those from the web and handouts.
- Grading: Quizzes and Exams: approximately 5 to 7 quizzes will be spread across the semester plus a final examination. All exams and quizzes are all cumulative with respect to content. Do not leave lecture without permission after quizzes are given or you will be counted absent and your quiz will not be graded. If there is a reason you must leave any lecture, notify Prof. Crow in advance of your departure. Of course, valid reasons will always be honored. You will not be allowed to take the lecture quizzes or exams if you arrive after 11:35 AM. Professor Crow will go over the quizzes immediately after each quiz is given and you are welcome to take notes; the actual quizzes will not be returned, but you may set an appointment to review again if you so desire. Quizzes and exams cannot be made up. No exceptions. **Do not ask for a makeup!**

Please note that there may be special support opportunities if you are having trouble and require extra help. First, contact Prof. Crow and also determine whether or not tutoring is available. Any special needs students should let Prof. Crow know immediately at the beginning of the semester. All such information will be kept in strictest confidence. Note that the course follows University policies with respect to all educational matters.

Be advised that all electronic equipment (phones, recorders, transmitters, and the like must be off upon entering the lecture hall or laboratory). There can be no eating or drinking in lecture. If you use your phone, or other electronic device in lecture for recording or outside communication of any kind, you will be ejected from that class and reported to the Dean; if in use during an examination your device may be confiscated and given to the Dean as evidence. It is presumptively concluded that a student using an unauthorized electronic device during an examination is cheating.

Assume >90% = A; >88% = B+; >80% = B; > 78% = C+; >70% = C; >60% = D; and <60% = F; note that lecture attendance as well as participation will influence your final grade.

Improvement counts in this course. So, it is important to be encouraged by that fact. This will be the basis for movement of a grade upward. Such improvement may result in as much as a one-half grade improvement for the course (occasionally more).

\*\*\* Please note that students must abide by the the University and College policies with respect to student conduct. Also, be polite, raise your hand and be acknowledged by Professor Crow before you speak. \*\*\*

**Academic Dishonesty:** The course has a zero tolerance policy for academic dishonesty, including plagiarism and cheating. Instances of dishonesty will be punished by a zero on the assignment and consultation with the Academic Integrity Officers to determine if further action is required. If you have any questions about what constitutes plagiarism or cheating, please ask your instructors or refer to the academic integrity websites for Rutgers and NJIT:

<http://academicintegrity.rutgers.edu/academic-integrity-at-rutgers>

<http://studentconduct.rutgers.edu/>

<http://www.njit.edu/academics/integrity.php>

**Cell Phone policy, etc.:** cell phones are not allowed in lecture and must be turned off completely. A penalty of 10 points may be deducted from you grade if your cell phone goes off in class. Cell phones and other electronic devices cannot be on your person or available and within reach during any form of exam or quiz. Violation of this policy will automatically result in a cheating presumption and will be turned over to the Dean for enforcement; your cell phone may be

confiscated by the professor and turned over to the Dean; you will not be allowed to continue taking the quiz or exam; and will be required to leave the room. You will not be allowed to return to the class without written permission from the Dean. No audio or video recording of any kind will be allowed in lecture or lab with the exception of those specific items listed below.

Exception for lecture: at the the end of each lecture there will be an opportunity for students to photograph the blackboard as a means of obtaining the professor's sketches, etc.

**Spring 2016**

<b>Plant Ecology Grading</b>	
<b>item</b>	<b>points*</b>
attendance	20
quizzes	130
term paper	75
class presentation	25
final	200
other assignments	25
total lecture (approx.) =	475

The semester schedule is on the following page.

<b>Plant Ecology 21:120:370 - Spring 2016 Schedule</b>		
<b>Prof. John H. Crow</b>		
#	Date	Subject
1	1/19	Welcome & introduction: environmental factors
2	1/21	General considerations
3	1/26	Plant communities - <b>Report topics to be assigned</b>
4	1/28	Ecotones and measurements of vegetation
5	2/2	landscape patterns and habitat types - <b>Quiz 1 and review</b>
6	2/4	plant succession
7	2/9	Animals and plant succession (Copper River Delta case study) and wetlands
8	2/11	Regulatory issues and plant ecology - <b>Quiz 2 and review</b>
9	2/16	Review Day
10	2/18	Plant geography
11	2/23	More plant geography
12	2/25	The world's soils - <b>Quiz 3 and review</b>
13	3/1	Soil development and profiles
14	3/3	Soil texture and moisture
15	3/8	Soil chemistry
16	3/10	Water - <b>Quiz 4 and review</b>
<b>3/12 to 3/20</b>	<b>Spring Vacation</b>	
17	3/22	Flex Lecture Day 1
18	3/24	Flex Lecture Day 2
19	3/29	Light part 1; intensity vs. quality; compensation point
20	3/31	Light Part 2 photoperiod and quality issues - <b>Reports due via email at 8 PM</b>
21	4/5	Temperature - thresholds, stratification, and related - <b>Quiz 5 and review</b>
22	4/7	Atmosphere - ppte., humidity, stress, and Saturation Deficit
23	4/12	Fire - Crown, surface, and ground
24	4/14	Biotic factor
25	4/19	Genecology - ecotypes and plant geography; introgressive hybridization, etc. - <b>Quiz 6</b>
26	4/21	<b>Paper presentations and discussions - day 1</b>
27	4/26	<b>Paper presentations and discussions - day 2</b>
28	4/28	Last Day of Class - Lecture Review for the Final Exam
		Reading Days: May 3 and 4
		<b>Final Exam - Hill 107 on May 10th at 11:45 AM to 2:45 PM (no entry after 12 noon)</b>