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JeanMarie Hartman, Ph.D.

School of Environmental and Biological Sciences
Rutgers, The State University of New Jersey

Plants in the Landscape

jhartman@rci.rutgers.edu

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Course Content and Structure

We will meet twice weekly. During each class, we will spend part of the time discussing reading assignments and field/greenhouse observations. The remainder of the class time will focus on projects related to plant identification, field studies, and planting design.

Introduction Principles of Ecological design and a semester long planting design will be introduced during the first lecture. Both topics create the infrastructure of the course.

Section 1 We begin with methods of plant identification. The recognition method of plant identification, taught in Landscape Plants I, is an excellent way to get started and we will revisit it. You will become familiar with common identification guides that use numerous organizations to help you identify plants (e.g. dichotomous keys, color guides, physiognomic groups).

Section 2 We will focus on the interaction of plants with their environment. We will review the relationships between plant characteristics and adaptations to the environment. This section will include at least one botanic garden visit to see desert and tropical collections.

Section 3 In order to relate plant diversity, characteristics, and design, a design assignment will require you to develop a series of small gardens that celebrate plant diversity and plant uses.

Course Materials and Communication

A sakai site has been established for announcements, exchange of reading materials, assignments, discussions, and questions. Please check it regularly and read the emails generated through this platform.

There are two required books both are very useful as well as inexpensive.

Botany for Gardeners. 2005. Brian Capon. (\$11 to \$20)

How to Identify Plants. 1957. H. D. Harrington (\$6 to \$10)

I will provide a small library of recommended books that you can use in my lab (room 202 in Old Blake). Each of you will be expected to become familiar with them and to understand how to use them.

Recommended Books

- ***Newcomb's Wildflower Guide***. 1989. By Lawrence Newcomb.
- ***Biology of Plants***. 2005. by Peter H. Raven, Ray F. Evert and Susan E. Eichhorn.
- ***Botany Illustrated : Introduction to Plants, Major Groups, Flowering Plant Families***. 2006. J. Glimn-Lacy and P. B. Kaufman.

- ***Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens.*** 2007. Douglas Tallamy.
- ***Invasive Plants: Guide to Identification and the Impacts and Control of Common North American Species.*** 2007. S.R. Kaufman and W. Kaufman.

Readings: Assigned and recommended readings will be mentioned during lectures. Most will be available on the sakai site if they are not in your textbooks.

Learning Objectives: Each assignment is based on learning objectives. Some objectives involve strengthening or expanding skills introduced in another class. Other objectives involve the introduction and application of new knowledge and skills. Learning objectives and assessment methods are listed at the end of this document.

Your Background: This class covers a broad range of topics. There are a few assumptions made about your background knowledge such as the following:

1. you have taken college level biology
2. you have a working knowledge of the material taught in Landscape Plants 1
3. you are able to identify 50 or more common landscape plants
4. you have an interest in Planting Design.

If you do not meet these assumptions, you may need to do some extra reading or work a little harder. When topics are introduced and applied too quickly, please ask for help.

Attendance: The Department of Landscape Architecture requires attendance in all of its classes. The individual student's development as a landscape architect is largely dependent upon two aspects of education. First is the exposure to and assimilation of a body of information which relates to the field. Second is the application of this knowledge through activities and assignments.

The Rutgers Landscape Architecture curriculum is designed to develop both areas. Attendance and participation in all lectures and labs are essential if the student is to achieve his/her maximum potential. As a consequence, arriving late, leaving early, being absent from the classroom are all considered unexcused absences. This course meets twice a week with a minimum of outside of class meetings. To make this work you must be present. More than three unexcused absences will result in a step reduction in your semester grade. Each additional three absences will result in another step reduction.

A minimum level of participation is defined as being in attendance for the entire duration of a class session. It is the student's responsibility to be in attendance at all required classes and all personal plans should be made in accordance with the schedule.

Students on academic probation have **NO ALLOWABLE UNEXCUSED ABSENCES.** Your attendance at juries or special seminars scheduled in your design course is mandatory for the entire duration of the session.

If a student has an excused or an unexcused absence, that student is responsible for making up work and catching up on the material that was presented in the missed class time.

Academic Integrity: Please read and review the resources available at:
<http://academicintegrity.rutgers.edu/academic-integrity-at-rutgers/>

The consequences can be as mild as attendance in workshops and severe as expulsion from school. In team based projects and a studio community, academic integrity is essential. If one team member fails to contribute why should their grade be the same? If a creative person comes up with an excellent solution, but another student uses it to create the best design, who should get credit? We will discuss these issues repeatedly during the semester because they will be part of your career.

Use of Facilities: Studio cannot be taught without reliable facilities. But your use of the facilities is dependent upon responsible use with particular regard to the clearly established rules about their use as specified in the student handbook:
http://landarch.rutgers.edu/current_students/student%20handbook/StudentHandbook_web_SectI.pdf

These rules cover access to studio and vandalism, table assignments, personalization of work space, smoking and drinking, use of the lockers, access to the reference collection, and basic rules governing the use of the computer lab. Failure to observe rules may result in loss of access. Access to the fabrication lab is granted after successfully passing the safety instructions. Access is monitored and can be revoked if students use tools they are not qualified for or if students do not clean after themselves.

Equipment: The student handbook also includes a section governing the use of equipment
http://landarch.rutgers.edu/current_students/student%20handbook/StudentHandbook_web_SectII.pdf

This section includes rules specifying use department equipment including of projection equipment, department cameras, and drafting equipment.

Submitted drawings, models, photographs, or written papers for any project assigned in Landscape Architecture courses are considered the property of the Department. The formatting of all digital submission must follow the department guidelines because they will be retained in its archives for exhibition and accreditation purposes.

All projects will be graded and returned to the student at a location designated by the instructor. Should your drawings be retained by the Department, you will be given the opportunity to obtain a print or photographic record of your work. Department files are OFF LIMITS to students.

Due Dates: Except for circumstances truly beyond the student's control, all assignments are due at the dates and times specified throughout the semester. Projects that are incomplete on the due date should still be submitted on the date it is due to receive at least partial credit. Any work submitted late will be penalized a letter grade for each day past due. Working beyond a due date is both unrealistic in a professional setting and unfair to your classmates in this course.

Ownership of design work: The Rutgers Department of Landscape Architecture maintains a permanent archive of student work. While you will retain authorship and intellectual property rights, all completed and submitted assignments belong to the department with full permission for the department to publish and publicize the work.

Assignments and Grades: This class will employ a wide variety of techniques for evaluating your work and assimilation of the material. Since projects like this evolve with new opportunities and problems, please be flexible as we adjust the schedule and grading to fit both the work and the learning.

Grading will be distributed approximately with these weights:

Labs	20%
Assignments	20%
Quizzes, pop quizzes, test	30%
Final Design	30%

The department suggests the following guideline for understanding appropriate grading in its courses. I have added the scale (as %) that I usually use, along with the Department descriptions.

A – Outstanding – 93-100%

This not only means fulfilling the requirements, but impressing and going beyond the initial expectations of the project. The student has demonstrated a superior grasp of the subject matter coupled with a high degree of creative or logical expression, and strong ability to present these ideas in an organized and analytical manner.

B – Very Good – 82-93%

The student has demonstrated a solid grasp of the material with an ability to organize and examine the material in an organized, critical, and constructive manner. The projects and in-class performance reveal a solid understanding of the issues and related theories or literature.

C – Acceptable – 70-82%

The student has shown a moderate ability to grasp concepts and theories for the class, producing work that, while basically adequate, is not in any way exceptional. This performance in class display a basic familiarity with the relevant literature and techniques.

D – Unacceptable – 60-70%

The work demonstrates a minimal understanding of the fundamental nature of the material or the assignment with a performance that does not adequately examine the course material critically or constructively. Students cannot graduate from the Landscape Architecture program with 2 D's in required 550 classes.

F – Failure – <60%

The student has demonstrated a lack of understanding or familiarity with course concepts and materials. Their performance has been inadequate. Failure is often the result of limited effort and poor attendance which may indicate that the student is not in the proper field of study.

Faculty Contact Information

Jean Marie Hartman jhartman@rci.rutgers.edu 848.932.8488 Room 119

Learning Goals/Objectives/Assessments

Goal 1: To graduate students who have knowledge of botany that is adequate to prepare them to work in a broad range of geographic environments.

- Objective 1.1 Recognition of life form and taxonomic diversity and the way this can be used to promote landscape sustainability.
 - Tactics/Outcomes: lecture, reading assignments, greenhouse visit, plant walk, followed by test.
- Objective 1.2 Understanding of plant physiological functions and their relationship to plant selection and care.
 - Tactics/Outcomes: lecture, reading assignment, experiment, write up of paper or chapter interpretive summary.
- Objective 1.4 Knowledge of plants growth and life history as it relates to changes in appearance and function in long term, large landscape.
 - Tactics/Outcomes: lecture, reading assignment, field study, short written and graphic essay.

Goal 2: To graduate students who have knowledge of ecosystems functions and processes that is adequate to create designs that will sustain and regenerate landscapes.

- Objective 2.1 Knowledge of soil structure and proper soil management.
 - Tactics/Outcomes: lecture, field identification, field classification, field test
- Objective 2.2 Knowledge of water cycle and hydrologic management.
 - Tactics/Outcomes: lecture, reading assignment, site evaluation
- Objective 2.3 Familiarity with nutrient cycles and ecosystem energetics.
 - Tactics/Outcomes: lecture, reading assignment, site evaluation and interpretation, written management plan
- Objective 2.4 Familiarity with role of plants in ecosystem processes and community functions.
 - Tactics/Outcomes: lecture, reading assignment, garden succession plan
- Objective 2.5 Familiarity with soil, nutrient, and water management in designed systems.
 - Tactics/Outcomes: lectures, readings, site analysis exercise, design demonstrating knowledge

Goal 3: To graduate students who have knowledge of the use of plants to create spaces for human use.

- Objective 4.1 Ability to assess site conditions in a way that generates practical alternatives for plant selections.
 - Tactics/Outcomes: lecture, reading, site visit, site assessment, generation of alternative solutions.

- Objective 4.2 Ability to communicate basic reasoning behind plant selections.
 - Tactics/Outcomes: lecture, reading, presentation of alternatives (4.1) (oral, graphic, and written)

- Objective 4.3 Knowledge of microclimate management that can be engendered by plant selection and massing.
 - Tactics/Outcomes: lecture, reading, site visits, microclimate monitoring, microclimate analysis, project that demonstrates microclimate alteration through design.

- Objective 4.5 Understanding the relationships between hard structures and plants.
 - Tactics/Outcomes: lecture, reading, measured drawings, sketch exercises for re-design.

- Objective 4.6 Ability to create transitions, with plants, between spaces with distinct uses and styles.
 - Tactics/Outcomes: lecture, reading, site visits, site analysis of transition treatments, plan of site with focus on transitions.