

Learning Objectives

- 1) Students gain an understanding of the spatial organization of the physical and biological processes that shape a watershed.
- 2) Students gain a working knowledge of watershed policy and management.
- 3) Students develop practical experience in problem solving and the use of analytic reasoning through evaluating and developing a watershed management plan or proposal.

The goal of this course is to investigate the relationships between scientific information and watershed policy. We will begin with defining watersheds and reviewing literature related to biological, chemical and physical processes in watersheds. During the first half of the course, students will complete online materials provided by the EPA Watershed Academy (<http://cfpub.epa.gov/watertrain/index.cfm>).

Students will be required to read, present and discuss primary literature during the second half of the course. Students will also conduct a survey of the watersheds of New Jersey (<http://www.nj.gov/dep/watershedmgt/>) with a focus on current management plans and policy issues.

After spring break, we will embark on individual studies of local watersheds and the status of their management and issues. Particular emphasis will be placed on the New Jersey State stormwater best management practices (<http://www.nj.gov/dep/watershedmgt/stormwater.htm>) and possible implementation. These studies will culminate in individual term papers.

This is a tentative schedule.

21 January	Defining and describing a watershed
28 January	Watershed Ecology
4 February	Water Hydrology (Steve Yergeau)
11 February	Watershed Change
18 February	Watershed Water Quality (S. Yergeau)
25 February	Planning & Management Practices
3 March	Watershed Associations
10 March	Test 1 and project updates

13-20 March SPRING BREAK

24 March	New Jersey CSO's (Dan Van Abs)
31 March	Watersheds of NJ
7 April	Literature Discussion
14 April	Model Discussion
21 April	Workshop
28 April	Workshop
5 May	Presentations
10 May	Turn in papers

Also, you may want to be aware of the following dates:

- LAST DAY to DROP is 1/28/12 (without a "W" grade)
- LAST DAY to ADD is 1/27/12
- Jan 28 thru Mar 21: Undergraduate Drop Period with a "W" grade
- For all Refund Policy Information, please see: <http://www.studentabc.rutgers.edu> and click on "Withdrawals"

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ASSIGNMENTS

EPA Modules (Completion Date)

Overview (28 January)

- * Principles of Watershed Management
- * Ecosystem Services: Benefits to Human Societies

Watershed Ecology (4 February)

- * Introduction to Watershed Ecology
- * Protecting Instream Flows: How Much Water Does a River Need
- * Stream Corridor Structure

Watershed Change (11 February)

- * Agents of Watershed Change
- * Nonpoint Source Pollution with Nitrogen and Phosphorus

Analysis and Planning (18 February)

- * Introduction to the Watershed Planning Process
- * Overview of Watershed Monitoring

Management Practices (25 February)

- * 8 Tools of Watershed Protection in Developing Areas
- * Agricultural Management Practices for Water Quality Protection
- * Forestry Best Management Practices in Watersheds

Community/Social/Water Law (3 March)

- * Getting in Step: a Guide to Effective Outreach in Your Watershed *
- * Top 10 Watershed Lessons Learned
- * Introduction to the Clean Water Act

Term Paper (Due 10 May 2016)

25 February Annotated Bibliography with 10 citations

- 24 March Paper Proposal with topic statement, paper suggested for class discussion, bibliography of 15 peer reviewed citations on topic
- 3 May Paper Presentations
- 10 May Paper submitted by 10PM to Sakai in .pdf or .doc format.

BREAKDOWN OF GRADING

- 15% Quizzes
- 15% Homework and Exercises
- 30% Test
- 40% Term Paper
- 10% Contribution to Discussions

Percentage / Letter grades / GPA

➤	> 92%	A	4.0
➤	88-92%	B+	3.5
➤	82-88%	B	3.0
➤	78-82%	C+	2.5
➤	70-78%	C	2.0
➤	60-70%	D	1.0
➤	< 60%	F	0.0

Assignment of Grades

While the assignment of grades is ultimately the purview of the instructor, the department uses the following guideline for understanding appropriate grading in its courses:

- **A** – Outstanding – 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 – 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 – 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 displays a basic familiarity with the relevant literature and techniques.
- **D** – Unacceptable – 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.
- **F** – Failure – 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.

ACADEMIC INTEGRITY

All students are expected to meet the standards of Academic Integrity as explained on the Student Conduct website: <http://studentconduct.rutgers.edu/academic-integrity/>

In short, actions that include copying answers during a quiz, plagiarism, submitting work done by someone else have consequences. The attached handout summarizes the policy.

The term paper assignment will require use of Turnitin.com in order to minimize any temptation of plagiarism.

POLICIES

Attendance

The Department of Landscape Architecture requires attendance in all of its classes. It is each individual student's responsibility to attend each class. When a student does not attend class, it is their responsibility to become familiar with the information they missed. The lecture class has two purposes:

- (1) First is the exposure to and assimilation of a body of information which relates to the field.
- (2) Second is the application of this knowledge through discussion and problem solving exercises.

Attendance and participation in all lectures and class exercises are essential if the student is to achieve his/her maximum potential. Unless a more strict policy is in place by the individual instructor, 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 good to excellent level of participation involves being prepared at the beginning of class, participation in discussions, involvement in activities, and respectful listening. A minimum level of participation is defined as being in attendance for the entire duration of a class session. Reading newspapers, texting, playing games on one's computer etc. are example of inattentive behavior and do not meet the minimum level of participation. 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**.