DRAFT Course Syllabus

URPL 6500
Environmental Planning and Management
Instructor: Austin Troy

Instructor’s Office: 330F CU Building
315-1006
Meets Tuesday, 9:30-12:15
Office hours: tentatively Thursday 9-10:30 (330 F)

Course description

This course covers topics related to the integration of environmental sustainability into urban and regional planning. The course covers this topic from the perspective of both the natural/physical sciences on the one hand and policy, planning, and management on the other. Scientific domains covered include community/ecosystems ecology, soils, climate, hydrology, habitat and natural history of the Front Range. Planning and management approaches covered include stormwater best management practices/ Low Impact Development, water supply planning, land conservation, water conservation, green space planning, natural hazards planning, and environmental performance indicators.

Learning objectives

- Understand basic concepts in ecology, hydrology, soil science, and climatology
- Have a basic understanding of local natural communities
- Understand the science and best practices behind stormwater management
- Understand source water supply planning and protection
- Understanding water conservation planning
- Understand the clean water act and how it influences land management and planning
- Understand habitat planning and management and the endangered species act
- Understand natural hazards planning, particularly in the urban wildland interface
- Understand environmental planning tools like conservation easements, land swaps, and participatory planning

Requirements

- Attendance and participation: you’re expected to attend all classes and field trips and actively participate in discussions and activities. Half the attendance grade is based on participation in in-class group exercises. Most of these will involve turning some kind of group-work into Canvas that will be marked as complete or not complete.
- Exams: there are three short exams in class covering the lectures and key aspects of the readings.
- Reading discussion groups: At the beginning of most class sessions students will meet in pre-designated groups to discuss the assigned readings. A rotating note taker will record the group's opinion of the 3-4 most notable or striking findings from each reading. These notes will be turned in to Canvas
- Field report: there will be a single report from the natural history field trip
- Final project and presentation: TBD

Grading

- Attendance: 10% (includes in-class exercises)
- Exams: 30%
- Reading discussion group submissions: 10%
- Field report: 5%
• Final project presentation: 5%
• Final project assignment 1: 5%
• Final project assignment 2: 15%
• Final project assignment 3: 20%

Grades

The MURP program uses the University’s standard 4.00 grading letter and point system:
A 4.00 points A- 3.70 points B+ 3.30 points B 3.00 points B- 2.70 points C+ 2.30 points
C 2.00 points C- 1.70 points D+ 1.30 points D 1.00 points D- 0.70 points F 0.00 points

These statements describe the expectations associated with letter grades awarded for MURP program assignments and courses:

• “A” grade range: Exceptional scholarship and superior work products that significantly exceed stated requirements in scope and/or quality
• “B” grade range: Commendable scholarship and accomplished work products that somewhat exceed stated requirements in scope and/or quality
• “C” grade range: Satisfactory scholarship and work products that meet or almost meet stated requirements in scope and/or quality
• “D” grade range: Inadequate scholarship and inferior work products that clearly fail to meet stated requirements in scope and/or quality
• “F” grade: Unacceptable scholarship and work product

Final Project
The final project for 2016 has yet to be determined but will possibly involve working on developing and augmenting water planning elements of the Rocky Mount Land Use Institute Sustainable Development Code (which will soon be migrated to Center for Sustainable Urbanism at CU Denver), which includes researching and highlighting best practices from other cities and describing implementation procedures.

Attendance Policy
Attendance is mandatory. If you have to miss a class for a valid reason, please email the instructor as far in advance as possible. Each unexcused absence will result in a 2% deduction from the attendance grade. Also, please arrive on time out of respect for your colleagues.

Academic Integrity:

Students must adhere to UCD’s code on academic honesty. (http://catalog.ucdenver.edu/content.php?catoid=6&navoid=530 (Links to an external site.) ) In particular, students should make all efforts to properly cite sources in papers and avoid plagiarism.

Readings:

Other readings on Canvas. Bibliographic information is contained within the PDF for each reading.
# Schedule (subject to change)

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<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
<th>Assignment (TBD)</th>
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<tr>
<td></td>
<td><strong>Part 1: Terrestrial Resource Management and Planning</strong></td>
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| 23-Aug | • Intro to course  
   • *lecture: Intro to climate*  
   • Discuss project | • *Chapin et al., Ch 2 excerpts*  
   • [Link](#)                                                                 |                  |
| 30-Aug | • lecture: intro to community and ecosystems ecology                  | • *Smith 1977, intro excerpt and ch 7*  
   • *Smith &amp; Smith 2006, pp 186-192 and 337-342*  
   • *Randolph pp. 317-322* |                  |
| 6-Sep  | • lecture: Plant communities—why do they grow where and how they do?  
   • In class exercise on the connections between natural communities and urban planning | • *Smith and Smith 2006, ch 18*  
   • *Spurr and Barnes, Forest Ecology, various excerpts* |                  |
| 13-Sep | • lecture: Intro to soils, agriculture and forestry                  | • *Smith and Smith 2001, chapter 4 excerpts (follow notes of what to read in PDF)* |                  |
| 20-Sep | • Lair of the Bear Field trip                                        | • *Benedict, chs 17 and 20*                                                                               |                  |
| 27-Sep | • Lecture: Planning for fire hazard                                  | • *Steelman: is wildfire policy sustainable?*  
   • In-class exercise on wildland-urban interface planning | • *TBD* |
| 4-Oct  | • Lecture: Landscape ecology, ESA, HCPs, habitat planning            | • *Watchman: Science and Uncertainty in Habitat Conservation Planning*  
   • Randolph: 374-400  
   • Smith 2006 Ch 19  
   • Randolph, 364-374, 673-676 |                  |
| 11-Oct | • Highlands Ranch field trip                                        | Plan docs for HRCA (skim):  
   • *Mngmt Implementation plan*  
   • *Open Space Conservation Area Plan* |                  |
| 18-Oct | • Lecture: Intro to hydrology and                                   | • *Randolph, pp 143-153, 186-*  
   • *Watchman: Science and Uncertainty in Habitat Conservation Planning*  
   • Randolph: 374-400  
   • Smith 2006 Ch 19  
   • Randolph, 364-374, 673-676 |                  |

**Part 2: Hydrologic Resource Management and Planning**
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<tr>
<th>Date</th>
<th>Lecture Topics</th>
<th>Reading Material</th>
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| 25-Oct     | • Lecture: Water pollution, Low Impact Development, wastewater, wetlands, stormwater BMPs  
             | • Guest lecture: David Mays                                                     | • Randolph, Ch 8 (247-289), Pp 343-355, 159-172       |
| 1-Nov      | • Lecture: Ground water                                                         | • Randolph, Ch 8 (247-289), 159-172                   |
| 8-Nov      | • Lecture: Source water protection and Catskills case study  
             | • Guest lecture: Urban drainage and flood control district                      | • Randolph Ch 9  
             |                                | • Skim the draft state water plan (Links to an external site.)               |
| 15-Nov     | • Lecture: Water Conservation  
             | • Guest lecture: Jeff Tejral, Denver Water                                     |                                                      |
| Thanksgiving | Castle Rock Public Works Field Trip with Public Works director Mark Marlowe |                                                      |
| 29-Nov     | • Lecture: Clean Water Act and Chesapeake Bay case study  
             | • In-class exercise on source water protection in planning  
             | • Exam 3                                                                       | • Randolph, 343-362, 217-234  
             |                                | • Doyle and Miralles: The culture of collaboration in the Chesapeake Bay Program  
             |                                | • TBD                                                                         |
| 6-Dec      | • Lecture: Clean Water Act and Chesapeake Bay case study  
             | • In-class exercise on source water protection in planning  
             | • Exam 3                                                                       |                                                      |
| 13-Dec (finals week) | Presentations for project                                                      | Final project and presentation due                      |