

UPD 499B: PLANNING FOR URBAN AGRICULTURE

SPRING 2011

WEDNESDAYS 5:30 TO 8:20 P.M.

Instructors

Daniel Dermitzel, Kansas City Center for Urban Agriculture, daniel@kccua.org

Jacob Wagner, Urban Planning + Design, wagnerjaco@umkc.edu

Office: Katz 106D 816.235.6053

Course Description

"In fact, most of what we need to know to design intelligent cities can be learned from farming."
R. Hester, "Ecological Democracy", p. 344.

This course examines urban agriculture, including the ways in which food production, distribution, consumption and disposal shape cities. Topics include planning and design of urban food systems, soil and civilization, food policy and cities, and urban material flows that impact food production, distribution and consumption. Assignments will include readings, site visits to the local food system, guest speakers, and in-class exercises on site design, policy analysis, and urban ecology.

Learning Objectives

Students will...

- Develop their understanding of the global food system and emerging alternatives
- Learn about the impact of food production, distribution and waste in urban ecosystems
- Explore ways to integrate food production into cities to create efficiencies and sustainability
- Experience new methods and technologies for urban food production
- Learn about policies and regulatory approaches to support urban food systems

Required Textbooks and Reading Materials

R. Hester, [Design for Ecological Democracy](#), MIT Press, 2006

A. Viljoen, K. Bohn, and J. Howe, 2005. [Continuous Productive Urban Landscapes: Designing Urban Agriculture for Sustainable Cities](#). Architectural Press

[Blackboard](#): In addition the course blackboard site also includes additional required readings. Readings may be added during the semester as well for specific modules

Assignments

[Participation \[20%\]](#): includes weekly attendance and participation in course activities.

[Farm Work Day \[10%\]](#): A farm workday is scheduled for Saturday April 16th from 8 am to noon. Each student will be assigned to a local farm to work and learn from a local farmer. A "rain day" of Saturday April 23rd will be scheduled if the 16th does not work. Tasks may include weeding, mulching, planting or other tasks. Other options to meet this requirement will be announced in class.

[Quizzes: \[30%\]](#): There will be four quizzes total over the major concepts and material from a course module or two. Dates for these will be announced in class at least one week prior to the quiz.

[Final Project: Urban Agriculture Patterns \[30%\]](#) Students will identify, describe and visualize the patterns that are evident as part of existing and alternative food systems including urban agriculture. This assignment will require you to visit specific locations in the metro area to observe, record, and analyze existing or proposed urban agricultural patterns.

[Final Presentation to class \[10%\]](#): In lieu of a final exam – each student will be required to present the results of their design project to the students in the class during the scheduled final exam day and time in May.

COURSE OUTLINE

[Note: this schedule is subject to change by the instructors]

Week 1, Jan 12: Introduction to the Course

Agriculture, Food and Urban Sustainability (overview- Daniel)

Cities, Planning and Design (overview - Jake)

Readings: Hester, Introduction, pp. 1-13; Enabling Form, pp. 15-19

CPULS, Ch. 1 New Space for Old Space, pp. 4-9

Week 2, Jan 19: Urban Ecosystem Primer

Content and Purpose: This session will introduce students to ecosystems and environmental science. This will be an opportunity to review basic scientific principles that are essential to our analysis of agriculture, sustainability and cities as ecosystems. Some of the main operating principles of ecosystems will be discussed.

Readings: Hester, Connectedness, pp. 49-65; Inhabiting Science, pp. 327-353

CPULS, Chapters 2-4 (pp. 11-39)

Grimm, et. Al. 2008. Global Change and the Ecology of Cities. Science (**Blackboard**)

Ch 3. Introduction to Ecosystem Services, Sustainable Sites Initiative

(online: [http://www.sustainablesites.org/report/The%20Case%20for%20Sustainable%20Landscapes 2009.pdf](http://www.sustainablesites.org/report/The%20Case%20for%20Sustainable%20Landscapes%202009.pdf))

Guest Lecture: Molly Davies, *Introduction to Urban Ecology*

Final Project – Introduction: Patterns for Urban Agriculture

Week 3, Jan 26: The Food System

Content and Purpose: For two weeks we will discuss the history, present and future of human food systems. Most of the time will be spent on describing and analyzing the present industrial food system and its effects of the environment and society. Mary Hendrickson is a renowned scholar in this field and will join us from the University of Missouri, Columbia. The industrial food system's fossil fuel dependency, environmental degradation, human costs, effects on climate change, etc. as well as the system's effects on human and animal health and food justice are all topics of discussion in these two weeks.

Readings: Hester, Fairness, pp.77-95

CPULS, Ch. 5 Food Miles; Ch 13 Food in Time (urban food in Britain) 96-108;

Mary Hendrickson, et.al. 2008 The Global Food System and Nodes of Power. A report prepared for Oxfam.

(**Blackboard**)

Guest Lecture: Mary Hendrickson

Week 4, Feb 2: The Food System, Part II

We continue the Food System module with a review of alternatives to the industrial food system. These alternatives include -- but are not limited to -- urban agriculture, organic agriculture, development of perennial crops and permaculture.

Readings: Hester, Sensible Status, pp.97-115;

CPULS, Ch. 6 and 7 pp.49-55; Ch. 22 Permaculture & Productive Urban Landscapes

Week 5, Feb 9: Building Urban Agriculture

Content and Purpose: The purpose of this module is to introduce students to the mechanics of growing food in the city.

Keeping special focus on the urban environment, we will discuss crop types, plant requirements, growing techniques, production inputs, tools and machines, greenhouses, and hydroponics. We will discuss opportunities and obstacle to urban agriculture (leaving primarily regulatory obstacles for discussion in a later module). We'll talk about production costs, access to financing, marketing opportunities and organic certification. We will conclude this module with a discussion of the community element in urban agriculture, such as what makes farming in neighborhoods different from farming in an isolated rural setting.

Readings: Hester, Centeredness, pp. 21-32; 37-40

CPULS, Ch 8, New Cities with More life, 57-63; Ch. 9, Economics of Urban Ag, 66-77

Week 6, Feb 16: Building Urban Agriculture Part II building urban farms

Readings: Hester, Reciprocal Stewardship, pp. 363-385 (includes Garden Patch case study)

CPULS, Ch. 10 Changing Consumer Behavior, pp.79-81; Ch 11 Social Role of Community Farms, pp.83-88

Guest Lecture: Sabine Martin, K State

Week 7, Feb 23: Building Urban Agriculture Building farms III: markets and communities

Readings: Hester, Naturalness, pp. 301-315

CPULS, Ch 14 – Food in Space, 109-123; Ch 16 Urban Ag in Havana, 136-145; Ch. 17 147-191

Week 8, Mar 2: Integrating Urban Material Flows

We will identify possibilities for achieving energy and material efficiencies for urban food production by re-designing the built environment. Where is a resource going unused and where is a need unmet? We will explore input-output loops and a waste-less urban food system. Water catchment and harvesting, use of waste heat, maximizing sun exposure, collecting and recycling organic matter are all examples of the kind of processes discussed in this module.

Readings: Hester, Section II: Resilient Form, pp. 137-147

CPULS, Ch 12 Recycling systems at the Urban Scale

Guest Lecture: Kevin Anderson, Missouri Organic (composting and soil); Laura Adams, Black and Veatch (water)

Week 9, Mar 9: Integrating Urban Material Flows

Readings: Hester, Particularness, pp. 145-169

CPULS, Ch 20 Allotments, pp.206-216

Week 10, Mar 16: Productive Urban Landscapes

Site Visit: Tim Walter's Farm and Water Treatment facility (*class will meet off campus*)

Week 11, Mar 23: Productive Urban Landscapes

Purpose and Content: This is the first urban design module of the course. Guided by the readings from CPULS and Design for Eco Democracy we will closely examine the urban environment for opportunities for integrating food production. Spatial visioning, re-imagining urban space, understanding design patterns ("good" and "bad") and social implications such as economic choices, occupation, use and value of time and other resources are all part of this module. We will begin to flesh out a set of broad principles for sustainable design and see how we can begin to apply them in the Kansas City metro area. We will touch on permaculture as a design approach both to agriculture and the whole of human settlements.

Readings: Hester, Selective Diversity, pp. 171-199

CPULS, Chapter 14: Food in Space; Ch 23 Utilitarian Dreams, pp. 230-235.

Other: APA Policy Guide on Community and Regional Food Planning

<http://www.planning.org/policy/guides/adopted/food.htm>

Readings: Hester, Density and Smallness, pp.201-225

CPULS, Ch. 21 Urban Food Growing 218-220; Ch. 24 New Space for Old Cities, pp. 240-250

Week 12, Mar 30: Spring Break - no classes

Read: Hester, Pacing, pp. 387-417

Week 13, Apr 6: Creating an Enabling Framework for UA (Jake/Daniel)

In this section we will introduce the policy context for regional planning and urban agriculture. We will look at the policy tools that can create obstacles or opportunities for increasing local food production.

Read: Hester, Limited Extent, pp. 227-243, 251-53; CPULS, Ch 25 252-264

Other: Read Section 6: Obstacles to Entrepreneurial Urban Agriculture, pp. 54-65 in Farming Inside Cities: Entrepreneurial Urban Agriculture in the United States, Jerry Kaufman and Martin Bailey, Lincoln Institute of Land Policy, Working Paper 2000.

Week 14, Apr 13: Creating an Enabling Framework for UA (Daniel)

Guest lecture - tba

Readings: Hester, Adaptability, pp. 255-275

CPULS, Ch 15; Ch 18

Other: Read Section 7: Overcoming Obstacles to Entrepreneurial Urban Agriculture, pp. 66-82 in Farming Inside Cities: Entrepreneurial Urban Agriculture in the United States

FARM WORK DAY: Saturday April 16th

Week 15, Apr 20: Creating an Enabling Framework for UA (Jake)

Multi-Stakeholder Process

Readings: CPULS, Ch 26 pp.266-269

Other: RUA, Multi-Stakeholder Process;

Mukherji and Morales, Zoning for Urban Agriculture, APA Zoning Practice, March 2010

FARM WORK DAY: Saturday April 23rd (rain day)

Week 16, Apr 27: Cities and the Illusion of Separateness

Readings: Hester, Epilogue

Class may meet at KCCUA farm

Wednesday May 4: Final – As scheduled: 5:45 until 8 p.m.
Presentations of Final Project: Patterns for Urban Agriculture

A Note about Academic Dishonesty: It is your responsibility as a student to insure that all of the work that you submit for this course is the product of your labor and no one else's work. All sources that you rely upon for information must be properly acknowledging using a recognized system of citation. The following excerpt from the UMKC student handbook explains the university's policy on academic dishonesty, including plagiarism:

"Academic dishonesty, such as cheating, plagiarism or sabotage. The Board of Curators recognizes that academic honesty is essential for the intellectual life of the University. Faculty members have a special obligation to expect high standards of academic honesty in all student work. Students have a special obligation to adhere to such standards. In all cases of academic dishonesty, the instructor shall make an academic judgment about the student's grade on that work and in that course. The instructor shall report the alleged academic dishonesty to the Primary Administrative Officer.

*The term **plagiarism** includes, but is not limited to: (i) use by paraphrase or direct quotation of the published or unpublished work of another person without fully and properly crediting the author with footnotes, citations or bibliographical reference; (ii) unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials; or (iii) unacknowledged use of original work/material that has been produced through collaboration with others without release in writing from collaborators."*

Plagiarism includes the improper or insufficient citation of websites, articles and other written materials. Summarizing another person's work requires proper citation. Even if you have completely re-written the cited materials in your own words, you must acknowledge where the idea or data were found. When in doubt, it is better to cite early and cite often in your submitted work. If you have any questions about proper citation, please consult the instructors. **The UMKC Writing Center is also available to you – we recommend that you use it.**

Sexual Harassment: The College and the University of Missouri-Kansas City have a zero tolerance policy for sexual harassment, intimidation, or discrimination of any kind. The faculty and the administration are committed to creating and maintaining an environment on campus that is free of all forms of harassment, intimidation, and discrimination. Should you or a friend ever experience any action or speech that feels coercive or discriminatory, you should report this immediately to the department chair, the office of the Dean, and/or the Affirmative Action Office. The Affirmative Action Office will be responsible for investigating any complaint of discrimination or sexual harassment. We are a community of learners dedicated to the pursuit of knowledge and the acquisitions of skills that will enable us to lead rich and full lives. We can pursue these ends only in a culture of mutual respect and civility. It is incumbent upon all of us to create a culture of respect everywhere on campus and at all times through our actions and speech. On behalf of the faculty of UMKC, we pledge to you that we will maintain a safe environment on campus and in our classroom that fosters respect for everyone.