E422/E522 UFM, Sp 2017 – Syllabus Part 2 - Course Calendar – 2017 Final
Topics, Readings & Homework - Highlighted items are helpful reading guides

Week 1 – Introduction to Urban Forests and Urban Forestry - Course/Instructor introduction; Pretest & review; Review Syllabus & Course Calendar & Canvas; Blogs - Treebune, The Nature of Cities & others; Review Class Themes; Introduction to urban forests, arboriculture & urban forestry; Urban forestry historical review; Urban land use trends;

Reading assignments:


The Economist. 2011 (May 26). Welcome to the Anthropocene: Humans have changed the way the world works now they have to change the way they think about it, too. 11p.

Discussion Paper #1 – Welcome to the Urban Forest Writing Assignment – 750-1000 words, figures are extra and encouraged - should include a map, drawing, or pictures of the location (hint: Google Earth) of the street block so the instructor can find where you are writing about. Describe the benefits/ecosystem services (ecological, environmental and/or social) of the street trees in one street block (both sides of the street) found within the Bloomington Downtown Commercial Zoning District (search City of Bloomington Map Gallery). To enhance your written presentation use the National Tree Benefit Calculator (www.treebenefits.com) to evaluate one individual tree from the street block to learn more about the environmental and economic benefits of urban trees and present these findings in a figure/table. Finally, close the paper with a paragraph discussing whether the street’s urban tree canopy cover is sustainable, has limitations, etc. You are writing as a technical paper to the instructor. Upload file (file name as follows: last name, first name, DP1) to Canvas Assignment #1. Due 11:15am Thursday, January 19, 25 pts.

Week 2 – Sustainable Urban Forests as Social-Ecological Systems (SES’s) – Defining the urban forest – Guest speaker - Dr. Sarah Mincey, Associate Director IPE, IUB SPEA; Urban forest sustainability models and metrics; Introduction to institutions, resilience, robustness thinking; Urban trees/forests - public goods or common pool resources?; See “About the Bloomington Urban Forestry Research Group” (2 pages) website at http://iu.edu/~cipec/research/bufrg_about.php; SOP - Debrief guest speaker

Reading Assignments:


Intro to Sustainability & Urban Forestry (a mixture of simple urban forest sustainability "metrics") American Forests - Setting Urban Tree Canopy Goals, 2p. See http://hpgreen.com/tag/american-forest/.

Arbor Day Foundation. 2015. Tree City USA Standards, 2p. ADF website


Week 3 – Urban Tree Canopy (UTC) Analysis – What is UTC and how is it analyzed; Perceptions and reality; Use and abuse as management tool; Guest speaker Bob Neary, Conservation Information Manager, IN Chapter, The Nature Conservancy


O’Neil-Dunne, J. 2015 (December draft). Tree Canopy Report: Indianapolis-Marion County, IN. USFS, University of Vermont Spatial Analysis Lab, 12p. (2 items, includes 1-page summary)

DP #2 – Introduction to Urban Tree Canopy Analysis Writing Assignment, 750-100 words. Review the Tree Canopy Report: Indianapolis-Marion County, IN and identify three important takeaways (conclusions, impressions or action points resulting from reading the report). The takeaways might relate best to city-county officials or Keep Indianapolis Beautiful or the media or neighborhoods or individual private citizens, etc. The format of the discussion paper is as follows: Introduction describes how you determined (criteria, etc.) the three important takeaways and then displays the three takeaways as bullet points. Then, prepare three tightly written sections explaining the importance of each takeaway. Finally, for closure consider the combined City of Bloomington/IUB campus, which has not done such a canopy analysis, and write one really important question you would want addressed locally if such a study was proposed. Upload file (last name, first name, DP2). Due 11:15 am Thurs., Feb. 2, 35 pts.


Reading Assignments (Selected readings; more available in vibrant, growing field of research)


Week 5 – National-State-Local Players in Urban Forestry (general overview, “chalk talk” presentation by Burney) – State/National players summarization & how things operate for urban forestry funding for programs & research federal>state>local (think neighborhood!) level; Guest speaker - Bill Kinicus, Indianapolis City Forester

Reading Assignments:
State U&CF Case Stories (2014 compilation of 1p state stories, review several for themes), 46p.

State Urban Forestry Program Assessments (Academic assessment of state program)

National perspectives on urban forestry (review for general overview and connection to chalk talk)

Sustainable Urban Forest Coalition (SUFC) - Policy Principles & Operating Procedures, 5p, & Fact Sheet, 2p.


Week 6 – Municipal Urban Forestry & Tree Law - Tree ordinances/boards/planning; Urban forest disturbance planning; Institutions “governing” urban trees; Tree law talk

Reading Assignments:
Municipal Urban Forestry (see Municipal Forestry Folder)


National Arbor Day Foundation. 2007. Sample City Tree Ordinance. 1p.


(Compare two plans for class discussion)
Urban trees public goods or CPR's? (See PPT used in class.)


Trees and the Law (Review prior to Tree Law Talk presentation – See Tree Law Folder)


Lewis, M. ‘Arborcide’ and 4 other nasty tree fights. MSN Real Estate, 5p.


DP#3 – SWOT of current urban tree planting/canopy campaign, 750-1000 words
The assignment is to conduct a brief SWOT (Strengths, Weakness, Opportunities and Threats; Google SWOT for references and helpful aids, if you are unaware of this analysis technique) analysis of an active/current (i.e. on-going, not completed or terminated) nonprofit, municipal or regional urban tree planting or canopy campaign. You will select a campaign of your choice (KIB is not allowed!) and do an online review and analysis of the campaign (make sure to include citations of all your work). The discussion paper, 750-1000 words, should clearly describe the initiative and its purposes, the key stakeholders, etc., and then you will construct a brief SWOT to analyze the campaign, not the whole organization conducting the campaign. Finally, you should end the paper with a succinct prediction on the possible success of the initiative. Figures and tables are extra, and should be placed at the end of the paper and cited in the text. Upload file (last name, first name, DP3). Due 11:15am, Tues., Feb 28, 40 pts

Week 7 – Tree Planting &/or Canopy Cover Campaigns (Selected regional/city greening initiatives): NGO’s – tree planting & otherwise; KIB presentation – Nate Faris, Molly Wilson & Ned Brockmeyer, review http://www.kibi.org/programs/overview, click on Planting Trees & Youth Program

Reading Assignments:


Week 8 – Midterm Exam Week. Catch-up day on Tuesday and Exam on Thursday, March 2.

Note: Schedule subject to change, per guest speakers/weather/field trips
Week 9 & 10 Tree Inventory and Assessment – Two field trips for street tree inventory training & exercise; Discussion Paper #4 (see in-field handout); Guest lecture by Sarah Widney, Craft Lab Mgr., Planted tree survival, growth and i-Tree; i-Tree software http://www.itreetools.org/

Spring Break – March 13-17!!!!!

Reading Assignments - See Week 9 & 10 folder for handouts, etc., for field exercises, etc.

ISA Basic Tree Risk Assessment Form, 2p


Discussion Paper #4 – short street tree inventory report, 3-4 person teams. Details TBD! Note: instructor will conduct a peer review of each team after homework assignment is received.

Weeks 11 – Introduction to Tree Biology (Understanding basic tree biology)

Reading Assignments: (Review Tree Owner’s Manual for Next 4 Weeks of Class)


Case Study Discussion (Review before PowerPoint lecture in class)

Week 12 - Tree Care and Management – Pruning, risk rating, etc.; Urban tree health management; EAB and other pest case studies

Reading Assignments:
UF Tree Care Myths Summary by B.C. Fischer. 2017. 3p.

Pruning (Major management activity by city foresters)

Purdue Forestry and Natural Resources Extension has an excellent set of publications about pruning trees by Extension Specialist Lindsey Purcell – see https://www.purdue.edu/fnr/extension/blog/2017/02/09/new-publication-tree-pruning-what-do-trees-think/

Emerald Ash Borer (EAB) will be our thematic pest species for urban forest health mgmt.) See National EAB website http://www.emeraldashborer.info/#sthash.YuuIWNhA.dpbs
See Indiana EAB http://extension.entm.purdue.edu/EAB/


**Week 13 - Tree Industry Review** - Economic impacts, trends, job opportunities; Field Day (April 13) with Davey Tree Expert Company/Davey Resource Group – Mark Noark, Aren Flint, etc.

Reading Assignments:

Trends in the Green Industry and Tree Care compiled by B.C. Fischer, December 2015


**Weeks 14 - Tree Planting** – Tree selection (& invasive spp.); Rules-of-thumb; Right Tree, Right Place; Planting/tree care field demo, B’ton City Forester Lee Huss

Reading Assignments:

ISA. 2005 Tree Planting BMP’s.


**Week 15 – Graduate Research Paper Presentations, Team Case Study Presentation(s), Course closure & evaluation; Final Exam for UG’s, Graduate Research Papers**