Topics, Readings & Homework - Highlighted items are helpful reading guidance

Week 1 – Introduction to Urban Forests & Urban Forestry – Pretest; Course/Instructor intro; Review Syllabus, Course Calendar, Themes & Canvas; Blogs: Treebune, The Nature of Cities; Intro to urban forests, arboriculture & urban forestry; Brief historical review; Urban land use trends

Reading assignments:
History of Urban Forestry (Focus: urban tree mgmt. history, particularly Northeastern USA)


Introduction to Urban Ecology, UF's and Urban Forestry (Three foci – USA history, Europe comparison, Urban Ecology-UFM connections)
UFM Introduction – 3 media stories (discussed Day 1), 7p


Current Trends in Land Use (Focus – land use change research; urbanization/Anthropocene)


See Assignment Folder – Anthropocene Readings - Browse as necessary to make sure you are up to speed on this concept per UFM.

Discussion Paper #1 – Welcome to UFM’s “What’s in the News” Writing Assignment – Informative memo to the Instructor (1-2 pages in length), explanatory figures are extra and encouraged if needed as attachments; memo must include at least two citations (use links to news stories, etc.) as supporting documents. At least one of the two or more citations should be recent (2017-18). The urban trees/forest storyline is from a US city of your choice. The urban forest storyline can be about controversy, an on-going situation, celebration or whatever and can be from a biophysical (trees/ecosystem), social (community) or governance (institutions) perspective. The informative or report format should begin with clearly identifying the city and a description of the situation you are writing about. Next should be clear description of the story that’s developing or has just concluded. Finally, close the paper with a paragraph discussing whether the story has really ended or what you believe the near future storylines might be (2018-19). You are writing as a memo to the instructor. Upload file (file name as follows: last name, first name, DP1) to Canvas Assignment #1. If you are unsure how to prepare and write a memo, search the Writing Tips Folder or search using phrases like memo writing, how to write a good memo, etc. Due 11:15am Thursday, January 18, 30 pts.

Week 2 – Sustainable Urban Forests as Social-Ecological Systems (SES’s) – Defining the urban forest from several perspectives; Urban forest sustainability model/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) https://urbanforestry.indiana.edu/index.html

Reading Assignments:
Sustainable Urban Forests and SES’s (Course theme; Clark, et al., benchmark UFM publication)


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

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


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


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. 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, under each bullet point prepare a tightly written sections explaining the importance of each takeaway. Finally, for closure consider the combined City of Bloomington/IUB campus, which has not yet done such a canopy analysis but the City is planning to contract on in 2018-19, and write and defend two really important question you would want addressed locally when the UTC inventory/assessment is conducted. Upload file (last name, first name, DP2). Due 11:15 am Tuesday, Feb. 13, 40 pts.
**Week 4 – Urban Tree Canopy (UTC) and other Data Analysis** – What is UTC & how is it analyzed; Street tree inventories; Perceptions & reality regarding UF data; Use and abuse of UTC data as management tool; Guest speakers Bob Neary, Conservation Information Manager, IN Chapter, The Nature Conservancy & Karl Selm, GIS Analyst, Keep Indianapolis Beautiful.


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)


**Week 5 – National-State-Local Players in Urban Forestry** (general overview, "chalk talk" 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 – Burney will give a chalk talk on the whiteboards of the US national-state-local players in urban forestry - no reading assignment, nothing substantially adds to the presentation/discussion. Burney will lead a discussion of the Indianapolis City Urban Forestry Plan (really a report) prepared by Davey Resource Group - Indianapolis MP is below in preparation for Indy City Forester presentation. See thoughts from Indy City Forester below.

Note from Bill Kinicus, Indianapolis City Forester:

"It would be good for them to "surf" around our UF website and check out some of the links found there: [http://indy.gov/eGov/City/DPW/Residential/Urban%20Forestry/Pages/Urban%20Forestry%20Home.aspx](http://indy.gov/eGov/City/DPW/Residential/Urban%20Forestry/Pages/Urban%20Forestry%20Home.aspx) (Links to an external site.). Links to an external site. We have a few FAQ pages within the website that give glimpses into some of our policies.

More importantly, the students can also read the Management Plan that Davey Resource Group created based on DRG’s analysis of the recently completed street tree inventory (it includes an executive summary). I will attach that here. Bear in mind that the management plan that DRG created is basically their recommendations for us, and many of the ideas are not achievable by our program. Some of the recommendations are far more aggressive than our funding sources can support, for example. Still, the analysis is the best snap shot of what is going on with the City’s street trees. And in the absence of our own official master plan, this analysis and management plan document is the next best thing."

Read Overview below (from Indianapolis Urban Forestry website) before Thursday presentation/discussion with Indianapolis City Forester

Overview of Indianapolis Urban Forestry, 1p (read before Thursday Guest Speaker)

Indianapolis Urban Forestry Master Plan by Davey Resource Group, 46p + Appendices

**Week 6 – Community Tree Planting Campaigns** (Selected regional/city greening initiatives); NGO’s – tree planting & otherwise; KIB presentation – Nate Farris, Molly Wilson & Ned Brockmeyer, review [http://www.kibi.org/programs/overview/](http://www.kibi.org/programs/overview/), click on Planting Trees & Youth Program
Reading Assignments:

DP #3 – Developing a Model Neighborhood Urban Forest Plan, team assignment (3-4 students/team).
The KIB Tree Team has asked our class to help develop a model urban forest plan at the neighborhood level, which they can begin utilizing with each neighborhood they work with in a given year (maybe 10-20 NH’s/yr.). The goal is to have a short two-page plan, think small brochure or two-sided item in size (i.e. something very simple and straightforward). Remember, KIB wants the plan to be locally driven regarding goals and things to accomplish so that progress is made. KIB’s role is to provide guidance to the neighborhood as well as some standardized data that the NH can reference or utilize, as they might need. So, teams need to think carefully about how to present data in a very useful and easily understood format. The final team presentation will be a poster (see a suggested model below) which will be presented to the class. See the Writing Tips Folder for how to construct a poster presentation. For your information, the City of Bloomington is also interested in using this format for the over 40 organized neighborhoods and my recent conversations with Davey Resource Group and Bartlett Tree folks indicates they are also interested. Upload file – the poster (last names of each team member, DP#3). Due 11:15 am Tues., Feb. 27, 40 points per person.

Week 7 – Municipal Urban Forestry & Tree Law - Tree ordinances/boards/planning; UF disturbance planning; Environmental Change; 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 for assignment and guide to reading articles and cases)


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

Three Cases:

Week 8 – Midterm Exam Week. Catch-up day on Tuesday and Exam on Thursday, March 1.

Note Weeks 9-10 - Schedule subject to change, per guest speakers/weather/field trips

Week 9 & 10 Tree Inventory and Assessment – Field trips (2) for street tree inventory training & exercise; DP #4 (UG team project; 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 12-16!!!!!

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

ISA Basic Tree Risk Assessment Form, 2p


Discussion Paper #4 – street tree inventory, 3-4 person teams. Details at the field experience!

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

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


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

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


**Week 13 - Tree Industry Review** - Economic impacts, trends, job opportunities; Field Day (April 12) with Davey Tree Expert Company/Davey Resource Group – Mark Noark, Aren Flint, etc.

Reading Assignments:
Review Davey Tree website at http://www.davey.com/ before Thursday field experience!

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’son City Forester Lee Huss (April 19)

**Reading Assignments:**


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