Week 1
(Edward Friedman)

Day 1
Lecture 1: Introduction to plant anatomy; vascular plant organization; shoot apical meristems
Lecture 2: Shoot apical meristems; root apical meristems

Day 2
Lecture 3: Epidermis
Lecture 4: Parenchyma; collenchyma; sclerenchyma

Day 3
Lecture 5: Xylem
Lecture 6: Phloem

Day 4
Lecture 7: Secretory structures
Lecture 8: Primary stem structure

Day 5
Lecture 9: Leaves
Lecture 10: Roots

Week 2
(Peter Baas, Peter Gasson, and Elisabeth Wheeler)

Day 1
Lecture 11: General intro - wood and bark in the living tree. Emphasis on “dicots”
   a. General wood in the tree, orientation of cells, general structure function. [Pieter]
   b. Cambium and growth periodicity
      i. Cambium – initials, divisions, differentiation [Elisabeth] – this will be short.
      ii. Growth rings – IAWA Features 1-5. [Pete]
Lecture 12: Hydraulic features of Hardwoods [Elisabeth]
   a. Vessels plus V. Tracheids,
   b. A bit of pit membrane structure of hardwoods.
Day 2
Lecture 13: Mechanical Tissues: [Pieter]
   a. Fibers
   b. Reaction wood
Lecture 14: Storage tissue in hardwoods
   a. Axial parenchyma [Pete]
   b. Rays [Elisabeth]

Day 3
Lecture 15: Special features in hardwoods, IAWA Features 118-163
   a. Storied structure and crystals – [Pete]
   b. Cambial variants and laticifers – [Pieter]
   c. Oil cells and canals [Elisabeth]
Lecture 16: Wood ID
   a. General intro, importance, examples [Pete]
   b. InsideWood – basics of background and how to use [Elisabeth]

Day 4
Lecture 17: Variability and ecological adaptations
   a. Within tree variation, root-trunk-branch, radial variation [Pete]
   b. Heartwood – [Pieter]
   c. Ecological variation [Pieter]
Lecture 18: Evolution of wood diversity
   a. Fossil Record, Classic Literature / Bailey– [Elisabeth]
   b. Phylogenies, parallelism – secondary woodiness [Pieter]

Day 5
Lecture 20: Bark Anatomy – Pieter
   Mini-lectures – 10-20 minutes on favorite topics; Driftwood story – Pieter
   Yellowstone or Deccan Woods – Elisabeth;
   Pete — Waterlogged wood, charcoal,