Syllabus

Lectures, Labs & Reading Assignments

Week One
Mon. 29 Mar     L#1 Introduction      pp. 1-16
Lab Basal Families: describing flowers (pp. 123 & 364-383)

Weds. 31 Mar    L#2 Angiosperm characters pp.153-156
Lab Basal Families: describing leaves (pp. 390-401)

Fri. 2 April    L#3 Angiosperm origins pp. 133-135

Families of the week: Nymphaeales (Nymphaeaceae), Magnoliales (Magnoliaceae pp. 150), Laurales (Lauraceae pp. 147), Piperales (Aristolochiaceae pp. 151), Monocots I: Liliales (Liliaceae pp. 182)

Week Two
Mon. 5 April    L#4 Monocots (pp 153-159)
Lab Quiz (all prior families)  In lab, monocots I

Weds 7 April    L#5 Why are flowers so variable? Selection by pollinators pp. 465-468
Lab: keying exercise with Ranunculaceae (read in advance: pp. 12 & 495-496)

Fri. 9 April    L#6 Selection on flowers II


Week Three
Mon. 12 April   L#7 Mating Systems pp. 468-476
Lab Quiz (all prior families) In lab: new
Families of the week

Weds. 14 April  L#8 Why are fruits so variable? Selection for Dispersal pp. 382-389 and 472
Lab: Families of the week

Fri. 16 April   L#9 Dispersal II.

Saturday 17 April  Field Trip to Mt. Pisgah (Required) 11:00-4:00

Families of the week: Caryophyllales (Portulacaceae pp. 239, Caryophyllaceae pp. 247, Cactaceae pp. 245-246, Polygonaceae pp. 248), Saxifragales (Saxifragaceae pp. 253, Crassulaceae pp. 251), Geraniales (Geraniaceae pp. 256)
**Week Four**
Mon. 19 April  L#10 Why are leaves so variable? I Selection by the environment  
Lab Quiz (all prior families) Families of the week  

Weds. 21 April L#11 Why are leaves so variable? II Selection by other organisms  
Lab Families of the week  

Fri. 23 April L#12 Molecular data pp. 477-491  

**Families of the week:** Myrtales (Melastomataceae pp. 257, Onagraceae pp. 260),  
Curcurbitales (Cucurbitaceae pp. 261), Fabales (Fabaceae pp. 263-264), Fagales (Fagaceae pp. 268, Betulaceae pp. 267),  

**Week Five**
Mon.26 April L#13 Phylogenetic Systematics: characters pp. 17-24  
Lab: Field trip, including QUIZ, to Alton Baker Park (wear comfortable shoes, we walk about 3 miles) IF IT IS RAINING HARD, WE WILL POSTPONE TO WEDS INSTEAD  

Weds. 28 April Lecture Mid-term Exam  
Lab: Families of the week  

Fri. 30 April L#14 Phylogenetic Systematics: cladograms pp. 24-38  

Families of the week: Malpighiales (Euphorbiaceae pp. 270, Violaceae pp. 273, Salicaceae),  
Rosales (Rosaceae pp. 278-279), Brassicales (Brassicaceae pp. 280-281)  

**Week Six**
Mon. 3 May L#15 Phylogenetic Systematics: analysis pp. 38-48  
Lab Quiz (all prior families) Families of the Week  

Weds. 5 May L#16 Nomenclature pp. 501-515  
Lab: Families of the week  

Fri. 7 May L#17 Species & speciation  
Keying exercise: Boraginaceae  

Sat 8 May Cascade Field Trip (Required) 8:00-6:00  

Information: Native Plant Garden Tour on Sunday 9 May.  

Families of the week: Sapindales (Anacardiaceae pp. 287, Sapindaceae pp. 290&291);  
Coronales (Cornaceae pp. 294), Ericales (Ericaceae pp. 295-296), Boraginaceae pp. 300,  
Hydrophyllaceae pp. 302
Week Seven
Mon. 10 May L#18 Parasitic Plants
Lab Quiz (all prior families) Lab: Families of the week

Weds. 12 May L#19 Species and speciation
Lab: Families of the week

Fri. 14 May L#20 Hybrids and Hybridization/Polyploidy pp. 473-474

Saturday: Volunteer to help setup the wildflower show at Mt. Pisgah Arboretum
Sunday 16 May: Wildflower festival at Mt. Pisgah


Week Eight
Mon. 17 May L#21 Hybrids and Hybridization/Polyploidy pp. 473-474
Lab Quiz (all prior families) Lab: Families of the week

Weds. 19 May L#22 TBA or Catch-up
Lab: Field Trip to Spencer Butte (includes quiz) 2-5 pm

Fri. 21 May L#23 Palynology & assessing environmental change (by Erin)


Week Nine
Mon. 24 May L#24 Grass identification
Lab Quiz (all prior families) Lab: Families of the week

Weds. 26 May Graduate Student Presentations
Lab: Families of the week

Fri. 28 May Graduate Student Presentations

Week Ten
Mon 31 May  NO Class, Memorial Day

Weds 2 June  no lecture due to Lab exam in the afternoon.
Lab Exam!!!  The room will be open from 2 until 6 pm, bring a snack and a drink.
Open book and open notes.
Exam advice: count parts, make lists of families with various plant part numbers, check ovary position, look for stipules, look for sheathing and ribs, latex and smell.

Fri 4 June  12:00 Potluck with prize for dish with most families in it & a prize for most beautiful

FINAL EXAM:  Tuesday June 8 at 10:15

Course Information
Professor:  Dr. Bitty Roy
Lectures:  Huestis 112, MWF 12:00-12:50
Laboratories:  Huestis 112, MW 2:00 – 5:00

Plant Walks: Tuesdays 12-1; leave promptly at 12 from the Autzen Stadium bridge over the Willamette at the N end (Autzen side).  This is a good way to reinforce what you are learning in the class and will help you to get to know the local plants.  We will walk a route that has more than 15 years of plant phenology data (when things start to flower).  These data are useful for seeing the effects of climate change.

Office Hour: 10-11 on Fridays, and by appointment
Room 461b Onyx Bridge (enter 461 and go through a pocket door to the left)
Tel. 346-4520
E-mail: bit@uoregon.edu

Please use 442/542 in the subject header

Graduate Teaching Assistant:  Erin Herring  eherring@uoregon.edu, office hour 11-12 Tuesdays, or by appointment, Place: Pacific 217.

Undergraduate Peer Tutor:  Alli Fitzgerald afitz13@nmsu.edu

Course Objectives:
Plant systematics is the study of plant diversity.  Through the lectures, laboratory exercises, and readings you will learn:
1.  How to describe and classify plant diversity.
2.  The major features and evolutionary origins of vascular plants.
3.  What causes selection on, and variation in, plant characteristics
4.  A "Vocabulary" of plant description.
5.  Identification of plants using dichotomous keys.
6.  Recognition of important angiosperm families
7.  Where your food plants come from
Required textbooks: (bring to every lab)

Michael G. Simpson. 2006. Plant Systematics. Elsevier Press, Burlington, MA. This textbook includes 1) chapters that you will be expected to read before lectures; and 2) family descriptions that you are expected to read before the lab session. The required readings cover most of the course topics. The book includes a lot of color photographs.

Hitchcock and Cronquist, Flora of the Pacific Northwest.

The course Packet, which includes the lab worksheets

Not required, but strongly recommended: Pojar and MacKinnon, Plants of the Pacific Northwest Coast. Well illustrated (with photos), but with few keys.

Bring to Lab: both text books (Simpson & “Hitchie”), the lab worksheets (in the packet), lab supplies, pencil, paper (unlined paper is best for drawings). Required lab supplies: 10 or 15 cm ruler, marked off in millimeters, dissecting needle(s), razor blade(s), fine forceps, 10X hand lens.

Field Trips:
There are three required field trips: Saturday April 17th (Mt. Pisgah) from 11:00-4:00, Saturday May 8 (Cascades) from 8:00-6:00, and Wednesday May 19 (Spencer Butte) from 2:00-5:00; materials discussed in lab and lecture will be seen in the field.

Meeting Place: Parking lot behind Onyx Bridge, directly behind the science library entrance. Be prompt. We will leave exactly on time.

Bring a snack (and lunch for the two Saturday trips), water, your field book, hand-lens and ruler. Wear long pants (for poison oak & ticks) and either hiking boots or tennis shoes. Bring a hat and sunscreen, as well as rain gear.

Important dates:
March 28, Sunday: last day to withdraw without a W
April 17, Saturday: Field Trip to Mt. Pisgah (required)
April 26, Monday: Alton Baker Park walk/quiz (required)
April 28, Wednesday: lecture mid-term
May 8, Saturday: Cascade Field trip (required)
May 10, Monday Seminar by John Pastor (Plant Ecosystem Ecology) 4pm
May 15, Saturday Wildflower festival set up-volunteers needed
May 16, Sunday Wildflower festival at Mt Pisgah Arboretum
May 16, Sunday: last day to withdraw from class, and to change grading option
May 24, Monday: Seminar by Joey Spatafora (fungi)
May 31, Monday: Memorial Day holiday
June 2, Wednesday: Lab Exam
June 4, Friday: Potluck in class with prize for dish with most families in it
June 8, Tuesday, 10:15 am: FINAL EXAM
Grading:
Exams will cover subjects and vocabulary presented in lecture or lab, whether that material is in
the textbook or not. Furthermore, you are expected to know what is in the assigned reading,
even if we don’t cover that material in lab or lecture. Questions may be multiple choice, short
essay, fill in the blank, or true/false format. The final exam will be cumulative.

Lab quizzes: There will be a lab quiz every Monday except the first, and the week with Labor
Day (dead week). The lab quizzes will focus on Family recognition and keying. I allow you to
drop one lab quiz.

Undergraduates (452): Points available:

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<td>A</td>
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| Lab quizzes (10-15 questions x 8 quizzes*) | 100 | 17% |
| Lab exercises (16 *, each worth 10)        | 150 | 24% |
| Lab final                                  | 100 | 17% |
| Midterm                                    | 100 | 17% |
| Final exam                                 | 100 | 17% |
| Field trip attendance (20 for each big one) | 50  | 8%  |
| Total:                                     | 600 |     |

* the lowest grade will be dropped

NOTE: If your grade on the final lab exam is better than the average of your quiz grades, the
final lab exam grade will count for the entire 34% of the lab practical grade (quizzes=17% plus
lab final=17%).

Graduate students (552): Points available:

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| Lab quizzes (10-15 questions x 8 quizzes*) | 100 | 14% |
| Lab exercises (16 *, each worth 10)        | 150 | 21% |
| Lab final                                  | 100 | 14% |
| Midterm                                    | 100 | 14% |
| Final exam                                 | 100 | 14% |
| Field trip attendance (20 for each big one) | 50  | 7%  |
| Presentation                               | 100 | 14% |
| Total:                                     | 700 |     |

* the lowest grade will be dropped

NOTE: If your grade on the final lab exam is better than the average of your quiz grades, the
final lab exam grade will count for the entire 28% of the lab practical grade (quizzes=14% plus
lab final=14%).

Extra credit can be gained by catching me making spelling errors with plant families, genera
and species. I take points away when you misspell words, so to be fair, you should catch me if I
make an error.
Graduate Student Presentations:

Your presentation should take 20 minutes to present. You will talk about a plant family of your choice, one that is NOT covered in class. At a minimum, talk about identification features, uses, why it interests you and its placement in the Angiosperm phylogeny. You will be graded on: 1) the information, 2) the presentation. Please provide me with a paper copy of the presentation so I can comment on it.

STUDENTS WITH SPECIAL NEEDS

University of Oregon in general, and the instructor in this course, work to support students with special needs. If you have special needs, such as test accommodations, note-taking, and sign language interpretation, please contact Disability Services so that their personnel and I can work together to help you learn comfortably in this class. The Disability Services office is located in 164 Oregon Hall. Telephone 541 346-1155. TTY: 541 346-1083. Fax 541 346-6013. On the web: http://ds.uoregon.edu. E-mail: disabsrv@uoregon.edu

If English is your second language and you find understanding my speech difficult, please contact me. I may be able to help you.

MISCELLANEOUS COURSE POLICIES:

If you miss a class, it is your responsibility to contact a classmate to get lecture notes.

Make-up exams will be allowed only if arranged in advance, and only in cases of illness or other documented emergencies such as a death in the family. Exams must be made up no later than the class period following that in which the exam was given (because exams will be returned to class at that time). Documentation of the emergency or illness is required.

I expect students to maintain high standards of academic integrity during my classes, and they nearly always do. Penalties for cheating range from receiving a zero score on the relevant test, quiz or exercise to receiving an F grade in the class. Mutilation of library materials or other shared materials for any exercise associated with this class will result in an F grade for the entire class.

Electronic devices (cell phones, graphing calculators, PDA’s, electronic game, radio, CD player, etc.) may not be used during a quiz or test. Any electronic device used during a test will be confiscated.

Cell phones should be turned off or the ringers silenced during class. If you need to take a call during class (other than during a quiz or test), leave class, deal with the call in the lobby (not near the classroom door), and return when finished. If you must take a call during a test or quiz, turn in the test or quiz when you are finished with it. Then take the call.