Syllabus

Professor: Dr. Bitty Roy
Lectures: Huestis 129, MF 12:00-12:50 (see plant walks for W)
Laboratories: Huestis 129, MW 2:00-4:50
Plant Walks: Wednesdays 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: Tobias Policha, tpolicha@uoregon.edu, office hour TBA, or by appointment, Place: Pacific 217.

Undergraduate Peer Tutor: Rachel Lytton, rlytton@uoregon.edu

Lectures, Labs & Reading Assignments

Week One
Mon 2 Apr L#1 Introduction pp. 1-16
Lab=Basal Families: describing flowers (pp. 165 & 468-487)

Weds. 4 Apr L#2=Plant Walk (meet at Autzen bridge, far side, at noon)
Lab=Basal Families: describing leaves (pp. 461-467)

Fri. 6 Apr L#3 Angiosperm characters and origins pp. 176-178


Week Two
Mon 9 April L#4 Monocots (pp 200-202)
Lab=Quiz In lab, monocots I

Weds 11 April L#5=Plant Walk (meet at Autzen bridge, far side, at noon)
Lab= keying exercise Berberidaceae & Ranunculaceae (read in advance: pp. 12 & 606-607)

Fri. 13 April L#6 Why are flowers so variable? Selection by pollinators pp. 574-576

Week Three
Mon. 16 April L#7 Mating (=Breeding) Systems pp. 576-580
Lab=Quiz In lab: new Families of the week

Weds 11 April L#8 =Plant Walk (meet at Autzen bridge, far side at noon)
Lab = Families of the week

Fri. 20 April L#9 Why are fruits so variable? Selection for Dispersal pp. 489-493

Saturday 21 April Field Trip to Mt. Pisgah (Required) 11:00-4:00


Week Four
Mon. 23 April L#10 film by David Attenborough: Private Lives of Plants
Lab= Quiz then families of the week

Weds. 25 April L#11 =Plant Walk (meet at Autzen bridge, far side, at noon)
Lab = Families of the week

Fri. 27 April L#12 Why are leaves so variable? I. Selection by the environment

Families of the week: Myrtales (Onagraceae pp. 353, 356), Curcurbitales (Cucurbitaceae pp. 341,343), Fabales (Fabaceae pp. 328-330), Fagales (Fagaceae pp. 344,346, Betulaceae pp. 344,345)

Week Five
Mon. 30 April L#13 Mid-term Exam
Lab = QUIZ & new families of the week

Weds. 2 May L#14=Plant Walk (meet at Autzen bridge, far side, at noon)
Lab = Families of the week

Fri. 5 May L#15 Why are leaves so variable? III. Selection by other organisms
Families of the week: Malpighiales (Euphorbiaceae pp. 315, 319, Violaceae pp. 323,325, Salicaceae pp. 322, 324), Rosales (Rosaceae pp. 334-335), Brassicales (Brassicaceae pp. 357-359)

**Week Six**
Mon. 7 May  L#16 Inflorescence types
Lab= Quiz  Families of the Week

Weds. 9 May  L#17=Plant Walk (meet at Autzen bridge, far side, at noon)
Lab= Families of the week

Fri. 11 May  L#18 Phylogenetic Systematics I. (pp 17-48; 585-609)

Sat 12 May  **Coast Field Trip** (Required) 8:00-6:00


**Week Seven**
Mon. 14 May  L#19 Phylogenetic Systematics II. (pp 17-48; 585-609)
Lab= Quiz then new families of the week

Weds. 16 May  L#20=Plant Walk (meet at Autzen bridge, far side, at noon)
Lab = Families of the week

Fri. 18 May  L#21 Nomenclature  pp. 501-515

Saturday 19 May Volunteer to help setup the wildflower show at Mt. Pisgah Arboretum
Sunday 20 May: Wildflower festival at Mt. Pisgah


**Week Eight**
Mon. 21 May  L#22 Species and speciation I (pp. 649-665)
Lab= Families of the week

Weds. 23 May  L#23=Plant Walk (meet at Autzen bridge, far side, at noon)
Lab= **Field Trip** to Spencer Butte (includes quiz)  2-5 pm

Fri. 25 May  L#24 Species and speciation II (pp. 649-665)

Week Nine
Mon. 28 May HOLIDAY no class

Weds. 30 May L#25 = Plant Walk (meet at Autzen bridge, far side, at noon)
Weds. 30 May Lab = Families of the week; Lab Quiz

Fri. 1 June May L#26 Grasses and Grasslands


Week Ten
Mon 4 June L#27 = Plant Walk (meet at Autzen bridge, far side, at noon)

Lab=Poaceae

Weds 6 June no lecture due to Lab exam in the afternoon.

Lab Practical!!! 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 8 June 12:00 Plant Family Potluck. There will be prizes, including the grand prize for the dish with most families in it and a prize for most beautiful.

FINAL EXAM: Thursday June 14 at 10:15 in our normal Huestis 129; graduate student collections are due at the same time.

Other Course Information

Course Objectives:
Plant systematics is the study of plant diversity. Through the lectures, laboratory exercises, walks 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
5. Identification of plants using dichotomous keys.
6. Recognition of important angiosperm families
7. Knowledge of where your food plants come from

Required textbooks: (bring to every lab)
Michael G. Simpson. 2010. 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/field supplies:** 10X hand lens and write in the rain notebook.

**Field Trips:**
There are two **required** field trips on weekends: **Saturday April 21st** (Mt. Pisgah) from 11:00-4:00, **Saturday May 12** (Coast) from 8:00-6:00; materials discussed in lab and lecture will be seen in the field.

There is also a required **WITHIN** class field trip: **Wednesday May 23** (Spencer Butte) from 2:00-5:00.

Field trip 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:**
April 1, last day to withdraw without a W
April 21, Saturday: Field Trip to Mt. Pisgah (required)
April 30, Monday: Alton Baker Park walk/quiz (required)
April 30, Monday: lecture mid-term
May 12, Saturday: Coast Field trip (required)
May 19 Saturday Wildflower festival set up-volunteers needed
May 20, Sunday Wildflower festival at Mt Pisgah Arboretum
May 20, Sunday: last day to withdraw from class, and to change grading option
May 23, Wednesday: Field trip to Spencer Butte
May 28, Monday: Memorial Day holiday
June 6, Wednesday: Lab Exam
June 8, Friday: Potluck in class with prize for dish with most families in it
June 14, Thursday, 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 week (usually on Monday) except the first week, and the week with Labor Day (dead week). The lab quizzes will focus on Family recognition and keying; points will be taken away for misspelling family names. I allow you to drop one lab quiz.

Undergraduates (452):

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab quizzes (10-15 questions x 8 quizzes*)</td>
<td>20%</td>
</tr>
<tr>
<td>Lab exercises (1-2 each week, variable number of points)</td>
<td>20%</td>
</tr>
<tr>
<td>Lab Practical</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm</td>
<td>15%</td>
</tr>
<tr>
<td>Final exam</td>
<td>20%</td>
</tr>
<tr>
<td>Field trip attendance</td>
<td>5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90+%</td>
</tr>
<tr>
<td>B</td>
<td>80+%</td>
</tr>
<tr>
<td>C</td>
<td>70+%</td>
</tr>
<tr>
<td>D</td>
<td>60+%</td>
</tr>
<tr>
<td>F</td>
<td>0-59</td>
</tr>
</tbody>
</table>

θ. 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 40% of the lab practical grade (quizzes=17% plus lab final=20%).

Graduate students (552): Points available:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab quizzes (10-15 questions x 8 quizzes*)</td>
<td>15%</td>
</tr>
<tr>
<td>Lab exercises (1-2 each week, variable number of points)</td>
<td>15%</td>
</tr>
<tr>
<td>Lab Practical</td>
<td>15%</td>
</tr>
<tr>
<td>Midterm</td>
<td>15%</td>
</tr>
<tr>
<td>Final exam</td>
<td>15%</td>
</tr>
<tr>
<td>Field trip attendance</td>
<td>5%</td>
</tr>
<tr>
<td>Collection</td>
<td>20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90+%</td>
</tr>
<tr>
<td>B</td>
<td>80+%</td>
</tr>
<tr>
<td>C</td>
<td>70+%</td>
</tr>
<tr>
<td>D</td>
<td>60+%</td>
</tr>
<tr>
<td>F</td>
<td>0-59</td>
</tr>
</tbody>
</table>

θ. the lowest grade will be dropped

NOTE for Graduate students: 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 30% of the lab practical grade.

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 be able to catch me if I make an error.
Graduate Student Collections:

You need to make a collection of plants for this class, with the following specifications:

1. The plants need to be collected along the riverfront on this side of the University of Oregon Campus. We will be helping to document what is present on campus. The plants will be deposited at the OSU herbarium at the end of the course.
2. You will need to collect and identify 30 specimens identified to species; these need to belong to a minimum of 10 families (at least two need to be Poaceae and one Asteraceae)
3. The plants need to be collected, pressed, and labels made (I will email you a format for the labels). Note that the labels need to have detailed location information on them. For this you need to identify the location on the map you will receive with the labels, a GPS point is excellent and we may have one in the lab you can use (ask).
4. In addition, each specimen must come with a page that details how you keyed it out (the progression of couplets). This will enable us to determine where you went wrong, if you did.

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: disabsvr@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 the whole 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.