Instructor: Dr. Daniel Nickrent
Department of Plant Biology
Life Science III, Rm. 1005
453-3223
nickrent at plant.siu.edu (replace “at” with “@”)
http://www.science.siu.edu/plant-biology/faculty/nickrent/index.html

Office Hours: I will meet with you individually following an appointment.

Lectures: Monday & Wednesday, 1 - 1:50, Rm. 430 LS II

Discussions: Friday 1 - 1:50, Rm. 430 LS II. The assigned reading or readings will be
announced. You will be emailed a pdf file of all articles to read.

Textbook: Briggs, D. Walters, S. M. Plant variation and evolution. Cambridge University Press,
Cambridge UK. 0-521-45295-3 (hardcover), 0-521-45918-4 (soft cover).

Class Web Page: http://www.plantbiology.siu.edu/PLB479/index.html

Course Grading: Your grade for this course will be based upon your performance on lecture
exams, Discussion participation (see below), and the term paper. I grade on a straight
percentage basis (e.g. ≥ 90% = A, etc.) with a possible curve based on student performance.
The format for the lecture exams will be short answer and essay. The relative percentages
for each are:

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<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Exam 1</td>
<td>20%</td>
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<td>Exam 2</td>
<td>20%</td>
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<tr>
<td>Final (comprehensive)</td>
<td>25%</td>
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<td>Discussion participation</td>
<td>15%</td>
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<tr>
<td>Term paper</td>
<td>20%</td>
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<tr>
<td>Total</td>
<td>100%</td>
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Lectures. These were constructed from chapters in the textbook and then supplemented with
additional new information taken from the literature. The lecture notes and all graphics are available
on the class web page.

Lecture exams. These will consist mainly of short answer questions that test you knowledge of
the main points covered in the lectures and discussion sessions. The the final exam will have two
components (equal number of points): the material since exam 2 and a comprehensive part to test
your understanding of concepts developed throughout the semester.

Discussion Participation. Lecture concepts will be reinforced by the weekly readings that will be
taken from the primary literature. The journal article will be sent to you via email as a pdf file.
Students are expected to read the weekly article and come prepared to discuss it during the Friday
Discussion period. Coming prepared means not only reading the paper, but also taking notes about
the important issues discussed in the paper, questions you have about any concepts that are unclear,
etc. Your grade for Discussions will be determined by 1) whether you read the paper, 2)
participation in discussing the paper, and 3) your degree of understanding following the discussion.

Term Paper. A list of potential topics for your term paper will be distributed early in the semester
as well as instructions on format, length, style, etc. A first draft of your term paper (printed copy
please) will be due on November 6. This will be promptly edited and returned to you with
corrections and suggested changes. The final draft of the term paper will be due November 30. It
will be graded and returned to you on the day of the final exam, December 4.
PLB 479 Plant Variation
Syllabus - Fall 2009

Mon. Aug. 24 Introduction. Chp. 1
Wed. Aug. 26 From Ray to Darwin – History of plant systematics. Chp. 2
Fri. Aug. 28 From Ray to Darwin – History of plant systematics. Chp. 2
Mon. Aug. 31 Early work on biometry. Chp. 3
Wed. Sept. 2 Phenetic classification (not in book)
Fri. Sept. 4 Discuss Reading
Mon. Sept. 7 Labor Day – no classes
Wed. Sept. 9 Early work on the basis for individual variation Chps. 4 & 6
Fri. Sept. 11 Early work on the basis for individual variation Chps. 4 & 6
Mon. Sept. 14 Modern views on the basis of variation Chp. 6
Wed. Sept. 16 Modern views on the basis of variation Chp. 6
Fri. Sept. 18 Discuss Reading
Mon. Sept. 21 Genetic variation and plant populations (not in book)
Wed. Sept. 23 Genetic variation and plant populations (not in book)
Fri. Sept. 25 Genetic variation and plant populations & Exam review
Mon. Sept. 28 EXAM 1
Wed. Sept. 30 Breeding systems & asexual reproduction Chp. 7
Fri. Oct. 2 Discuss Reading
Mon. Oct. 5 Breeding systems & asexual reproduction Chp. 7
Wed. Oct. 7 Isolating mechanisms (not in book)
Fri. Oct. 9 Discuss Reading
Mon. Oct. 12 Intraspecific variation, ecotypes, & genecology. Chp. 8
Wed. Oct. 14 Intraspecific variation, ecotypes, & genecology. Chp. 8
Fri. Oct. 16 Discuss Reading
Mon. Oct. 19 Recent advances in Genecology. Chp. 9
Wed. Oct. 21 Recent advances in Genecology. Chp. 9
Fri. Oct. 23 Discuss Reading
Mon. Oct. 26 Gradual speciation and hybridization Chp. 11
Wed. Oct. 28 Gradual speciation and hybridization Chp. 11
Fri. Oct. 30 Discuss Reading
Mon. Nov. 2 Review for exam
Wed. Nov. 4 EXAM 2
Fri. Nov. 6 Abrupt speciation and polyploidy Chp. 12. First Draft of Term Paper Due.
Mon. Nov. 9 Abrupt speciation and polyploidy Chp. 12
Wed. Nov. 11 Speciation – the process
Fri. Nov. 13 Discuss Reading.
Mon. Nov. 16 Species concepts –10 &13
Wed. Nov. 18 Biogeography
Fri. Nov. 20 Discuss Reading.
Mon. Nov. 23 Thanksgiving Vacation – no classes
Mon. Nov. 30 Phylogeography. Final Draft of Term Paper Due.
Wed. Dec. 2 Conservation biology and genetics Chp. 15
Fri. Dec. 4 FINAL EXAM.
Useful References

**Plant Biosystematics and Evolution**

**Plant Taxonomy and Systematics**

**Molecular Evolution and Systematics**

Biogeography and Phylogeography

Evolutionary Biology - General