I. COURSE: BIOL 4422 - Plant Taxonomy 4 semester hours (3:3)
T-R 9:30-10:45 CS 103
Laboratory: R 1-3:50 Room CS 240

II. FACULTY: Dr. Roy L. Lehman CS 247
Phone: 825-5819 E-mail: roy.lehman@tamucc.edu
Office Hours: T-R 8:00-9; 11-12 Additional Hours by Appointment.

III. COURSE DESCRIPTION:
Basic principles, concepts, and practice in the systematics and classification of flowering plants. Includes procedures of identification, family recognition, terminology, nomenclature, herbarium techniques, systems of classification and the taxonomic literature.

IV. TEXTBOOK:
Required:

Recommended:

COLLECTION SUPPLIES:
- Field Book & Pen
- Gloves – thorn proof
- Collection Bags/Polythene and/or cloth
- Small Shovel/trowel
- Plant Press with newspaper & cardboard
- Magnifying Glass
- Small Metric Ruler
- Pocket Knife
- Wax Paper
- Pruning Shears
V. STUDENT LEARNING OUTCOMES:

The student will:

* identify the basic activities of systematic botany including Cataloging, Identification, Classification, Data Gathering and Analysis.
* become proficient in the correct pronunciation of scientific names.
* differentiate between common names and scientific names of plants.
* evaluate and describe the botanical nomenclature of scientific names of plants and discuss and explain the rules of the International Code of Botanical Nomenclature.
* identify structures and terminology used in the identification of plants.
* properly construct and use keys for the identification of plants.
* collect and preserve plants for study.
* complete a survey of vascular plants
* describe the different approaches to the classification of plants
* explain how character variation and experimental plant systematics have combined to form a modern technology for the interpretation of characters and the classification of plants.

VI. COURSE REQUIREMENTS AND GRADING CRITERIA:

Academic Integrity/Plagiarism

University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

Dropping a Class

I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. November 7, 2014 is the last day to drop a class with an automatic grade of “W” this term.

Classroom/professional behavior

Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students
engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

**Grade Appeals**

As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html), and the College of Science and Engineering Grade Appeals webpage ([http://sci.tamucc.edu/students/GradeAppeal.html](http://sci.tamucc.edu/students/GradeAppeal.html)). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

**Disabilities Accommodations**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

**Statement of Academic Continuity**

In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.
VII. COMPONENTS OF COURSE GRADE:

LABORATORY REQUIREMENTS

<table>
<thead>
<tr>
<th>REQUIREMENT</th>
<th>VALUE</th>
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<tbody>
<tr>
<td>1. Students will collect, identify, press and dry 50 herbarium specimens from selected families and herbarium mount five specimens (Due 4/23)</td>
<td>500</td>
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<tr>
<td>2. Students will complete two laboratory exams (100 points each) (2/19 AND 4/30)</td>
<td>200</td>
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<tr>
<td>3. Students will complete 2 quizzes (announced or unannounced!)</td>
<td>100</td>
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<tr>
<td>4. Daily Laboratory Bonus Points</td>
<td>BONUS</td>
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<td>TOTAL:</td>
<td>800</td>
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CLASS GRADE REQUIREMENTS

<table>
<thead>
<tr>
<th>VALUE</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>1. Lecture Examinations (3) (2/17, 4/5 &amp; TBD*)</td>
<td>200</td>
</tr>
<tr>
<td>2. Laboratory Exams (2) (2/19 &amp; 4/30) &amp; 2 Quizzes (@50 pts*)</td>
<td>100</td>
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<tr>
<td>3. Term Research &amp; Paper (Due 4/14 - 150 points); Oral Presentation (Beginning 4 - 100 points)</td>
<td>250</td>
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<td>4. Laboratory Projects</td>
<td>500</td>
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<td>TOTAL:</td>
<td>1,650</td>
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FINAL GRADE: Total Number of points ÷ 1,650 = FG (%)  
*Dates are tentative!
90-100 = A; 80 – 90 = B; 70 – 80 = C; 60 – 70 = D; 59 below = F

VIII. LECTURE TOPIC OUTLINE

A. BASICS OF INTRODUCTORY TAXONOMY                                           week 1
   1. Introduction to Plant Taxonomy                                           |
   2. Basic activities of systematic botany                                   |
B. BOTANICAL NOMENCLATURE                                                    week 2
   1. Common names vs. Scientific names                                       |
   2. Pronouncing Scientific Names                                            |
   3. International Code of Botanical Nomenclature                            |
C. VEGETATIVE TERMINOLOGY                                                    week 3
   1. Plant Life histories                                                    |
   2. Plant Habits                                                            |
   3. Plant Organs                                                            |
   4. Root Types                                                              |
   5. Stem Types                                                              |
   6. Leaf Structure                                                          |
   7. Special Features                                                        |
   8. Surface Features                                                        |
D. COLLECTING, PRESERVING AND IDENTIFYING PLANTS                             week 4
   1. Determining the correct names for plants                               |
   2. Floras, manuals and botanical descriptions                             |
   3. Collecting and preserving plants for study                             |

4
E. SURVEY OF VASCULAR PLANT FAMILIES

1. Organization of the survey
2. Ferns and fern allies
3. Gymnosperms
4. Introduction to flowering plants
5. Magnoliidae
6. Rosidae I
7. Rosidae II
8. Asteridae I
9. Asteridae II
10. Dilleniidae
11. Caryophyllidae
12. Hamamelidae
13. Monocots I
14. Monocots II

week 6
week 6
week 6
week 7
week 7
week 8
week 8
week 9
week 9
week 10
week 10
week 11
week 11
week 12

F. APPROACHES TO CLASSIFICATION

1. Artificial and Phenetic Systems of Classification
2. Cladistic Classification Systems

week 13
week 14

G. GATHERING AND ANALYSIS DATA

1. Character Variation
2. Experimental Plant Systematics

week 14
week 15

IX. LABORATORY/FIELD TRIP TOPIC OUTLINE:

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Lab #</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>January</td>
<td>1/29</td>
<td>Lab # 1</td>
<td>Introduction, Vegetative Terminology/Exercise 3</td>
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<tr>
<td>February</td>
<td>2/5</td>
<td>Lab # 2</td>
<td>Flowering Plants/Exercise 10</td>
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<td></td>
<td>2/12</td>
<td>Lab # 3</td>
<td>Survey of Vascular Plants/Exercise 7</td>
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<td></td>
<td>2/19</td>
<td>Lab # 4</td>
<td>Lab at Herbarium NRC</td>
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<td>2/26</td>
<td>Lab # 5</td>
<td>First Laboratory Examination (Plant Morphology)</td>
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<td>March</td>
<td>3/5</td>
<td>Lab # 6</td>
<td>Sandia/Mathis Field Trip</td>
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<td>3/12</td>
<td>Lab #7</td>
<td>Survey of Vascular Plants</td>
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<tr>
<td>April</td>
<td>3/26</td>
<td>Lab # 8</td>
<td>Survey of Vascular Plants/Field Trip Prep.</td>
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<td>4/2</td>
<td>Lab # 9</td>
<td>Survey of Vascular Plants</td>
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<td></td>
<td>4/3-4/4</td>
<td>Field Trip to Ben Bolt Mesquite/Acacia Habitat (*A $15 fee for meals is required.)</td>
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<td>4/9</td>
<td>Lab #10</td>
<td>Survey of Vascular Plants</td>
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<td>4/16</td>
<td>Lab #11</td>
<td>Labeling and collection final preps</td>
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<td></td>
<td>4/23</td>
<td>Lab #12</td>
<td>Survey of Vascular Plants ALL PLANT COLLECTIONS DUE!</td>
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<td></td>
<td>4/30</td>
<td>Lab #13</td>
<td>Final Laboratory Examination (Plant Keying)</td>
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