Course Syllabus

Department: Environmental Conservation and Horticulture

Date: January 29, 2014

I. Course Prefix and Number: BIO 224
   
   Course Name: Dendrology and Field Botany
   
   Credit Hours and Contact Hours: 3 credit hours and 4 contact hours

   Catalog Description including pre- and co-requisites: Field study, identification and natural history of plant communities with an emphasis on important forest tree species. (Also listed as CON 224).

   Relationship to Academic Programs and Curriculum including SUNY Gen Ed designation if applicable: Dendrology and Field Botany is a required course for the AAS Natural Resources Conservation degree program. It may also be taken as an elective course for AS Environmental Studies, AAS Natural Resource Conservation: Law Enforcement, AAS Fish and Wildlife Technology, AAS Ornamental Horticulture, and other FLCC degree programs requiring a science elective. It may also be taken as an enrichment course by the general public.

II. Course Student Learning Outcomes:

1. Students will demonstrate plant identification skills for major plant groups with an emphasis on important forest trees.

2. Students will demonstrate knowledge of vegetative and reproductive morphological characteristics of plants.

3. Students will demonstrate knowledge of tree utilization by humans and wildlife.

4. Students will demonstrate knowledge of ecological processes that create patterns in forest communities.

5. Students will master the techniques of pressing plants to create a herbarium collection.
College Learning Outcomes Addressed by the Course: (check each College Learning Outcome addressed by the Student Learning Outcomes)

- writing
- computer literacy
- oral communications
- ethics/values
- reading
- citizenship
- mathematics
- global concerns
- critical thinking
- information resources

III. Assessment Measures (Summarize how the college and student learning outcomes will be assessed): For each identified outcome checked, please provide the specific assessment measure.

<table>
<thead>
<tr>
<th>List identified College Learning Outcomes(s)</th>
<th>Specific assessment measure(s)</th>
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<tbody>
<tr>
<td>Critical thinking</td>
<td>Students will demonstrate critical thinking skills in their ability to use dichotomous keys to correctly identify plants and achieve a passing score on relevant quizzes and exams.</td>
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<tr>
<td>Information resources</td>
<td>Students will locate, evaluate and use library/Internet resources as required references for their plant collection project.</td>
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IV. Instructional Materials and Methods

Types of Course Materials:

The following descriptive field guides are required for this class. All guides utilize a dichotomous key to assist in plant identification.

The following book is recommended but not required for this class. A copy of the book will be on reserve in the FLCC main library.


Students will also receive reprinted articles that describe taxonomy, human uses, and wildlife values of specific plant groups in New York State.

Methods of Instruction (e.g. Lecture, Lab, Seminar ...):

A combination of lecture, discussion and campus field trips to natural areas, ornamental gardens and the college arboretum are used in this course. Students will complete a plant collection project including 15 different species, herbarium labels and detailed information sheets.

V. General Outline of Topics Covered:

1. Plant classification
2. Scientific nomenclature
3. Vegetative and reproductive morphology
4. Identification keys
5. Important forest trees (natural history, phenology, ecology, phytogeography, economic values, wildlife uses)
6. Winter tree identification
7. Forest tree associates (shrubs, vines, herbaceous plants, groundcover species)
8. Natural community classification emphasizing the eastern deciduous forest biome
9. Special topics (e.g., old growth forests, dendrochronology, tree restoration projects)