
Instructor: Dr. Carter
Office: BC 1105 *Herbarium:* BC 1040
Telephone: (229) 333-5759, ext. 5763
e-mail: Please use the mail tool in BlazeVIEW

Office Hours: BC 1040 or BC 1105
Mon & Wed 1:00 1:50 PM; 3:15 4:00 PM;
other times by appointment

Weekly Course Schedule

Mon Lec 10:00 10:50 AM, BC 1024
Wed Lec 10:00 10:50 AM, BC 1024
Fri Lec 10:00 10:50 AM, BC 1024
Lab 11:00 AM 1:50 PM, BC 2040

Miscellaneous

One or two day-long Saturday field trips and one four-day weekend field trip to the Appalachian Mountains are scheduled.

Pre-requisite: Completion of Core Area D. A survey of the biology and diversity of trees and of the major forest communities. Course will emphasize species of the southeastern United States and forest communities of North America, including field identification, description and classification of forest communities, and a study of reproductive cycles, anatomy, and development of representative species. [3-3-]

Lecture contact: 75 mins X 30 lectures = 2250 mins

Laboratory contact: 170 mins X 15 labs = 2550 mins

Credit: 4 semester hrs

Following is a list of course outcomes linked to Biology Department Educational Outcomes (B) and Valdosta State University General Education Outcomes (V).

The student will demonstrate understanding of the basic principles of taxonomy, including identification, nomenclature, and classification. [B 2; V 4, 7]

The student will demonstrate comprehension of basic concepts and the ability to use scientific terminology accurately through effective oral and written communication and the use of dichotomous keys. [B 1; V 4, 5, 7]

The student will demonstrate the ability to handle and analyze plant materials in the field and laboratory. [B 1; V 5, 7]

The student will demonstrate the ability to work and use basic equipment effectively in the field and laboratory. [B 1; V 4, 5, 7]

The student will demonstrate the ability to gather and analyze data scientifically. [B 1, 5; V 3, 5]

The student will demonstrate the ability to follow oral and written instructions effectively. [V 4, 7]

The student will demonstrate the ability to access course resources and complete assignments on-line using computer technology (i.e., BlazeView). [V 3]

The student will demonstrate the ability to complete assignments, quizzes, and examinations ethically. [V 8]

Three lecture examinations will be given.
Routine field identification quizzes will be given.
Various miscellaneous assessments will be given.

Students will participate in service learning projects.
Students will keep a course notebook.

Duncan, W.H. and M.B. 2000. *Trees of the Southeastern United States*. Univ. of Georgia Press, Athens. 336 pp.
Faircloth, W.R. 1977. *Common Trees of Central-South Georgia*. Valdosta State University Bookstore.

*Elias, T.S. 1987. *The Complete Trees of North America*. Gramercy Publishing Company, New York. [**Copies of this text may be borrowed from the instructor.*]

Meeting the minimum point requirement for a letter grade does not necessarily assure that the student will receive that grade.

For current information on classification of angiosperm plant families

Stevens, P. F. (2001 onwards). Angiosperm Phylogeny Website. Version 9, June 2008 [and more or less continuously updated since]. <http://www.mobot.org/MOBOT/research/APweb/> (Accessed: March 11, 2012)

For plant community classification

Barbour, M.G., M.G. and N.L. Christensen. 1993. Vegetation, pp. 97-131 in: Morin, N.R. (Ed.). Flora of North America, Vol. 1. Oxford University Press. New York.

Description of the Ecoregions of the United States, compiled by R.G. Bailey, U.S. Forest Service. March 1995.

<http://www.fs.fed.us/land/ecosysgmt/index.html> (Accessed: March 11, 2012)

Ecological Subregions of the United States, compiled by McNab, W.H. and P.E. Avers. U.S. Forest Service. WO-WSA-

5. July 1994. <http://www.fs.fed.us/land/pubs/ecoregions/> (Accessed: March 11, 2012)

Ecoregions, Nearctic. World Wildlife Fund, 1250 Twenty-Fourth Street, N.W., P.O. Box 97180, Washington, DC

20090-7180. http://www.worldwildlife.org/wildworld/profiles/terrestrial_na.html (Accessed: March 11, 2012)

NatureServe. 2011. NatureServe Explorer: An online encyclopedia of life [web application]. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer> (Accessed: March 11, 2012)

Peet, R.K., T.R. Wentworth, and P.S. White. 1998. A Flexible, Multipurpose Method for Recording Vegetation Composition and Structure. *Castanea* 63:262 -274.

Thorne, R.F. 1993. Phytogeography, pp. 132-153 *in*: Morin, N.R. (Ed.). Flora of North America, Vol. 1. Oxford University Press. New York.

Wharton, C.H. 1978. Physiography and Biota of Georgia. *BioScience* 28:336-339.

Wharton, C.H. 1978. The Natural Environments of Georgia. Bulletin 114, Georgia Department of Natural Resources. Atlanta.

Miscellaneous

Peattie, D.C. 1980. Natural History of Western Trees. University of Nebraska Press. Lincoln. 751 pp.

Peattie, D.C. 2007. A Natural History of Trees: of Eastern and Central North America. Houghton Mifflin Co. New York. 606 pp.

Tomlinson, P. B. 2002. The Biology of Trees Native to Tropical Florida. Second Edition. Printed privately. Petersham, Massachusetts. 395 pp.

Lecture:

Introduction to Course

What is a tree? What is a forest?

Overview of the Classification of Plants

*Botany Laboratory: Development and Structure of the Woody Plant Body

What is a tree? What is a forest?

Overview of the Classification of Plants

*Botany Laboratory: Reproduction in Pine and Oak

Diversity of Trees

GINKGO

Ginkgoales: Ginkgoaceae: *Ginkgo*: ginkgo

CONIFERS

Pinales: Cupressaceae, Pinaceae, Taxaceae: *Chamaecyparis*, *Juniperus*, *Taxodium*; *Abies*, *Pinus*, *Picea*, *Tsuga*; *Taxus*, *Torreya*: white cedars, junipers, baldcypresses; firs, pines, spruces, hemlocks; yews, gopherwood

*Alternative Assessment: Using the Valdosta State University Virtual Herbarium [VSU-VH] to review basic vegetative structure of trees

Lecture: Diversity of Trees

ANA GRADE

Austrobaileyales: Schisandraceae [incl. Illiciaceae]: *Illicium*: Florida anise

MAGNOLIIDS

Magnoliales, Laurales: Magnoliaceae, Annonaceae; Lauraceae, Calycanthaceae: *Liriodendron*, *Magnolia*; *Asimina*; *Persea*, *Sassafras*, *Litsea*; *Calycanthus*: magnolias, yellow poplar; pawpaws; redbay, swampbay, sassafras, pondspice; sweetshrub

MONOCOTS

Arecales: Arecaceae: *Sabal*: cabbage palm

* Field Laboratory: Identification of Trees and Plant Communities

Lecture: Diversity of Trees

EUDICOTS

Proteales, Saxifragales: Platanaceae; Hamamelidaceae, Altingiaceae: *Platanus*; *Hamamelis*, *Liquidambar*: sycamore; witch hazel, sweetgum

Malpighiales: Euphorbiaceae, Salicaceae, Rhizophoraceae: *Triadica*; *Populus*, *Salix*; *Rhizophora*: Chinese tallow; willows, cottonwoods; red mangrove

Fabales: Fabaceae: *Acacia*, *Albizia*, *Robinia*, *Gleditsia*, *Cercis*: acacias, mimosas, locusts, redbud

*Field Laboratory: Identification of Trees and Plant Communities

Lecture: Diversity of Trees

Rosales: Rosaceae, Rhamnaceae, Ulmaceae, Celtidaceae, Moraceae: *Amelanchier*, *Crataegus*, *Malus*, *Prunus*; *Rhamnus*; *Planera*, *Ulmus*; *Celtis*; *Broussonetia*, *Morus*: serviceberries, hawthorns, crabapples, plums, cherries; Carolina buckthorn; elms; hackberries; mulberries

*Field Laboratory: Identification of Trees and Plant Communities

Lecture: Diversity of Trees

Fagales: Fagaceae: *Castanea*, *Fagus*, *Quercus*: chestnuts, chinkapins, beeches, oaks

Fagales (continued): Betulaceae, Myricaceae, Juglandaceae: *Alnus*, *Betula*; *Morella*, *Myrica*; *Carya*, *Juglans*: alder, birches; bayberries; hickories, walnuts

*Field Laboratory: Identification of Trees and Plant Communities

