Syllabus

HRT 151 Woody Plant Materials

General Information

Date
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Author
Shawn Kenaley

Department
Conservation

Course Prefix
HRT

Course Number
151

Course Title
Woody Plant Materials

Course Information

Credit Hours
3

Lecture Contact Hours
2

Lab Contact Hours
2

Other Contact Hours
0

Catalog Description
This course integrates classroom and hands-on learning towards the identification and utilization of trees and shrubs - native and non-indigenous – in commercial and residential ornamental landscapes as well as the horticulture industry at large. This course emphasizes plant anatomy, taxonomic identification, culture requirements, landscape value, proper placement and maintenance, and seasonal interest within gardens and the broader landscape. Students will develop recognition skills of commonly used trees and shrubs in Northeast gardens and planted landscapes according to their scientific classification and, hence, will develop tree and shrub selection skills – assembling best-fit plants for garden/landscape application based on aesthetics, ecology, and sustainability. Classroom learning will be reinforced by practical experiences on the grounds of FLCC, including arboretum, and visits to local cemeteries and botanic gardens.

Prerequisites
None

Co-requisites
None

Grading Scheme
Letter

First Year Experience/Capstone Designation

This course DOES NOT satisfy the outcomes applicable for status as a FYE or Capstone.
SUNY General Education

This course is designated as satisfying a requirement in the following SUNY Gen Ed category
None

FLCC Values

Institutional Learning Outcomes Addressed by the Course
None

Course Learning Outcomes

Course Learning Outcomes

1. Define and give examples for relevant terms as they relate to woody plants, trees and shrubs.
2. Identify woody plants using classification criteria (e.g. seasonal characteristics, cultural needs, and landscape uses).
3. Apply an identification scheme (e.g. health, leaf arrangement, twig and bark characteristics, growth habit, and flower type and morphology) to differentiate trees and shrubs with similar characteristics.
4. Recommend woody material based on a variety of aesthetic needs and observed cultural conditions.

Program Affiliation

This course is required as a core program course in the following program
AAS Horticulture

Outline of Topics Covered

1. Introduction to Plant Classification, Morphology, and Vocabulary
   a. Nomenclature and taxonomy
   b. Leaf and twig anatomy
   c. Branching arrangement
   d. Flower and fruit types as well as associated morphological characteristics
   e. Common descriptive terms utilized in botany and, at large, plant identification to compare and contrast families and specific taxa based on growth habit as well as leaf, flower, fruit, and twig morphology.

2. Introduction to Woody Plants: Ecology and Sustainable utilization
   a. Angiosperms versus gymnosperms
   b. Deciduous versus evergreen plants
   c. Plant selection criteria
      i. Flowering and fruiting times
ii. Site considerations
   1. Light and exposure
   2. Soil (drainage, pH, nutrient availability, texture)
   3. Hardiness zone

iii. Native versus non-native

iv. Pests and disease

v. Utilization strategies
   1. Windbreaks
   2. Wildlife
   3. Foundational plantings
   4. Winterscape (post-defoliation/evergreen color and texture)
   5. Privacy
   6. Native plant landscapes
   7. Aesthetics

3. Identification and Culture of Woody Plants in Residential and Commercial landscapes

   a. Plant Lists
      i. Deciduous trees and shrubs
         1. Winter identification
            a. Bark, branch arrangement, buds, growth habit, and twigs.
         2. Growing season identification
            a. Leaf anatomy and arrangement, bark, branch arrangement, buds, flowers, fruits, and twigs.
      ii. Broadleaf evergreens
         1. Leaf anatomy and arrangement, branch arrangement, buds, flowers, fruits, and twigs.
      iii. Coniferous trees and shrubs
         1. Needle arrangement and morphology, buds, cones, growth habit, and twigs.