

COURSE OUTLINE
FORS 241--DENDROLOGY
Autumn Semester 2015
3 Credits

Course Information

Instructor: Burke, Edwin J. -- Journalism 105 -- 243-5157

Teaching Asst.: Tracy Wendt

Schedule: Lecture: Tuesday, Thursday, 1:10 - 2:00 pm., Forestry 301 (Plant Lab)

Laboratory: Tuesday or Friday, 2:10 - 5:00 pm., Forestry 301 (Plant Lab)

Web Page: Undergoing reconstruction at this time

Required Texts

Course Materials from Burke; *Trees of North America* -- Golden Press at UM or any bookstore

Optional Text: *Textbook of Dendrology* -- McGraw-Hill; *Fruit and Twig Key*, Dover Press.

Grading

Lecture

1 hr. mid-semester exam covering Angiosperms,
during the Thursday lecture period 100

1 hr. mid-semester lecture exam covering Gymnosperms
during the Thursday lecture period 100

Angiosperm Laboratory:

6 weekly quizzes, starting week #2 @40 pts. ea. 360

Laboratory Examination, over weeks 1-6, during lab, Week 7 200

Gymnosperm Laboratory

5 weekly quizzes, starting week # 9 @40 pts. ea. 300

Laboratory Examination, over weeks 8-13 during lab period in the
last week of classes 200

Subtotal Points for Class 1260

Drop lowest quiz score for the semester -60

Total Points for Class 1200

One grade enhancement quiz will be given near the last week of the semester, during the Gymnosperm section. The enhancement quiz will cover Gymnosperms, but can be used to count for a missed quiz or can substitute for the lowest quiz score if no quizzes were missed. In addition, the lowest quiz score for the semester, including the enhancement quiz, will be dropped. Weekly grades will be posted in the classroom.

A=90%+; B=80%+; C=70%+; D=60%+; F< 60%

A=1,080 pts.+; B=960 pts.+; C=840 pts.+; D=720 pts.+; F< 720 pts.

- All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University.
- All students need to be familiar with the Student Conduct Code. The Code is available for review online at [Student Conduct Code](#).

FORS 241
Dendrology- Autumn Semester
Topical Outline and Course Schedule
TOPIC

Week # New Trees

ANGIOSPERMAE

- | | | |
|---|----|--|
| 1 | 8 | Introduction; Dendrology Terminology, Angiosperm lifecycle, leaf, flower and fruit arrangements and types, ; <i>Salicaceae</i> (8). Lecture and lab during lab periods this week. |
| 2 | 11 | <i>Betulaceae</i> (7), <i>Juglandaceae</i> (4); Quiz A-1 |
| 3 | 12 | <i>Fagaceae</i> (9), <i>Ulmaceae</i> (2), <i>Cannabaceae</i> (1); Quiz A-2 |
| 4 | 12 | <i>Magnoliaceae</i> (2), <i>Lauraceae</i> (2), <i>Altingiaceae</i> (1), <i>Platanaceae</i> (1), <i>Elaeagnaceae</i> (1), <i>Rosaceae</i> (3), <i>Moraceae</i> (2); Quiz A-3 |
| 5 | 14 | <i>Fabaceae</i> (5), <i>Sapindaceae</i> (9); Quiz A-4 |
| 6 | 10 | <i>Aquifoliaceae</i> (1), <i>Tiliaceae</i> (1), <i>Anacardiaceae</i> (1), <i>Cornaceae</i> (3), <i>Oleaceae</i> (2), <i>Ericaceae</i> (1), <i>Bignoniaceae</i> (1); Quiz A-5 |
| 7 | 0 | Quiz A-6 given during Tuesday lecture period; The Angiosperm Lecture Exam is to be held during Thursday's lecture period. The Angiosperm Laboratory Exam is to be held during this week's laboratory periods. |

GYMNOSPERMAE

- | | | |
|----|----|---|
| 8 | 9 | <i>Ginkgoaceae</i> (1), <i>Taxaceae</i> (1), <i>Pinaceae</i> -- Subgenus <i>Strobus</i> (<i>Hapoxylon</i>) of <i>Pinus</i> (7); No Quiz this wk. |
| 9 | 11 | <i>Pinaceae</i> --Subgenus <i>Pinus</i> (<i>Dipoxylon</i>) of <i>Pinus</i> (11); Tuesday is ELECTION DAY HOLIDAY. <u>A Replacement Lab will be held Thursday from 2-5: Quiz G-1</u> |
| 10 | 10 | <i>Pinaceae</i> -- <i>Pseudotsuga</i> (1), <i>Larix</i> (3), <i>Picea</i> (6); Tuesday is VETERANS' DAY HOLIDAY. <u>A Replacement Lab will be held Thursday from 2-5: Quiz G-2</u> |
| 11 | 11 | <i>Pinaceae</i> -- <i>Abies</i> (6), <i>Tsuga</i> (3); <i>Cupressaceae</i> -- <i>Sequoia</i> (1), <i>Sequoiadendron</i> (1) Quiz G-3. |
| 12 | 10 | <i>Cupressaceae</i> -- <i>Calocedrus</i> (1), <i>Thuja</i> (2), <i>Taxodium</i> (1), <i>Chamaecyparis</i> (3), <i>Juniperus</i> (3), Quiz G-4 |
| 13 | 0 | STUDY WEEK |
| 14 | 0 | NO CLASS THIS WEEK; THANKSGIVING BREAK WEDNESDAY THRU SUNDAY |
| 15 | 0 | Quiz G-5 and Grade Enhancement Quiz during Tuesday's lecture period. Gymnosperm Lecture Exam on Thursday. Gymnosperm Laboratory Exam during this week's laboratory periods. |
| 16 | 0 | Finals Week. Examinations will be graded and ready to pick up by Friday. |

of trees = 118

**FORS 241
Dendrology**

Key to Species Groups and Geographic Location Abbreviations

OCYP	=	oak, chestnut, yellow-poplar	OH	=	oak, hickory
BBM	=	birch, beech, maple	SM	=	sycamore, silver maple
NH	=	northern hardwoods (mixture of white oak, northern red oak, sugar and red maple, yellow and paper birch, white ash, quaking and bigtooth aspen, yellow-poplar and basswood).			
SH	=	southern hardwoods (mixture of southern red oaks, sweetgum, black and water tupelo, flowering dogwood, magnolia, basswood, pecan hickories)			
SCP	=	sycamore, cottonwood, poplar (riparian or riverbanks of midwest is a better descriptor as this abbreviation can be confused with southern coastal plain)			
D-FL	=	Douglas-fir, western larch	NWC	=	northern white cedar
EWP	=	eastern white pine	ESAF	=	Engelmann spruce, subalpine fir
PJ	=	pinyon, juniper	SH	=	spruce, hemlock (eastern or western species)
SYP	=	southern yellow pine	WYP	=	western yellow pine
LPES	=	lodgepole pine, Engelmann spruce	SPF	=	spruce, pine, true fir
SCP	=	southern coastal plain			
PC	=	Pacific coast of U.S. and Canada, including Alaskan coast			
NE	=	New England, or northeast U.S. and eastern Canada			
SW	=	Southwest U.S.			
NRM	=	northern Rocky Mountains; eastern Washington, northern Idaho, Montana & Canada			
SRM	=	southern Rocky Mountains (Wyoming, southern Idaho, Utah, Colorado, New Mexico, Arizona, western Texas and northern Mexico)			
BH	=	Black Hills of South Dakota and northern Nebraska			
FB	=	Fog Belt of northern California, north to southern coast of Oregon			
IE	=	Inland Empire (western Montana, northern Idaho, western Washington, southeastern British Columbia)			

FORS 241 Dendrology

Examples of Tables of Comparative Features Used for Study

Morphologic Comparison of the Subgenera *Leucobalanus* and *Erythrobalanus*

Subgenus	Leaf Margins	Acorn Taste	Acorn Inner Shell	Acorn Maturity	Latewood vessel elements	Tyloses
<i>Leucobalanus</i> (white oaks)	Smooth, rounded lobes	Mildly sweet to bland	Smooth	1 year	Outline indistinct on transverse surface when viewed w. hand lens	Abundant in heartwood
<i>Erythrobalanus</i> (red oaks)	Pointed, bristle-tipped lobes	Bitter	Pubescent	2 years	Outline distinct on transverse surface when viewed w. hand lens	Sparse in heartwood

Morphologic Comparison of the Subgenera *Hapoxylon* (Strobus) and *Dipoxylon* (Pinus)

Subgenus	Fibro-vascular Bundles in Needle	Leaves per Fascicle	Fascicle Sheath	Umbo Location	Cone Armature	Earlywood to Latewood Transition
<i>Strobus</i> or <i>Hapoxylon</i> (soft pines)	1	Usually 5 (except pinyons)	Deciduous	Usually terminal	Generally Unarmed	Generally gradual
<i>Pinus</i> or <i>Dipoxylon</i> (hard pines)	2	2's, 3's, 2&3's	Persistent	Dorsal	Generally Armed	Generally abrupt