GRANDE PRAIRIE REGIONAL COLLEGE

DEPARTMENT OF SCIENCE AND TECHNOLOGY

Bachelor of Applied Forest Resource Management

DENDROLOGY: FO1200

Transfer status: Under discussion

Pre-requisite: Biology 30

Calender Description:
Identification, classification and distribution of forest trees of Canada. Identification and classification of shrubs and herbs from different forest communities. Identifications of local species are made in the field during field labs. Delineation of forest regions of the world and their major tree species. Basic biology of trees and shrubs.

Instructor: Albert Sproule
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Lectures: Tuesdays and Thursdays 11.00 - 12.20 A303
Lab: Tuesdays 15.00 - 18.50 Field - then A303

Texts:

Required:
Johnson, Kershaw, MacKinnon & Pojar. 1995. **Plants of the Western Boreal Forest & Aspen Parkland**. Lone Pine Publishing. 392 p.

Optional: (available in the library)
Farrar, J.L. 1995. **Trees in Canada**. Fitzhenry & Whiteside Ltd. & The Canadian Forest Service.
MacKinnon , Pojar & Coupe. 1992. **Plants of Northern British Columbia**. B.C. Ministry of Forests & Lone Pine Publishing.
Beckingham & Archibald. **Field Guide to Ecosites of Northern Alberta**. Special Report #5. Canadian Forest Service, Northwest Region. Northern Forestry Centre. 1996.

Website
www.canadian-forests.com
www.fs.fed.us

Course Objectives:

- To be able to identify the common trees/shrubs/forbs growing in the boreal forest and their ecological characteristics.
- To know the major forest regions of North America and their major tree species.
- To understand the basic biology of trees and shrubs: morphology of vegetative parts; reproductive morphology; basic genetics; ecology.

Course Outline:

The major emphasis in the course is on plant identification. We will study the biology of woody plants during the lecture periods. Labs early in the term (before the onset of winter) will consist of field trips in and around Grande Prairie. During these labs we will concentrate on recognition/identification of plant species. Students will be expected to identify the plants from either fresh twigs, leaves, bark, fruits, etc. or from lab mounts. Latin names and families will be emphasized. Students are expected to follow the correct method of writing the Latin names, i.e. underline Genus and species and capitalize the Generic name. Indoor labs, later in the term, will cover tree identification based on wood anatomy and cellular structure.

Lab quizzes will be held each week. These will be chiefly on the plants learnt during the most recent lab, but may also include species learnt during any previous lab. The best 7 (of 9) lab quizzes will count towards the final grade. **There will be no make-up quizzes**.

A mid-term lecture exam will be held on **October 21st**. The final lecture exam will be held during regularly scheduled college exams.

A mid-term lab exam will be held on **October 28th**. This exam will be held during the normal lecture period. The final lab exam will be held on **December 11th** during the regular lab period.

Grading:

The various assignments and exams will be assigned the following weights:

Weekly lab quizzes (best 7 of 9)	35%
Midterm lecture exam	15%
Midterm lab exam	10%
Plant herbarium	10%
Final lecture exam	15%
Final lab exam	15%
Total	100%

TENTATIVE LECTURE SCHEDULE

Date		Topic
Sept.	4	Introduction to Dendrology, course objectives, outline. Taxonomy and Systematics
	9	Identifying a plant; dichotomous keys
	11	Vegetative morphology
	16	" "
	18	" "
	23	" "
	25	Reproductive morphology
	30	" "
Oct	2	" "
	7	Open
	9	Conifers
	14	"
	16	"
	21	**MID-TERM LECTURE EXAM**
	23	Genetics
	28	**MID-TERM LAB EXAM**
	30	Genetics
Nov	4	"
	6	Vegetation zones of North America and the Boreal Forest Zone
	11	Deciduous Forests of Eastern North America
	13	" "
	18	Western North American Forests
	20	Hardwoods and Ornamentals
	25	Tree Physiology
	27	"
Dec	2	Seed and Seedling Physiology
	4	" "
	9	Open
	11	Revision
	16	**FINAL LECTURE EXAM**

Lab Schedule

DATE		TOPIC	QUIZ
Sept	4	Canfor Trail - trees and shrubs of river valleys of Alberta	
	11	Canfor Trail - trees and shrubs of the aspen grove section of the boreal forest	#1
	18	Woody plants of a black spruce bog	#2
	25	Wapiti ski trails - trees and shrubs of the aspen grove section of the boreal forest	#3
Oct	2	Jubilee Park - hardwoods and ornamentals	#4
	9	Beaverlodge Research Station - hardwoods and ornamentals	#5
	16	Beaverlodge Research Station - Conifers I	#6
	23	Indoor lab - conifers II	#7
	30	Indoor lab - eastern and western hardwoods	#8
Nov	6	Indoor lab - mounting of plant herbariums	#9
	13	Open	
	20	Open	
	27	Review lab	
Dec	4	Review lab	
	11	**FINAL LAB EXAM**	

Plant Herbariums

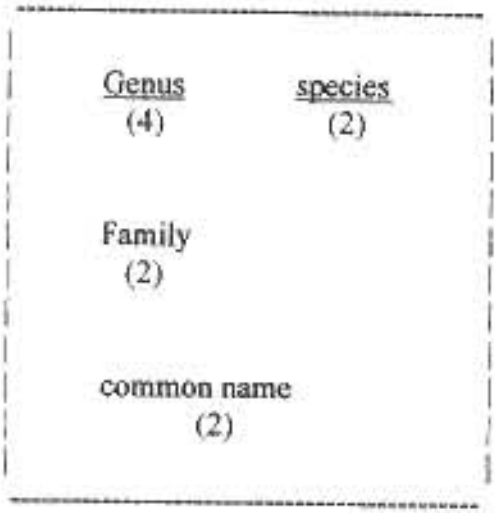
Students are expected to collect and press plants from the first seven labs. A good specimen consists of a twig, a leaf and possibly flowers or fruit (if still in season). Plants should be labelled and the location of the specimen should also be noted. During one of the indoor labs, students will bring their plants to the lab for mounting (GPRC will provide mounting supplies). The herbarium is worth 10% of the final grade. Plants will be used to help next years students and also for exam purposes..

In order to get a good cross section of plants, students will collect one sample of each of the following two species (counting down from the top of each lab list).

Lab Quizzes

For the outdoor labs, you will have to identify 10 plants, worth 10 points each. Emphasis will be on the plants learnt in the most recent lab, however plants from any lab could be included.

Point structure - total of 10 points



Deductions:

Misspelled word = -1 (per word)
Genus or species not underlined (or in italics) = -1 (per word)
Family or Genus: first letter not capitalized = -1 (per word)
Common name not capitalized (if needed) = -1

Note: Please do not write all words in capital letters.