



UNIVERSITY OF CALGARY
FACULTY OF SCIENCE
DEPARTMENT OF BIOLOGICAL SCIENCES
COURSE OUTLINE

1. **Course:** PLBI 541, Taxonomy of the Seed Plants -- Fall 2018

Instructor Name	Email	Phone	Office	Hours
<i>L01:</i> (TR 09:30 - 10:45 in BI 542)				
Jana Vamosi	jvamosi@ucalgary.ca	403-210-9594	BI482	TBA

Course Site:

D2L: PLBI 541 L01-(Fall 2018)-Taxonomy of the Seed Plants

Department of Biological Sciences:

Office: BIO 186
Phone: 403 220-3140
Email: biosci@ucalgary.ca

Note:

Students must use their U of C account for all course correspondence.

There is a lab component for this course. Labs will run on Thursdays, 12:00-3:00pm in the herbarium (BI013). This resource can also be made available outside of designated lab times (during regular business hours).

2. **Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

Prerequisite(s): Botany 327 or Plant Biology 327. Also known as: (formerly Botany 541)

3. **Grading:**

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Component(s)	Weighting %	Date
Plant collection, herbarium preparation, identification	30%	
Laboratory Assignments	40%	
Midterm exam - written	15%	November 20, 2018 (in class)
Seminar	10%	
Participation	5%	

There will NOT be a final examination scheduled by the Registrar's Office.

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	95 %	86 %	80 %	77%	73%	70 %	67 %	63%	60%	55 %	50 %

A mark of 50% or greater is required on the plant collection component of this course to pass the course as a whole. Each piece of work (assignments, seminar, midterm test) submitted by the student will be assigned a percentage score. The student's average percentage score for the various components listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

This course has a non-registrar scheduled final component.

4. **Missed Components of Term Work:**

The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in [Section 3.6](#). It is the student's responsibility to familiarize himself/herself/themselves with these regulations. See also [Section E.3](#) of the University Calendar.

5. **Scheduled out-of-class activities:**

There are no scheduled out of class activities for this course.

6. **Course Materials:**

Required Textbook(s):

Hallworth, Beryl & C.C. Chinnappa, *Plants of Kananaskis Country In The Rocky Mountains of Alberta*: University of Calgary Press / University of Alberta Press .

7. **Examination Policy:**

No aids are allowed on tests or examinations.

Students should also read the Calendar, [Section G](#), on Examinations.

8. **Approved Mandatory and Optional Course Supplemental Fees:**

There are no mandatory or optional course supplemental fees for this course.

9. **Writing across the Curriculum Statement:**

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also [Section E.2](#) of the University Calendar.

10. **Human & living organism studies statements:**

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

STUDIES IN THE BIOLOGICAL SCIENCES INVOLVE THE USE OF LIVING AND DEAD ORGANISMS. Students taking laboratory- and field-based courses in these disciplines can expect involvement with and experimentation on such materials. Students perform dissections on dead or preserved organisms in some courses. In particular courses, students experiment on living organisms, their tissues, cells, or molecules. Sometimes field work requires students to collect a variety of living materials by many methods, including humane trapping.

All work on humans and other animals conforms to the Helsinki Declaration and to the regulations of the Canadian Council on Animal Care. The Department strives for the highest ethical standards consistent with stewardship of the environment for organisms whose use is not governed by statutory authority. Individuals contemplating taking courses or majoring in one of the fields of study offered by the Department of Biological Sciences should ensure that they have fully considered these issues before enrolling. Students are advised to discuss any concern they might have with the Undergraduate Program Director of the Department.

Students are expected to be familiar with [Section SC.4.1](#) of the University Calendar.

11. **Reappraisal of Grades:**

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

1. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **15 days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall immediately submit the Reappraisal of Graded Term work form to the department in which the course is offered. The department will arrange for a re-assessment of the work if, and only if, the student has sufficient academic grounds. See sections [I.1](#) and [I.2](#) of the University Calendar

2. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

12. OTHER IMPORTANT INFORMATION FOR STUDENTS:

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- b. **SU Wellness Center:** The Students Union Wellness Centre provides health and wellness support for students including information and counselling on physical health, mental health and nutrition. For more information, see www.ucalgary.ca/wellnesscentre or call [403-210-9355](tel:403-210-9355).
- c. **Sexual Violence:** The University of Calgary is committed to fostering a safe, productive learning environment. The Sexual Violence Policy (<https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>) is a fundamental element in creating and sustaining a safer campus environment for all community members. We understand that sexual violence can undermine students' academic success and we encourage students who have experienced some form of sexual misconduct to talk to someone about their experience, so they can get the support they need. The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at [403-220-2208](tel:403-220-2208).
- d. **Misconduct:** Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties. Examples of academic misconduct may include: submitting or presenting work as if it were the student's own work when it is not; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; collaborating in whole or in part without prior agreement of the instructor; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. **These are only examples.**
- e. **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
- f. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at [procedure-for-accommodations-for-students-with-disabilities.pdf](#).
- Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head, Undergraduate of the Department of Biological Sciences, Heather Addy by email addy@ucalgary.ca or phone [403 220-6979](tel:403-220-6979). Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See [Section E.4](#) of the University Calendar.
- g. **Safewalk:** Campus Security will escort individuals day or night (See the [Campus Safewalk](#) website). Call [403-220-5333](tel:403-220-5333) for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- h. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.
- i. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](tel:403-220-3911) Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: [403-220-3913](tel:403-220-3913) Email: sciencerep@su.ucalgary.ca. Student Ombudsman, Email: suvpaca@ucalgary.ca.

- j. **Internet and Electronic Device Information:** Unless instructed otherwise, cell phones should be turned off during class. All communication with other individuals via laptop, tablet, smart phone or other device is

prohibited during class unless specifically permitted by the instructor. Students that violate this policy may be asked to leave the classroom. Repeated violations may result in a charge of misconduct.

- k. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

TENTATIVE LECTURE SCHEDULE

<u>Topics of Lectures and Discussion</u>	<u>Number of lectures</u>
Principles of Taxonomy and Systematics	4
Evolution of Seeds Flora of British Columbia and Alberta, plant ID	2
Evolution of flowers, Basal angiosperms, Monocots	5
Evolution of Eudicots; anther and pollen traits	4
Evolution of zygomorphy, Epigyny, Perigyny	3
Chemotaxonomy, genomics, and ethnobotany	1
Reading days (November 11-17 th) Review	

MIDTERM (in class)	November 20, 2018
Presentations	2
Phylogenetics: Guest Lectures	2
Phylogenetics: Advanced Topics	1

BOTANY 541 LAB SYLLABUS

<u>Lab#</u>	<u>Lab Topic</u>
Sept 13	Introduction to Phylogenetic systematics
Sept 20	Molecular systematics and phylogenetic analysis
Sept 27	How to use keys to identify plants in your collection
Oct 11	Grasses, Rushes, and Sedges
Oct 25	Flower and Fruit Specialization

Department Approval:

Electronically Approved

Date: 2018-08-30 13:46

Course Outcomes

- Perform the basic techniques used in inferring phylogenies based on morphological and molecular data
- Summarize the major steps in the evolution of the seed
- Describe the traits that unite all flowering plants
- List the major groupings of monocots and the traits that would help you classify an unknown monocot species
- Outline the relationships between Basal angiosperms, monocots, basal eudicots and core eudicots
- List the monophyletic groups of Eudicots and the characteristics important for their evolutionary success
- Describe how differences can arise between groups listed in a dichotomous key and a phylogeny
- Describe the ecological conditions that favour the evolution of wind pollination and nitrogen fixation
- List the families of flowering plants that provide major food sources for humans
- Explain why closely related species may have more similarities in nutrients and/or toxins in common than distantly-related species