



DEPARTMENT OF BIOLOGICAL SCIENCES  
COURSE OUTLINE

1. **Course:** PLANT BIOLOGY 541 – TAXONOMY OF THE SEED PLANTS

Lecture Sections: L01 TR 09:30-10:45 ST 027 FALL 2016  
Lab Section: B01 R 12:00-2:50 p.m. BI 013  
Course Coordinator/  
Instructor(s): Dr. J. Vamosi BI 482 210-9594 jvamosi@ucalgary.ca

Desire 2 Learn (D2L) course name: TBA

Biological Sciences Department BI 186; (403) 220-3140; biosci@ucalgary.ca

2. **Prerequisites:** BOTANY 327 or PLBI 327 See section 3.5.C in the Faculty of Science section of the online Calendar (<http://www.ucalgary.ca/pubs/calendar/current/sc-3-5.html>)

3. **Grading:** The University policy on grading and related matters is described sections F.1 and F.2 of the online University Calendar. In determining the overall grade in the course the following weights will be used:

<b>Plant collection, herbarium preparation, identification</b>	<b>25%</b>
<b>Laboratory Assignments</b>	<b>30%</b>
<b>Midterm exam – written</b>	<b>In-Class 15% (Nov 17th, 2016)</b>
<b>Final lab exam</b>	<b>20%</b>
<b>Seminar</b>	<b>10%</b>

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

A mark of  $\geq 50\%$  is required on both the plant collection and the laboratory work component of this course to pass the course as a whole. Each piece of work (assignment, laboratory report, midterm test or final examination) 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, (bearing in mind that an F grade will result if the student does not pass the laboratory 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 with these regulations. See also [Section E.3](#) of the University Calendar

5. **Scheduled out-of-class activities:** N/A

**REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY.** If you have a clash with this out-of-class-time-activity, please inform your instructor as soon as possible so that alternative arrangements may be made for you.

6. **Course Materials:**

Required: Plants of Kananaskis Country In The Rocky Mountains of Alberta, Hallworth, Beryl & C.C. Chinnappa, 1997. University of Calgary Press / University of Alberta Press.

Recommended: Plant Systematics: A Phylogenetic Approach, Judd et al., Sinauer Associates, 4th Edition

7. **Examination Policy:** No aids may be used in examinations. Students should also read the Calendar, [Section G](#), on Examinations..

8. **Writing across the curriculum statement:** In this course, the quality of the student's writing in laboratory reports will be a factor in the evaluation of those reports. See also [Section E.2](#) of the University Calendar.

9. **STUDIES IN THE BIOLOGICAL SCIENCES INVOLVE THE USE OF LIVING AND DEAD ORGANISMS.** See also <http://www.ucalgary.ca/pubs/calendar/current/e-5.html>

**10. OTHER IMPORTANT INFORMATION FOR STUDENTS:**

- (a) 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
  
- (b) Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
  
- (c) Student Accommodations:** 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 [http://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities\\_0.pdf](http://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities_0.pdf).  
  
Students needing an Accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to the Associate Head of Biological Sciences, Dr. H. Addy, by email [addy@ucalgary.ca](mailto:addy@ucalgary.ca) or phone 403 220-3140.
  
- (d) Safewalk:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
  
- (e) Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPPA). As one consequence, 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 also <http://www.ucalgary.ca/secretariat/privacy>.
  
- (g) Student Union Information:** VP Academic Phone: 403 220-3911 Email: [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca)  
SU Faculty Rep. Phone: 403 220-3913 Email: [science1@su.ucalgary.ca](mailto:science1@su.ucalgary.ca), [science2@su.ucalgary.ca](mailto:science2@su.ucalgary.ca) and [science3@su.ucalgary.ca](mailto:science3@su.ucalgary.ca);  
Student Ombuds Office: 403 220-6420 Email: [ombuds@ucalgary.ca](mailto:ombuds@ucalgary.ca); <http://ucalgary.ca/provost/students/ombuds>
  
- (h) Internet and Electronic Device Information:** You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.
  
- (i)** At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses ([www.ucalgary.ca/usri](http://www.ucalgary.ca/usri)). Your responses make a difference - please participate in USRI Surveys.

Department Approval \_\_\_\_\_ ORIGINAL SIGNED \_\_\_\_\_ Date \_\_\_\_\_

Department Approval for  
NO FINAL EXAM \_\_\_\_\_ ORIGINAL SIGNED \_\_\_\_\_ Date \_\_\_\_\_

## COURSE OUTCOME

A study of the morphology and taxonomy of seed plants in relation to classification, phylogeny and evolution. An introduction to taxonomy, nomenclature and identification of flowering plants. Students are required to make a plant collection of 50 plant specimens in the preceding summer. Plant press and collection books should be obtained from the Herbarium (BI 013).

## **TENTATIVE LECTURE SCHEDULE**

<u>Topics of Lectures and Discussion</u>	<u>Number</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	3 2
Evolution of Eudicots; anther and pollen traits	4
Evolution of zygomorphy, Epigyny, Perigyny Flora of Alberta, plant ID	3
Chemotaxonomy, genomics, and ethnobotany	1
Reading days (November 10-13 <sup>th</sup> ) Review	
<b>MID TERM</b>	<b>November 17, 2016</b>
Phylogenetics: Guest Lectures	2
Phylogenetics: Advanced Topics	1
Presentations	2

## BOTANY 541 LAB SYLLABUS

<u>Lab#</u>	<u>Lab Topic</u>
1	Introduction to Phylogenetic reconstruction
2	Molecular systematics and phylogenetic analysis
3	The Flower: Floral diagrams, floral diagrams.
4	Development of Perigyny Epigyny
5	Evolution of Wind Pollination: Spring Flowering Trees
6,7	Grasses, Sedges and Rushes
8	Sympetaly and the Evolution of Zygomorphy
9	The Asteraceae (Compositae)
10	Orchids and Milkweeds Some Specialized and Unusual Flowers and Inflorescences
11	<u>Lecture and Laboratory Exam</u>

### GRADING SCALE

Letter Grade	Cut-Off
A+	= 93
A	= 86
A-	= 80
B+	= 77
B	= 73
B-	= 70
C+	= 67
C	= 63
C-	= 60
D+	= 55
D	= 50
F	= <50