DEPARTMENT OF BIOLOGICAL SCIENCES
COURSE OUTLINE

1. Course: PLANT BIOLOGY 403 – PLANT PHYSIOLOGY

Lecture Section(s)	L01	MWF	14:00	SB 142	Fall 2017

Course Coordinator: Dr. Facchini

Instructor(s):	Dr. Peter Facchini	BI 396	220-7651	pfacchin@ucalgary.ca
	Dr. Dae-Kyun Ro	BI 393	220-7099	daekyun.ro@ucalgary.ca

Desire 2 Learn (D2L) and Blackboard course name: PLBI 403 L01 - (Fall 2017) – Plant Physiology

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

2. Prerequisites: Biology 371 or 233 or any two of Biology 231, 241 and 243 and completion of at least 9.5 full-course equivalents.
See section 3.5.C in the Faculty of Science section of the online Calendar
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:

Component	Percentage of final grade
Lecture (60%)	
Midterm Exam*	30%
Final Exam**	30%
Laboratory (40%)	
Assignment 1	5%
Assignment 2	10%
Assignment 3	5%
Assignment 4	5%
Assignment 5	10%
Assignment 6	5%

* In class ** Scheduled by the Registrar's office

Each piece of work (assignment, midterm tests 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.

Final Grade Scale

A+: 90 or higher	C+: 67 and under 70
A : 85 and under 90	C : 63 and under 67
A- : 80 and under 85	C- : 60 and under 63
B+: 77 and under 80	D+: 55 and under 60
B : 73 and under 77	D : 50 and under 55
B- : 70 and under 73	F : under 50

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: Dates and times of approved class activities held outside of class hours. N/A

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a conflict with 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 textbook: *Plant Physiology and Development, Sixth Edition, Taiz, L. and Ziegler, E., (eds), Sinaur Associates Inc., Sunderland, MA*

7. **Examination Policy**: No electronic or written aids (e.g. cell phones, tablets, computers, calculators, notes, textbooks) will be allowed during writing of any exams. Students should also read the Calendar, Section G, on Examinations. (http://www.ucalgary.ca/pubs/calendar/current/g.html)

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. **Human studies statement:** indicating whether students in the course may be expected to participate as subjects or researchers. See also Section E.5 of the University Calendar.

ETHICS IN THE BIOLOGICAL SCIENCES
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 fieldwork 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.

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*.

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 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 (FOIPP). 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.

(f) Student Union Information: VP Academic Phone: 403 220-3911 Email: suvpaca@ucalgary.ca
SU Faculty Rep. Phone: 403 220-3913 Email: science1@su.ucalgary.ca, science2@su.ucalgary.ca and science3@su.ucalgary.ca;
Student Ombuds Office: 403 220-6420 Email: ombuds@ucalgary.ca; http://ucalgary.ca/provost/students/ombuds

(g) 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.

(h) 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). Your responses make a difference - please participate in USRI Surveys.

Department Approval_____**ORIGINAL SIGNED**_____**Date**_____
PLBI 403 co F17; 8/24/2017 9:26 AM

PLBI 403 L01 – (Fall 2017) – Plant Physiology

Tentative Lecture Schedule

Monday, September 11	Introduction to Plant Physiology	PJF
Wednesday, September 13	Xylem Transport I	PJF
Friday, September 15	Xylem Transport II	PJF
Monday September 18	Xylem Transport III	PJF
Wednesday, September 20	Phloem Transport I	PJF
Friday, September 22	Phloem Transport II	PJF
Monday September 25	Phloem Transport III	PJF
Wednesday, September 27	Photosynthesis I	PJF
Friday, September 29	Photosynthesis II	PJF
Monday, October 2	Photosynthesis III	PJF
Wednesday, October 4	Photosynthesis IV	PJF
Friday, October 6	Respiration and Lipid Metabolism I	PJF
Monday, October 9	Thanksgiving (no lecture)	
Wednesday, October 11	Respiration and Lipid Metabolism II	PJF
Friday, October 13	Respiration and Lipid Metabolism III	PJF
Monday, October 16	Nutrient Assimilation I	PJF
Wednesday, October 18	Nutrient Assimilation II	PJF
Friday, October 20	Nutrient Assimilation III	PJF
Monday, October 23	Review	PJF
Wednesday, October 25	Midterm Exam (in class; 60 minutes; 14:00 – 15:00)	
Friday, October 27	Introduction to Growth and Development	DKR
Monday, October 30	Cell Walls	DKR
Wednesday, November 1	Signal Transduction I	DKR
Friday, November 3	Signal Transduction II	DKR
Monday, November 6	Light and Plant Development I	DKR
Wednesday, November 8	Light and Plant Development II	DKR
Friday, November 10	Mid-Term Break (no lecture)	
Monday, November 13	Lieu of Remembrance Day (no lecture)	
Wednesday, November 15	Seed dormancy I	DKR
Friday, November 17	Seed dormancy II	DKR
Monday, November 20	Vegetative growth	DKR
Wednesday, November 22	Gametophytes	DKR
Friday, November 24	Fruit development	DKR
Monday, November 27	Senescence and cell death I	DKR
Wednesday, November 29	Senescence and cell death II	DKR
Friday, December 1	Biotic interactions I	DKR
Monday, December 4	Biotic interactions II	DKR
Wednesday, December 6	Abiotic Stress	DKR
Friday, December 8	Review	DKR

Lab Schedule

Week of:

September 11	Lab 1 – Xylem Tension lab
September 18	Lab 2 – Photosynthesis I lab
September 25	Lab 3 – Photosynthesis II lab
October 2	Lab 4 – Nitrogen Fixation lab
October 9	Lab 5 - Rhizobium lab (Set-up)
October 16	Lab 6 - Brassinolide lab (Set-up)
October 23	Lab 6/7 - Brassinolide lab (Data collection) & Germination lab (set-up)
October 30	Lab 7 - Germination lab (Data collection), Lab #7 Lab Assignment
November 6	Mid-term Break (No lab)
November 13	No Lab
November 20	Lab 5 - Rhizobium lab (Data collection)