

BIOLOGY 458

PLANT BIOCHEMISTRY AND BIOCHEMICAL ECOLOGY

Fall term 2019/20

Mon/Thurs 10:00 - 11:20 Ell 160

INSTRUCTOR: Dr. Peter Constabel
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Cun 147a
Ph: 472-5140

TEXTBOOK: none required. Optional textbook (Heldt, " " , 3rd or 4th edition) will be on reserve at the library and should be consulted to reinforce lectures. Some material is covered by Taiz and Zeiger's " " , also on Reserve. **Readings from the primary literature will be assigned every other week (5 in total).** You will be asked to do brief summaries of these readings to be handed in, followed by discussion

alkaloids, and their roles in plant-animal and plant-environment interactions.

WEB-ACCESSIBLE / ADDITIONAL MATERIAL:

Lecture materials will available be prior to the lecture on CourseSpaces. **Please be aware that these are abbreviated notes. It is therefore imperative that you attend lectures.**

EVALUATION:	Mid-term examination (Oct 17, 2019)	20%
	_____	40%
	Total	100%

Grading system: Percentages converted to letter grades

A+ 90-100	A 85-89.9	A- 80-84.9	
B+ 77-79	B 73-76	B- 70-72	
C+ 65-69	C 60-64	D 50-59	F 0-49.9

There will be no supplemental exam. Make-up final exams will only be considered if a Request for Academic Concession is provided. There will be no make-up midterm exams; if you miss a midterm, you must provide a **documented medical** reason.

Last day for adding courses: Sept 20.

Last day for dropping courses without penalty of failure: Oct 31

Please be aware the University deals harshly with plagiarism. See UVic's guidelines on how to avoid it. (<http://library.uvic.ca/instruction/cite/plagiarism.html>).

<u>LECTURE TOPICS:</u>	<u>Text Readings</u> <u>(Heldt ed. 4th)</u>	<u>Lecture</u> <u>Period #</u>	<u>Dates</u>
<u>Introductory lecture</u>			
• Importance of plant biochemistry & biochemical ecology		1	Sept 5
<u>Part A. Primary Metabolism (Carbon and Nitrogen)</u>			
• Tree Walk (weather permitting); enzymes		2	Sept 9
• Calvin cycle and overview of metabolism		3	Sept 12
• Carbohydrates: starch, sucrose, fructans, & other sugars	pp. 241-268	4-5	Sept 16, 19
• Structure and function of the cell wall	pp. 4-9, 268-270	6-7	Sept 23*, 26
• Fatty acid biosynthesis; plant oils & genetic engineering	pp. 359-378, 385-387	8-9	Sept 30, Oct 3
• Nitrogen assimilation	pp. 273-288	10	Oct 7*
• Nitrogen fixation amino acid synthesis	pp. 307-318	11	Oct 10
Thanksgiving Monday (Oct 14th)	no lecture		
MIDTERM EXAM		12	