BIOLOGY 458: PLANT BIOCHEMISTRY AND BIOCHEMICAL ECOLOGY

Fall term 2021/22 Mon/Thurs 10:00 - 11:20 CLE C115

INSTRUCTOR: Dr. Peter Constabel Cun 147a
email: cpc@uvic.ca Ph: 472-5140/7091

TEXTBOOK: none required. Optional textbook (Heldt, "*Plant Biochemistry*" 3rd or 4th ed.) is on reserve at the library. Some material is covered by Taiz and Zeiger's "*Plant Physiology*", also on Reserve. **Readings from original papers will be assigned every other week (5 in total)**. You will be asked to do brief summaries of these readings to be handed in.

COURSE OBJECTIVES:

You will learn about natural plant chemicals, their role in the plant and ecosystem, and the biochemical basis of plant adaptation to the environment. Our focus will be on plant-specific biochemical pathways and processes, their regulation and molecular biology. The course is divided into primary metabolism (storage carbohydrates, cell wall biosynthesis, lipid metabolism, nitrogen fixation and assimilation) and special metabolism (biochemistry and ecology of secondary plant metabolites such as isoprenoids, phenolics and alkaloids, and their roles in plant-animal and plant-environment interactions). Students will become familiar with the diversity of plant metabolites, and impacts on health and the environment.

WEB-ACCESSIBLE / ADDITIONAL MATERIAL:

Lecture materials will available be prior to the lecture on Brightspace. **Please be aware that my notes are brief, and it is imperative that you attend the lectures.** Recording: BIAL:

discuss it with your classmates. Stay healthy, and talk to me if you have any co2dy3ve* n. n[(c) 0 2i12 0 Couns6spfs

LECTURE TOPICS:	**Text Readings (Heldt ed. 4th)**	**Lecture Period #**	**Dates**
Introductory lecture			
• Importance of plant biochemistry & biochemical ecology		1	Sept 9

Part A. Primary Metabolism (Carbon and Nitrogen)

- Tree Walk on campus. Enzymes