

Colorado State University Department of Biochemistry
BC 405-R90 Comprehensive Biochemistry II – Metabolism Honors Section
Spring Semester 2020

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Office hours: Monday 3:00 – 4:00PM; Tuesday 1:00 – 2:00PM or by appointment.

Schedule: W 3:00 – 3:50PM
AZ E208

Objectives: BC403 is designed to provide an understanding of the molecular and cellular features that constitute and regulate the central pathways in metabolism. This class focuses on metabolism of carbohydrates, lipids, and amino acids, from absorption to tissue specific utilization and production. The course also addresses the regulatory mechanisms required by the cell to maintain a steady-state and cellular homeostasis. Disruptions caused by dysregulation (e.g. T2DM or cancer) of these pathways are also covered.

The honors breakout session has been designed to complement the material in BC403 and deepen the students understanding of metabolic regulation and the consequences of dysregulation. In BC405 students will be asked to develop a “Teachable Tidbit” on a topic that BC403 has just currently covered. The “Teachable Tidbit” must include a set of learning objectives, a means of assessing student learning, and an innovative active learning component. Upon completion of the class students will have further developed their ability to:

1. Create innovative means of content delivery for a particular subject under study.
2. Organize content material in a manner so as to effectively facilitate other students/colleagues learning/understanding.
3. Articulate what they are learning and when they are confused regarding a particular subject under study.
4. Critically evaluate and appraise colleagues work in order to facilitate improvement in their work.

Course Design: The main objective of BC405 is to provide students the structure and opportunity to create an innovative way of teaching/presenting material they are currently learning within BC403. Each student enrolled in BC405 is expected to write and present one “teachable tidbit” throughout the course of the semester. In addition, all students are expected to attend and fully participate in other students’ “teachable tidbit”. Each “teachable tidbit” must consist of a learning objective, a means of formative assessment, and an “active learning” activity. In the first three-weeks of class each of these aspects of a “teachable tidbit” will be addressed and the 4th week of class a “teachable tidbit” will be modeled. Following that students will be assigned one of the topics (see schedule) in which to develop their “tidbit. Prior to their presentation, the student will be required to turn in a detailed written lesson. The lesson plan will include the powerpoint presentation, a formative assessment, and learning objectives all addressed in their teachable tidbit. In addition, the lesson plan is to include written

instructions and supporting materials for executing the teachable tidbit. The lesson plan is to be detailed enough for a knowledgeable reader to understand and implement the tidbit in a similar class setting.

Throughout the course students not presenting will be asked to: 1. Participate in the learning activity developed by their colleague. 2. Partake in an oral discussion on strengths and weaknesses of their colleague's tidbit. 3. Write a half to full page critical analysis of each of their colleagues' tidbit. The critical analysis must address:

1. What was the most effective aspect of the teachable tidbit?
2. What was the least effective aspect of the teachable tidbit?
3. Did the tidbit advance my knowledge of the subject beyond what I had learned in this and other courses? Explain.
4. Should this tidbit be included in BC403? If not, what improvements could be made to make it ready for inclusion in the class.

Attendance: Attendance is mandatory. Any absences must have prior approval by the instructor; unexcused absences receive 0 points for that time period.

SDC: If you are a student who will need accommodations in this class due to a disability or chronic health condition, please provide me the SDC accommodation letter. If you do not already have these accommodation letters, please contact the SDC as soon as possible to initiate the process of setting up accommodations. The SDC is located in room 121 of the TILT building. You can reach them by phone at 970-491-6385 or visit www.disabilitycenter.colostate.edu

Grades: The grade break-down is as follows:

Assignment	Points Counted
Lesson plan	50
Tidbit presentation	50
Critical evaluation of other students	70
Total	170

Letter grades will be assigned based on the percentage of points accumulated from the aforementioned requirements. Letter grade breakdown will be as follows:

<u>Grade</u>	<u>Final Average</u>
A+	97-100%
A	90 - 96%
B+	87 - 89%
B	80 - 86%
C+	77 - 79%
C	70 - 76%
D	60 - 69%
F	<60%

If appropriate, the final averages required for a specific grade will be reduced to compensate for a low final class average or A- and B- grades may be used to better discriminate breaks in the grade distribution.

Academic Integrity: This course will adhere to the Academic Integrity Policy found in the Colorado State University [General Catalog](#).

Course Schedule

Week	Date	Topic	Assignment Due (DATE)
Week 1	1/22	Course Introduction	NA
Week 2	1/29	Learning Objectives/Assessments	NA
Week 3	2/5	Active Learning	NA
Week 4	2/12	Instructor facilitated "Tidbit"	NA
Week 5	2/19	No class	NA
Week 6	2/26	Student led Tidbit	Lesson plan (2/25); Critical Evaluations (2/27)
Week 7	3/4	Student led Tidbit	Lesson plan (3/3); Critical Evaluations (3/5)
Week 8	3/11	Student led Tidbit	Lesson plan (3/10); Critical Evaluations (3/12)
Week 9	3/25	Student led Tidbit	Lesson plan (3/24); Critical Evaluations (3/26)
Week 10	4/1	Student led Tidbit	Lesson plan (3/30); Critical Evaluations (4/2)
Week 11	4/8	Student led Tidbit	Lesson plan (4/7); Critical Evaluations (4/9)
Week 12	4/15	No class	NA
Week 13	4/22	Student led Tidbit	Lesson plan (4/21); Critical Evaluations (4/23)
Week 14	4/29	Student led Tidbit	Lesson plan (4/28); Critical Evaluations (4/30)
Week 15	5/6	Student led Tidbit	Lesson plan (5/5); Critical Evaluations (5/7)