

BIBC102 Winter Quarter 2011

Metabolic Biochemistry

Instructor: Yunde Zhao (y3zhao@ucsd.edu, 858-822-2670)

Lectures **MWF 9-9:50 am**, PETER 108 and 110

Course webpage: <http://www.biology.ucsd.edu/classes/bibc102.W111>

You need login info to access the page (Username: bibc102wi11, Password: EggNogg2)

Course discussion forum: <http://webct.ucsd.edu>. You use your UCSD e-mail username and password to login. For more info on logging in see: <http://iwdc.ucsd.edu/password.shtml>. If you are a concurrent enrollment (UCSD Extension) student, you must obtain a registration token from Extension's student services or the ACS Help Desk in order to login to the course website. More information is at: <http://sdacs.ucsd.edu/~icc/ce.php>.

TAs will check the discussion board daily including weekends to answer your questions. The discussion board is probably the best place to get your questions addressed.

EXAMS:

There will be two midterm exams and one Final. The first Mid-term will worth 20%, the second mid-term will worth 20%, and the final will worth 50% of your grade. Neither your midterm scores nor your final exam score can be dropped (i.e. all three scores will be included in your final grade).

No calculator, cell phone, camera, or other electronic devices that are capable of storing information are allowed during the exams. Backpacks should be left in front of the classroom during the exam.

Each Midterm will be 50 minutes long and the final will be 2 hours long. There will be no make-ups for the Midterms. If you do not take a midterm, you will be assigned a zero to the midterm unless you supply documents for medical or family emergency to the Professor. If you miss one midterm for medical or family emergency, your other midterm will count for 40% and your Final will worth 50% of your grade. No one may take the Final Exam early. **The grades will be curved.**

The midterms will consist of short answer questions, multiple-choice, true/false, and other types of questions. The final exam will be all multiple-choice and will be graded by Scantron. Last year's exams and answers are on the course website. **The Final exam will be comprehensive (materials from every lecture will be covered).**

Clickers

You will need an i>clicker for this class. Clicker questions will be asked in class beginning January 10th – March 11 (a similar but not identical number each class period). Clicker performance counts 10% of your grade and is divided into two parts. The first part is 5% of your grade and is purely calculated on basis of your participation. The other 5% is based on the number of questions you answered correctly. To compensate for a few missed classes or

forgotten /malfunctioning clickers, you only need to answer 90% of the questions to get the 5% participation credit. Your participation credit is calculated as the following: $(5Y/0.9X)$, Y is the number of questions you answered and X is the total number of questions. If you answer more than 90% of the questions, you will get a small amount of extra credit. For example, if the total number of clicker questions is 50, and you answered 45, you will get the 5 points (5% of your grade). But if you answered 50, you will get 5.6 points toward your grade. The other 5% of your grade is calculated as the following $(5Z/0.8X)$, Z is the number of questions you answered correctly and X is the total number of questions. You only need to correctly answer 80% of the questions to get the full credit. However, if you answered more than 80% correctly, you will get extra credit. For example, if the total number of questions is 50, and you answered 45 correctly, you will get 5.6 points.

Because the system is set up to give you some allowances (you do not need 100% participation to get the full credit), I will not give you additional allowances for occasional forgotten or malfunctioning clickers (e.g. dead batteries), absence from class (regardless of the reason), or for students who add the class late and missed some classes for that reason. It's your responsibility to make sure that your clicker works properly.

Make sure that you have an i>clicker – other clicker brands will not work for this class. If you already have an i>clicker purchased for use in another class this quarter or in the past, you can use it for this class also. i>clickers can be purchased from the UCSD Bookstore for \$37.50 new and \$28.15 used (the Bookstore will buy your clicker back after the quarter ends). You can also buy or borrow used i>clickers from other sources - just make sure it's an i>clicker!

You must register your i>clicker to use in this class by going <http://webct.ucsd.edu>, clicking "Register your i>clicker" button and following prompts from there. The "Remote ID" is the serial number on the back of your clicker. **If you have a clicker with an illegible serial number, see Prof. Zhao after class or at office hours.**

YOUR GRADE

Your grade for the course will be based on the exams and clicker performance. The exams count for 90% of your grade and 10% of your grade is from clicker performance. Each midterm counts 20% of your grade and the final counts as 50%. Clicker performance counts 10% and is divided into two parts. The first part is 5% of your grade and is purely calculated on basis of your participation. The other 5% is based on the number of questions you answered correctly according the formula described above.

For example, if you get 75 for midterm1, 80 for midterm2, 65 for the final, your points from exams will be $75 \times 20\% + 80 \times 20\% + 65 \times 50\% = 63.5$. If you answered 45 questions out of 50, you will get 5 points for participation. If you answered 40 questions correctly, you will get $5 \times 40 / (50 \times 0.8) = 5$ points. Your overall points will be 73.5

The overall points will be used for statistic analysis and the grades will be curved. The average of the overall points will be a **B**. One standard deviation above the average is A. The range from average to one standard deviation below the average is C. For example, if the average is 68 points, standard deviation is 16, then 84 and above is A, 68 to 83 will be B, 52 to 67 will be C. 83.1 to 83.5

will be B+ and 83.6 to 83.9 will be A-. 67.1 to 67.5 will be C+ and 67.6 to 67.9 will be B-. Points below 52 will be D or F.

ACADEMIC DISHONESTY

Academic dishonest (aka cheating) will not be tolerated in this class. According to UCSD policy, academic dishonesty includes:

- taking an exam for another student
- allowing another student to take an exam for you
- copying another student's work on an exam or quiz
- allowing another student to copy your work
- altering graded assignments and submitting them for a regrade

Since clicker questions earn you course credit, responding to them using another person's clicker will also be considered an act of academic dishonesty (you are doing that person's work for them). **If the TAs see a student using more than one clicker, both clickers will be confiscated immediately for the remainder of the class period.** Altering an exam and submitting it for a regrade is an incredibly bad idea since a subset of exams will be photocopied prior to returning them to students, and any exam handed in for a regrade will be checked against the original. Any student caught or suspected of cheating (including those found using two or more clickers in class) will be reported to the UCSD Academic Integrity Coordinator and the Dean of the student's college. Confirmed cases of cheating will result in the student receiving an F as their final grade and other disciplinary actions determined appropriate by the Academic Integrity Coordinator.

ADMINISTRATIVE QUESTIONS: See Biology Undergraduate Student Affairs Office, Pacific Hall, Room 1129 for adding/dropping a class, etc.

UCSD POLICY ON ACADEMIC INTEGRITY: All academic work will be done by the student to whom it is assigned without unauthorized aid of any kind.

Text Book: Lehninger Principles of Biochemistry by David Nelson and Michael Cox, fourth or fifth edition. **Exams will be based on lectures and assigned readings only.**

Date	Lecture	Topic	Reading
January 3, Monday	1	Bioenergetics and metabolic conce	Chapter 13
January 5, Wednesday	2	Bioenergetics and metabolic conce	Chapter 13
January 7, Friday	3	Bioenergetics and metabolic conce	Chapter 13

January 10, Monday	4	Enzyme kinetics	Chapter 6
January 12, Wednesday	5	Glycolysis	Chapter 14
January 14, Friday	6	Glycolysis	Chapter 14
January 17, Monday	No class	Martin Luther King, Jr. Holiday	
January 19, Wednesday	7	Glycolysis	Chapter 14
January 21, Friday	Midterm1		
January 24, Monday	8	Glycolysis regulation	Chapter 15
January 26, Wednesday	9	Pentose pathway	Chapter 14
January 28, Friday	10	Krebs cycle	Chapter 16
January 31, Monday	11	Krebs cycle	Chapter 16
February 2, Wednesday	12	Krebs cycle	Chapter 16
February 4, Friday	13	Oxidative phosphorylation regulation	Chapter 19
February 7, Monday	14	Oxidative phosphorylation	Chapter 19
February 9, Wednesday	15	Oxidative phosphorylation	Chapter 19
February 11, Friday	16	Midterm 2	Chapter 19
February 14, Monday	17	Gluconeogenesis	Chapter 15
February 16, Wednesday	18	Glycogen	Chapter 15
February 18, Friday	19	Photosynthesis	Chapter 19
February 21, Monday	No class	President's day	
February 23, Wednesday	20	Photosynthesis	Chapter 19
February 25, Friday	21	Lipids	Chapter 17 & 21
February 28, Monday	21	Lipids	Chapter 17 & 21
March 2, Wednesday	22	Lipids	Chapter 17 & 21
March 4, Friday	23	Lipids	Chapter 17 & 21
March 7, Monday	24	Amino Acids	Chapter 18
March 9, Wednesday	25	Nucleotides	Chapter 22
March 11, Friday		Integration and regulation of metabolism	Chapter 23
Week of March 14	Final exam		