

# BIBC102 Spring Quarter 2014

## Metabolic Biochemistry

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

Lectures **MWF 10-10:50 AM**, WLH 2005

Course website and discussion forum: <http://ted.ucsd.edu>. You use your UCSD e-mail username and password to login. For more info on login, see: <https://ted.ucsd.edu/>. 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.

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 15%, the second mid-term will worth 25%, 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 3 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. Previous years' exams and answers are on the TED 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 Monday, **April 7th** (a similar but not identical number of questions during each class period will be asked). 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 80% of the questions to get the 5% participation credit. Your participation credit is calculated as the following:  $(5Y/0.8X)$ , Y is the number of questions you answered and X is the total number of questions. If you answer more

than 80% 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 40, you will get the 5 points (5% of your grade). But if you answered 50, you will get 6.25 points toward your grade.

The other 5% of your grade is calculated as the following  $(5Z/0.7X)$ , Z is the number of questions you answered correctly and X is the total number of questions. You only need to correctly answer 70% of the questions to get the full credit. However, if you answered more than 70% correctly, you will get extra credit. For example, if the total number of questions is 50, and you answered 40 correctly, you will get 5.72 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. 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 <https://ted.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. Midterms count 40% 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  $75 \times 15\% + 80 \times 25\% + 65 \times 50\% = 63.75$ . If you answered 40 questions out of 50, you will get 5 points for participation. If you answered 35 questions correctly, you will get  $5 \times 35 / (50 \times 0.7) = 5$  points. Your overall points will be 73.75

The overall points will be used for statistic analysis and the grades will be curved. The average of the overall points will be a solid **B (not B minus)**. 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. Points below 52 will be D or F.

**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.

Since clicker questions earn you course credit, responding to them using another person's clicker will also be considered an act of academic dishonesty. **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 will lead to an automatic F for the course.** Some of the exams will be randomly selected and be photocopied prior to returning them to students. 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.

**Text Book:** No textbook is required. **Exams will be based on lectures and assigned readings only.**

Date	Lecture	Topic
March 31, Monday	1	Bioenergetics and metabolic concepts
April 2, Wednesday	2	Bioenergetics and metabolic concepts
April 4, Friday	3	Bioenergetics and metabolic concepts
April 7, Monday	4	Enzyme kinetics
April 9, Wednesday	5	Glycolysis
April 11, Friday	6	Glycolysis
April 14, Monday	7	Glycolysis
April 16, Wednesday	8	Glycolysis regulation
<b>April 18, Friday</b>		<b>Midterm 1</b>
April 21, Monday	9	Pentose phosphate pathway
April 23, Wednesday	10	Krebs cycle
April 25, Friday	11	Krebs cycle
April 28, Monday	12	Krebs cycle

April 30, Wednesday	13	Oxidative phosphorylation
May 2, Friday	14	Oxidative phosphorylation
May 5, Monday	15	Oxidative phosphorylation
May 7, Wednesday	<b>16</b>	Gluconeogenesis
<b>May 9, Friday</b>		<b>Midterm 2</b>
May 12, Monday	17	Glycogen
May 14, Wednesday	18	Photosynthesis
May 16, Friday	19	Photosynthesis
May 19, Monday	20	Lipids
May 21, Wednesday	21	Lipids
May 23, Friday	22	Lipids
<b>May 26, Monday</b>	<b>No class</b>	<b>Memorial day</b>
May 28, Wednesday	23	Lipids
May 30, Friday	24	Guest lecture on diabetes by Prof. Gen-Sheng Feng
June 2, Monday	25	Amino Acids
June 4, Wednesday	26	Nucleotides
June 6, Friday	27	Integration and regulation of metabolism
<b>June 9, Monday</b>	<b>Final exam</b>	