Welcome to Bio98 Section B for Winter 2015!

We will be journeying into the world of biochemistry. We will learn not just the metabolic pathways that allow life to exist, but also the chemical logic behind them, and the ways in which they are regulated. We will seek to understand how knowledge of basic biochemical mechanisms informs our ideas about health and disease, and how we can use our understanding to develop new therapies for diseases that affect millions of people around the world.

The importance of reading

Please refer to the Course Calendar for the assigned readings and important dates. Keep in mind that this calendar is tentative, and may be subject to changes throughout the quarter.

Let me reiterate the importance of reading before you come to class. The lecture time will be used to further your understanding and application of concepts. If you have not familiarized yourself with the vocabulary by completing the reading assignments BEFORE class, you will be lost in class, and will HATE this class (and me!). So please, please, pretty please with a cherry on top, do the darn readings!

Dr. K

A brief introduction:

I hail from India (so, yes, I do have a funny accent! Try and get me to say “aluminium!”), and obtained my PhD at Rutgers University, NJ. I then worked as a post-doc at UCSD before coming to UCI.

The most important thing I would like to teach you is to be independent learners. If I can teach you some Biochemistry along the way, that would be a bonus! I see my role as more than just a lecturer, and within the constraints imposed by dealing with ~450 students, I would like to be available to you to address your concerns and discuss ideas about not just the class, but also science and life in general. I do have a wicked sense of humor, but hope that won’t dissuade you from coming to office hours, and otherwise interacting with me.

If you see me around campus, on the beach, on some hiking trail, or at Café 85C, do say hello! That being said, I do have numerous engagements that take up my time, so if you drop in to my office unannounced, and I don’t have time for you, please don’t take it personally. I look forward to our time together this quarter.

Mentoring:

I try and make a lot of time to mentor students, and hope you will take advantage of this. You can email me to fix a time to meet over coffee/lunch to talk about anything - careers, my life, your life, dogs, cats, science, etc.

Email: pavan.k@uci.edu

IMPORTANT: Please read email policies before sending me an email, so we can communicate efficiently.

Office: MH2234
Academic honesty

In two words, **DON'T CHEAT**. In any form or fashion. Do not copy exam answers. Do not plagiarize. Do not aid or abet cheating in any way. Do not try to circumvent the system – the rationale for every assignment will be clearly laid out, and if you try to violate the principle of the assignments, that is academic dishonesty! If you are ever in doubt about whether something constitutes dishonesty/cheating and/or plagiarism, come check with me or your TA BEFORE you decide on a course of action. Once you are caught (and trust me – you will be!), I will accept no excuses. None. Under any circumstances. The UCI policies on Academic Honesty are laid out at [http://www.editor.uci.edu/11-12/appx/appx.2.htm](http://www.editor.uci.edu/11-12/appx/appx.2.htm), and we will be taking academic integrity **VERY** seriously.

Violations of the university's policies on academic honesty will result, AT THE VERY LEAST in an "F" in the course.

Many of your assignments will be based on completion, not performance (Eg, iClickers). I have no control over how you approach these, but I expect that most of you will take them seriously, and do them independently. But for those of you who are planning on taking it easy on these assessments, do a little math before you proceed:

*The assessments/assignments are going to be given completion points that count for a small percentage of your grade. They are designed to help you prepare for the class quizzes and final exam which count for 80% of your grade. So let's say you just essentially blow off these participation quizzes/assignments. Yaay!*

You laugh all the way to the class quizzes and final exams. Having done nothing to learn in this class, you will probably get less than 20% on these. Your final total for the class will be ~40%, which I assure you, will be an “F,” no matter how low the curve is. You will no longer be laughing.Yippee ki-yay!

So, read my lips. **DO NOT CHEAT. TAKE ALL THE ASSIGNMENTS SERIOUSLY.**

Say it with me. **DO NOT CHEAT. TAKE ALL THE ASSIGNMENTS SERIOUSLY.**

The course

This course is meant to fulfill three broad aims:

**First**, it will introduce you to the vocabulary and general concepts of biochemistry. **YOU** will be primarily responsible for figuring this out using the textbook, assigned readings and the internet!

**Second** it will introduce you to the ways in which the science of biochemistry is thought about, and approached, and will force you to start thinking critically about how to solve biological problems.

**Third** is to get you to start learning for yourself, rather than being a passive receptacle for the information doled out by your instructor.

The fulfillment of these aims requires us to overcome several challenges, and this course will be taught somewhat unconventionally.

**Continuous effort**

**THIS IS EXTREMELY IMPORTANT.** You have to keep up with the class continuously. You CANNOT cram for this class before the quizzes/exams and hope to do well.
**Assigned readings**

You will be required to actually read the textbook BEFORE each class. If you come into class without having covered the assigned readings on your own, you will be EXTREMELY uncomfortable in class and will not be able to follow the lecture.

**Active participation**

I will challenge you in this class. I will push you, and will attempt to get you out of your learning comfort zone. If you come into class expecting me to merely tell you what is important for the exams/quiz, you will be SORELY disappointed, since you will need to be actively thinking about the concepts and figuring out things for yourself, even in class. This is why there will be Clicker questions, surprise quizzes, and various other activities, to encourage you to actively engage with the material, and to ensure that you are keeping up with the material.

**Multiple exams**

There will be multiple “mid-terms” and a cumulative final. So, you cannot forget things that you learnt at different times in the course. Furthermore, the exams will not be traditional “memorization” exams, but will require you to apply concepts in order to do well on the exams.

**Integrative**

One of the important messages of this course is that knowledge and understanding in science is integrative and cumulative. Biology, chemistry and physics (and their sub-disciplines) are not distinct entities - even though they are taught as such in our educational system. You cannot understand concepts in biochemistry in isolation, but will need to be able to remember and integrate knowledge that you have learnt previously.

**Expectations**

Unlike what you may be used to till now, this class will be a collaborative effort. I cannot “teach” if you refuse to “learn.” Note that I did not stay “study” but “learn.” Studying is passive, and is probably what you have been used to till now. “Learning” is active, and is MUCH harder than studying. In order to learn, you need to not only “know” the material, but must also be able to integrate it into a broader framework, and apply it to different situations. So, this will be a difficult and challenging course for both you and me. But we’re in this together, and hopefully what you gain from this course will make up for the initial discomfort, and continued effort you put into it.

**What I expect from you:**

- Independently and seriously complete the assigned readings, quizzes and homework assignments. Clarify your doubts in class, office hours or in discussion sections.
- Start thinking independently. Learn to use Google Search, Pubmed and the textbook to become and independent learner.
- Be an active participant in class.
- Come talk to me.
- Start thinking about how to apply the concepts you learnt in this class in other contexts, and to solve biological problems.
Complete the various surveys and evaluations I send out during the class; I take your feedback seriously, and won’t know what to change/improve unless you tell me. These surveys/evaluations will be anonymous, and will not in any way impact your grade.

- Participate in the discussion board to ask and answer questions.

What you can expect from me:

- I will challenge you. This will not be an easy course. But it is my hope that the rewards will be well worth it. I will try to not just teach you biochemistry, but to **THINK** scientifically.
- I will try to be extremely approachable; but I do have numerous other pressures on my time, so if I am not be able to address your concerns immediately, or talk to you if you come to my office unannounced, please don't take it personally.
- I do have a rather sarcastic and sardonic sense of humor (it's that darn British influence!). My comments are never meant to intimidate or belittle. Please bear that in mind when you interact with me.
- I may not directly give you the answer you want, but will attempt to get you to figure out the answer for yourself. This will make life a little more difficult for both of us, but in the long run, should be more beneficial.
- I will try to create an inclusive environment, so you feel comfortable participating in class and with me, irrespective of your gender, religion, race or ethnicity. If you ever have any concerns about inclusivity, please bring them to my attention immediately so I can address them.
- I will take your feedback about the class and my teaching style seriously, so you have the best learning experience possible.

Textbook, iClickers, Attendance

**Textbook:**

The textbook for the course is

*Lehninger Principles of Biochemistry*

6th Edition

by David L Nelson & Michael M Cox

Please keep in mind that the bundle available at the bookstore also includes the textbook that you will need for Bio99 AND access to both of the ebooks.

*You may use any edition of the above textbook, but the chapter and page numbers for the assigned readings might be different, and you will be responsible for dealing with these differences. You may purchase any form of the textbook (hardcover, looseleaf or eBook).*
iClickers:

You will also need to have your iClickers for EVERY class and for EVERY Discussion section. Please make sure to register your iClicker on the website, and even if you’ve registered it previously, confirm that the registration is current for this class. If your iClicker is not registered, I cannot identify you correctly to give you your participation points.

It is your responsibility to make sure that you have your iClicker with you, and that it is working correctly, and that it is correctly registered. No excuses will be entertained for forgotten iClickers, damaged iClickers, lost iClickers, etc.

Attendance:

Attendance in lectures OR Discussion sections is not mandatory. However, components of your grade come from participation points. And if you’re not in class, you can’t participate. Also, there will be surprise quizzes, activities, etc. in classes and Discussion sections. If you are not there, you will miss out on these - and there are no make-ups! Furthermore, unlike other classes, lecture will not be merely covering what you can read for yourself in the textbook, and will be used to probe deeper into the important concepts. Also remember that exams will be open-book, and WILL NOT be rote memorization. So, I would HIGHLY encourage you to attend all lectures & Discussion sections, and actively participate in the class. Besides, you’ll miss my wonderful jokes and incisive humor if you don’t come to class!

Discussion sections:

Discussion sections are not mandatory. However, there will be Clicker questions, surprise quizzes and other activities in Discussion sections that are designed to get you to engage with the material, and to improve your understanding of Biochemistry. These will help you do better in the quizzes and exams, and completion of these activities will count for 5% of your grade.

Grades

All exams and quizzes for this class are open book/open notes. An open book exam/quiz is usually harder than the traditional exam. You cannot merely memorize the material for an open book exam, since the exam is designed to go deeper and test your understanding and ability to use your knowledge effectively. An open book exam DOES NOT mean that you don’t need to study for it. If you expect that you can come into an open book exam without adequate preparation since you can just refer to the textbook/your notes for the answers, you will be in for a rude awakening! The whole point of an open book exam is to shift the emphasis away from “knowing” to “understanding.” So, the answers to the exam questions will NOT be in the textbook. The only advantage to the open book format is that it takes away the anxiety of having to memorize everything. But if you don’t understand the material thoroughly, you WILL NOT do well on the exams.
**Reading quizzes/activities - 10%**

There will be a number of online quizzes, homework assignments, and in-class activities. Completion of 70% of these activities will get you 10% on your grade. If you complete less than 70%, you will get a maximum of 5% (your final score will be determined by the number you completed). In order to “complete” any quiz, you must score at least 75% in that quiz.

Online quizzes, etc. will be completed on EEE and some assignments will be submitted on UCI's Dropbox. Please make sure you have access to both of these. I will not be responsible for any technical issues in dealing with these sites.

**iClicker participation - 5%**

You will get 5% iClicker participation points as long as you have at least 70% participation. It does not matter if you got the right answers. No excuses for malfunctioning iClickers/forgotten iClickers, etc. will be entertained. No partial credit.

**Discussion sections - 5%**

There will be clicker questions, surprise quizzes, and activities in Discussion sections.Completion of 60% of these will get you 5% of your total score. No partial credit. No excuses for missed discussions, forgotten iClickers, etc.

**Mid-terms - 40%**

There will be 3 class mid-terms (see the Class calendar for the dates). Your lowest score will be dropped (so if you miss one of these due to unforeseen circumstances, that will be the one dropped), and the quizzes will count for 40% of your grade. All class mid-terms will be open book/open notes (but no electronic devices). All class mid-terms are cumulative. In order for your lowest score to be dropped, you must score at least 25% on all three mid-terms. If not, all three of your mid-term scores will count towards your final grade. All mid-terms are cumulative.

**Final Exam - 40%**

Cumulative final will count for 40% of your grade. The final exam will be open book/open notes (but no electronic devices).

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**Regrades**

The regrade policy is only in place so you don’t pay the price for human error. Please do not use the regrade policy as a means to try and secure a few extra points. **It will not work, and eventually will prove to be counterproductive. Trust me.**

If you believe that there is an error with your grade in the class quizzes/assignments, please email your TA (you will be informed which TA graded your quizzes/exams) with details on what you think the error was, and why you think you deserve more points. You should email your TA within 2 days of receiving your exam back (or by the date stipulated in a subsequent email). Merely sending an email saying you think you should get full points on a particular question will result in your email being ignored, and no regrade. The email should detail why you think you deserve more points than was originally given. See the examples that follow:
Example email 1:

Dear TA,

I think I should get 5 points for question 2. Please make the correction in my grade.

-Student "I did not read the regrade policies carefully"

Result of this email: Ignored, no regrade

Example email 2:

Dear TA,

I believe I should get 5 points for question 2 for the theory quiz #5. The answer I gave was that the band would be at 1.5kb, whereas the correct answer as discussed in class was 1564 bp. I was merely rounding off in my answer, and the fact that my reasoning matches what was discussed in class shows that I completely understood the question, and answered it correctly. Thus, I think I deserve the full 5 points for this question.

-Student "I read the regrade policies"

Result of this email: TA will consider the regrade request

If you believe that there is an error with your grade in the FINAL EXAM, please email me with details on what you think the error was, and why you think you deserve more points. You should email me within 2 days of receiving your exam back (or by the time specified in any emails I send you after the Final). Merely sending an email saying you think you should get full points on a particular question will result in your email being ignored, and no regrade. The email should detail why you think you deserve more points than was originally given. See the examples above.

NOTE: When you ask for a regrade, your ENTIRE quiz/exam may be regraded, and you may end up losing more points than you get.

Contacting me by email

First post all questions (unless they are of a personal nature) on the Message Board. Other students, or the TAs might give you a more prompt answer. I will not respond to emails of a non-personal nature, but will answer questions on the Message Board.

You may get a quicker response to your question on the Message Board. Remember that I or the TAs will be checking the Message Boards, and will highlight the good answers to questions. Also search the Message Boards; your question might have already been asked and answered!

Examples of emails I will not answer:

An email asking me to explain how an enzyme active site works.
An email asking for the correct answer to question 3 on Quiz 4.
An email asking when assignment 4 is due.
Examples of emails I will answer:
An email asking for a make up final exam because you were involved in an accident on the day of the final.
An email asking to meet with me outside of office hours for a personal matter.
An email telling me about an incident of cheating/harassment/favoritism in class.

All emails should contain the following in the subject line:
[Bio98 Winter 2015]-

Include the square brackets.
After that, have a short subject for the email. Your subject line should look like this:
[Bio98 Winter 2015]-Subject of email

I will reply to email message as soon as I can, but it may take up to 48 hours. This means that if you email me a question one day before a quiz/exam/lab report submission, you may not hear back from me in time.

I will not reply to your questions if the answer is to be found in the syllabus, class documents, or website. Or if it is information that I have previously emailed you.

IF YOU DO NOT FOLLOW THESE INSTRUCTIONS CAREFULLY, YOUR EMAIL WILL END UP IN MY SPAM FOLDER AND WILL NOT BE ANSWERED, EVER.

Participation in the Discussion board

The class Discussion Board is on EEE, and is linked to from the website. You will be allowed to post anonymously, but I strongly recommend against it, since I will not be able to consider you for extra credit for participation if I don’t know who you are.

What is this “credit for participation” you ask?

Well, at the end of the quarter, I might give people who made excellent contributions in the Discussion board some extra credit. But because I don’t want people spamming the boards in anticipation of extra credit, I will leave the specifics nebulous for now. The precise nature of the extra credit will be explained at the end of the quarter.

The question uppermost in your mind is going to be why the bloody hell you should participate in the forums. Some of the advantages are:

Improve your learning!

Asking and answering questions is the BEST way to really start thinking about the material and gauge your own understanding of all the topics we are going to cover. Some of you will argue that since the class is graded, it makes no sense to share your wisdom with your fellow classmates. This is a silly argument, since explaining what you think you know will increase your own understanding, sometimes show you how wrong your “understanding” was, and will almost always end up improving your grade. In my classes, students who actively participated in the forums (and I mean in an effective way – not just to post useless comments!) usually ended up with an “A” in the class.

Have fun!

One of the most important ways to increase your grade in the class is to get interested in the subject matter. And one of the most effective ways to do that is to talk with other people about what you are learning in class and how it
applies to your life. And one place to discuss that is in the forums. Having a common subject to talk about also builds a sense of community, which makes class a lot more fun and engaging.

**Give useful feedback about class!**

One of the annoying things about the current system of class evaluations is that I get to know what you thought about the class at the end, when it does you no good. Instead, we can have a meaningful discussion in the forums during class on things that can be done to improve class while the quarter is still in session, so that you can benefit from the feedback too. It also helps me know when there is a problem that is shared by many people that needs to be fixed, as opposed to assuming that a problem is just one whiny student who emailed me!

**FAQs**

*Will the lectures be podcast?*

Yes.

*Can I meet with you out of office hours?*

Yes, subject to time constraints. Also, these appointments are exceptions, rather than the rule. You can email me to set up a mutually acceptable time for meeting outside of office hours.

*Can I ask you about science, careers, life, etc?*

Yes. I am happy to meet with you over lunch/coffee (subject to time constraints) to talk about my thoughts and life experiences. You can email me throughout the quarter to fix a time to meet.

*How can I do well in this class? How can I get an “A”?*

Don't just study the material. *Learn & Understand it.*
Don't just study the material. *Think about it.*
Don't just study the material. *Apply it.*
Don't just study the material. *Integrate it.*

The more you are focused on your grade, the less likely you are to get a good grade. The more you are focused on understanding the material, the more likely you are to get a good grade.

*Can I do an assignment for extra credit to make up for ...?*

No.

*Is “X” important to know? Will “X” be on the exam?*

Yes.