

BIOL 6520: Molecular Biophysics (Fall, 2015, CRN: 80193)

1. Course Information

- Course name, number, and section: Molecular Biophysics BIOL 6520 A
- Hours of credit: 3
- Pre-requisites or co-requisites as listed in university catalogue: Prerequisite: Admission into the graduate program or permission of the instructor.
- Classroom location and room number: BC 1024, T & R 5:00 pm - 6:15 pm

2. Instructor Information

- Instructor name: Dr. Jonghoon Kang
- Instructor contact: BC 2217, 229-333-7140, jkang@valdosta.edu
- Instructor office hours: T & R 3:00 pm - 4:00 pm (You may discuss course-related issues)

3. Course Description

- Course description as printed in university catalogue: Introduction to thermodynamics, kinetics, and their applications to biological systems.
- Required texts, resources, and materials:
 - ✓ *Chemistry for the Biosciences: The Essential Concepts*, 3rd Edition by Jonathan Crowe and Tony Bradshaw from Oxford University Press (ISBN-13: 978-0199662883)
 - ✓ Electronic calculator (not cell phone)

4. Standards, Goals, Objectives, or Outcomes

- outcomes:

The departmental educational outcomes

1. To demonstrate competency in factual content and interpretation of the major biological concept areas of cell and molecular biology, genetics, organismal biology, and evolution and ecology.
2. To demonstrate the ability to identify significant biological research questions, develop research protocols, and properly analyze research questions through the use of the scientific method.
3. To produce a systematic and thoroughly researched thesis suitable for publication and appropriate to the thesis sub-discipline.

- Course objectives or outcomes:

- Describe basic terminology used in thermodynamics and kinetics
- Perform basic mathematical manipulations of thermodynamic and kinetic equations
- Interpret biochemical phenomena in terms of thermodynamics and kinetics
- Enhance understanding of current biological literature that contains biophysical concepts covered in this course.
- Recognize the importance of physics and chemistry in the biological sciences

5. Assignments

These are the five activities you need to do to obtain an A from this course:

- Attending class
- Taking note of whatever I write on the board
- Reading and studying your notebooks and textbook
- Working on the exercise problems on the online resources
<http://global.oup.com/uk/orc/biosciences/chembio/crowe3e/>
- Reading any additional assignments (papers)

6. Policy

There will be five in-class tests (100 points each) and one final exam (200 points). In addition to the test scores, your attendance will also be included in the assessment. Your attendance will be counted from August 25 to December 3 excluding the test dates. The total number of dates for attendance evaluation is 22 days. Each attendance is worthy of 2 points so the total attendance point is 44.

If YCS (Your Class Score) $\geq 90\%$ then A for the final grade, if YCS $\geq 80\%$ then B, if YCS $\geq 70\%$ then C, if YCS $\geq 60\%$ then D and anything below will be F.

Attendance and tardiness: Any absence policy should conform to the university policy.

University Attendance Policy from the VSU catalogue:

"The University expects that all students shall regularly attend all scheduled class meetings held for instruction or examination. When students are to be absent from class, they should immediately contact the instructor. A student who misses more than 20% of the scheduled classes of a course will be subject to receive a failing grade in the course."

In the event that a student misses a class with an excuse, s/he should email the instructor within 24 hours of the missed class. Excused absences are usually given for medical emergencies and documentation must be provided.

8. Classroom Policies

- Accommodations Statement:
From VSU's Access Office <http://www.valdosta.edu/access/facresources.shtml>:
"Students requesting classroom accommodations or modifications due to a documented disability must contact the Access Office for Students with Disabilities located in the Farber Hall. The phone numbers are 245-2498 (V/VP) and 219-1348 (TTY)."
- Academic Integrity: You know that cheating is a bad thing to do. Students caught cheating will receive a grade of F for the test in question and will be reported to the Dean of Students. You are expected to follow VSU's Academic Integrity Code.
From VSU's Academic Integrity Code (the full code is available at <http://www.valdosta.edu/academic/AcademicHonestyPoliciesandProcedures.shtml> :
"Academic integrity is the responsibility of all VSU faculty and students. Faculty members should promote academic integrity by including clear instruction on the components of academic integrity and clearly defining the penalties for cheating and plagiarism in their course syllabi. Students are responsible for knowing and abiding by the Academic Integrity Policy as set forth in the Student Code of Conduct and the faculty members' syllabi. All students are expected to do their own work and to uphold a high standard of academic ethics. "
- Classroom demeanor or conduct: Every student should make the lecture a comfortable and enjoyable learning experience. Late entry to the class room or leaving early is bad behavior. Common sense should be practiced and expected.
- Communication: All VSU-related correspondence should be conducted via VSU email addresses for both student and instructor.

9. Additional Information (at instructor's discretion)

- Expectations for competencies such as writing, technology skills, or performance: Students should be able to describe biological phenomena at the molecular and cellular level in terms of physics and chemistry.
- Instructional philosophy: I believe reading one book ten times is better than reading ten books one time each. This is the case for this course. Students are encouraged to practice all the exercise and examples in the textbook ten times.
- Strategies used to support learning: Students should take advantage of my office hours. Studying as a group (study group) should be a good idea.
- ***After all, I teach and you learn. Let's see how much we can accomplish together!***