

## BIOL 6500: Cell Biology (Spring, 2017)

### 1. Course Information

- Course number and section: BIOL 6500 (A) (CRN #: 21305)
- Course name: Cell Biology
- Hours of credit: 4
- Pre-requisites or co-requisites as listed in university catalogue: Admission into the graduate program or permission of the instructor.
- Classroom location and room number:  
Lecture: M & W 3:30 pm - 4:45 pm, BC 1202  
Lab: R 1:00 pm - 3:50 pm, BC 3018
- Department, College, University: Department of Biology, College of Arts and Sciences, Valdosta State University

### 2. Instructor Information

- Instructor name: Dr. Jonghoon Kang
- Instructor contact: BC 2217, 229-333-7140, [jkang@valdosta.edu](mailto:jkang@valdosta.edu)
- Instructor office hours: M & W 2:00 pm - 3:00 pm

### 3. Course Description

- Course description as printed in university catalogue: The organization and function of cellular structures in animal, plant, and microbial systems. Emphasis on the molecular basis of metabolism, transport, mobility, nerve conduction, and the cell cycle.
- Required texts, resources, and materials: **Guesstimation** by Lawrence Weinstein and John A. Adam from Princeton University Press (ISBN-13: 978-0691129495) and **Cell Biology by the Numbers** by Ron Milo and Rob Phillips from Garland (ISBN: 978-0815345374)  
Online Resources for Lab: **An Elementary Introduction to the Wolfram Language** by Stephen Wolfram. <http://www.wolfram.com/language/elementary-introduction/>  
Hand-on Start to Mathematica:  
<http://www.wolfram.com/broadcast/screencasts/handsonstart/>  
Fast Introduction for Programmers:  
<http://www.wolfram.com/language/fast-introduction-for-programmers/en/>
- Required out-of-class activities: In addition to attending the lectures you need to
  - ✓ Read your notebook/ppt materials (very important).
  - ✓ Read the textbooks
  - ✓ Work on all the exercise questions in the textbooks.
  - ✓ Complete assignments.

### 4. Standards, Goals, Objectives, or Outcomes

- outcomes:

The General Education Outcomes (<https://www.valdosta.edu/academics/general-education-council/ge-outcomes.php>).

AREA A1: Students will communicate effectively in writing by using appropriate conventions of correctness, style, tone, and organization and by adapting writing to audience and context.

AREA A2: Students will demonstrate mathematical proficiency by analyzing a variety of functions and solving various equations.

AREA D: Students will demonstrate understanding of the physical universe and the nature of science, and they will use scientific methods and/or mathematical reasoning and concepts to solve problems.

The departmental educational outcomes (listed in the university catalogue).

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.

- **Course objectives or outcomes:**

- Enhance analytical and quantitative skills
- Describe basic terminology in cell biology.
- Describe the underlying physical and chemical principles in cell biology.
- Demonstrate proficiency in basic mathematical programming (*Mathematica*).
- Demonstrate an understanding of basic computational techniques in cell biology.
- Demonstrate competency for the cell biology part in standard tests such as GRE, MCAT, DAT, PCAT, and MFT.

5. Assignments (explicitly aligned with the goals, objectives, or outcomes)

- General description of the assignments: Students are required to read the textbook to be covered before and after class. Some additional materials will be posted on the Blazeview and you need to study them before class. There will be four in-class tests and one final test.
- Policies for missed assignments, make-up assignments, late assignments, and/or extra credit: If you miss any assignment due to medical or family-related emergency you can have make-up assignments as long as you prove the valid reason of your absence (doctor's notes). **Otherwise no make-up tests or labs!** And you will get a zero point for the missing part. Late assignments will not be accepted. If you miss the lab more than three times for any reasons, you won't pass this course. So, make sure that you attend all lectures as well as labs.

6. Assessment or Evaluation Policy

- Explanation of how much each assignment contributes to the overall grade for the class:
- **Total Score = 300 (In Class Exam) + 200 (Two Lab Practical) + 10 (Assignment) + 100 (Presentation of assigned papers) + Final (200) = 810**
- Explanation of how grades are assigned:

Total score (%)	Grade
$\geq 90\%$	A
$\geq 80\%$	B
$\geq 70\%$	C
$\geq 60\%$	D
$< 60\%$	F



## 8. Classroom Policies

### Accommodations Statement

Students with disabilities who are experiencing barriers in this course may contact the Access Office for assistance in determining and implementing reasonable accommodations. The access Office is located in Farbar Hall. The phone numbers are 229-245-2498 (V), 229-375-5871. For more information, please visit VSU's Access Office or email: [access@valdosta.edu](mailto:access@valdosta.edu).

### Title IX Statement

Valdosta State University (VSU) is committed to creating a diverse and inclusive work and learning environment free from discrimination and harassment. VSU is dedicated to creating an environment where all campus community members feel valued, respected, and included. Valdosta State University prohibits discrimination on the basis of race, color, ethnicity, national origin, sex (including sexual harassment and sexual violence), sexual orientation, gender identity, religion, age, disability, genetic information, or veteran status, in the University's programs and activities as required by applicable laws and regulations such as Title IX. The individual designated with responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination policies is the University's Title IX Coordinator: the Director of the Office of Social Equity, [titleix@valdosta.edu](mailto:titleix@valdosta.edu), 1208 N. Patterson St., Valdosta State University, Valdosta, Georgia 31698, 229-333-5463.

- Arrive on time. Attendance will be recorded in the first 10 minutes of the class. So, do not be late to class. 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. It is the instructor's prerogative to accept the excuse or not. Students are still responsible for all class content even if they received an excused absence.
- Cell phones are not allowed to be used in class.
- Email: Please email me only from a VSU email account. I am unable to respond to emails from non-VSU accounts.
- Academic integrity is the responsibility of all VSU faculty and students. Students are responsible for knowing and abiding by the Academic Integrity Policy as set forth in the Student Code of Conduct and the syllabus. All students are expected to do their own work and to uphold a high standard of academic ethics. Cheating (including plagiarism) will not be tolerated. The instructor reserves the right to dismiss you from the course without credit if you are caught cheating. You will be respectful of your instructor and your fellow students at all times, or you will be dismissed from the class and potentially the course.
- No arguments on final grade. You can check any mistake in the calculation of your grade but no any other arguments.

### 9. Additional Information (at instructor's discretion)

- Strategies used to support learning: Students should take advantage of my office hours. Studying as a group (study group) should be a good idea. However, you have to complete all term projects and take-home exams by yourself. If cheatings are found in your projects or take-home exams, all students involved will get a zero point in those assignments.
- ***I will teach you and you will learn an essential topic in biology, cell biology, in this course. Therefore, your intellectual enhancement from taking this course will depend on both of us. Would you have any other ideas?***