

MATH 255A: Calculus for the Life Sciences, Spring 2017

Section: 02, Class Number: 17432
(Syllabus)

Disclaimer: This syllabus is provisional and the instructor reserves the right to make changes. The instructor will make every effort to notify you in advance about any changes.

Instructor: Dr. Jing Li

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Office hours: Mondays 11:00am - 12:00pm and 2:00pm - 3:00pm & Wednesdays 11:00am - 12:00pm or by appointment (email).

I will be happy to address your questions regarding the course and its contents. You are advised to make use of office hours.

Prerequisites: Passing Score on or exemption from the Entry Level Mathematics Exam (ELM) or credit in Math 093, and either a passing score on Mathematics Placement Test (MPT) or completion of MATH 105 (or 102/104), or transfer credit from another college for the equivalent of the above courses, with grades C or better.

Lectures: Mondays & Wednesdays 12:30pm-1:45pm in Live Oak Hall 1124

Course textbook: Calculus for Life Sciences with WileyPLUS Card Set, by S. J. Schreiber, K. Smith, W. Getz, 1st ed., Wiley 2014, available at CSUN Matador Bookstore or from the publisher: <http://www.wiley.com/WileyCDA/Section/id-828943.html>. (You *will* need the code for online homework.)

Course webpage: http://www.csun.edu/~jingli/courses/MATH255A_S17.html

MATH 255A Lab: This class has a lab section attached to it (called MATH 150AL this semester) which is mandatory for all students who are Conditionally Prepared. The lab is designed to provide supplemental instruction and training to help cover the gaps and prepare for the exams. All students are encouraged to enroll in the lab definitely consider doing this if your schedule permits.

Course Description: First semester of a brief course in calculus, emphasizing applications to biology and other natural sciences. Topics include functions of one variable, graphs, limits, continuity, derivatives, techniques for finding maxima/minima, introduction to integration, fundamental theorem of calculus and integration by substitution. This course is available for General Education, Basic Skills Mathematics.

Goal: Students will gain competence in mathematical reasoning necessary for informed judgment and decision making.

Student Learning Outcomes: Students will:

- Represent, understand and explain mathematical information symbolically, graphically, numerically and verbally;

- Develop mathematical models of real-world situations and explain the assumptions and limitations of those models;
- Use models to make predictions, draw conclusions, check whether the results are reasonable, and find optimal results using technology when necessary and appropriate;
- Demonstrate an understanding of the nature of mathematical reasoning, including the ability to prove simple results and/or make statistical inferences.

Assessment: There will be regular homework assignments, quizzes, three 75-minute midterm exams and one 2-hour final exam. These will be weighted as follows:

Homework: 10% (total)

Midterm exams: 20% each

Final exam (comprehensive): 30%

The percentages are generally translated into letter grades using the following scale: 90-100A; 77-90% B, 65-77% C, 50-65% D, 0-50% F. Small modifications to the cutoff numbers may be done at the end of the semester to account for particulars of grade distribution. There will be no "grading on the curve", i. e. there is no prescribed number of A's, B's, C's and D's given in this course. Plus and minus grades may be assigned at instructor's discretion.

Homework assignments: Homework will be assigned for each section covered in class and is to be completed via the Wiley Plus online system <http://www.wileyplus.com/>. Homework will be automatically submitted on the due date; late assignments will receive no credit. All online homework problems are from the textbook – work with the textbook when you solve homework problems. Even though the homework receives only 10% of the total grade, it is probably the course's most important component. Allow yourself sufficient time to work on the problems, keep notes and refer to them to prepare for the exams –this will improve your chances for success in this course greatly.

Midterms: There will be three in-class midterms, tentatively scheduled for February 15, March 15 and April 19 (all Wednesdays). This schedule may be adjusted, and the changes will be announced in class and on the course web page. One single-sided page of notes is allowed on the midterms.

Make-up exams: There will be absolutely **NO** makeup final exams. Make sure that you don't have any conflicts with the time and day of the final exam for this class. Make-up midterm exams will be given to students with legitimate excuses such as verified illness, university sponsored events, etc. Written documentation is required. In this case you should let me know about it before the exam (by email).

Final exam: on May 16, 2017, Tuesday 12:45 pm - 2:45 pm. The final exam is comprehensive. You must take the final exam to get a passing grade for the course; final exam no-shows will automatically result in grade WU.

Calculators and Other Technology: A graphing calculator such as TI 83 or TI 84 Plus is strongly recommended for this course, and calculators may be required for the exams. For a list of acceptable graphing calculators see here:

<http://apstudent.collegeboard.org/takingtheexam/exam-policies/calculator-policy>

There is probably no need to get the most advanced graphing calculator on the list, and on the exams you will be required to show your work beyond the graphing calculator output. Any of the two mentioned TI calculator models should be sufficient for the purposes of this class.

Other technology tools that are useful for this course include the Wolfram Alpha website:

www.wolframalpha.com

and/or Wolfram Alpha iPhone/Android apps (basic functionality is available for free on the web, and mobile and tablet apps seem like viable options that include more features) and GNU Octave:

<https://www.gnu.org/software/octave/>

which is a powerful tool for numerical computations available for free on Windows PC, Mac or Linux.

An approved graphing or scientific calculator is the only electronic device allowed on all tests/exams; cellphones and other electronic devices must be off and put away completely for the duration of the exams.

General Comments: for your information, please read carefully.

1. **Scholastic Misconduct:** Students are required to fully comply with the University Code of Conduct. Any disturbance during lectures or cheating during exams will have severe consequences. I assume that you are familiar with the following document:

<http://www.csun.edu/catalog/policies/student-conduct-code/>

I would also like to draw your attention to the **CSUN's academic dishonesty policy:**

<http://www.csun.edu/catalog/policies/academic-dishonesty/>

and to the **CSUN's grade forgiveness policy.** Please be aware of that this policy is not applicable to a grade resulting from a finding of academic dishonesty. Please refer to this URL address:

<http://www.csun.edu/catalog/policies/repeating-courses-grade-forgiveness-undergraduate/>

2. **Attendance:** Class attendance is strongly suggested for successful course completion. There is a high correlation between students who miss class and students who fail. Should one miss a class, he/she is still responsible for the work covered and any announcements made. Attendance will be taken routinely at the start of the class.
3. **Electronic Device (Cell phones) Usage Policy during the Exams:** All electronic devices such as cell phones must be turned off, placed on the floor, and visible to the proctors. If a mobile phone is observed ON during an exam, it will be assumed that it is being used for cheating purposes, and the student in question will fail the exam and possibly the course, along with other possible university disciplinary sanctions.
4. **Electronic Devices (Cell phones) Usage Policy during the Lectures:** Students are required to turn off all electronic devices such as cell phones, iPods, and blackberries. If you need your cell phone on because you have children or need to remain in contact with someone because of a medical emergency, please inform the professor at the beginning of the class and please leave the cell phone on vibrate.
5. **Participation:** Your participation in discussions of the material of MATH255A during the lecture and outside of class are highly encouraged.

6. Students with Disabilities: If you have a disability and need accommodations, please register with the Disability Resources and Educational Services (DRES) office or the National Center on Deafness (NCOD). The DRES office is located in Bayramian Hall, room 110 and can be reached at 818.677.2684. NCOD is located on Bertrand Street in Jeanne Chisholm Hall and can be reached at 818.677.2054. If you would like to discuss your need for accommodations with me, please contact me to set up an appointment.
7. E-mail Communication: In accordance with the University's policy, this class will use your university email address to communicate with you about all course-related matters.
8. Course Webpage: The table on the course website gives you information about what was covered in class together with a list of suggested exercises. Please check the website frequently as it will be updated regularly.
9. Learning mathematics requires solitary work and group efforts. Get together in small groups to discuss the material but solve and write your assignments on your own! This will pay off in the end.
10. It is a sign of strength (not weakness) to ask for help if you need it: Identify your difficulty, identify who can help you, go and ask for help.
11. If you have suggestions for me to improve our teaching, please tell me right away. Do not wait until the course evaluation at the end of the term, because then only the students after you will benefit from your suggestion.
12. Start working on the material right away. Check your understanding after every class. It will pay off later.
13. Classmate contact information [you are recommended to get basic contact information from two classmates (*such as email address or phone number*) so that you can call on these classmates for help in case you miss a meeting or have a simple question.]

Classmate Name: _____ **Classmate Contact:** _____

Classmate Name: _____ **Classmate Contact:** _____