

MATH 16B
INFO SHEET

SOWINSKI
SPRING 2018

TIME : T-R 7:15 – 9:20 AM

ROOM : V-324

TEXTBOOK : *Applied Calculus for the Managerial, Life, and Social Sciences*, 10th edition, by Soo T. Tan, publisher: Cengage Learning

INSTRUCTION : The usual class meeting will consist of working homework problems that gave you difficulty, lecture, and discussion. At the beginning of each class meeting, please put a list of homework problems you would like me to do on the far left side of the board. This allows me to come in and immediately begin.

HOMEWORK : Homework will be assigned each class meeting. However, I do not collect homework. As in any math course, homework is an essential part of the learning process. Just as an athlete must practice his sport in order to become proficient, you must be willing to put in the time practicing the problems in order to become proficient in this subject. For most students, that means at least 2 hours out of class for every hour in class.

QUIZZES : Quizzes will be given each Thursday at the beginning of the class. Please do not be late, as you will not be given any more time. The quizzes will be approximately 15 – 20 minutes in length, and you will be told the class meeting before which sections the quiz will cover. Each quiz contains problems that are similar to but not the same as the assigned problems from homework. The two lowest quizzes will be dropped. **There are no make-ups on quizzes.**

EXAMS : There will be 5 exams given during the semester. Each exam is worth 100 points. You may make up exams if you give me advance notice that you will be missing a class meeting when a test will be given.

GRADES : Grades will be assigned based on total points accumulated:

Quizzes	100 pts
Exams	500 pts
Final	<u>200 pts</u>
Total	800 pts

The scale I will use is as follows:

720 – 800 pts (90% - 100%)	A
640 – 719 pts (80 % - 90 %)	B
560 – 639 pts (70% - 80%)	C
80 – 559 pts (60% - 70%)	D
BELOW	F

ATTENDANCE : I will be taking attendance each class meeting. Mathematics is a subject that requires participation. During the class meeting as I lecture, I will often give hints as to how to study more effectively or how to solve problems in a quicker way. If you are not present for the lecture, you will be missing out on many helpful ideas not to mention the core content. It has been my experience that students who regularly do not attend class usually fail or withdraw. Therefore, if any student misses more than 8 hours of class (that is 4 class meeting) during the course of the semester, you may be dropped by me. Be aware that leaving class early constitutes an absence. Sometimes, however, some students fall through the cracks and I miss them. If it is your intention to withdraw from the course, do not assume that I have withdrawn you. You must check with the records department as to your status for the course. If I have withdrawn you, great! But, if I haven't, you will be able to initiate the process yourself.

E-MAIL : lsowinski@sierracollege.edu .

OFFICE HOURS : T W 9:30 – 10:00 AM in room v-329

ELECTRONIC DEVICES: Cell phones and other electronic devices have become a natural part of our lives. While they are a wonderful too, they can be very distracting in a class room environment. Please do not use your phone or other electronic device while in class unless you are using the device as a note taking tool and have cleared it will me beforehand. If I see you using your cell phone for any reason during class, I will give you one warning. If I see you using these devices after you have been given a warning, I will be asking you to give me your phone or until the end of class. If there is an emergency and you are expecting a call regarding it, let me know. You will be instructed to leave your phone on your desk in vibrate mode, and if the call comes in, please leave the room quietly and only answer it after you are in the hallway.

COURSE OUTCOMES

1. Apply the Fundamental Theorem of Calculus.
2. Use the disc method and washer method to find the volume of a solid of revolution. Use solids of revolution to solve real-life problems.
3. Use integration by substitution, integration by parts, partial fractions, and integration tables to find antiderivatives. Use techniques to solve real-life problems.
4. Evaluate improper integrals with infinite limits of integration and infinite integrands. Solve real-life problems.
5. Evaluate trigonometric functions (exactly and approximately), their limits and their derivatives. Calculate using degrees and radians.
6. Solve trigonometric equations (including real life applications) using identities and special angles.
7. Sketch the graphs of trigonometric functions using calculus when necessary.
8. Analyze points (distance between and midpoint) and surfaces (spheres, planes, traces, level curves) and graphs (quadric surfaces) in the three dimensional coordinate system.
9. Calculate partial derivatives and find extrema of functions of several variables including real life examples.
10. Use Lagrange multipliers to solve constrained optimization problems.
11. Evaluate double integrals and use them to find area and volume.
12. Find general solutions and particular solutions of differential equations. Solve differential equations using separation of variables and integrating factors. Use differential equations to model and solve real-life problems.
13. Find the limit of a sequence of numbers and use techniques to solve business and economic applications involving sequences.
14. Determine the convergence or divergence of an infinite series. Use the Ratio Test and Convergence Test to determine convergence or divergence for p-series

15. Use Taylor's Theorem to determine the Taylor and Maclaurin series of simple functions.
16. Use Taylor polynomials for approximation.
17. Use the Power Rule, Exponential Rule and Log Rule to calculate antiderivatives.
18. Evaluate definite integrals to find the area bounded by two graphs.

STUDENT LEARNING OUTCOMES:

- CSLO 1 Calculate integrals of algebraic, trigonometric, inverse, and transcendental functions.
- CSLO 2 Sketch graphs of trigonometric functions using calculus techniques.
- CSLO 3 Translate, model, and solve optimization problems utilizing differentiation, partial differentiation, integration, and Lagrange multipliers
- CSLO 4 Analyze points, surfaces, and graphs in three dimensions.
- CSLO 5 Logically present clear, complete, accurate, and sufficiently detailed solutions to communicate reasoning and demonstrate the method of solving problems

TITLE IX REPORTING:

As an instructor, one of my responsibilities is to help create a safe learning environment for my students and for the campus as a whole. Under Title IX as a member of the college community, I have the responsibility to report any instances of sexual harassment, sexual or domestic violence, and/or other forms of prohibited discrimination. If you would rather share information about sexual harassment, sexual violence or discrimination to a confidential counseling employee who does not have this reporting responsibility, please let me know so that I can get you in contact with them.