MATH 2130-03: Calculus III
Fall 2019

Instructor: Tony Shaheen
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Office Hours: to be announced in class.

Course Website: Follow the link from http://www.calstatela.edu/research/ashahee/

Lectures: Tuesday and Thursday, 1:40—2:55, in Salazar Hall 139A.

Textbook: Calculus: Early Transcendental 2nd ed. Briggs, Cochran, Gillett.
1. ebook and MyMathLab: ISBN 978-0-321-19991-1 available at www.mymathlab.com
Other Options:
2. Hard copy with MyMathLab: ISBN 978-0-321-96516-5
3. Hard copy only: ISBN 978-0-321-94734-5

Prerequisite: Math 2120 with a minimum C grade; students with a grade of less than B- in MATH 2120 must enroll concurrently in MATH 2131.

Description: Partial differentiation, multiple integration, vector calculus, line integrals.

Student learning outcomes: Students who successfully complete Math 2130 will be able to:
1. Sketch cylinders and quadratic surfaces in the three-dimensional coordinate system.
2. Use the vector and scalar equation of a plane to solve problems with lines and planes.
3. Compute the limit of a function of two variables, or show that the limit does not exist.
4. Compute the partial derivatives of a function using the definition or the rules.
5. Compute derivatives using the various chain rules.
6. Compute the directional derivative and the gradient vector of a function; apply these computations to find rates of change of the function.
7. Use the derivative tests of a function of two variables to find local maxima and minima; be able to maximize or minimize a function of two variables on a closed and bounded set in the plane.
8. Use the method of Lagrange multipliers to maximize and minimize functions subject to constraints.
9. Compute double integrals, using polar coordinates if necessary, and triple integrals, using cylindrical coordinates or spherical coordinates if necessary.
10. Use a double or triple integral to find the volume of a region in three-dimensional space.
11. Use multiple integrals to solve physics problems, such as finding the mass of a lamina or a solid.
12. Compute line integrals.
13. Understand and apply Green's theorem.

Grading: Your grade will be based on two tests and a cumulative final. Each exam is worth 1/3 of your grade.

Homework: Homework will be assigned, but not collected. The homework problems will be posted on the course website. We will go over some of the homework problems in class. You will also be working on the homework in the workshop.

Exams: There are two tests and a final. All tests are in the regular classroom. The dates and times of the exams are as follows.   The below dates are tentative.   The final time/day is scheduled by the school and it may change.

Test 1: Tuesday, October 8.
Test 2: Tuesday, November 5.
Tentative Final Date: Thursday, December 12, 12:00—2:00pm.

ADA statement: Reasonable accommodation will be provided to any student who is registered with the Office of Students with Disabilities and requests needed accommodation. Please let me know in the first week of class if you will be taking tests at the OSD office.

Academic honesty statement: Students are expected to do their own work. Copying the work of others, cheating on exams, and similar violations will be reported to the University Discipline Officer, who has the authority to take disciplinary actions against students who violate the standards of academic honesty.

Student responsibilities: Students are responsible for being aware of all announcements that are made in class, such as changes in exam dates, due dates of homework and papers, and cancellation of class due to instructor's absence. Students are responsible for announcements made on days that they are absent.

Students must check their CSULA email account regularly for information from the instructor and the Department. Failure to do so may result in missed deadlines or other consequences that might adversely affect students. Note that you can forward this email account to any other account of your choosing.