

Multivariable Calculus, Section 003
MATH-2063-003 (4 credit hours)
Fall Semester, 2013

Class Room and Class Times: Room 801 of the Old Chemistry Building
Monday, Tuesday, Thursday, and Friday at 8:00-8:55 a.m.
except Monday, September 2 (Labor Day), October 7 and 8 (Reading Days),
November 11 (Veteran's Day), and November 28-29 (Thanksgiving Holidays)

From Monday, August 26 through Friday, December 6, 2013
and the Final Examination on Friday, December 13 at 8:00-10:00 a.m. in Room 801 Old Chemistry

Teacher: Roger Chalkley

Office: Room 4504, French Hall West

Office Hours: 9:15-10:30 a.m. on Monday, Tuesday, and Friday (or by appointment)

Requirement for the course: MATH 1062 with a grade of C or better

Access to the internet service WebAssign at <http://WebAssign.net/> is needed for the homework problems and your access key is uc 5291 5650 for our section of this course.

Textbook: *Calculus – Early Transcendentals*, seventh edition, 2012,
by James Stewart, Brooks/Cole, Belmont, CA

List of Subject Matter: See the next page for sections and assigned problems. In general, the homework must be submitted by 11:59 p.m. of the Sunday following the day in which the corresponding section was covered in class. (That will also apply in the event that the schedule needs to be adjusted.)

Testing and Grading Policy: There will be three 50-minute examinations, a 2-hour final examination, 3 quizzes, and graded homework. Each 50-minute exam will be graded on a basis of 100 points and count as 1/6 of your final grade. The final examination will be graded on a basis of 100 points and count as 2/6 of your final grade. Each quiz will be graded on a basis of 25 points and count as 1/24 of your final grade. The overall homework grade will be based on 25 points accumulated from WebAssign Problems and count as 1/24 of your final grade.

Examination 1 - Friday, September 20, 8:00-8:50 a.m. Q
Examination 2 - Friday, October 18, 8:10-8:50 a.m.
Examination 3 - Friday, November 15, 8:00-8:50 a.m.

Final Exam: Friday, December 13 at 8:00-10:00 a.m. in Room 801 Old Chemistry

Partial credit on examinations and quizzes is awarded only for work that is mostly correct except for one or two minor errors. You will not be given partial credit for attempting to solve a problem by an incorrect method. You must show your work on those tests. A correct answer without the accompanying correct work will receive no credit; an incorrect final answer accompanied by mostly correct work will receive substantial credit. Also, it is your responsibility to arrange your work in a logical manner and to write legibly. The grade is based on the work shown, not what was intended or implied.

Grade of W: November 1 (a Friday) is the last day to withdraw from the class and receive a grade of W.

The Mathematics Learning Center is located in French Hall West, Room 2133. It is a free, walk-in, mathematics tutoring center for all University of Cincinnati students. The tutoring hours may be found at http://www.artsci.uc.edu/departments/math/learning_center.html

| Week | Days | Sections | WebAssign Homework |
|------|--|---|--|
| 1 | Aug. 26-30 | 13.1 Vector functions and space curves 13.2 Derivatives and Integrals of vector functions 13.3 Arc length, curvature | Section 13.1 Section 13.2 Section 13.3 |
| 2 | Sept. 3-6 Labor Day on Sept. 2 | 13.4 Motion in space: velocity and acceleration 14.1 Functions of several variables 14.2 Limits and continuity Quiz 1 | Section 13.4 Section 14.1 Section 14.2 |
| 3 | Sept. 9-13 | 14.3 Partial derivatives 14.4 Tangent planes and linear approximations 14.5 Chain rule | Section 14.3 Section 14.4 Section 14.5, part 1 |
| 4 | Sept. 16-20 | 14.5 (continued) 14.6 Directional derivatives and gradient vector Examination 1, Friday, 8:00-8:50 a.m. | Section 14.5, part 2 Section 14.6 Section 14.7 |
| 5 | Sept. 23-27 | 14.7 Maximum and minimum values 14.8 Lagrange multipliers | Section 14.7 Section 14.8 |
| 6 | Sept. 30-Oct. 4 | 15.1 Double integrals over rectangles 15.2 Iterated integrals 15.3 Double integrals over general regions, Quiz 2 | Section 15.1 Section 15.2 Section 15.3 |
| 7 | Oct. 7-11 Reading Days Oct. 7, 8 | 15.4 Double integrals in polar coordinates 15.5 Applications of double integrals | Section 15.4 Section 15.5 |
| 8 | Oct. 14-18 | 15.6 Surface area 15.7 Triple integrals Examination 2, Friday, 8:00-8:50 a.m. | Section 15.6 Section 15.7 |
| 9 | Oct. 21-25 | 15.8 Triple integrals in cylindrical coordinates 15.9 Triple integrals in spherical coordinates | Section 15.8 Section 15.9 |
| 10 | Oct. 28-Nov. 1 | 15.10 Change of variables in multiple integrals 16.1 Vector fields Quiz 3 | Section 15.10 Section 16.1 |
| 11 | Nov. 4-8 | 16.2 Line integrals 16.3 Fundamental theorem for line integrals 16.4 Green's Theorem | Section 16.2 Section 16.3 Section 16.4, part 1 |
| 12 | Nov. 12-15 Veterans-Day on Nov. 12 | 16.4 (continued) 16.5 Curl and divergence Examination 3, Friday, 8:00-8:50 a.m. | Section 16.4, part 2 Section 16.5 |
| 13 | Nov. 18-22 | 16.6 Parametric surfaces 16.7 Surface integrals | Section 16.6 Section 16.7 |
| 14 | Nov. 25-27 Thanksgiving on Nov. 28, 29 | 16.8 Stokes' Theorem | Section 16.8 |
| 15 | Dec. 1-6 | 16.9 Divergence theorem 16.10 Summary | Section 16.9 |
| 16 | Dec. 9-13 | Final Exam, Friday, Dec. 13, 8:00-10:00 a.m. | |