Text: *Calculus*, 5th ed, Hughes-Hallett et al., Wiley.

ACE Outcome 3: This course satisfies ACE Outcome 3: "Use mathematical, computational, statistical, or formal reasoning (including reasoning based on principles of logic) to solve problems, draw inferences, and determine reasonableness." Your instructor will provide examples, you will discuss them in class, and you will practice with numerous homework problems. The exams will test how well you've mastered the material. The final exam will be the primary means of assessing your achievement of ACE Outcome 3.

Disability Statement: Students with disabilities are encouraged to contact the instructor for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska-Lincoln to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Services for Students with Disabilities (SSD) office, 132 Canfield Administration, 472-3787 voice or TTY.

Course Evaluation: The Department of Mathematics Course Evaluation Form will be available through your Blackboard account during the last two weeks of class. You'll get an email when the form becomes available. Evaluations are anonymous and instructors do not see any of the responses until after final grades have been submitted. Evaluations are important—the department uses evaluations to improve instruction. Please complete the evaluation and take the time to do so thoughtfully.

Schedule: The daily schedule and number/dates of tests are subject to change. It is your responsibility to keep track of appropriate dates for your section.

Daily Work: Do an initial reading of the sections expected to be covered before coming to class each day - even if you don't understand the details, that reading will help you better understand the lecture. Rereading more carefully after the class can also be helpful. The exercises listed below represent a minimal assignment and should be done as the material is covered. Doing additional exercises not listed here can help you to attain better mastery of the material.

Calculators: You will be permitted to use any standard calculator not possessing communications capability (you cannot use a calculator built into a cell phone) on the final exam. You will not be allowed to use a tablet or notebook computer or equivalent. Your instructor will decide to what extent calculators are allowed on your midterm exams and quizzes.

Final Exam: The time for the final exam is 6:00-8:00 pm, Monday, December 10, Room TBA. You are expected to arrange your personal and work schedule to allow you to take the exam at that time. Students with conflicting exam schedules may be allowed to take an alternate final, which is always given after the regularly scheduled final. No student will be allowed to take the final exam early. A picture ID (driver's license or student ID) may be required to take the final exam.

Advanced Placement: If this is the first college mathematics course that you have attempted, then you may be eligible for 10 hours of free credit for Math 106 and Math 107, provided you earn a grade of P, C or better in Math 208 this semester. To be considered for this credit, you should register with the Department of Mathematics, 203 Avery Hall, by Friday, September 14, 2012.

Department Grading Appeals Policy: The Department of Mathematics does not tolerate discrimination or harassment on the basis of race, gender, religion or sexual orientation. If you believe you have been subject to such discrimination or harassment in this or any math course, please contact the department. If, for this or any other reason, you believe that your grade was assigned incorrectly or capriciously, appeals should be made to (in order) the instructor, the department chair, the departmental grading appeals committee, and the college grading appeals committee.

Dates	**Sections/Topic**	**Exercises**
Aug. 20–24	12.1 Functions of Two Variables	1, 2, 5, 11, 15, 23, 25, 29, 30
	12.2 Graphs of Functions of Two Variables	1, 2, 5, 8, 10, 11, 13, 15, 17, 19, 29, 31
	12.3 Contour Diagrams	5, 7, 8, 9, 13, 16, 20, 21ab
	12.4 Linear Functions	1–5, 7, 8, 10, 13, 21, 28
Aug. 27–31	12.5 Functions of Three Variables	1–3, 8–11, 13, 15, 16–18, 23, 31
	12.6 Limits and Continuity	1, 3, 6, 11, 13, 18
	13.1, 2 Vectors	13.1: 1, 5, 7, 12, 15, 28, 29, 31, 40
		13.2: 1–5, 7, 11, 21, 25
	13.3 The Dot Product	1, 5, 7, 9, 11, 15, 17, 19, 33, 39, 41, 43, 49
Friday, August 31, is the last day to withdraw from the course without a grade of W.		

Dates	Sections/Topic	Exercises
Sept. 4–7	13.4 The Cross Product	2, 3, 9, 11–13, 19, 21, 27, 32
	Review	
	Exam 1	
Sept. 10–14	14.1 The Partial Derivative	1, 3, 5, 9–11, 16, 17, 20, 22, 25
	14.2 Computing Partial Derivatives	1, 3–5, 9, 11, 18, 23, 26, 27, 36, 43
	14.3 Local Linearity	1, 2, 5, 6, 9, 11, 18, 20, 22, 29, 31
	14.4 Gradients and Directional Derivatives	1, 4–5, 7, 15, 17, 22, 24, 27, 29–31, 33
Sept. 17–21	14.4 Gradients and Directional Derivatives	37, 41, 47, 49–50, 53–55, 59, 65, 68–69
	14.5 Gradients and Directional Derivatives	2, 3, 7, 9, 14, 17, 25, 26, 49, 53
	14.6 The Chain Rule	1, 2, 3, 7, 12, 15–18, 22, 25, 28, 31, 33
	14.7 Second-Order Partial Derivatives	1, 3, 6, 11, 13, 14, 19, 23, 25, 30, 33, 35, 44
Sept. 24–28	Review	
	Exam 2	
	15.1 Local Extrema	1–3, 6, 7, 9, 11, 17, 20–22, 26, 32
	15.2 Optimization	2, 7, 18, 20, 23
Oct. 1–5	15.3 Constrained Optimization	1, 11–13, 18, 19, 22, 43
	16.1 The Definite Integral in the Plane	1, 9, 11, 13, 19, 26, 30 / handout sheet
	16.2 Iterated Integrals	1–4, 9, 11, 13, 17, 21, 27, 31, 33, 44
	16.3 Triple Integrals	16.2: 34, 37; 16.3: 15, 25, 26, 27, 32, 49, 51
Oct. 8–12	Review	
	Exam 3	
	16.4 Double Integrals in Polar Coordinates	10, 11, 12, 16, 20, 21, 23, 24, 26, 28
	16.5 Triple Integrals in Cylindrical Coordinates	1, 2, 5, 9, 25, 35, 44, 52, 55, 56, 57
Friday, October 12, is the last day to change your grade option to or from Pass/No Pass.		
Oct. 17–19	16.5 Triple Integrals in Spherical Coordinates	3, 10, 14–16, 26, 28, 34, 40, 63
	17.1 Parameterized Curves	1, 4–7, 9, 19, 21, 22, 26, 28, 29, 35, 49, 70
Oct. 22–26	17.2 Motion, Velocity and Acceleration	1, 3, 7, 8, 10, 17, 32, 36, 37, 41
	17.3 Vector Fields	1, 2, 4,5, 7, 9, 13, 15, 16, 20, 26, 27, 33
	17.4 The Flow of a Vector Field	1, 5, 8, 9, 11, 17, 18, 20
	Review	
10/29 – 11/2	Exam 4	
	18.1 The Idea of a Line Integral	1–8, 11, 16, 18–21, 24, 26, 33, 36, 42, 46
	18.2 Computing Line Integrals	1, 3, 5, 10, 11, 16, 20, 23, 29, 30, 31
	18.3 Gradient Fields and Path-Independence	3, 5, 6, 8, 9, 13, 18–20, 22, 23, 29, 31, 49
Nov. 5–9	18.4 Green's Theorem	1, 5, 9, 13, 14, 17, 21, 23, 26, 33, 34, 38
	17.5 Parameterized Surfaces	1, 5, 7, 9–12, 13, 17, 18, 23–25, 30, 33
	Review	
	Exam 5	
Friday, November 9, is the last day to withdraw from the course and receive a grade of W.		
Nov. 12–16	19.1 The Idea of a Flux Integral	1–2, 5–6, 9, 12–15, 20, 27, 29, 36, 43, 46–47
	19.2 Flux Integrals Over Graphs	1, 3, 5, 6, 10, 14, 16, 18, 26
	19.2 Flux Integrals Over Cylinders and Spheres	8, 9, 15, 17, 19, 21, 23; p.991: 37, 48
	20.1 The Divergence of a Vector Field	1, 2, 6, 10, 12, 16, 19, 20, 27
Nov. 19–20	20.2 The Divergence Theorem	1, 2, 5, 7, 14, 16, 20, 29
	20.3 The Curl of a Vector Field	1, 2, 4, 7, 9, 11–14, 22, 29, 31, 35
Nov. 26–30	20.4 Stokes' Theorem	1–3, 8, 10, 13, 17, 23, 31
	20.5 The Three Fundamental Theorems	1, 2, 10, 12
	Review	
	Exam 6	
Dec. 3–7	Review	

The final exam is 6:00-8:00 pm, Monday, December 10.