

COURSE SYLLABUS**MATH 208: Calculus III**

UNL, Fall 2016, Section: 010, CRN: 4121

Lecture: MTWF, 12:30 pm–1:20 pm, M&N B5

Dr. Adam Larios

Email: alarios@unl.edu**Office:** Avery Hall 305**Math Dept. Phone:** (402) 472-7250**Office Hours:** M,W,F, 1:30 pm–2:20 pm, or by appointment**Text:** *Calculus: Single and Multivariable, 6th ed.* by Hughes-Hallet, et al., ISBN: 978-0470-88861-2.

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.

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 receive an e-mail 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.

Scheduling A tentative schedule of assignments and exams is included in this syllabus. Your instructor may change the order of the topics, modify the list of exercises and introduce new assignments. It is your responsibility to keep track of the course details and the schedule for your section.

Daily Work: Do an initial reading of the section(s) expected to be covered before coming to class each day—even if you don’t understand the details, that reading will help you to better understand the lecture. Rereading more carefully after the class can also be helpful. The exercises listed below represent a minimum assignment and should be done as the material is covered.

Quizzes/Homework: Your instructor will determine if, in addition to your hour exams, you will have quizzes or other assignments.

Calculators: A graphing calculator may be useful for this course, e.g., the TI-83, TI-84 and TI86. However, no calculator having a built-in computer algebra system (CAS) will be permitted during any of the exams or quizzes. Examples of CAS calculators include the TI-89, TI-92, TI-Nspire, HP-40, HP-41, Casio ALGEBRA FX 2.0, Casio ClassPad 300 and 330. Your instructor will decide to what extent calculators are allowed on hour exams and quizzes.

Phones, etc.: **No phones or any devices capable of wireless communication** including smart-watches are permitted at any time. As a courtesy to others please **silence your phones** when you come to class.

Final Exam: The time for the final exam is **6:00-8:00 P.M., Monday, Dec 12, Room TBA**. The final exam will be a comprehensive exam. You are expected to arrange your personal and work schedule to allow you to take the exam at the scheduled 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) is 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 9, 2016.

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 department grading appeals committee, and the college grading appeals committee.

ADA Language: Students with disabilities are encouraged to contact the instructor for 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 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.

Dates	Sections/Topic	Exercises
Aug 22–26	12.1 Functions of Two Variables 12.2 Graphs of Functions of Two Variables 12.3 Contour Diagrams 12.4 Linear Functions	1–4, 6, 10, 11, 13, 14, 17, 21, 23, 25, 29, 30 1, 2, 3, 7, 8, 10, 15, 16, 18–20, 23–25 1, 2, 4, 5, 7–9, 13, 16, 17, 24, 27(a,b) 1–5, 7–11, 13, 21, 23, 26, 27
Aug 29–Sep 2	12.5 Functions of Three Variables 12.6 Limits and Continuity 13.1 Vectors 13.2 Vectors	1–4, 8–11, 13, 15, 16–18, 23, 31 1, 2, 3, 6, 7, 9, 11–14, 19, 23 1, 2, 5, 7, 12, 15, 24, 25, 29, 31, 32, 39(b), 40, 41 1–5, 7, 10, 11, 16, 20, 30, 36
Friday, Sep 2, is the last day to drop without a W.		
Sep 5–9	Labor Day Holiday, Sep 5 13.3 The Dot Product 13.4 The Cross Product Catch up/Review	(no class) 1, 5–19(odd), 23, 25–27, 29, 31, 33, 38, 40, 41, 43, 45 2, 3, 7, 9, 11, 14, 15, 17, 19, 20, 23, 27, 29, 31, 33, 39
Sep 12–16	14.1 The Partial Derivative 14.2 Computing Partial Derivatives 14.3 Local Linearity 14.4 Gradients and Directional Derivatives	1, 3, 5, 10–12, 17–19, 21, 22, 24, 25, 30 1, 3–5, 9, 11, 18, 21–25, 31, 39–41, 44, 45, 49 1, 2, 3, 5, 6, 7, 9, 11, 13, 18, 20, 22, 23 1–8, 15, 17, 20, 21, 23–26, 29–33, 37
Sep 19–23	14.4 Gradients and Directional Derivatives 14.5 Gradients and Directional Derivatives 14.6 The Chain Rule 14.7 Second-Order Partial Derivatives	39, 45, 46, 49, 51, 53, 56–59, 61, 67, 69–71, 75 2, 3, 7, 9, 14, 17–19, 21, 25–27, 35, 37–41, 46, 47, 53, 56, 57 1, 2, 3, 5, 7, 9, 11–15, 17, 20, 23, 24, 28, 33, 38 1, 3, 6, 11, 13, 14, 16, 19–21, 23–31(odd), 34, 35, 37, 41, 44
Sep 26–30	Catch up/Review Exam 1 15.1 Local Extrema 15.2 Optimization	 1–4, 6, 7–35(odd) 2, 5, 7, 8, 9, 10–13, 15, 17, 19, 20
Oct 3–7	15.3 Constrained Optimization Catch up/Review 16.1 The Definite Integral in the Plane 16.2 Iterated Integrals	1, 3, 5, 6, 7, 9–13, 17–19, 22, 24, 30, 31, 32, 45 1, 3, 6–11, 13, 15, 22, 23 1–4, 9–23(odd), 29, 33–38
Oct 10–14	16.2 Iterated Integrals 16.3 Triple Integrals 21.2 Change of variables (optional) 16.4 Double Integrals in Polar Coord.	42, 43–51(odd), 52, 54, 55 1–9(odd), 11–27(odd), 28–30, 33, 34–37, 39, 41, 45, 50, 57 1, 3, 4, 5–7, 9, 13, 15 1–8, 10–12, 14–17, 19, 21, 24, 25, 27, 28, 30, 31, 33
Friday, October 14, is the last day to change your grade option to or from Pass/No Pass.		
Oct 17–18	Fall Semester Break	
Oct 19–21	16.5 Triple Integrals in Cylindrical Coord. 16.5 Triple Integrals in Spherical Coord. 17.1 Parameterized Curves	1, 3–7, 9, 3–15, 21, 23, 27–37(odd), 48, 49, 57–59 8, 10, 11, 24, 30, 32, 39, 43, 47, 65 1–7, 10, 11, 13, 15, 19, 21, 26, 29, 33, 45–49(odd), 57, 62, 81
Oct 24–28	17.2 Motion, Velocity and Acceleration 17.3 Vector Fields Catch up/Review Exam 2	1, 3, 5, 9, 10, 13, 15, 17, 21–23, 25, 27, 30, 36, 41, 45 1–5, 7, 9, 11, 13, 15, 16, 20, 21–27(odd), 28, 30, 31, 33
Oct 31–Nov 4	18.1 The Idea of a Line Integral 18.2 Computing Line Integrals 18.3 Gradient Fields and Path-Indep. 18.4 Green's Theorem	1–8, 11, 13, 15–21(odd), 25–28, 31, 32, 36, 46 1–23(odd), 26, 29–35(odd) 1, 3, 4, 5, 7, 8, 9, 10, 13, 15, 17–21, 27, 29, 31, 32, 38, 39, 48 1–17(odd), 19, 20, 22, 26, 27, 33, 34, 39
Nov 7–11	Catch up/Review 19.1 The Idea of a Flux Integral 21.1 Parameterized Surfaces 21.3 Flux Through Parameterized Surfaces	1–9, 13, 14, 16–19, 21, 25, 26, 29–35(odd), 39, 48 1–8, 10–13, 17, 15, 17, 19, 20 1–3, 5–9, 11, 12
Friday, Nov 11, is the last day to withdraw from the course and receive a grade of W.		
Nov 14–18	19.2 Flux Integrals through graphs 19.2 Flux Integrals through graphs Catch up/Review 19.3 The Divergence of a Vector Field	1–6, 7, 9, 11, 13, 15, 19, 29, 31, 41–43, 47 16, 17, 21–23, 25, 27, 35, 37, 49, 51, 52 1, 3, 4, 5–11(odd), 12, 17–20, 24, 29, 36
Nov 21–22	19.4 The Divergence Theorem Catch up/Review	1, 2, 3–9(odd), 8, 14–17, 19, 23, 25, 28, 32
Nov 23–27	Thanksgiving Holiday	
Nov 28–Dec 2	20.1 The Curl of a Vector Field 20.2 Stokes' Theorem Catch up/Review Exam 3	1–5, 7, 11–16, 25 1–5, 7, 9, 11, 14, 17–19, 21, 23, 25–27
Dec 5–9	Catch up/Review	
Final Exam, 6:00-8:00 P.M., Monday, Dec 12, Room TBA.		