

MATH 1440: APPLICATIONS OF CALCULUS II

Formerly Math 181: Elements of Calculus II

University of New Mexico, Spring 2020

Instructor: Daishu Komagata

E-mail: ryugen@unm.edu

Office: SLMC 230A

Office Hours: TR: 1400-1450 SLMC 230a & F 0900-0950 Algebra Table.

The Algebra Table is located on the second floor of DSH next to the elevators.

Prerequisite: Grade of C or better in MATH 180

Textbook: APPLIED CALCULUS for the Managerial, Life and Social Sciences, Tenth Edition, Brooks / Cole 2017, S. T. Tan

Available through Inclusive Access, see your UNM Learn account and the course website.

Website: math.unm.edu/~ryugen

Calculator: Calculators will not be allowed.

Homework: All homework assignments will be due at the beginning of class. Late homework assignments may not be permitted. The homework will be due on every Friday. The homework assignments are on my department website: math.unm.edu/~ryugen. The homework assignments are all EVEN NUMBERS, which is on my department website and has what problems to do. Your homework assignments will be written in a clear and concise manner and will have proper mathematical notation to receive full credit. Your daily homework is your most important effort in this course. It is imperative that you do all of the assigned problems, especially the hard ones, because this is how you actually learn the material. Expect 2-3 hours of homework for every hour of class meeting time (on average 6-9 hours per week). Keep all of your homework together in a folder so that if you are having trouble in the course, you can bring it with you when you go to see your instructor or get tutoring.

Quizzes: There will be weekly quizzes. The quiz problems will be very similar to the homework problems, if not the same. Most of the quizzes will be in-class and announced, but occasionally there may be a pop quiz. No make-up quizzes will be given, even if you have an excused absence.

Exams: There will be three in-class exams, 100 points each. You have to show all your work and use proper mathematical notation to receive full credit. A correct answer without work will receive 0 points. If you must miss an exam, you must contact your instructor on or before the day of the exam in order to discuss a make-up test. Make-up tests will be given solely at your instructor's discretion. If you do not contact your instructor immediately, you may be dropped from the course.

Final Exam: The final exam, comprehensive and worth 200 points, will be held the week of May 6, date and time depending on your class meeting time; see http://schedule.unm.edu/final-exams/final_exam/spring-2020-final-exam.pdf No early Final Exam will be given, except in well documented emergencies.

Important Note: Notes of any kind, 3x5 cards, books, cell phones, computers, headphones, smart watches etc. are not allowed on any tests, including the Final Exam.

Grading: To get full credit on graded work, students must address all mathematical components presented by the problem, showing all steps and calculations. The use of proper notation, well-structured procedures, and legibility will be taken into account when assigning points. Your grade will be determined based on your performance on the following:

Quizzes	75 Points
Homework	75 Points
Exams	300 Points
Final Exam	200 Points
Total	650 Points

Traditional grading: 90% to 100% ~ A 80% to 89% ~ B 70% to 79% ~ C below 70% ~ D or F

Your instructor reserves the right to award fractional grades. There is no extra credit. Students who withdraw after week 3 will receive the grade W. No W's will be given to students who have not withdrawn.

Communication: Please check your UNM e-mail regularly or make sure to forward your e-mail from that address to an account that you check at least daily. Your instructor may send you important information and updates to your UNM e-mail address. If you e-mail your instructor, include your full name, class and section. Only UNM e-mail addresses will be answered to.

Help: If you are struggling, seek help immediately. In addition to your instructor's office hours, there is extra help available at:

- The *Calculus Tutoring Table*, staffed by instructors every day, SMLC northeast corner 1st floor
- *CAPS*: Center for Academic Program Support, 3rd floor Zimmerman Library, 277-4560
- *MEP* Engineering Annex, room 210, or call the study group at 277-8795
- *CATS*: Counseling and Therapy Services, Student Health Center, 277-4537 (for test anxiety, etc.)

Items for all 100-level courses required by the Department of Mathematics & Statistics:

Attendance: Attendance is mandatory. If a student has four or more unexcused absences he/she may be dropped from the course. Tardiness or early departure may be regarded as an absence. After the Withdrawal deadline the instructor will not drop any student. Please note that it is the student's responsibility to drop the course if he/she stops attending. A failing grade of F may be assigned if the student stops attending and does not drop before the posted deadline. No early final exams will be permitted except in documented emergencies: flight reservations, weddings, vacations, birthdays, non-NCAA sporting events etc. are not considered emergencies.

Student Behavior: All students have to abide by the Student Code of Conduct: pathfinder.unm.edu. According to the Code of Conduct, student activities that interfere with the rights of others to pursue their education or to conduct their University duties and responsibilities will lead to disciplinary action. This includes any activities that are disruptive to the class and any acts of academic dishonesty. Students are expected to behave in a courteous and respectful manner toward the instructor and their fellow students. Students may be dropped for inappropriate behavior. The use of cell phones, headphones, smart watches, etc. is not permitted during class or exams.

Cheating: Cheating of any kind will not be tolerated. Examples are: looking at a neighbor's exam, plagiarizing, using a calculator when not permitted, using the book and/or a cheat sheet, modifying an exam after it is graded, etc. The instructor may warn an offending student, the score of the exam may be reduced, the score may be set to zero, the student may get dropped from the class, the student may get a grade of F for the class, and in most cases the incident will be reported to the Dean of Students.

Grading: To get full credit on graded work students must address all mathematical components presented by the problem, showing all steps and calculations. The use of proper notation, well structured procedures, and legibility will be taken into account when assigning points.

Deadlines: The Department of Mathematics and Statistics will adhere to all of the registration deadlines published by the Office of the Registrar in the schedule of classes: registrar.unm.edu. We will not give permission to override any deadline except in documented emergencies; failing a class is not considered an emergency.

Grade mode and Withdrawals: You must select your grade mode (Letter Grade, CR/NC, or Audit) within the first 2 weeks of the semester. We will not give permission to change the grade mode after the deadline. Students who are in the regular grade mode and who withdraw after the end of week 3 will receive a grade of W. If you do not withdraw, you will receive a letter grade of A, B, C, D, or F (not a W). Students who are in the CR/NC grade mode and who withdraw after the end of week 3 will receive a grade of W. If you do not withdraw, you will receive a letter grade of NC (not a W). See the list of all deadlines: registrar.unm.edu.

Accessibility Statement: We will accommodate students with documented disabilities (through ARC). During the first two weeks of the semester, those students should inform the instructor of their particular needs.

Registration, Drop, and Grade Change Deadlines: The Department of Mathematics and Statistics will adhere to all registration deadlines published by the Office of the Registrar. These deadlines are:

January 31	Last day to add a course or change sections
January 31	Last day to change grading option via LoboWeb
February 7	Last day to drop without a grade (100% Refund)
April 17	Last day to withdraw without the Dean's permission

May 8

Last day to withdraw with the Dean's permission

Tentative Schedule and Academic Deadlines:

The instructor reserves the right to change the syllabus at any time during the semester.

These problems are for additional practice. To view the actual homework problems go to the website: math.unm.edu/~ryugen.

The Homework problems are the even numbers on the website.

Week	Sections covered and important dates Homework Exercises (do only odd-numbered problems unless otherwise noted)	Topics
Jan 20	Holiday Monday Review Chapter 6 sections 1 to 5 6.6: 1, 3, 7, 11-25, 33-37, 41-45, 49, 51	Review Area Between Curves
Jan 27	7.1: 1-41 7.2: 1-21, 27-35 <i>Last day to add a course or change sections: Friday, January 31</i> <i>Last day to change grading option via LoboWeb: Friday, January 31</i>	Integration by Parts Integration Using Tables of Int.
Feb 3	7.4: 1-5, 9, 11, 15-21, 25-31 8.1: 3, 5, 13-27, 31, 35, 36, 43 <i>Last day to drop without a grade: Friday, February 7</i>	Improper Integrals Functions of Several Variables
Feb 10	8.2: 1-21, 25-31, 35-43, 48, 54 8.3: 3-7, 11-21, 24, 25-29	Partial Derivatives Maxima and Minima
Feb 17	Catch up, Review Exam #1	
Feb 24	8.4: 3, 7, 9, 11, 13 8.5: 3, 5, 11, 13, 17, 19, 23	Least Squares Constrained Max and Min and Lagrange Multipliers
Mar 2	8.7: 3-7, 11-23 8.8: 1-3, 7, 11-15, 19, 21	Double Integrals Application of Double Integrals
Mar 9	9.1: 1-15, 19-27 9.2: 1-25, 31, 33	Differential Equations Separation of Variables
Mar 16	SPRING BREAK!	
Mar 23	9.3: 1-17 Catch up, Review	Applications of Separable Differentiable Equations
Mar 30	Exam # 2 10.1: 1-25, 31, 42, 44, 46	Probability Distributions of Rand Vars
Apr 6	10.2: 3-11, 15, 18, 22 10.3: 1-27	Expected Value and Std Deviation Normal Distributions
Apr 13	12.1: 1-25 12.2: 1-17, 27, 28, 29, 30, 39-45, 48, 49, 50, 51 <i>Last day to withdraw without the Dean's approval: Friday, April 17</i>	Measurement of Angles The Trigonometric Functions
Apr 20	12.3: 1-37, 41-49, 53 12.4: 1-7, 11-15, 21, 29, 33-39, 40, 41	Differentiation of Trig. Fns Integration of Trigonometric Fns
Apr 27	Catch up, Review Exam # 3	
May 4	Review <i>Last day to withdraw with the Dean's permission: Friday, May 8</i>	Review for the Final Exam
May 11	FINAL EXAM (Date, Time and Location according to your section)	Final Exam