MATH 1220 – College Algebra
Summer 2020

I. Instructor Contact Information

INSTRUCTOR: Phil Glass

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II. Course Description

The study of equations, functions and graphs, reviewing linear and quadratic functions, and concentrating on polynomial, rational, exponential and logarithmic functions. Emphasizes algebraic problem solving skills and graphical representation of functions.

III. Student Learning Outcomes

Students will build on their knowledge of polynomial, rational, absolute value, radical, exponential and logarithm functions in the following contexts:

1. Use function notation; perform function arithmetic, including composition; find inverse functions.
2. Identify functions and their transformations given in algebraic, graphical, numerical, and verbal representations, and explain the connections among these representations.
3. Graph and interpret key feature of functions, e.g., intercepts, leading term, end behavior, asymptotes, domain and range.
4. Solve equations algebraically to answer questions about graphs, and use graphs to estimate solutions to equations.
5. Solve contextual problems by identifying the appropriate type of function given the context and creating a formula based on the information given.
6. Communicate mathematical information using proper notation and verbal explanations.

IV. Prerequisites

Math 1215XYZ or ACT Math ≥ 22 or SAT Math Section ≥ 540 or ACCUPLACER Next-Generation Advanced Algebra and Functions: 239-248.

Note: Mathematics or Statistics coursework dating back more than five years cannot automatically be counted as fulfillment of a prerequisite. Students with coursework dating back more than five-years should take the placement exam offered through the University of New Mexico Testing Center to determine what Mathematics or Statistics courses to register for based on their skill level.

V. Texts and Materials

- **Textbook and Online HW:** This course requires ALEKS 360 available through Inclusive Access and UNM Learn. The textbook is COLLEGE ALGEBRA, 2nd edition, Julie Miller and Donna Gerken.

- **Print Textbook Upgrade:** After you register, you will have the option to purchase a low-cost print version of the text through ALEKS. This is optional. If you choose to purchase a copy, a full-color, loose-leaf version will be shipped to you.
- **Calculator:** There is an online calculator in the ALEKS system. **No other calculator will be allowed.**
- **Other Materials:**
  - **A Notebook.** Within the ALEKS system you can read the textbook and watch video lectures that explain the concepts you are learning. These videos can be used to supplement lectures in face-to-face courses or as lectures in online courses. You will want a notebook to take notes while you read the textbook and watch any of the videos. You will also want a notebook for your work as you are doing problems in ALEKS. Keeping well organized notes is extremely important to your success in this class.
  - **Respondus Lock Down Browser:** You will be doing your tests online using the Respondus Lock-Down Browser. You can download the Respondus Lock-Down Browser at: http://www.respondus.com/lockdown/downloadc.php?id=916915865 A video on the Respondus Lock Down Browser is **https://www.youtube.com/watch?v=XuX8WoeAycs**
  - **Scanning App:** You may have some written work to do in this course. This will involve downloading or viewing a file from Learn, solving the given problems, and uploading your work to Learn. A scanning app works much better than just a photo from your cell phone. There are many free scanning apps available for smart phones. These apps allow you to use the camera on your phone to take black and white scans of your work, concatenate multiple pages into a single pdf file, so that you can upload your work to Learn or email your work to your instructor. These scanning apps create files that are much easier to read than what you typically get when you simply photograph a written page. If you have an iPhone, the built in Notes app has a scanning feature. Other free apps that you can download are CamScanner, Genius Scan, Scanner Pro, TurboScan. A search in the App Store or Google Play will show a variety of free scanning apps.

VI. ALEKS

- **ALEKS: In** this course we will use ALEKS, an adaptive program that creates a personalized path based on what you already know, what you don't and what you are ready to work on. ALEKS helps you learn, understand, and master content in your course so that you can be successful in this course and beyond!

- ALEKS is an adaptive learning platform from McGraw-Hill Education. Many of your course assignments will be delivered through ALEKS. ALEKS stands for **A**ssessment **and LE**arning in **K**nowledge **S**paces. When working in ALEKS, you only work on topics that you have not yet learned and mastered.
- Most of your HW will be done in ALEKS.
- When you first log into ALEKS, you will be given an **Initial Knowledge Check**. This is nothing to fear, it is not a test and it does not count toward your grade. ALEKS just wants to know what you know. ALEKS will give you "credit" for any of the content of the course you may already know. This "credit" will be different for each student because each student has a unique math background — math courses taken, time since last math class, grades earned in those classes, etc. There is no right or wrong "grade" on the Initial Knowledge Check. The result of your Initial Knowledge Check is what ALEKS uses to create your own individualized learning path to work through the content of this course. You will next be asked to "Start your path." ALEKS will start by asking you to work through topics you are most ready to learn.
- You will have regular homework with due dates to do in ALEKS. ALEKS has a calendar that you can use to keep track of due dates. You will be graded on successful completion of these homework assignments.

  Your 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 to put in 9–12 hours each week on this course. Keep all of your notes and work on your homework together in your folder or binder so that if you are having trouble in the course, you refer to your work if you ask for help from your instructor or get tutoring.
- In ALEKS, you will also see a PIE. As you learn topics, your PIE gets filled in. A portion of your homework grade is based on PIE completion. By the end of the course, you want to have a complete PIE. So even if you didn't finish a homework assignment by the due date, you can continue learning and mastering those topics in order to fill in your PIE. When you finish an objective HW assignment early, or at the end of the course, you could go back to prior topics and work on those to establish mastery in the topics and fill your PIE.
- ALEKS will periodically provide you with progress assessments known as Knowledge Checks. These Knowledge Checks may not be skipped. They provide the software, your instructor, and you with detailed information about your progress, and they will allow ALEKS to continue to provide you with the material you are ready

to learn and give you credit for the material you have mastered. Knowledge Checks do not directly affect your grade, but they do assess how many topics you have learned and thus factor in the completion of your PIE. You have the potential to gain or lose topics while taking a Knowledge Check. You may use notes on Knowledge Checks, so keeping well organized notes is an asset. When you finish your Knowledge Check, you may ask your instructor to email you a copy. These are excellent to keep in your notebook.

- You will be taking exams within ALEKS. You will need to use the "Respondus LockDown browser Monitor" in ALEKS. You will have to download the software for this. You will be given 1 hour and 30 minutes to complete Tests 1—3 and 3 hours to complete the Final Exam.

  Exams need to be done on the following dates:

  - **Test 1: Monday, June 15, 2020**
  - **Test 2: Monday, June 29, 2020**
  - **Test 3: Monday July 13, 2020**
  - **Test 4 (Final Exam): Friday, July 24, 2020**

  You must take each exam on the specified date.

- Missed Exams
  - A missed exam is a serious issue! The course schedule has all exam dates clearly marked and there are very few acceptable reasons to miss an exam other than an emergency or serious illness. If such an emergency occurs and you miss an exam you must email the instructor immediately (within 24 hours unless unable). You must provide documentation of the emergency (doctor's note, etc) and schedule to take a make-up within 2 days of the missed exam.
    Be aware that make-ups are entirely at the instructor's discretion and only in cases of well documented excused absences. Even though you may deem a situation an emergency it does not guarantee the right to a make-up.
    If you miss an exam and do not contact your instructor immediately, you will get a zero for the exam and you may be dropped from the course.

Accessing ALEKS:

- Your ALEKS access for this course is already available to you through your course fees. **There is no need to purchase an ALEKS access code.**

- Go to www.aleks.com
- Select the yellow **Sign Up Now!** button. ***Important Note: All students need to Click on this button even if you have used ALEKS before. Don't log in at the*** www.aleks.com ***login page. You will be prompted for your login information later.***
- Enter the 10-digit ALEKS Class Code:
  Course Codes:

  Math 1220-004 and Math 1220-007

  Course Code is WN6RT-DEHYT
- After you put in your course code, you should see your class information. Make sure that you are registering for the correct class. You should see your instructor's name.
- At this time you will be prompted to create a new account or log in with an existing ALEKS account.
- You must use your UNM email as your ALEKS account email address.
- A video that shows how you register and how you access ALEKS is at this URL: http://video.mhhe.com/watch/CTE1qgdpUkhtZy4r7naEdH
- **ALEKS TechSupport:** If you are having trouble registering for or accessing ALEKS, please contact ALEKS Customer Support. Live chat, email, and phone support are available 7 days a week.

  When contacting a support agent, you will always receive a case number. It will be important to save this case number if additional follow up or documentation is needed.

  - **Hours (EST):** Sunday: 4 PM–1 AM EST
    Monday - Thursday: 7 AM – 1 AM EST
    Friday: 7 AM – 9 PM EST
  - **Phone Number:** (800) 258-2374
  - **Website**: https://mhedu.force.com/aleks/s/
  - Ensure your computer meets system requirements by going to this link: https://www.aleks.com/support/system_requirements

VII. Written Work

One of the Student Learning Outcomes is "Communicate mathematical information using proper notation and verbal explanations." Thus, in addition to ALEKS homework,

you will be asked to solve problems using pencil and paper and showing all your steps and explaining your reasoning.

VIII. Grading

Your grade will be determined based on your performance on the following:

Source	Percentage
Written Work	**10%**
ALEKS Objectives	**10%**
ALEKS PIE Completion	**10%**
ALEKS Exams	**70%**
Total	100%

How Grades Are Determined:

98–100 A+			
93–97 A	87–89 B+	77–79 C+	67–69 D+
90–92 A–	83–86 B	70–76 C	60–66 D
	80–82 B–		Below 60

There will be ***NO*** extra credit.

IX. Additional UNM Information

Registration, Drop, and Grade Change 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: www.registrar.unm.edu. For full term classes in the fall 2020 term the deadlines are:

Friday, June 5, 2020	Add a course, change sections, or change grade mode in LoboWeb
Friday, June 12, 2020	**L**ast day to drop without a grade and with full tuition refund
Friday, July 10, 2020	Last day to withdraw on LoboWeb without the Dean's permission (grade of W assigned)
Friday, July 27, 2020	Last day to withdraw with the Dean's Permission

Note: It is the student's responsibility to drop the course if he/she stops attending/working. A failing grade of 'F' will be assigned if the student stops attending or working on topics and does not drop before the posted deadline. After the withdrawal deadline the instructor will not drop any student.

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.

Academic Honesty: Academic dishonesty of any kind will not be tolerated. Examples are: using a calculator when not permitted, using the book and/or a cheat sheet or the internet on an exam if it is not permitted. 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.

Accessibility Statement: We will accommodate students with documented disabilities. During the first week of the semester, those students should inform the instructor of their particular needs.

Title IX Reporting Obligations: Our class and our university should always be spaces of mutual respect, kindness, and support, without fear of discrimination, harassment, or violence.

Should you ever need assistance or have concerns about incidents that violate this principle, please access the resources available to you on campus, especially the LoboRESPECT Advocacy Center and the support services listed on its website (http://loborespect.unm.edu/).

Please note that, because UNM faculty, TAs, and GAs are considered "responsible employees" by the Department of Education, any disclosure of gender discrimination (including sexual harassment, sexual misconduct, and sexual violence) made to a faculty member, TA, or GA must be reported by that faculty member, TA, or GA to the university's Title IX coordinator. For more information on the campus policy regarding sexual misconduct, please see: https://policy.unm.edu/university-policies/2000/2740.html.

X. Get Help!

I have provided several "tip" sheets to help you with the more challenging topics. These are posted to the UNM Learn site and in the Math 1220 – College Algebra directory at http://www.unm.edu/~elflord.

I can be a valuable resource for help. I can provide insight into any ALKES topic troubling you. I respond to emails within 24 hrs., often within minutes if you email in the morning. Since back-and-forth email can be time consuming and frustrating, I can also provide real-time help through Zoom conferencing. I will conference with you anytime you need help simply by setting up an appointment via email. Rather than have fixed office hours, which is only convenient to a few students, this way, I can reach everyone who wants help, regardless of the hours they keep.

Extra Help: In addition to getting help from your instructor, there is extra help available at:

- **CAPS:** Center for Academic Program Support. Located on the 3rd floor of Zimmerman Library, (505) 277-7205, Website: https://caps.unm.edu. Online tutoring is available, go to the CAPS Website.
- **Student Health and Counseling Resources:** Counseling and Therapy Services, Student Health Center, (505) 277–3136. (For test anxiety, etc.) Website: http://shac.unm.edu/services/mental-health/index.html

XI: Tentative Schedule - 8 week

Date	Start Date	Notes	Textbook Section	ALEKS Homework
Week 1	6/1/2020	Solving Equations and Inequalities	1.1/1.4/1.6 /1.7	Initial Knowledge Check: Due 6/3/2020 HW 1: Due 6/7/2020
Week 2	6/8/2020	Lines, Functions, Linear Functions, Average Rate of Change	2.3/2.4/2.5	HW 2: Due 6/11/2020 HW 3: Due 6/14/2020
Week 3	6/15/2020			Test1: To be done on 6/15/2020
		Library of Functions/Transformations/Analyzing Graphs/Piecewise functions/	2.6	HW 4: Due 6/21/2020
Week 4	6/22/2020	Algebra of Functions/Function Composition/Difference Quotients/	2.7,2.8	HW 5: Due 6/25/2020 HW 6: Due 6/28/2020
Week 5	6/29/2020			Test2: To be done on 6/29/2020
		Quadratic Functions/Polynomial Functions and Inequalities	3.1,3.2, 3.5	HW 7: Due 7/5/2020
Week 6	7/6/2020	Rational Functions and Inequalities	3.5, 3.6	HW 8: Due 7/9/2020 HW 9: Due 7/12/2020
Week 7	7/13/2020			Test 3: To be done on 7/13/2020
		Inverse Functions/Exponential Functions/Log Functions/Log Properties	4.1, 4.2,4.3,4.4	HW 10: Due 7/16/2020 HW 11: Due 7/19/2020
Week 8	7/20/2020	Exponential and Log Equations	4.5	HW 12: Due 7/23/2020
				FINAL EXAM: To be done on 7/24/2020