Math 1180.400: College Math for Business, Economics, and Related Fields Syllabus

Instructor Information

Name: Kyranna Kioulafa
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Office Hours: office hours will be on zoom by appointment. Email me to schedule times.
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Communication Expectations: I typically respond in one (1) business day, during business hours. A message received after business hours is considered received the next business day. The best way to reach me is via email. I will work hard to respond as quickly as possible to emails, but it may occasionally take me up to a business day to respond.

Course Description

Topics from algebra (linear equations, quadratic equations, functions and graphs, inequalities), mathematics of finance (simple and compound interest, annuities), linear programming, matrices, systems of linear equations, applications to management, economics and business.

Course Structure

This course is takes place 100% online in Canvas. Information on how to be successful in a remote learning environment can be found at UNT Online (https://online.unt.edu/learn). This course is a 16-week course structured with 4 Unit modules. Each module has multiple lessons with assignments and assessments due.

Course Prerequisites or Other Restrictions

Prerequisite(s): Two years of high school algebra and one year of geometry, and consent of department. Students who feel they acquired solid algebra skills in high school are strongly encouraged to take the mathematics placement exam to see if they may begin in MATH 1190 instead. A grade C or better in MATH 1180 is required when MATH 1180 is a prerequisite for other mathematics courses.

Course Learning Objectives

- Students will demonstrate an ability to recognize and solve problems involving financial mathematics, including simple interest, compound interest and present and future value of annuities
- Students will demonstrate an ability to understand graphing of equations, operations with lines, solve and interpret solutions of systems of linear equations and linear inequalities, and interpret solutions of standard maximization problems.

- Students will demonstrate skill at using tools from algebra. Students will demonstrate an ability to manipulate, solve, graph, and work with several types of functions.
- Students will demonstrate skill at using tools from probability, including counting, using conditional probability and finding expected values.
- Students will demonstrate skill at using exponential rules, factoring, function composition, interpreting results from rational functions and making and interpreting sign charts

ADA Policy

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time, however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information, refer to the Office of Disability Access website at https://studentaffairs.unt.edu/office-disability-access. You may also contact ODA by phone at (940) 565-4323.

Materials

Homework assignments will require accessing Knewton or Canvas "quizzes" through your UNT Canvas account. Log in to Canvas at https://unt.instructure.com, read through "Getting started with Knewton". Additional resources are listed in Canvas. You will have to purchase access to Knewton or continue access if you have used it for Math 1180 or 1190 and purchased the 2-year access within the last two years. This can be done through the Barnes and Noble link or other sellers. You can get free access for up to two weeks. For more information about your homework, please read the Homework section.

No textbook is required.

Course Technology & Skills

This course has digital components. To fully participate in this class, students will need internet access to reference content on the Canvas Learning Management System.

Minimum Technology Requirements and required skills

- A working computer with speakers and webcam that can reliably access the internet and access Canvas (minimum requirements) and view content videos on Canvas or Youtube

- A calculator (see Calculator Policy)
- Ability to download, install and run software including Respondus Lockdown Browser
- Proficiency in using Canvas
- Proficiency in using Knewton (see Getting Started with Knewton in Canvas)
- Proficiency in using your calculator

Information on how to be successful in a digital learning environment can be found at Learn Anywhere (https://online.unt.edu/learn).

Calculator Policy

Many calculators will be sufficient for the exams on this class. Among good options are the TI-36X,TI-30XIIS, TI-83 or TI-84 (or similar Casio, other manufacturer's calculators). Examples of calculators not allowed: TI-Nspires, TI 92's, TI 89's. Any other utility with alphanumeric/CAS capabilities or the ability to connect to the internet, such as a smartphone.

Knewton is Required

The homework and some course content will be delivered in Knewton, which must be accessed via Canvas. You **will not** need a Knerd link as the access is provided directly in Canvas. Note: Mac users may find it easiest to use a browser other than Safari.

Course Evaluation

Assignments	20%
Engagement	10%
Midterm Exams	50%
Final Exam	20%

Grade Assignment:

A: [90%,); B: [80%, 90%); C: [70%, 80%); D: [60%, 70%); F: [0%, 60%).

Policies/information directly affecting grades/grading

Assignments:

The online Knewton assignments worth 20% of your overall course grade. Each assignment is equally weighted. Most assignments will use an online software program called Knewton, though some will be directly in Canvas.

What is Knewton? Knewton is a mastery-based adaptive software and is designed to judge your ability to complete your assignments. You will be able to proceed through Knewton much more quickly if you study and review your notes before starting the assignments. For best results, read through “Getting Started with Knewton" located in Canvas before your first assignment.

Why do Assignments? A purpose of homework is to provide you with sufficient opportunities to learn and practice the new content you are learning. Knewton is adaptive and mastery based, which means that the software will provide each student with the sufficient number of questions to judge whether each topics learning objectives have been mastered. This means a student who has prepared well before the assignment may have very short assignments, while a less well prepared student may take many more questions on each assignment. Again, the more you prepare before starting to attempt the exercises, the less work you will have. For more tips on how to get the most out of the homework assignments, read through “Getting Started with Knewton"

Get the Most out of Assignments

- You should have a dedicated notebook for your math assignments. Carefully write out your work, especially noting the questions with which you struggled. This should form a substantial part of your review material prior to the exams.
- Homework is one piece of your learning process in this course, but successful completion of the homework assignments is not sufficient preparation for exams. You must be able to work the exercises on your own, without any aids on exams.

Where is Knewton?

You access your Knewton powered assignments in one of two ways through Canvas, they are:

1. At the Syllabus portal. Every assignment for your course is accessible through the Syllabus portal. This portal is very helpful because it lists all assignments in due date order; or

2. At the content module. Select the Modules tab along the left-hand navigation of Canvas. From the Modules select Unit 1. The Knewton assignments have a paper and pencil icon to their left.

When are Knewton Assignments due?

Assignment due dates are listed on the calendar and on the syllabus link in Canvas. Knewton assignments are always due at 11:59 PM. To successfully complete the assignments, you must carefully manage your time. I recommend that you plan to complete them well ahead of the due date. Late homework will not be accepted. At the end of the term, **two (2) lowest grades will be dropped from the calculation of the assignments average**. In Canvas, the two dropped grades will not be correctly calculated until the very end of the semester.

Midterm Exams

There will be **three midterm exams** in the course. Each exam is worth 50/3=16.66% of your overall grade. **The exams will consist of 15 - 25 multiple-choice questions**. Module exams are specific to the content of that Unit. They are administered online with LockDown Browser and Respondus Monitor with a webcam.

Each midterm exam will have a 120 minute time limit. Each exam becomes available at 12:01 AM (a minute after midnight Central time) on the due date and is available until 11:59 PM (a minute before midnight Central time) on the day of the exam**. Each exam will be available for a two-day period.** Be sure to plan your time so that the exam will be completed before the time it is due. That is, if you start the exam at 11:45PM, then you will only have 14 minutes to complete the exam. On certain problems, I typically provide a formula sheet in face-to-face classes. On all of the possibly relevant problems, I will include the formula sheet as an image as a part of the question. You could use your own formula sheet when taking your exams but you will need to take a picture of it at the end of your exam. During the exam you can use writing implements (e.g. pencil), blank sheets of scratch paper and an approved calculator. At the end of the term, **one (1) lowest grade will be dropped from the calculation of the midterm exams average**.

Final Exam:

The final exam is on **Monday, May 4th or Tuesday, May 5th (take the exam one of those two days that work best for you)**. The final exam is comprehensive and is 20% of the course grade. The format of the final exam will be the same as the format of the midterm exams, except longer.

Examination Policy

I structure my course to balance the time necessary for students to learn the necessary content, with the need to have regular midterm exams. As such, students are expected to take the exams on the given day or early. In the event of a schedule conflict with a university function, dental/physicians appointment, wedding, formal, etc., the student should make every effort to take the test early. In the event that an unavoidable conflict/illness comes up, reach out to me as soon as you can. If a student does not take a scheduled exam, a zero may be recorded for that exam.

Enagagement

This graded portion of your course is worth 10% of the grade overall.

Assignment Policy

All homework assignments are due online through Canvas either directly in Canvas or via Knewton.

Late Work

Due dates are expected to be followed and are intended to allow you time to complete the course on time. As such, I will rarely accept late work. If exceptional circumstances occur, please reach out to me as soon as possible.

Instructor Responsibilities and Feedback

My goal in this course is to provide an environment conducive to your learning. I will work hard to be available outside of class during my tutoring/office hours, via email or via Zoom. I welcome questions about any portion of the course and am happy to clarify any issues if they come up. Most homework assignments are automatically graded and you can review your work on the Canvas assignments the day after they are due. I make it a priority to grade exams quickly, but my past experience suggests that this can take me up to two weeks to get them back to you.

Drop/Withdrawal Policy

If the student is unable to complete this course, it is his/her responsibility to formally withdraw from the course. You can find more details about dropping the course at this link.

If the student does not properly withdraw from the course but stops attending, the student will receive a performance grade, usually an F.

If you are considering dropping, it is strongly recommended that you discuss the matter with me as soon as possible.

Incomplete

Beginning April 11, a student that qualifies may request a grade of "I", incomplete. An "I" is a non-punitive grade given only if ALL three of the following criteria are satisfied. They are:

- The student is passing the course;
- The student has a justifiable (and verifiable) reason why the work cannot be completed as scheduled; and
- The student arranges with the instructor to complete the work within one academic year.

Syllabus Change Policy

This syllabus is subject to change. Any changes will be announced in class and the updated syllabus will be posted in Canvas.

Attendance and Participation

Students who read and follow the weekly announcements for the class are more likely to be successful. Your Canvas notifications should be enabled to ensure you receive the weekly announcements on time. Make sure to follow your instructors' guidelines!

Emergency Notification and Procedures

Students will be notified by Eagle Alert if there is a campus closing that will impact a class. The calendar is subject to change: see the Emergency Notifications and Procedures Policy

Classroom Etiquette:

Appropriate behavior is expected of all students taking this course. Arrive to class promptly and do not leave until the scheduled ending time of the class. If you must arrive late or leave early, please do so as discreetly as possible and take a seat near the door. Turn off all non-medical electronic devices such as pagers, cell phones, laptops, etc. Take off your headphones. Do not play on your phone or work on unrelated assignments during class. I reserve the right to ask disruptive students (texters, those using a computer for non-class related work, etc.) to leave class. You will be considered absent if you are asked to leave. Again, it is considered a serious violation of your responsibilities as a student to be on a computer or your mobile device during class. It distracts you, lowers your performance in class and does the same for those around you. Please read the New Yorker article I've posted on Canvas for more information about this. Students misusing electronic devices for non-academic reasons distract others and may be asked to leave. See also #8 on the 10 academic rights that is linked here.

Recommended Steps to Succeed

I hope this advice will be helpful for you. It consists of my observations in the time I have been teaching. I have observed two character traits common to successful students. The traits are maturity and time commitment. Learning requires working when you don't want to – that requires maturity. Learning also requires consistent and diligent dedication of time.

Some additional specific steps:

- Learning math requires a great deal of time and honest effort along with regular and consistent work.
- After class review your notes. If you have questions, ask immediately.
- Actively read through all recommended readings.
- Use the time you spend on your Knewton assignments to learn the material rather than just getting through the homework as fast as possible.
- Complete the Exam Reviews prior to each exam.
- Form a study group with your classmates. Create online groups.
- Make use of the tutoring options available to you: the Math Lab, the Learning Center, and your instructor's tutoring hours.
- The Learning Center offers several tutoring options: Drop-In Tutoring, One-on-One Tutoring, Group Tutoring and Online Tutoring. Additional links for places you can get help at UNT is on the Academic Support and Student Services page in the Canvas Start Here module.
- Work on the assignments consistently well ahead of due date. Waiting until the last minute is a horrible idea.
- Math is not a spectator sport. You must try the problems, finish problems, ask questions, correct your mistakes, put concepts in your own words, and practice, practice, practice. You learn math by doing, not by watching others do math.

- Contact your instructor immediately if you are having problems.

One last thought: As an adult, you need to **self-advocate**. If you are having problems, you are expected to seek help. Most of you, at some point in your college career you will run into problems and need to ask for help – don't wait, reach out as soon as you realize you have an issue.

Supporting Your Success and Creating an Inclusive Learning Environment

Every student in this class should have the right to learn and engage within an environment of respect and courtesy from others. We will discuss our classroom's habits of engagement and I also encourage you to review UNT's student code of conduct so that we can all start with the same baseline civility understanding (Code of Student Conduct).

Academic Integrity Policy

Cheating on tests, quizzes or final exams is a serious breach of academic standards and will be punished severely and generally result in a student failing the course. All work done on exams and quizzes must represent only the student's own work, unless otherwise stated in the directions. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. See Academic Integrity for details on academic integrity policies at UNT.

Important Notice for F-1 Students taking Distance Education Courses Federal Regulation Federal regulations state that students may apply only 3 fully-online semester credit hours (SCH) to the hours required for full-time status for F-1 Visa (PDF) https://digitalstrategy.unt.edu/clear/policies-procedures/f1-visa.html holders. Full-time status for F-1 Visa students is 12 hours for undergraduates and 9 hours for graduate students.

Calendar Schedule

I reserve the right to change this schedule as necessary throughout the semester. You are still responsible for being aware of any changes announced in this class!

Week 1

Material to cover: 1.1: Solving linear equations and 1.2: Simple Interest

Week 2

Material to cover: 1.3: Exponential basics and Logarithmic basics and 1.4: Compound interest

Week 3

Material to cover: 1.5: Future Value of an Annuity and 1.6: Present Value of an Annuity

Week 4

Exam 1 Review and Unit 1 Wrapup

Friday 2/6/2026 Due in Canvas: Exam 1

Week 5

Material to cover: 2.1: Graphing, generally, 2.2: All about lines and 2.3: Finding points of intersection for two lines

Week 6

Material to cover: 2.4: Systems of linear equations and matrices and 2.5: Applied systems of linear equations

Week 7

Material to cover: 2.6: Linear Inequalities and Systems of linear inequalities and 2.7: Linear programming, graphically

Week 8

Exam 2 Review and Unit 2 Wrapup

Friday 3/6/2026 Due in Canvas: Exam 2

No Classes from 3/9-3/15 due to Spring Break

Week 9

Material to cover: 3.1: Functions, 3.2: More about Functions and 3.3: Transformations of functions

Week 10

Material to cover: 3.4: Quadratic functions and Factoring

Week 11

Material to cover: 3.5: Polynomial and 3.6: Rational functions

Week 12

Material to cover: 3.7: Exponential functions and 3.8: Logarithmic functions

Week 13

Exam 3 Review and Unit 3 Wrapup

Friday 4/17/2026 Due in Canvas: Exam 3

Week 14

Monday 4/21/2025 Material to cover: 4.6: More Exponential rules, 4.7: Function composition and decomposition and 4.8: Other Algebra topics

Week 15

Material to cover: Unit 4 Wrapup and Final exam Review

Friday 5/3/2025 Reading Day

Your Final Exam is on Monday, May 4th or Tuesday, May 5th . It is required, comprehensive and worth at least 20% of your overall grade.