

Course Syllabus



Course Description

MATH 1316: Survey of Contemporary Mathematics

A study of the uses of mathematics in society today. Emphasis is on concepts rather than technical details. May not be used as a prerequisite for any other mathematics course.

Prerequisite: College Readiness in Mathematics according to the TSI regulations or Math 1311 with a grade of CR.

Course Objectives

This course satisfies the University's General Studies requirement for mathematics. The goal of this course is to emphasize modern uses of mathematics as applied to practical settings. This will be accomplished by the following objectives. The student will learn from the concepts of:

- **Mathematics of Finance**—simple and compound interest, amortization, annuities, investing
 - **Management Science**—street networks (Euler circuits), Hamilton circuits, bin packaging, minimum spanning trees, scheduling, set theory, truth tables
 - **Statistics and Probability**—descriptive statistics, sampling and experimental design, normal distribution, polling, basic probability
 - **Growth and Form**—units of measure, simple and compound interest, geometric properties of shapes, permutations and combinations
 - **Social sciences**—voting methods, apportionment methods, methods for optimization, investment basics
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Course Materials

The following materials are required:


Math in Our World by David Sobecki (Author), Allan Bluman (Author)

eBook

Edition: 4th

Purchase the eBook with ALEKS access -- see below.

You may purchase a paper copy if you'd like, but an electronic version of the textbook comes with the ALEKS online subscription (discussed below).

- Purchase of **eBook with ALEKS Access code** is required.
 - Purchase the eBook and register for a ALEKS account at <http://www.aleks.com>  (<http://www.aleks.com/>).
 - In the upper-right corner of the screen, click on **Sign Up**
 - The course code for ALEKS is **WUT64-UDCHK**
 - If you need a little time to collect the funds for the ALEKS Access Code, email me and I will provide directions for registering with a financial aid access code.
 - A **scientific calculator** is required for this course. The course will be taught using the capabilities of the scientific calculator. You may also use a graphing calculator.
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Assessments and Grading

Your final grade for the course will be comprised of the following learning opportunities that sum to 1000 points:

- **Getting Started Quiz** (20 points)
- **Homework** (250 points) The homework is assigned at the end of each lesson and must be completed in ALEKS. You may attempt homework as many times as you wish in order to achieve your desired grade.
- **Chapter Tests** (180 points) You will take a test via ALEKS at the end of each chapter. You will be allowed **three** attempts.
- ***Mid-Course Exam** (220 points) The mid-course exam will be 22 questions inspired by problems presented in the interactive online lessons on Canvas, ALEKS homework, and e-book examples as well as the videos assigned for viewing for chapters 7 and 13. To take the mid-course exam, *you must have earned a score of 80% or higher on all homework assignments for Chapters 7 and 13.* This exam will be taken in a proctored, testing environment. Before taking the mid-course exam, you must submit an Exam Approval Request form (see Mid-Course Exam information in Course Content).
- ***Final Exam** (330 points) The final exam will be 32 questions inspired by the problems presented in the interactive online lessons on Canvas, ALEKS homework, and ebook examples as well as the videos assigned for viewing for chapters 10, 11, and 12. To take the final exam, *you must have completed all assignments and have earned a score of 80% or higher on all homework assignments for Chapters 10, 11, and 12.* Before taking the Final exam, you must submit an Exam Approval Request form (see Final Exam information in Course Content).
- You must wait at least one week between taking the mid-course exam and the final exam.

For the mid-course exam and the final exam, please be aware that I have five business days from the date of receipt to complete grading.

You will be able to earn a maximum of 1000 points. Final grades will be determined as follows*:


- A = 900 points and above
- B = 800-899 points
- C = 700-799 points
- D = 600-699 points
- F = less than 600 points


*Regardless of the total points you accumulate, you must earn a total of at least 330 out of 550 points on the two exams to earn a D in this course and a total of at least 375 out of 550 points on the two exams to earn a C in this course.

You may not resubmit an assignment after it has been graded.

How to be successful in this Course

Completing this course successfully will require time and effort on your part. Accordingly, I have compiled the following list of study practices that I believe will help you to be successful in this course:

- **Realize that you cannot *cram* this material.** Slow and steady wins the race. Please do not try to complete this course in an unreasonably short period of time. One of your first tasks in this course should be to prepare a schedule and stick to it. (The [Course Pacing Guide](https://canvas.txstate.edu/courses/1300551/files/218072945/download?wrap=1) (<https://canvas.txstate.edu/courses/1300551/files/218072945/download?wrap=1>)  (https://canvas.txstate.edu/courses/1300551/files/218072945/download?download_frd=1) will help you do this.) ***I suggest you plan to cover no more than one chapter every two weeks.*** Be careful about stepping away from the course material for an extended period of time.
- **Fully utilize ALEKS.** Recognize that math is not a spectator sport. Would you expect to watch someone play a sport and then expect to be able to perform at the same level? No. It's the same with math. Think of your brain as a muscle; you have to build it up and get it in shape by practicing, and you practice by working problems. In this course, your "gym" will be ALEKS. You will go there to work out your brain. And just like you have to visit the gym regularly to keep in shape, you'll need to keep visiting ALEKS regularly to retain your mathematical fitness.
 - *ALEKS* is an interactive workspace for learning, including homework problems and videos. Unlike using a book where there is no feedback, ALEKS has several options to help you understand and practice problems. First, be sure you have tried the problem on your own before you use the available resources. Students are often tempted to follow an example step-by-step. This is not an effective learning strategy. If your attempts to work the problem are not successful, you can select "Guided Solution" to step through the problem, then choose "Try Another" to work a similar problem. Or, after you have tried a problem unsuccessfully several ways, you might choose to select "Show Example" to see a sample problem worked out. You can continue working "Try Another" exercises until you understand the problem, and have earned full credit for the problem. You can also work review exercises at the end of each section in the online textbook.

- **Keep a Homework Journal.** Don't work your ALEKS homework on scratch paper and then throw it away. If you do this, then what will you have to study from for your exams? Instead, work your homework in a homework journal and you'll have it to study from for your exams. Your homework journal can be a 3-ring binder or a spiral notebook(s); it's up to you. As you do your homework, make notes to yourself in your journal. Write out the equations and processes or whatever helps you make the connections you need to make. Then, when you study for your examinations, your journal will be a useful study tool. If you put the effort into it, your homework journal can be the most useful tool in this course. In addition to working your homework problems in your journal, enhance it with formulas and notes so that you'll have a personalized study guide. The topics in this course involve multi-step solution processes. While many of the equations will be provided on the exams, the process steps will not so you will need to learn them. The first step in learning a multi-step process is to write down the steps. So as you read the material, watch videos and work homework, write out the steps.
- **Make a Plan.** Self-motivation is necessary for successful completion of this course; no one will be pushing you but you. Use the [Course Pacing Guide](https://canvas.txstate.edu/courses/1300551/files/218072945/download?wrap=1) (<https://canvas.txstate.edu/courses/1300551/files/218072945/download?wrap=1>)  (https://canvas.txstate.edu/courses/1300551/files/218072945/download?download_frd=1) to help you identify target dates and chart a path for progressing through the course, including when you'll complete each homework, chapter test, and exam. You will benefit the most by completing the assignments in the sequence shown on the study schedule. Also, as you plan your submission dates, remember that I have five business days from the date of receipt to grade your mid-course exam and final exam. Life happens; update your schedule as needed.
- **You are not alone.** Though self-paced courses offer tremendous convenience for students, they also leave some students feeling isolated. Remember that I am here to help. If you have questions about the course content or structure, please email me via the Inbox tool in the left-hand navigation menu. You can also visit the useful links to reference materials, interactive activities, and videos provided in the lessons. If you're on campus, remember also that you can utilize [SLAC](http://www.txstate.edu/slac/) (<http://www.txstate.edu/slac/>) and [Math Cats](http://www.correspondence.txstate.edu/students/tutoring/math-lab-and-slac.html) (<http://www.correspondence.txstate.edu/students/tutoring/math-lab-and-slac.html>) for free tutoring. Those of you distant from campus have access to free online tutoring via [Smarthinking](http://www.correspondence.txstate.edu/students/tutoring.html) (<http://www.correspondence.txstate.edu/students/tutoring.html>). Contact the Office of Distance and Extended Learning (ODEL) for additional help as needed. You may e-mail ODEL at corrstudy@txstate.edu (<mailto:corrstudy@txstate.edu>), phone ODEL at 512.245.2322 or 800.511.8656, or come by the office in 302 Academic Services Building-North. Office hours are Monday through Friday, 8 a.m. to 5 p.m., and the office is open when the university is open.

FREE TUTORING RESOURCES

A variety of free tutoring resources are available for students enrolled in correspondence courses. You may access tutoring through Tutor.com by clicking on Tutor.com: 24/7 Online Tutoring in the left menu of this course. Then just respond to the questions to start tutoring. If you need help with writing specifically, then choose Writing as your topic.

Free online tutoring for writing-related assignments is also available from the University Writing Center. For information on accessing these resources, please visit the Office of Distance and Extended Learning's [Free Tutoring \(http://www.correspondence.txstate.edu/students/tutoring.html\)](http://www.correspondence.txstate.edu/students/tutoring.html) page. Currently-enrolled, degree-seeking students able to visit the Texas State campus are eligible for free in-person tutoring from the [Student Learning Assistance Center \(SLAC\) \(http://www.txstate.edu/slac/\)](http://www.txstate.edu/slac/) on the fourth floor of Alkek Library

Printable Version of Syllabus

- [MATH 1316 Syllabus.pdf \(https://canvas.txstate.edu/courses/1300551/files/279485007?wrap=1\)](https://canvas.txstate.edu/courses/1300551/files/279485007?wrap=1) ↓
(https://canvas.txstate.edu/courses/1300551/files/279485007/download?download_frd=1)