

MAT 142: College Mathematics **Spring 2012 Course Syllabus**

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Course Information

Course Description

Welcome to MAT 142! The purpose of this course is to relate college-level mathematics to real-life problems. We will emphasize problem-solving techniques, specifically by means of discussing concepts including proportional reasoning, sets, probability, statistics, and finance.

Course Objectives

- Students will be able to apply proportional reasoning to solve a range of problems.
- Students will learn about sets, set notation, set operations and use set theory to solve problems
- Students will learn basic counting techniques and a variety of strategies to solve probability based problems
- Students will apply a variety of statistical measures to solve problems
- Students will solve a variety of financial based problems including problems involving simple and compound interest, annuities, and amortized loans.

Prerequisites

This course is open to students whose major does not require MAT 119, MAT 170, or MAT 210 and have completed either MAT 106 or scored at least a 30 on the ALEKS Placement test. This course also carries General Studies "MA" credit.

Course Materials & Structure

Textbook

You are not required to purchase a textbook for this course. Reading materials will be provided in each lesson as .PDF chapters. If you would like to purchase a hard copy (available for purchase at the ASU bookstore) we are using the following text:

Mathematics All Around, 4th Edition (Custom Package); by Thomas L. Pirnot; Pearson Custom Publishing; ISBN 0-558-326153-0

Calculator

At minimum, a scientific calculator is required for this course. A few of the recommended models include the TI-30XS Multiview, TI-34 Multiview, TI-36, TI-83, and TI-84. A graphing calculator is not required. You are expected to bring your calculator to class daily. Cellular phone calculators are not permitted in class or during an exam. Also, the sharing of calculators is not permitted during exams.

Diagnostic Assessment

A diagnostic assessment is administered online before you begin each section to determine your learning path and the content materials you will receive. You are expected to watch the video for each section before completing the diagnostic assessment. **The diagnostic assessment results do not get calculated into your final course grade.**

Knewton Study Center

The information you receive in the Knewton Study Center could differ from your classmates depending on your results of the diagnostic quizzes and understanding of the course material. You are expected to work out solutions to problems and take notes while interacting with the online content just as if you were in a traditional lecture. You can use these notes as you prepare for your exams or in class for the problem solving sessions.

Problem Solving Sessions

Each student is expected to come to class on a weekly basis and participate. Every week, you will receive a problem set and be assigned a group based on the most recent content you and each of your group members have completed in the course. If you miss class you will not receive your problem sets or credit for that class. **This means that you will receive a score of 0 for the problem set you should have completed that day as well as losing participation points.** There are no make-up problem sets for missed class sessions. Please see your instructor if you have a documented medical reason for missing class.

Exams

You will take five unit exams during the semester according to the target dates listed below. Based on the recommended pace of the course you should not have any trouble meeting these deadlines. Each exam will involve a mix of mechanical skills and conceptual reasoning. No exam scores will be dropped. It is highly recommended that you schedule to take an exam as soon as you finish a unit while the information is still fresh in your mind. It is required for you to bring headphones to the computer lab for taking the exam.

Exam	Target Date
Unit 1 Exam	Week of Monday, January 23, 2012
Unit 2 Exam	Week of Monday, February 6, 2012
Unit 3 Exam	Week of Monday, March 5, 2012
Unit 4 Exam	Week of Monday, April 2, 2012
Unit 5 Exam	Week of Monday, April 16, 2012

Course Design

Click [HERE](http://asuonline-dev.asu.edu/math/flowchart/142_flow.pdf) (http://asuonline-dev.asu.edu/math/flowchart/142_flow.pdf) to see a graphic of the course flow for 142.

Course Expectations & Student Resources

Course Expectations

- You are expected to complete a minimum of 2 sections per week as outlined on the course schedule.
- Over the course of the semester, you are expected to remain "On Track" as designated by your instructor. Students who are "Off Track" by the day/time designated by your instructor may receive a loss of points for your participation grade.
- Our weekly class meeting for problem solving is not the only time you should be working on the course content. Since this is a hybrid course, a majority of your work will be done online outside of the classroom. You are expected to spend at least 7.5 hours per week outside of our scheduled class meeting to access the course content in the computer lab or your personal computer.
- You are required to attend at least 1.5 hours per week of tutoring in the tutoring lab. Verification sheet must be turned in each class for the week's tutoring. Failure to complete the tutoring each week will result in a loss of participation points.
- There is a dedicated lab time for this course on Thursday during the regular class time (Thursdays from 1:30 pm to 2:45 pm) in BAC 16. It is highly recommended that you attend this lab time. Attending the entire dedicated lab time will count as your 1.5 hours of required tutoring for the week.

Attendance

- For Fall and Spring semesters, classes that meet four days a week, the maximum number of allowed absences is eight (8). For classes that meet three days a week (MWF, for example), the maximum number of allowed absences is six (6). For classes that meet two days a week, the maximum number is four (4). **For classes that meet once a week, the maximum number is two (2).** For classes that meet on other schedules, the number of absences allowed should reflect a similar ratio (two weeks worth of class meetings).
- Students must bring their ASU SunCard to class each day to scan in.
- Any students arriving 10 minutes or more after the class starting time will not be counted as present. Any student leaving before the instructor dismisses the class, will not be counted as present.
- All students are required to attend class until the instructor tells them that they have completed all the course requirements.
- **Students who exceed the number of allowed absences will receive a grade of EN.**
- Students cannot be dropped for the course for non-attendance once they have attended the class.
- Any student who has not attended class during the first week of classes may be administratively dropped from the course. However, students should be aware that non-attendance would NOT automatically result in being dropped from the course. Thus, a student should not assume they are no longer registered for a course simply because they did not attend class during the first week. It is the student's responsibility to be aware of their registration status.

Student Resources / Computer Lab

- Your primary resource for tutoring is the computer lab. During non-class and non-testing times, tutors will be available to answer questions for you regarding the course content. You can also visit the Student Success Center. Specific hours for when a MAT 142 tutor is available at the Student Success Center can be found on their webpage at: <http://studentsuccess.asu.edu>.
- If you own a laptop computer, you are encouraged to bring it with you to the computer lab when you are working on course content or taking an exam.
- The Technology Studio can check your laptop or personal computer free of charge to make sure you are ready to access all the course content from your computer. If you choose to use your laptop for exams, the Technology Studio will also assist you in installing the secure browser required for testing.
- You must wear headphones while in the computer lab and while using your computer in class.

Evaluation Activities

This course requires students to complete four important evaluation activities:

- Success in ASU Math Study Consent Form
- ACES Pre-test
- ACES Post-test
- Engagement Survey

Your course website includes detailed information about the evaluation activities, how long it takes to complete each one, and when each one should be completed. It will take about 45 minutes total over the semester to complete all four evaluation activities. Don't forget you will need to include your name and ASURITE ID on each evaluation activity in order to get credit for completing the task. NOTE: If you took MAT 194, MAT 142 or MAT 117 in Fall 2011, your course included the same evaluation activities. You will need to complete the evaluation activities again in this course.

How to Succeed in this Course

- Staying "on track" is a critical component of student success in this course. Stay ahead of schedule and make sure you are aware of all the resources available to you that are listed in the syllabus and on the course site so you don't fall behind.
- Check your ASU e-mail at least daily.
- Log in to the course site every day.

Course Schedule

Class Date	Material Covered	Week of	To Do
January 10	<input type="checkbox"/> Introduction <input type="checkbox"/> 1.1 – Approaching Problems <input type="checkbox"/> 1.2a – Direct Proportions <input type="checkbox"/> 1.2b – Solving with Proportions	1/10 – 1/16	<input type="checkbox"/> Complete Getting Started Badge <input type="checkbox"/> Complete ASU Math Study Consent <input type="checkbox"/> Complete ACES Pre-Test <input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 1/12 at 1:30 pm in BAC 16) <input type="checkbox"/> Complete Syllabus Quiz <input type="checkbox"/> Schedule Test 1 Complete by 8 am on 1/16 <input type="checkbox"/> 1.1 – Approaching Problems <input type="checkbox"/> 1.2a – Direct Proportions <input type="checkbox"/> 1.2b – Solving with Proportions
January 17	<input type="checkbox"/> 1.3a – Understanding Percents <input type="checkbox"/> 1.3b – Percent Problems <input type="checkbox"/> 1.4a – Unit Conversions <input type="checkbox"/> 1.4b – Conversions in the Real World	1/17 – 1/23	<input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 1/19 at 1:30 pm in BAC 16) Complete by 8 am on 1/23 <input type="checkbox"/> 1.3a – Understanding Percents <input type="checkbox"/> 1.3b – Percent Problems <input type="checkbox"/> 1.4a – Unit Conversions <input type="checkbox"/> 1.4b – Conversions in the Real World
January 24	<input type="checkbox"/> 2.1a – Describing Sets <input type="checkbox"/> 2.1b – Cardinality and Special Sets <input type="checkbox"/> 2.2 – Relating Sets	1/24 – 1/30	<input type="checkbox"/> Take Test 1 no later than Friday, January 27. <input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 1/26 at 1:30 pm in BAC 16) <input type="checkbox"/> Schedule Test 2 Complete by 8 am on 1/30 <input type="checkbox"/> 2.1a – Describing Sets <input type="checkbox"/> 2.1b – Cardinality and Special Sets <input type="checkbox"/> 2.2 – Relating Sets

January 31	<input type="checkbox"/> 2.3a – Operations with Two Sets <input type="checkbox"/> 2.3b – Operations with Three Sets <input type="checkbox"/> 2.4a – Two-set Survey Problems <input type="checkbox"/> 2.4b – Three-set Survey Problems	1/31 – 2/6	<input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 2/2 at 1:30 pm in BAC 16) Complete by 8 am on 2/6 <input type="checkbox"/> 2.3a – Operations with Two Sets <input type="checkbox"/> 2.3b – Operations with Three Sets <input type="checkbox"/> 2.4a – Two-set Survey Problems <input type="checkbox"/> 2.4b – Three-set Survey Problems
February 7	<input type="checkbox"/> 3.1 – Basic Counting Methods <input type="checkbox"/> 3.2 – Understanding FCP	2/7 – 2/13	<input type="checkbox"/> Take Test 2 no later than Friday, February 10. <input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 2/9 at 1:30 pm in BAC 16) <input type="checkbox"/> Schedule Test 3 Complete by 8 am on 2/13 <input type="checkbox"/> 3.1 – Basic Counting Methods <input type="checkbox"/> 3.2 – Understanding FCP
February 14	<input type="checkbox"/> 3.3 – How Many Ways? <input type="checkbox"/> 3.4 – How Likely?	2/14 – 2/20	<input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 2/16 at 1:30 pm in BAC 16) Complete by 8 am on 2/20 <input type="checkbox"/> 3.3 – How Many Ways? <input type="checkbox"/> 3.4 – How Likely?
February 21	<input type="checkbox"/> 3.5 – Combined Events <input type="checkbox"/> 3.6 Working with Conditions	2/21 – 2/27	<input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 2/23 at 1:30 pm in BAC 16) Complete by 8 am on 2/27 <input type="checkbox"/> 3.5 – Combined Events <input type="checkbox"/> 3.6 Working with Conditions
February 28	<input type="checkbox"/> 3.7 – Calculating Expected Value	2/28 – 3/5	<input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 3/1 at 1:30 pm in BAC 16) Complete by 8 am on 3/5 <input type="checkbox"/> 3.7 – Calculating Expected Value

March 6	<input type="checkbox"/> 4.1a – Construction Data Visualizations <input type="checkbox"/> 4.1b – Interpreting Data Visualizations	3/6 – 3/12	<input type="checkbox"/> Take Test 3 no later than Friday, March 9. <input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 3/8 at 1:30 pm in BAC 16) <input type="checkbox"/> Schedule Test 4 Complete by 8 am on 3/12 <input type="checkbox"/> 4.1a – Construction Data Visualizations <input type="checkbox"/> 4.1b – Interpreting Data Visualizations
March 13	<input type="checkbox"/> 4.2a – Mean, Median, Mode <input type="checkbox"/> 4.2b – Five-number Summary <input type="checkbox"/> 4.3 – Range and Standard Deviation	3/13 – 3/26	<input type="checkbox"/> NO CLASS ON MARCH 20 due to Spring Break <input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 3/15 at 1:30 pm in BAC 16) <input type="checkbox"/> Complete by 8 am on 3/26 <input type="checkbox"/> 4.2a – Mean, Median, Mode <input type="checkbox"/> 4.2b – Five-number Summary <input type="checkbox"/> 4.3 – Range and Standard Deviation
March 27	<input type="checkbox"/> 4.4a – The Normal Curve <input type="checkbox"/> 4.4b – Applications of the Normal Curve	3/27 – 4/2	<input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 3/29 at 1:30 pm in BAC 16) <input type="checkbox"/> Complete by 8 am on 4/2 <input type="checkbox"/> 4.4a – The Normal Curve <input type="checkbox"/> 4.4b – Applications of the Normal Curve
April 3	<input type="checkbox"/> 5.1 – Time is Money <input type="checkbox"/> 5.2 – Interest on Your Interest <input type="checkbox"/> 5.3 – Add-on and Daily Balance Methods	4/3 – 4/9	<input type="checkbox"/> Take Test 4 no later than Friday, April 6. <input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 4/5 at 1:30 pm in BAC 16) <input type="checkbox"/> Schedule Test 5 Complete by 8 am on 4/9 <input type="checkbox"/> 5.1 – Time is Money <input type="checkbox"/> 5.2 – Interest on Your Interest <input type="checkbox"/> 5.3 – Add-on and Daily Balance Methods

April 10	<input type="checkbox"/> 5.4 – The Annuity Formula <input type="checkbox"/> 5.5 – The Amortization Formula	4/10 – 4/16	<input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 4/12 at 1:30 pm in BAC 16) Complete by 8 am on 4/16 <input type="checkbox"/> 5.4 – The Annuity Formula <input type="checkbox"/> 5.5 – The Amortization Formula
April 17	<input type="checkbox"/> Review	4/17 – 4/23	<input type="checkbox"/> Complete ACES Post-Test <input type="checkbox"/> Take Test 5 no later than Tuesday, April 24. <input type="checkbox"/> Attend 1.5 hr of tutoring (or lab time on 4/19 at 1:30 pm in BAC 16)
April 24	<input type="checkbox"/> Review		LAST DAY OF CLASS

Grading Policy

Point Distribution	Percentage
5 Unit Exams	50%
Problem Sets	25%
5 Unit Badges	20%
Participation / Misc.	5%

Grade	Grading Scale
A+	97% or above
A	90% - 96.99%
A-	89.5% - 89.99%
B+	87% - 89.49%
B	80% - 86.99%
B-	79.5% - 79.99%
C+	77% - 79.49%
C	70% - 76.99%
D	60% - 69.99%
E	< 60%

Key Semester Dates

<i>Drop/Add Deadline:</i>	Wednesday, January 11, 2012
<i>Course Withdrawal Deadline:</i>	Wednesday, March 28, 2012

Additional Information

- The highest standards of academic integrity are expected of all students at all times. Violations of academic integrity include, but are not limited to, cheating, fabrication, tampering, plagiarism, or facilitating such activities. We will act very harshly against any acts of academic dishonesty.
- Students with disabilities should arrange to meet with me as soon as possible to arrange for reasonable accommodations for their learning needs. Students registered with DRC must notify the instructor at least two weeks prior to any exam close date.
- Alternative arrangements for any religious observances, ASU sanctioned activity, or ASU student athlete obligations must be arranged with the instructor at least two weeks prior to the event. As a reminder, there are no extensions or makeups for exams after the exam close date.
- No individual extra credit assignments will be offered.

ACADEMIC DISHONESTY

In the "Student Academic Integrity Policy" manual, ASU defines "Plagiarism" [as] using another's words, ideas, materials or work without properly acknowledging and documenting the source. Students are responsible for knowing the rules governing the use of another's work or materials and for acknowledging and documenting the source appropriately." You can find this definition at:

http://www.asu.edu/studentaffairs/studentlife/judicial/academic_integrity.htm#definitions

Academic dishonesty, including inappropriate collaboration, will not be tolerated. There are severe sanctions for cheating, plagiarizing and any other form of dishonesty.

Student Conduct Statement:

Students are required to adhere to the behavior standards listed in Arizona Board of Regents Policy Manual Chapter V – Campus and Student Affairs: Code of Conduct (http://www.abor.asu.edu/1_the_regents/policymanual/chap5/5Section_C.pdf), ACD 125: Computer, Internet, and Electronic Communications (<http://www.asu.edu/aad/manuals/acd/acd125.html>), and the ASU Student Academic Integrity Policy (<http://www.asu.edu/studentaffairs/studentlife/srr/index.htm>).

Students are entitled to receive instruction free from interference by other members of the class. If a student is disruptive, an instructor may ask the student to stop the disruptive behavior and warn the student that such disruptive behavior can result in withdrawal from the course. An instructor may withdraw a student from a course when the student's behavior disrupts the educational process under USI 201-10

<http://www.asu.edu/aad/manuals/usi/usi201-10.html>.

- **Please note the following links to ASU's academic integrity policy**
<http://provost.asu.edu/academicintegrity/policy>