

## **MAT 142: College Mathematics** **Spring 2007 Course Syllabus**

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### Tentative Schedule

Week	Dates	Monday	Wednesday	Remarks
1	January 15 – January 19	No Class	Introduction	1/15 – Martin Luther King Observed
2	January 22 – January 26	1.3 Sets	2.1 Intro to Probability	
3	January 29 – February 2	2.4 Independence	2.6 Binomial Probability Model	
4	February 5 – February 9	2.7 Conditional Probability	2.8 Bayes' Theorem	
5	February 12 – February 16	<b>Exam 1</b>	2.9 Expected Value	Exam 1
6	February 19 – February 23	3.1 Intro to Stats	3.2 Inferences	
7	February 26 – March 2	3.3 Mean, Median, Mode	3.4 Normal Distribution	
8	March 5 – March 9	3.5 Standard Deviation	<b>Exam 2</b>	Exam 2
9	March 12 – March 16	Spring Break	Spring Break	Enjoy the week off!
10	March 19 – March 23	5.1 Simple Interest	5.2-5.3 Compound Interest	
11	March 26 – March 30	5.4 Annuities	5.4 Present Day Annuities	3/30 – Course Withdrawal Deadline
12	April 2 – April 6	5.6 Mortgage Equation	Finance Exercises	
13	April 9 – April 13	<b>Exam 3</b>	4.1-4.2 Rates of Change	Exam 3
14	April 16 – April 20	4.3 Linear Models	4.4 Exponential Models	
15	April 23 – April 27	4.7 World Population	4.5 Global Warming	
16	April 30 – May 4	Recitation, Leeway	Reading Day	Finals Week Begins

### Homework Assignments

Section / Topic	Homework
1.3 Sets	Page 32 #1,2,3,7,8,9,22,23,25,26,27,28,29,34,35,37
2.1-2.2-2.3 Intro. to Probability	Page 76 #1,2,3,4,5,6,7,8,9,10,11,12,23,24,25,26,27,28,29,32,33,34,36,37,38
2.4 Independence	Page 81 #2,3,4,5,6,8,9,15,16,17,18,19,23,24
2.6 Binomial Probability Model	Page 93 #1,2,3,4,5,6,7,8,14,15,16,17,18,19,20,21,22,23,27,28,29
2.7 Conditional Probability	Page 98 #1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,17,18
2.8 Bayes' Theorem	Page 106 #1,2,3,4,5,6,7,8,9,10,11,12,13,14
2.9 Expected Value	Page 112 #1,4,5,6,8,9,13,14,15,16,17
3.1 Intro. to Stats	Page 123 #1,5,6,7,9,11,12,13,14,15,16,17
3.2 Inferences	Page 133 #1,3,5,6,9,12,13
3.3 Mean, Median, Mode	Page 145 #1,2,3,4,5,6,7,8
3.4 Normal Distribution	Page 155 #2,3,4,5,6,7,8,9,10,17,18,19,20,21,22,23,24,26,27,28,29,30,31,32
3.5 Standard Deviation	Page 169 #1,4,6,8
5.1 Simple Interest	Page 258 #1,3,5,6,8; Page 264 #10,11
5.2-5.3 Compound Interest	Page 263 #1,2; Page 267 #1, 4,5,6,7,8,11,12
5.4 Annuities	Page 276 #2,5,8,12,21,22,23,25
5.6 Mortgage Equation	Page 286 #1,2,3,4,23,24,25,27,31,32,33
4.1-4.2 Rates of Change	Page 181 #11,12,13 ; Page 186 #1,2,3,4,5,9,11
4.3 Linear Models	Page 198 #1,2,3,4,5,6,11,12,13,14,15,16,17,18,19,20,21,22,23,24,27,28,29,30,31,32
4.4 Exponential Models	Page 213 #1,2,3,4,5,6,7,8,9,11,12,13,14,15
4.5 Global Warming	Page 220 #1,2,4
4.7 World Population	Page 237 #9,10,11,12,13,24,25,26,27,28

#### Course Description/Goals:

This course covers applications of basic college-level mathematics to real-life problems. It is appropriate for students whose major does not require MAT 119, MAT 170, or MAT 210. Prerequisite: MAT 106 or 2 years of high school algebra.

**Required Text:**

*Literacy in Mathematics; A Contemporary Approach to Quantitative Literacy*, Second Edition; by Isom & Abramson; Kendall/Hunt Publishing Company; ISBN 0-7575-3147-4. Students are expected to read relevant sections of the textbook prior to attending class.

**Calculator:**

A calculator is required for this course. The recommended models are the Casio FX-7400 or TI-83. These are the models that most students use, but any scientific calculator will be adequate. I will be using the TI-83 for classroom demonstrations. Cellular phone calculators are not permitted in class or during an exam. Also, the sharing of calculators is not permitted during exams.

**Student Success Center:**

The Student Success Center in UCENT 171 is open Monday-Thursday from 7am – 7pm and Friday from 8am – 5pm. Be sure to go for help before it is too late and several days before an exam.

**Exams:**

You will take 3 exams (in class) during the semester and one final exam according to the tentative dates listed below. Any changes will be announced at least one week in advance. Each exam will involve a mix of mechanical skills and conceptual reasoning. The best possible preparation for them is regular attendance and completion of assigned homework. No exam scores will be dropped.

<b>Exam</b>	<b>Date</b>	<b>Topics on Exam</b>
Exam #1	Monday, February 12, 2007	Chapter 1-2 Topics
Exam #2	Wednesday, March 7, 2007	Chapter 2-3 Topics
Exam #3	Monday, April 9, 2007	Chapter 5 Topics
Final Exam	See below.	Chapter 4 Topics

**Final Exam:**

The final exam will be given in our regular classroom as scheduled on the final exam scheduled located at: <http://www.asu.edu/registrar/registration/finals.html>. According to ASU policy, final exams can be rescheduled only under the following circumstances: (1) religious conflict, (2) the student has more than 3 exams scheduled on the same day, or (3) two finals are scheduled to occur at the same time. No final exams will be rescheduled for personal reasons or non-refundable airline tickets.

<b>Class SLN &amp; Time</b>	<b>Date &amp; Time of Final Exam</b>
SLN 99518 (3:15)	Tuesday, May 8, 2007; 10:00-11:50am
SLN 65698 (4:40)	Wednesday, May 9, 2007; 4:40-6:30pm

**Homework:**

In order to ensure all students stay on top of the homework, homework will be collected regularly. You are encouraged to work together on homework, but each individual student is required to write-up and turn in their own work. All homework must be turned in neat, organized, and stapled if there are multiple pages. (No, folding corners over or paper clips do not count.) If not, your homework will not be graded. Moreover, all work must be shown to receive full credit. No late homework will be accepted if you miss class for any reason. If there is a documented long-term emergency, other graded criteria for the course will be adjusted on a pro-rata basis to calculate the final homework grade. Your lowest homework grade will be dropped.

**Quizzes:**

In order to ensure all students participate during class and keep up with the material, daily quizzes will be given reflecting that day's material. No make-up quizzes will be given if you miss class for any reason, but your lowest quiz score will be dropped. If there is a long-term documented emergency, other graded criteria for the course will be adjusted on a pro-rata basis to calculate the final quiz grade.

**Make-Up Policy:**

Make-up exams are only given in the case of documented emergencies. There are no exceptions to this policy. (Yes, this means you too!) Please note that work emergencies do not constitute documented emergencies. Arrangements for any make-ups must be done within one week of the assignment. There are no make-ups for homework. (See above.)

**How to Study:**

Students often ask me for advice on how to prepare for an exam. Be sure to look over the problems we covered in class, as well as the problems assigned for homework. Make sure you can work out these problems without the aid of your notes or textbook and check to make sure that your solution is correct. If you need assistance, please meet with me, use the Student

Success Center, or work with classmates for help. If you make a mistake, be sure you understand not only the correct way to do the problem, but why your method was wrong. If you understand the reasoning behind your actions, you are more likely to remember them and be successful. I often change or modify problems just enough to keep students from memorizing.

I highly recommend working in groups. Within your group, pick problems and present them to each other. Be sure you explain each step along the way, as if you were teaching a class. If you stumble over a step, you now know the concept on which you need to focus. If you can explain through an entire problem without any help or coaching, then you probably know the concept pretty well. This does take some extra time, but if you are determined and serious about doing well in the class, this is a great way to go about doing it.

**Attendance:**

All students are expected to come to class each day having read relevant sections of the textbook and prepared to discuss assignments or material being presented in class. During class, any student can expect to be called upon to answer questions posed by the instructor or other students. Statistics show that students who regularly come to class tend to do better than students who skip class every now and again. **From this data, only three (3) unexcused absences will be allowed during the semester. The fourth absence is grounds for the loss of a full letter grade at the end of the semester. Any subsequent absence will result in the loss of another full letter grade.**

**Final Grade Breakdown:**

Your final grade is determined as follows:

Component	Percentage
Exam 1	17%
Exam 2	17%
Exam 3	17%
Final Exam	17%
Quizzes	17%
Homework	15%

Grade	$x = \text{Final Percentage}$
A+	$98\% \leq x \leq 100\%$
A	$90\% \leq x < 98\%$
A-	$89.5\% \leq x < 90\%$
B+	$87\% \leq x < 89.5\%$
B	$80\% \leq x < 87\%$
B-	$79.5\% \leq x < 80\%$
C+	$77\% \leq x < 79.5\%$
C	$70\% \leq x < 77\%$
D	$60\% \leq x < 70\%$
E	$x < 60\%$

**Warning:**

Many students do not take my class seriously at the beginning of the semester, especially with regard to the homework. They feel as though because they understand what goes on in class in class they do not do most or any of the homework. These students tend to not do well on the first exam. Many students who struggle on the first exam tend to do better on subsequent exams once they adjust their study habits, but it is tough to get a really good grade in the class at that point. The majority of the students who do keep up with the work tend to do well. Please keep up and come for help before it is too late.

**Student Expectations of the Instructor:**

As an instructor of mathematics, I have certain responsibilities to you the student:

- I must show up to class prepared to teach the day’s lecture with a well-organized plan.
- I must not answer or use my cell phone while I am in class.
- I must always treat students fairly and with patience.
- I must effectively teach you the information that you require in order to learn mathematics.
- I must be available if you have having difficulty with the material by offering weekly office hours and the option of meeting with you by appointment.

**Instructor Expectations of the Student:**

However, expectations are mutual. I, as the instructor, have the right to expect:

- That you come to class prepared. This includes bringing your textbook, calculator, a pencil, and any other necessary class materials. (If you have not done your homework, do not participate in group activities, do not bring the necessary class materials, or wish to sleep through your math class, you are stealing time from your classmates who are interested in learning something.)
- That you will not use or answer your cell phone while in class.
- That you come for extra help with specific questions that demonstrate you have attempted to learn the material in the classroom and at home. (“I don’t understand Chapter 4!” or “Math is impossible!” are not valid complaints. On the other hand, “I don’t understand what I should plug in for  $r$  in problem 14 on page 227” demonstrates that you have put forth some effort and now requires some help on my part.)

**Additional Information:**

- The best way to reach me is by e-mail. My office phone number is not the most efficient way to leave a message for me.
- Students with differing abilities should arrange to meet with me by the end of the first week of classes to arrange for reasonable accommodations for their learning needs. Students registered with DRS must notify the instructor at least one week prior to any exam.
- Athletes with travel schedules should meet with me by the end of the first week of classes to discuss any necessary arrangements that need to be made.
- Arrangements for any religious observances or ASU sanctioned activity must be arranged with the instructor at least one week prior to the event.
- Classroom disturbances, including but not limited to: arriving late, talking in class, and cellular phones, are not tolerated. Each student is expected to show respect for every student registered in the course. Turn off or silence any cellular phones prior to entering class. Blatant cellular phone usage (i.e., text messaging) during class will result in the student being asked to leave the room. Recurring disturbances caused by an individual will result in an administrative withdrawal from the course.
- Electronic submissions of written homework (e-mail or fax) will not be accepted.
- No individual extra credit assignments will be offered.
- I reserve the right to make changes to this syllabus as necessary. Changes will be considered official if they are announced in class or placed on my web site.
- Welcome to the course! I encourage you to stay after class, visit the Student Success Center, come to my office hours, or make an appointment with me to discuss any material that is unclear to you. I wish you well in the course and all of your other academic pursuits this semester.

**Agreement of Terms:**

By remaining registered in the course through drop/add period, you agree to all terms and policies set forth in the syllabus.

**Reminder of Particular Departmental and University Policies and Procedures**

<i>Course Withdrawal:</i>	Friday, March 30, 2007
<i>Complete Withdrawal:</i>	Tuesday, May 1, 2007

**Ethics:**

It is highly unethical to bring to your instructor's attention the possible impact of your mathematics grade on your future plans, including graduation, scholarships, jobs, etc. The instructor may exercise an option to withdraw you from the course if they think you are compromising the ability to assess your work independently of any other consideration. Students found to be involved in academic dishonesty will be removed from the class and a grade of **XE** for the course will be submitted to the registrar. The student will be advised to repeat the course with another professor, possibly at another institution. This is the least action taken. Further, more serious actions may be taken if the situation indicated that such actions are appropriate.

**The Grade of XE:**

A grade of XE is reserved for "failure for academic dishonesty." The grade goes on the student's transcript; the student needs to petition to have it removed after 1 year.

**Incomplete:**

If there is a last-minute personal or medical emergency, the student may receive a grade of Incomplete and make up the final within one calendar year. The student must provide written documentation and be passing the class at the time to receive an Incomplete. Make-up exams will NOT be given for reasons of a non-refundable airline tickets, vacation plans, work schedules, weddings, family reunions, and other such activities. Students should consult the final exam schedule before making end-of-summer session travel plans. *The Dean of the student's college must approve any exceptions to these rules.*

**Honor Policy:**

The highest standards of academic integrity are expected of all students at all times. The failure of any student to meet these standards may result in suspension or expulsion from the University or other sanctions as specified in the University Student Academic Integrity Policy. Violations of academic integrity include, but are not limited to, cheating, fabrication, tampering, plagiarism and/or facilitating such activities.