

## Math 465 --- Probability Theory Section 01 #22873

### Syllabus Winter 2012

Dr. Chetan Prakash, Instructor

**Text:** "Probability and Statistical Inference" by Hogg & Tanis, 8<sup>th</sup> edition, Pearson Prentice Hall, 2010

**Time/Place:** MW 4:00 to 5:50 p.m. at JB-387.

**Instructor's Office:** JB 327 **Phone:** 537-5390 **e-mail:** [cprakash@csusb.edu](mailto:cprakash@csusb.edu)

**Office Hours:** MW 3:30-4:00 p.m., TTh 3:00-4:00 p.m. and by appointment

**Material to be covered:** Chapters 1 through 5 with some sections omitted

**The Course:** Probability Theory is the mathematical study of uncertainty. Even though it had its origins in an attempt to understand gambling so as to devise strategies that maximize winnings, uncertainty pervades most of our knowledge, so naturally the subject pervades all fields of science, social science, medicine and management. This course follows the introduction to analysis and to combinatorics you received in the **pre-requisites:** Math 251 and Math 372. Section 1.3 of the book covers some combinatorics: please refer to it often if you are in need of a review.

**Tentative Schedule:** We have about 29 sections to cover in 17 class sessions (there will be two midterm exams and possibly one day off). Thus, expect to see an average coverage of three or more sections per week. Here is an approximate schedule:

Week	Monday	Wednesday
1 January	<b>9:</b> 1.1 1.2 (1.3)	<b>11:</b> (1.3) 1.4 1.5
2 January	<b>16:</b> <b>Holiday (MLK)</b>	<b>18:</b> 1.6 2.1
3 January	<b>23:</b> 2.2 2.3	<b>25:</b> 2.4 2.5
4 February	<b>30:</b> 2.6 3.1 Review	<b>01:</b> <b>First Midterm</b> (Ch. 1, 2)
5 February	<b>06:</b> 3.3 3.4	<b>08:</b> 3.5 3.6
6 February	<b>13:</b> 4.1 4.2	<b>15:</b> 4.3 4.4
7 February	<b>20:</b> 4.4 5.1	<b>22:</b> 5.1
8 March	<b>27:</b> 5.2 Review	<b>29:</b> <b>Second Midterm</b> (Ch. 3,4)
9 March	<b>05:</b> 5.2 5.3	<b>07:</b> 5.4
10 March	<b>12:</b> 5.5 5.6	<b>14:</b> 5.7
March	<b>19:</b> Catch-up/Review	<b>21:</b> <b>Final Exam</b>

**Quizzes:** Will be conducted for 15 minutes at the end of class every Wednesday (except for weeks when we have an exam), based on homework assigned from each section we cover as we go along. The best five quizzes will count towards your grade and no make-ups will be entertained.

**Exams:** Two in-class *midterm tests* and a *final* will take place as on the schedule above. You will be informed of the material to be covered on each midterm during the prior week. Our review of the material on the day before the test will be of greatest use to you if you have already studied the material and then bring questions to the review class. **Make-ups:** *No make-ups will be allowed for the quizzes or midterms.* Instead, the final grade will replace one of your midterm grades, if the final grade is higher.

**Grading:** If the minimum of your midterm grades is less than that on the final, the percentage on that midterm will be replaced by the final percentage.

The total of your homework assignments, and each of your midterms will have equal worth: 20% of the grade each. The final will be worth 40% of the grade. Grades will be calculated on the following scale: an A if your rounded-off total percentage is in the interval [92, 100]%, an A- if in [89, 91]%, a B+ in [86, 88]%, a B in [79, 85]%, a B- in [76, 78]%, a C+ in [73, 75]%, a C in [67, 75]%, a C- in [64,66], a D in [50,63] and an F if the grade is below 50%.

**Notes:**

1. The responsibility for learning the material is yours. Please expect to spend, on average, 2 hours of home work for each hour in class. *Read the sections we are to cover before coming to class.* It is my responsibility to facilitate your learning by pointing the way, helping you with specific problems you bring to class or to my office hours, and giving you feedback on your progress. However, watching me work exercises or reading someone else's solutions is not enough --- you must do it yourself. Sincerity of effort will lead you to the joy of doing mathematics – as well as the best grade you are capable of.
2. This is a fast-paced course, so it will not be possible to discuss all questions during class time. Do please utilize as many resources as you can, e.g., my office hours, the tutors in JB 391 (free of charge), and study groups with other students. By all means look up other texts if they seem more readable to you.
3. Please keep up to date with the material, and try not to miss any midterms or home assignments. You are responsible for bringing calculators to the exams.
4. If you anticipate enrolling in MATH 599 then be sure to prepare your presentation write-up for your portfolio. Try to get any paperwork for these entries to me as soon as possible after completion if they require my signature.
5. If you are in need of an accommodation for a disability in order to participate in this class, please contact Services to Students with Disabilities at UH-183, (909)537-5238.
6. Excluding very special circumstances, the college will not approve petitions to drop the course after October 12. Please refer to the Academic Regulations and Policies section of your current bulletin for information regarding add/drop procedures and consequences of academic dishonesty.
7. You can always get in touch with me by leaving a message by phone. I should get back to you within a working day.
8. Please make chapter summaries for yourself and note any difficulties you are having. At the end of class on the day before an exam, our review will consist of discussing *your* questions – not mine.
9. Graded work in hard copy will generally be returned, along with solutions, within one week after being handed in.
10. Final grades will be posted on MyCoyote at the end of term.

### **E-mail Etiquette:**

1. Any emails regarding this course should have a subject heading starting with the Course Number (MATH 465) and a quick description of the subject. Otherwise they might be missed entirely.
2. Emails are not text-messages or IMs. They are letters, or at least memos. Therefore we are expected to include a greeting as well as a signature of some kind and to adhere to the basic conventions of politeness (e.g., “please”, “thank you” etc.). If I cannot discern from your email who you are, I will not reply to it.
3. For clear communication, correct punctuation is expected.
4. This is not a distance-learning class. Any question that can wait until the next class time or office hours should be addressed to the professor in person. It is spamming to fill up your professor’s mailbox merely because you don’t feel like waiting for class or for office hours -- such emails will not be replied to. Please note that an appointment can always be made if you cannot make the announced regular office hours. Such an appointment *can* be arranged by email.
5. Questions that can be easily answered by looking up or by going on line and searching (e.g., “When is the final?” or other questions that can be easily found in the syllabus, course catalogs or on csusb.edu) should not be emailed to your professor – find out for yourself.
6. If you are working on on-line homework, and there will not be a class or office hour before it is due, you may email questions to the professor. You may also request a meeting at his office if that is possible. Otherwise, such emails will not be replied to.
7. Any emails that *are* responded to will be replied to during or after the professor’s next regular office hours, after all physically present students have had their questions answered.
8. If you are sick or otherwise unable to come to class and need to communicate with the professor, it is best to call the professor’s number and leave a message, including a number where you can be called. Try to avoid using a cell phone for this unless you have good coverage. However, you may write an email with the word SICK after the course number (MATH 465) in the subject heading.

### **Important Dates**

Last day to add open classes without permission: Jan. 13

Martin Luther King Holiday observed (campus closed; library open Sat. - Sun.): Jan. 14 - 16

Census (Last day to drop/add with permission): Jan. 30