

MATH 1780.001 Probability

Fall 2012

COURSE/Section #: MATH 1780.001 COURSE TITLE: Probability	INSTRUCTOR: Jose Angel Islas EMAIL: joseislas@my.unt.edu
OFFICE: GAB 442A OFFICE HOURS: Monday & Wednesday 3:00 p.m. -5:00 p.m. and by appointment.	PHONE: I do not have an office phone number. Students should exchange names and phone numbers among themselves in order to secure missed assignments when they are absent.
CLASS MEETS: TH 120 TR 3:30 p.m. – 4:50 p.m.	TEXT: Schaeffer and Young, Introduction to Probability & Its Applications, 3 rd Edition
FINAL EXAM DATE AND TIME: Tuesday, December 11, 1:30 p.m. -3:30 p.m.	Academic Dishonesty: http://www.unt.edu/csrr Final grades online access: http://www.unt.edu/grades THIS COURSE DOESN'T USE BLACKBOARD ! Course web site: http://math.unt.edu/~josei/
Math Lab web site: www.math.unt.edu/mathlab The UNT Math Lab is located in GAB 440 Fall 2012 Hours: September 4th to December 7th 2012 Monday through Thursday 7:00am to 8:00pm Friday 7:00 am to 4:00pm Saturday 12:00pm to 4:00pm	Description: Probability theory, discrete and continuous random variables, Markov chains, limits theorems, stochastic processes, and models for phenomena with statistical regularity. Prerequisite(s): MATH 1710.
HOMEWORK Visit the course web site for homework assignments. Write your work very clear, if the grader can't read it, no credit is given. Homework must be placed on my desk by the beginning of the class. THERE ARE NO EXTENSIONS.	
ATTENDANCE AND MAKE-UP TEST POLICIES: Attendance is expected of all students (ON TIME!). If a student is unable to attend, it is his/her responsibility to contact the instructor to obtain assignments. A student may request a make-up test to be administered in the Testing Center for documented medical and/or family emergencies only. This makeup exam will be administered in GAB 443.	
GRADING POLICY: Homework 25% EXAM 1 25 % EXAM 2 25% FINAL 25% Comprehensive. Final exam can replace the lowest exam grade. Grading Scale: A: [90%, 100%]; B: [80%, 90%]; C: [70%, 80%]; D: [60%, 70%]; F: [0%, 60%]	
It is the responsibility of students with certified disabilities to provide the instructor with appropriate documentation from the Dean of Students Office.	

NOTES:

Students are responsible for meeting all university deadlines (registration, fee payment, prerequisite verification, drops deadlines, etc). See the printed Schedule of Classes and/or University Catalog for policies and dates.

MATH 1780.001 – FALL 2012

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8/27	8/28	8/29	8/30 FIRST DAY OF CLASS Section 2.2	8/31
9/03 LABOR DAY No classes	9/04 Section 2.2-2.3	9/05	9/06 Section 2.4-2.5	9/07.
9/10	9/11 Section 2.5,3.1, 3.2	9/12 CENSUS DATE - Last day to drop course without instructor's consent	9/13 Section 3.2, 3.3	9/14
9/17	9/18 Section 3.4, 4.1	9/19	9/20 Section 4.1, 4.2	9/21
9/24	9/25 Section 4.2, 4.3, 4.4	9/26	9/27 Section 4.4, 4.5	9/28
10/01	10/02 Review	10/03	10/04 Exam#1	10/05
10/08	10/09 Last day to drop with an automatic "W" Section 4.6	10/10 Beginning this date, instructors may drop students with grade of WF for nonattendance.	10/11 Section 4.7	10/12
10/15	10/16 Section 4.8, 4.9	10/17	10/18 Section 4.10	10/19 MID SEMESTER
10/22	10/23 Section 4.11	10/24	10/25 Section 4.11, 5.1, 5.2	10/26
10/29	10/30 Section 5.3, 5.4	10/31	11/01 Section 5.4, 5.5	11/02
11/05	11/06 Review	11/07 Last day to drop a course with consent of instructor	11/08 Exam#2	11/09
11/12	11/13 Section 5.6, 5.10, 7.2	11/14	11/15 Section 7.2	11/16
11/19	11/20 Section 7.3-7.4	11/21 Last day for an instructor to drop a student with a grade of "WF" for non- attendance	11/22 THANKSGIVING University closed	11/23 THANKSGIVING University closed
11/26	11/27 Section 8.2	11/28	11/29 Section 8.3, 8.4	11/30
12/03	12/04 Section 8.4, (9.1)	12/05	12/06 Review	12/07 Reading Day No Class
12/10 FINALS WEEK	12/11 FINALS WEEK	12/12 FINALS WEEK	12/13 FINALS WEEK	12/14 FINALS WEEK TERM ENDS

- 2. Foundations of Probability, 8
 - 2.2. Sample Space and Events, 13
 - 2.3. Definition of Probability, 22
 - 2.4. Counting Rules Useful in Probability, 31
 - 2.5. More Counting Rules Useful in Probability, 48
- 3. Conditional Probability and Independence, 57
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 - 3.2. Independence, 69
 - 3.3. Theorem of Total Probability and Baye's Rule, 78
 - 3.4. Odds, Odds Ratios and Relative Risk, 83
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 - 4.1. Random Variables and Their Probability Distributions, 93
 - 4.2. Expected Values of Random Variables, 104
 - 4.3. The Bernoulli Distribution, 121
 - 4.4. The Binomial Distribution, 122
 - 4.5. The Geometric Distribution, 137
 - 4.6. The Negative Binomial Distribution, 144
 - 4.7. The Poisson Distribution, 152
 - 4.8. The Hypergeometric Distribution, 162
 - 4.9. The Moment-Generating Function, 169
 - 4.10. The Probability-Generating Function, 172
 - 4.11. Markov Chains, 176
- 5. Continuous Probability Distributions, 192
 - 5.1. Continuous Random Variables and Their Probability Distributions, 192
 - 5.2. Expected Values of Continuous Random Variables, 201
 - 5.3. The Uniform Distribution, 210
 - 5.4. The Exponential Distribution, 216
 - 5.5. The Gamma Distribution, 226
 - 5.6. The Normal Distribution, 233
 - 5.10. Moment-Generating Functions for Continuous Random Variables, 272
- 7. Functions of Random Variables, 351
 - 7.2. Functions of Discrete Random Variables, 352
 - 7.3. Method of Distribution Functions, 354
 - 7.4. Method of Transformations in One Dimension, 363
- 8. Some Approximations to Probability Distributions: Limit Theorems, 395
 - 8.2. Convergence in Probability, 395
 - 8.3. Convergence in Distribution, 399
 - 8.4. The Central Limit theorem, 406
- 9.1. The Poisson Process, 422 (Optional)