

University of North Texas at Dallas

Fall 2015

SYLLABUS

MATH 1355 Probability and Statistics for Teachers 3 credit hours

Division: Liberal Arts and Life Sciences

Department: Mathematics and Information Sciences

Instructor: Dr. Gwendolyn Johnson

Office: Founders Hall (Bldg 2) Room 232

Phone: 972-338-1320

Email: Gwendolyn.johnson@untdallas.edu

Office hours: Mondays & Wednesdays 2:30-4:00

Tuesdays 11:30-1:00 and 2:30-5:30

Thursdays 11:30-1:00

Fridays and Saturdays by appointment

Because I often have meetings on campus, I might not be in my office during these hours. Please email me to make sure I will be available before you visit.

Class Location: Bldg 2 room

Class Times: Tuesdays and Thursdays 1:00-2:20

Course Catalog Description: Elementary probability, tree diagrams, counting techniques, basic set theory, statistical techniques for organizing, summarizing, displaying, and interpreting data, sampling techniques, descriptive statistics, normal distribution, discussions of children's learning of statistics and probability.

Learning Objectives:

1. Students will answer questions and solve problems related to data analysis including bar graphs, line plots, pictographs, stem-and-leaf plots, and Venn diagrams.
2. Students will answer questions and solve problems related to probability including counting combinations, set theory, and tree diagrams.
3. Students will answer questions and solve problems related to statistics including sampling techniques, mean, median, mode, normal distribution, range, and correlation.

INTASC and NCATE Standards:

InTASC Standard #4 Content Knowledge: The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make these aspects of the discipline meaningful for learners to ensure mastery of the content.

InTASC Standard #5 Application of Content The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

NCATE Standard 1: Candidate Knowledge, Skills, and Professional Dispositions

Learning Resources:

UNT Dallas Math Lab is located in Bldg 1 room 336.

UNT Dallas Writing Center can be found at www.unt.edu/wc

Academic Advising and Student Support is located in Bldg 1, third floor. 972-338-1645

Grading Matrix:

Six Quizzes	600 points
Final Exam	130 points
Two Homeworks	70 points
Participation	<u>50 points</u>
	850 points total

Tentative Course Outline

Date	Topics
Aug. 25	Pictographs
Aug. 27	Bar graphs and line plots
Sept. 1	Circle graphs and line graphs
Sept. 3	Go over practice problems
Sept. 8	Review and Quiz #1 Homework Due
Sept. 10	Stem-and-leaf plots; reading data from a table
Sept. 15	Venn diagrams
Sept. 17	Box-and-whiskers plots
Sept. 22	Review and Quiz #2
Sept. 24	Combinations and permutations
Sept. 29	Basic probability
October 1	Making predictions
October 6	Go over practice problems
October 8	Review and Quiz #3 Homework Due
October 13	Experimental and theoretical probability, sum of two number cubes
October 15	Compound probability and tree diagrams
October 20	Compound probability without replacement
October 22	Go over practice problems
October 27	Review and Quiz #4
October 29	Sampling techniques
Nov. 3	Mean, median, mode
Nov. 5	Range, variation, standard deviation
Nov. 10	Review and Quiz #5
Nov. 12	Quartiles, interquartile range, and box-and-whiskers plots
Nov. 17	Scatterplots, correlation, line-of-best-fit, and prediction
Nov. 19	The normal distribution and standard deviation
Nov. 24	Review and Quiz #6
Dec 1 and 3	Review
December 8	Final Exam

Course Policies and Procedures

Tests and Quizzes

Students who will be absent on the day that a test or quiz is scheduled should notify the professor of the absence ahead of time. A make-up test must be scheduled within one week of the original test. Students will not be allowed to make up a test or quiz more than one week past the original test date. A make-up test may contain different questions than the original test.

All tests and quizzes are cumulative meaning that any test or quiz may contain questions on material covered earlier in the semester.

Homework

Homework will consist of two parts. A “suggested” assignment will give you an opportunity to practice the skills that we learn in class. Some of the test questions will come from the “suggested” assignments, so doing them is a good way to prepare for the tests.

The other part of the homework will be turned in for a grade. Homework that is turned in must be typed and submitted through Blackboard. Spelling, grammar, organization count toward the grade. Your thoughts and reasoning must be fully explained.

Homework will be accepted up to three weeks past the due date, but a late penalty will apply. The late penalty will be 10% for one day to one week late, 20% for eight days to two weeks late, and 30% for 15 days to three weeks late.

Attendance and Participation

It is very important to attend class. Students who miss class will lost participation points. There is no such thing as an “excused” absence. If you must miss class, it is your responsibility to learn the information by downloading the PowerPoint from Blackboard and scheduling an appointment with the instructor.

Participation includes attending class, paying attention to the instructor and other students, asking and answering questions, and volunteering to solve problems at the board. Students who miss class or who arrive late or leave early will lose participation points.

University Policies and Procedures

Students with Disabilities (ADA Compliance):

The University of North Texas Dallas is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 – The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. For more information, you may visit the Student Life Office, Suite 200, Building 2 or call 972-780-3632.

The Department of Teacher Education is committed to full academic access for all qualified students, including those with disabilities. In keeping with this commitment and in order to facilitate equality of educational access, faculty members in the department will make reasonable accommodations for qualified students with a disability, such as appropriate adjustments to the classroom environment and the teaching, testing, or learning methodologies when doing so does not fundamentally alter the course.

If you have a disability, it is your responsibility to obtain verifying information from the Office of Student Life and to inform me of your need for an accommodation. Grades assigned before an accommodation is provided will not be changed. Information about how to obtain academic accommodations can be found in UNTD Policy 7.004, [Disability Accommodations for Students](#), and by visiting Student Life, building 2, Suite 200. 972-780-3632, studentlife@unt.edu.

Student Evaluation of Teaching Effectiveness Policy:

The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching.

Academic Integrity:

Students are expected to abide by the University's code of conduct and Academic Dishonesty policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Conduct at http://www.unt.edu/csrr/student_conduct/index.html for complete provisions of this code.

Bad Weather Policy:

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campus main voicemail number (972) 780-3600 or search postings on the campus website www.unt.edu/dallas.

Diversity/Tolerance Policy:

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Center for Student Rights and Responsibilities as the instructor deems appropriate.