

Course Syllabus

Course Information

<i>Course Number/Section</i>	ED 3340 - 501
<i>Course Title</i>	Math Concepts for Teachers
<i>Term</i>	Fall 2009
<i>Days & Times</i>	Tuesday and Thursday, 7:00 – 8:15

Professor Contact Information

<i>Professor</i>	Julia Haun
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<i>Office Location</i>	CBW 1.206
<i>Office Hours</i>	Tuesday, 6:00 - 6:45 or by appointment
<i>Other Information</i>	Messages and assignments can be delivered to the Teacher Development Center, FN 3.118

Course Description

The primary objective of this course is to examine how to facilitate the learning of mathematics in grades Kindergarten through eight so that students are actively involved in their own learning. Teachers will be encouraged to become actively involved in visualizing mathematical concepts, solving problems, performing mental calculations, using manipulatives, and employing mathematical models to realize that mathematics is a way of thinking rather than a collection of rules. The content is designed to reflect the National Council of Teachers of Mathematics *Principles and Standards for School Mathematics* and the Texas Essential Knowledge and Skills for Mathematics (TEKS), Grades K-8. The content and pedagogy for problem solving; whole numbers; number theory; integers; fractions and decimals; pre-algebra; probability; geometry; and measurement will be examined.

Student Learning Objectives/Outcomes

1. The student will analyze problem situations, create solutions strategies, solve problems, and justify his/her thinking.
2. The student will hypothesize whether properties from one set of numbers will work for other sets of numbers and then validate his/her conjectures.
3. The student will construct concepts of number, patterns, geometry, measurement, probability, and statistics through the use of exploration and investigation.

TEExES Domains and Competencies - This content of this course relates to the following domains and competencies assessed on the TExES (Texas Examination of Educator Standards) indicated.

Generalist EC-4

Domain II - Mathematics, Competencies 013, 014, 015

Generalist 4-8

Domain II - Mathematics Competencies 010 - 025

Mathematics 4-8

Domain 1 - Competencies 001-003

Domain 2 - Competencies 004-007

Domain 3 - Competencies 008-011
 Domain 4 - Competencies 012-014
 Domain 5 - Competencies 015-016

Required Textbooks and Materials

Required Texts

Albert B. Bennett, Jr. And L. Ted Nelson, Mathematics for Elementary Teachers, a Conceptual Approach, 7th edition

Required Materials

Calculator, basic or scientific

Suggested Course Materials

Suggested Readings/Texts

Albert B. Bennett, Jr. And L. Ted Nelson, Student Solutions Manual for use with Mathematics for Elementary Teachers, 7th Edition

Assignments & Academic Calendar

Problems will be assigned to provide practice on concepts and skills covered as part of this course. Additional problems may be assigned to supplement the assigned problems.

Dates	Section Number	Assigned Problems
August 20	Introduction to Problem Solving (Section 1.1)	1.1 - 1, 3, 5, 7, 9, 10, 17, 19
August 25 and 27	Patterns in Problem Solving (Sections 1.1, 1.2)	1.2 - 3, 5, 7, 9, 23, 27, 28, 29
September 1 and 3	Sets, Functions, and Reasoning (Sections 2.1, 2.2)	2.1 - 31, 33, 35, 37, 39, 41 2.2 - 3, 5, 7, 11, 19, 21, 23
September 8 and 10	Whole Numbers (Sections 3.1, 3.2)	3.1 - 21, 23, 25, 27, 39, 41 3.2 - 15, 19, 21, 35
September 15 and 17	Whole Numbers (Sections 3.3, 3.4)	3.3 - 9, 11, 13, 33, 43, 45 3.4 - 1, 3, 5, 7a, 11, 19
September 22 September 24	Test Number 1 Chapters 1 - 3 Number Theory, (Section 4.1)	4.1 - 3, 27
September 29 October 1	Number Theory , (Section 4.2) Integers, (Section 5.1)	4.2 - 1, 3, 7, 9, 11, 13, 15, 21, 25, 27 5.1 - 1, 3, 7, 9, 15, 17, 19, 21
October 6 and 8	Fractions, (Section 5.2)	5.2 - 9, 11, 13, 15, 17, 19, 21, 25, 27, 39, 43, 45

October 13 October 15	Fraction Operations, (Section 5.3) Decimals, (Section 6.1)	5.3 - 3, 5, 11, 33, 35, 37, 49, 51 6.1 - 5, 7, 13, 23, 35, 37
October 20 and 22	Decimal Operation, (Section 6.2) Percents, (Sections 6.3)	6.2 - 3, 9, 29, 43, 45 6.3 - 3, 5, 7, 9, 11, 13
October 27 October 29	Decimals: Irrational Numbers (Section 6.4) Test Number 2 , Chapters 4 - 6	6.4 - 1, 3, 13, 15, 33, 35, 41a
November 3 and 5	Probability, (Sections 8.1 and 8.2)	8.1 - 1, 3, 5, 7, 9, 13, 15, 17 8.2 - 3, 5, 7, 9, 11, 25
November 10 and 12	Geometry, (Section 9.1)	9.1 - 7, 9, 11, 13
November 17 and 19	Geometry, (Sections 9.2 and 9.3)	9.3 - 3, 5, 8, 9, 10 11, 27a, 28a
November 24	Measurement, (Section 10.1)	10.1 - 5, 9, 10, 11, 13, 14, 25
December 1 and 3	Measurement, (Sections 10.2 and 10.3)	10.2 - 3, 9, 13, 15, 17, 21, 31 10.3 - 3, 5, 19, 21 Last day of class
December 15 7:00 pm	Test Number 3 Chapters 8 - 10	

Grading Policy

In order to receive a passing grade in this course, each student must:

1. Participate in class discussions.
2. Complete all tests.

Homework will be assigned for each section and reviewed at the beginning of each class. Homework quizzes will be given over the homework assigned and problems worked in class. The lowest two quiz grades will be dropped. No make-ups quizzes will be given.

Three examinations will be given. Each exam will reflect the content of the problems or activities that have been assigned or discussed as a part of the course and problems from the text chapter tests. Completion of the homework will be your best preparation for the exams. A comprehensive final exam will not be given. Test 3 will be administered in place of the final.

Grading:

Quizzes	100 points
Test 1	100 points
Test 2	100 points
Test 3	100 points

The cumulative point total for the quizzes and tests is 400 points. The following point scale will be used to determine the final grade.

<u>Final Grade</u>	<u>Total Points</u>
A+	388 - 400
A	376 - 387
A-	360 - 375
B+	348 - 359
B	336 - 347
B-	320 - 335
C+	308 - 319
C	296 - 307
C-	280 - 295
D+	268 - 279
D	256 - 267
D-	240 - 255
F	Below 239

Course Policies

Make-up exams

Missed exams will be given at the discretion of the instructor and must be completed before the next class. Only extreme situations will warrant rescheduling an exam. No make-up quizzes will be given.

Retests

Students earning a grade below 70 on one of the three tests will be given the opportunity to retest.. The retest will be scheduled by the instructor. The highest grade that can be earned on a retest is a grade of 70.

Extra Credit

Extra credit is not awarded for this course.

Late Work

No late work will be accepted.

Class Attendance

Attendance will be taken. Failure to attend class may impact the final grade.

Classroom Citizenship

All reading and homework assignments are expected to be completed before class.

Cell phones are to be turned off.

Student Conduct & Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper

paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grade Policy

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of F.

Disability Services

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:
The University of Texas at Dallas, SU 22
PO Box 830688
Richardson, Texas 75083-0688
(972) 883-2098 (voice or TTY)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired).

Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

Off-Campus Instruction and Course Activities

Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at the website address given below. Additional information is available from the office of the school dean. (http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm)

These descriptions and timelines are subject to change at the discretion of the Professor.