

MATH 365 Structure of Mathematics I FALL 2006 TEXAS A&M UNIVERSITY

Instructor: Dr. Sherry Scarborough

Office: 606 Blocker

Office Phone: 845-6728

Email Address: sherry.scarborough@math.tamu.edu

Emails: In all correspondence, please include your full name, your course number, and your section number in the subject line. You must check your TAMU email daily!

Web Site: <http://www.math.tamu.edu/~Sherry.Scarborough/>

Office Hours on Class Days: MWF 10 – 11am, TR 1:30 – 3pm

Special Office Hours Before Finals: Thursday, December 7 from 9am to noon

Textbook: *A Problem Solving Approach to Mathematics for Elementary School Teachers*, 9th ed., Billstein, Libeskind, Lott, ISBN 0321331796

Course Description: Informal logic, sets, relations, functions, whole numbers, numeration systems, binary operations, integers, elementary number theory, modular systems, rational numbers and the system of real numbers. Designed primarily for elementary teacher certification. All others must have consent of the instructor. Prerequisite: Completion of core curriculum mathematics requirement.

Class Times: Section 504 MWF 11:30 – 12:20pm BLOC 114

Grading: average of 3 exams 50%
assignment average 25%
comprehensive final 25%

Grade cutoffs will be 90%, 80%, 70%, and 60%. Due to confidentiality, grades will not be discussed via phone or email, only in person.

Tentative Exam Schedule

Exam I Sept 20 on 1.1 – 2.5

Exam II Oct 18 on 3.1 – 4.3

Exam III Nov 15 on 4.4 – 5.4

Comprehensive Final Exam Schedule

Wednesday, December 13 10:30am – 12:30pm

Make-Up Policy: No make-up examinations or assignments will be given without a university approved excused absence (See the *Texas A&M University Student Rules*). An absence for a non-acute medical service or regular check-up does not constitute an excused absence. To be excused you must notify me (acknowledged email or written) prior to date of absence if such notification is feasible. Consistent with Texas A&M Student Rules, students are required to notify their instructor by the end of the second working day after missing an examination or assignment; otherwise, they forfeit their rights to a make-up. For injury or illness too severe or contagious to attend class, you must provide confirmation of a visit to a health care professional affirming date and time of visit. The student is to take the make-up examination or assignment within three days of missing it (unless excused absence is prolonged). *It is the student's responsibility to schedule a makeup!*

Policies: Policies pertaining to absences, scholastic dishonesty and final examinations are identical to TAMU regulations. Students with an official excused absence are permitted to make up work only for the dates of the absence. All other assigned work, even that assigned on the excused date, is due as assigned.

Grade Disputes: Once you leave class with your graded examination or assignment you accept its grade. All grade disputes must be dealt with at the time you receive the examination or assignment.

Calculator Policy: Calculators will not be allowed on the exams. It is recommended that you do not use a calculator on your homework, except to *check* your arithmetic.

Week-In-Review Problems: I strongly recommend you doing the WIR problems to help prepare yourself for the exams; they are a good indicator of your exam readiness.

Assignments: There will be problem-solving assignments throughout the semester. These assignments may be designed as in-class or out-of-class individual- or group-work. All out-of-class assignments are due at the *beginning* of class on the date due, unless otherwise instructed. In-class assignments may be given and taken up at *any* time during class. Three of the lowest assignment scores will be dropped before the assignment average is computed at the end of the semester, though certain assignments will not qualify to be dropped regardless of the grade. Doing "Now Try This," Brainteasers," "Ongoing Assessment," "Laboratory Activity," "Questions From The Classroom," and "Chapter Review" problems will help you with your learning and your assignments.

Attendance: Attendance is required. Math 365 is a mathematics content course for students working towards certification to teach elementary school. This course is not a methods course to teach you specific strategies for teaching mathematics to children. However, Math 365 does engage you in experiences that strengthen your understanding of the concepts and underpinnings important to the mathematics taught in Kindergarten - Grade 8 so that you can make effective instructional decisions and generate appropriate questions when teaching mathematics. You will be expected to participate in several in-class activities that lead to discussions of concepts and language that you will see again on the major exams. It is essentially impossible to replicate these experiences outside of the class environment; therefore, class attendance and participation are extremely important.

Plagiarism: All printed handouts and web materials are protected by US Copyright Laws. Handouts are all materials generated for this course, which include but are not limited to syllabi, assignments, examinations, in-class materials, and anything downloaded from a web page. Because these materials are copyrighted, **you do not have the right to copy the handouts**, unless I expressly grant permission.

Academic Integrity Statement: "An Aggie does not lie, cheat, or steal or tolerate those who do." The Honor Council Rules and Procedures are on the web at <http://www.tamu.edu/aggiehonor>. Students may work together on their homework from the text, unless otherwise directed, but are expected to turn in their own work. Examinations and all assignments are to be taken individually. As commonly defined, plagiarism consists of passing off as one's own the ideas, words, writings, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated.

Disabilities: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Room B118 Cain Hall or call 845-1637.

Personal Requests: You are always welcome to come to my office hours; you do not need an appointment. I encourage you to come, ask questions, as often as you would like. Students who come to office hours can get personal attention and help. If you smoke, please 'air out' before visiting. As a courtesy to all, please turn your cell phones and pagers off during all classes. Thanks!

Emergencies: On-campus phones 9-911
Off-campus and cell phones 911

Please note: It is extremely important that you move beyond "the rules of mathematics," investigate why they work, and what other strategies can be employed. Many times you will develop "the rules" and "the formulas." It is necessary to know *why*, as well as the how, of the mathematics involved in this course. You are expected to learn the concepts and the behind-the-scenes workings. While it is critical that you attain the correct answer to a question, you must show correctly, precisely, and accurately its solution (all the steps, labels, explanations, equal signs, models, etc.) in an orderly, clear, concise manner. Where appropriate circle your final answer. Give exact answers, unless otherwise stated (estimations). Please bring your text to class. You are responsible for your own learning. This class has high standards since some of you will be teaching our children and our grandchildren!

Tentative Schedule

Aug 28 – Sept 1 Week 1: Introduction, Section 1.1, 1.2, 1.3

Sept 4 – 8 Week 2: Section 1.4, 2.1, 2.2

Sept 11 – 15 Week 3: Section 2.3, 2.4, 2.5

Sept 18 – 22 Week 4: Review, Exam I, Section 3.1

Sept 25 – 29 Week 5: Section 3.2, 3.3

Oct 2 – 6 Week 6: Section 3.4, 4.1

Oct 9 – 13 Week 7: Section 4.2, 4.3

Oct 16 – 20 Week 8: Review, Exam II, Section 4.4

Oct 23 – 27 Week 9: Section 4.5, 4.6

Oct 30 – Nov 3 Week 10: Section 5.1, 5.2

Nov 6 – 10 Week 11: Section 5.3, 5.4

Nov 13 – 17 Week 12: Review, Exam III, Section 6.1

Nov 20 – 28 Week 13: Section 6.2, 6.3, 6.4

Nov 29 – Dec 5 Week 14: Section 6.5, Review