

MATHEMATICAL STRUCTURES
MATH 3603 – 62598
Fall 2017

Instructor: Emily Quinn
Office: MSCS 435
Phone: Office: 405-744-2304 Cell: 657-777-2365 *Can Call AND/OR Text!
Office Hours: Monday 10:30AM to 11:20AM (in MLSC Room 1), 12:20PM to 1:20PM,
2:30PM to 4:20PM;
Wednesday 10:30AM to 11:20AM, 12:20PM to 1:20PM;
Friday 10:30AM to 11:20AM, 12:20PM to 1:20PM; Or By Appointment
e-mail: emily.quinn@okstate.edu (the BEST way to reach me)
Webpage (Brightspace): <https://oc.okstate.edu> (then log in and find our course)
Textbook: A Problem Solving Approach to Mathematics for Elementary School Teachers by Billstein, Libeskind, & Lott (12th Edition)

Syllabus Attachment: OSU has compiled useful information that applies to all classes at
<https://academicaffairs.okstate.edu>

This website includes add/drop/withdrawal dates, university holidays, accommodations for students with disabilities, academic resources, and much more. You are responsible for reading this information and having any questions answered. **Please contact me privately during the first week of the course if you need accommodations as the result of a disability.**

Important Note to Students. This course is no longer an A-designated General Education course; it will NOT satisfy the General Education Analytic and Quantitative Thought (A) upper division requirement.

Course Description.

From OSU catalog:

Prerequisite(s): 1483, 1493 or 1513. Foundations of mathematics and number concepts for prospective early childhood and elementary educators. Problem solving, logic, set theory, functions and relations, number systems, number theory, rational numbers, decimals and fractions, exponentiation, probability, and applications. Class format may emphasize student investigation and discovery, discussion and presentation, and working with mathematical tools. Together with MATH 3403, it prepares students for CIED 3153 and 4153 and/or HDFS 3223.

From the instructor:

The content and instructional delivery of this course models the current professional thinking and standards endorsed by the National Council of Teachers of Mathematics (NCTM). Please be aware that

1. MATH 3603 is specifically designed for prospective elementary/ early childhood/ middle level teachers; if you are pursuing a major different from one of these, your advisor will work with you to select a course more appropriate and valuable to your studies.
2. MATH 3603 is a content mathematics class much like other MATH-prefixed courses you have taken; the pedagogical issues related teaching this content in the school setting is addressed in detail in one of the methods courses that you will be taking as part of your program.
3. The value of this course will depend mostly on you - your involvement, effort, and creativity.

Daily Routine. Almost every class meeting will consist of a combination of lectures, individual and/or group activities and presentations, and discussion. In addition, there will be assignments and homework, which must be completed outside of class.

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Course Evaluation. Course grades will be determined according to the following distribution.

Assignments/Quizzes	25%	90% - 100%	A
Presentations	10%	80% - 89%	B
Examination 1	15%	70% - 79%	C
Examination 2	15%	60% - 69%	D
Examination 3	15%	Below 60%	F
Final Examination	20%		

Exams. There will be three (3) 50-minute in-class examinations and a comprehensive Final Examination during Final's Week. **Your Final Examination is scheduled for 2PM to 3:50PM on Wednesday, December 13.** The time for the Final is not negotiable (except when the OSU Final Exam Overload Policy applies). These exams will test not only your content knowledge but also your ability to explain your thought process.

The dates for the exams are as follows and will not change. Put them on your calendar now and plan ahead.

Exam 1: September 22

Exam 2: October 27

Exam 3: December 1

Make-Up Exams will be considered only if the request is made at least 72 hours (3 days) in **advance** for known conflicts that are **documented, valid and unavoidable**; or your request must be made within 24 hours (1 day) when last minute extenuating circumstances arise (**documentation required**). If this condition is not satisfied, it is understood that the opportunity to receive a make-up exam is voided. In the instance that a make-up exam is appropriate, I will schedule and administer the make-up exam in a timely manner. With rare exceptions all make-up midterm exams must be completed 1 week from the time of the scheduled exam. Bring your student ID to each examination.

Note: Using a false excuse is a violation of academic integrity, and will be dealt with accordingly. As a future teacher, your academic integrity standards should be very high.

Quizzes. There will be twelve (12) unannounced quizzes in class; you must be present for the **entire** class session to present a quiz. Each quiz will cover material over the homework and/or notes and will be worth 10 points. At the end of the semester, the lowest two (2) quizzes will be dropped. Because the lowest two (2) quizzes will be dropped at the end of the semester, **there are NO make-ups for quizzes, nor will any be considered "excused"**.

Homework: To facilitate using the homework on your quizzes, homework needs to be completed in the following way:

- Each section needs to start on a new sheet of paper (i.e., **do not** do 1-1's problems on the front of a sheet of paper and then use the back for 1-2 – use a new sheet of paper to begin 1-2).
- Number each of the homework problems clearly, and mark each of your final answers clearly.
- Only the homework problems listed as "required" will be checked, although you may do the suggested problems on the same page.
- All work must be your own, and all work must be shown in order to receive credit. Answers to all of the problems from Assignment Set A's are in the back of the book – be sure to use their answers as checks only.
- Note: Homework that is not completed in this manner will not be checked for a grade.

Calculators. You may use one scientific calculator (without fraction capabilities) on all assignments and exams.

Attendance/Class Participation. For this course in particular, attendance is very important since much of the learning takes place in group activities during class. As a future teacher, you are expected to conduct yourself professionally. You are expected to attend all classes and participate fully. Even though I believe that your active participation in this class is important to your success in it, there is no course attendance requirement. You will have an opportunity to earn course credit, however, through regular active participation in the class meetings that can contribute to improving your final course grade.

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Here's how it works. You will be assigned an Attendance/Participation Score at the end of the semester. Attendance will be recorded during each class session. Your attendance/participation score is based on 100 points maximum and will be determined by your total days absent from class. As a prospective teacher, professionalism is expected; therefore, attendance/participation in this course is important. You must be fully participating in class to be considered present and determining "full participation" will be left to the discretion of the instructor. Here are some helpful things to remember about the attendance/participation score.

1. You must be present for the **entire** class session in order to be counted as present.
2. Because there is no class attendance requirement, **there is no reason for "excused" absences for any reason**, including university-sponsored activities and illness.
3. The instructor has complete discretion in awarding attendance points. If you are sleeping during class, or are otherwise not participating in class (including texting, working on the computer, etc.), **you will be counted as absent**.
4. The attendance score/participation score is optional and is meant to reward students for good attendance. A low class attendance score (due to excessive absences) will not lower your overall grade.
5. You will be given 100 attendance/participation points at the beginning of the semester. You will receive one "free" absence, with no points deducted. For each absence after that, you will have 3 points deducted from your attendance/participation score.
6. If a person has no absences at all during the semester (present at every class meeting), 3 additional bonus points will be added to the attendance/participation score (in this instance, the total is 103).

Replacing an Exam. At the end of the semester, you may replace the lowest of the first three exam scores or one of the two final exam scores (if it is your lowest score), provided it improves your letter grade, with points awarded to you as follows.

(your lowest exam score + your attendance/participation score) \div 2 = the grade that replaces your lowest exam score

Example: Sam's lowest exam score is 59 and he has 3 absences. Sam's points are calculated as follows:

Sam's lowest test score	59	
Attendance/participation score	+94	(first absence is "free", so $100 - 3 \cdot 2 = 94$)
	<hr/>	
	153	

Since $153 \div 2 = 76.5$, Sam's lowest exam score of 59 will be replaced with a score of 76.5.

Classroom Etiquette:

- Arrive on time. If you need to leave early for any reason, please let me know ahead of time. Sit on the outside of the row so that you will not disturb those around you – otherwise, you are to be present for the duration of the class. Remember that arriving late or leaving early **will** cost you your attendance points for the day.
- No loud or odorous food.
- No laptops, iPads, tablets, etc. Cell phones need to be **on silent** or turned off AND **put away**. If there is a serious need to leave your cell phone on or out, such as a family emergency, please notify me before class.

Drop and Withdrawal Policy. "Dropping" means withdrawing from a specific course while "withdrawal" means withdrawing from all courses and leaving the University for the balance of the term. The drop and withdrawal dates are noted on the syllabus attachment. IT IS YOUR RESPONSIBILITY TO KNOW AND COMPLY WITH ALL DEADLINES. Reasons similar to those listed below will NOT result in approval for dropping a course after the deadline (from OSU Policy 4.03):

- a. Student's lack of knowledge or misunderstanding of the deadline.
- b. Student waited to get the results of an exam or other assignment.
- c. Student's grades have declined since the deadline.
- d. Student doesn't need the course for graduation.
- e. Different deadlines existed at a previous school.

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Incomplete Grade. Please refer to: <https://registrar.okstate.edu/FAQ-Incomplete-Grade-Students>

Academic Integrity. 101 Whitehurst/405-744-5627, <http://academicintegrity.okstate.edu>

OSU is committed to maintaining the highest standards of integrity and ethical conduct. This level of ethical behavior and integrity will be maintained in this course. Participating in a behavior that violates academic integrity (e.g., unauthorized collaboration, plagiarism, multiple submissions, cheating on examinations, fabricating information, helping another person cheat, unauthorized advance access to examinations, altering or destroying the work of others, and altering academic records) will result in an official academic sanction. Violations may subject you to disciplinary action including the following: receiving a failing grade on an assignment, examination or course, receiving a notation of a violation of academic integrity on your transcript, and being suspended from the University. You have the right to appeal the charge.

Working with another person or in study groups on problems can be helpful in learning the material. I encourage you to work together if you find it helpful. However, **all work submitted must be your own**. Copying someone else's problem solution, showing your written solution to someone else, or having another person complete your on line work is prohibited; such behaviors are regarded as violations of academic integrity and will be treated according to the University's policy. In order to be successful in learning the material and doing well on the examinations you must think very hard about the problems themselves before discussing them with anyone else.

Office of Student Disability Services. 315 Student Union/405-744-7116, <http://sds.okstate.edu/>

According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. If you think you have a qualified disability and need special accommodations, you should notify the instructor and request verification of eligibility for accommodations from the Office of Student Disability Services. Please advise the instructor of your disability as soon as possible, and contact Student Disability Services, to ensure timely implementation of appropriate accommodations. Faculty have an obligation to respond when they receive official notice of a disability but are under no obligation to provide retroactive accommodations. To receive services, you must submit appropriate documentation and complete an intake process to verify the existence of a qualified disability and identify reasonable accommodations.

Final notes.

I want every single one of you to come out of this class feeling better about mathematics than when you came in. I am more than willing to help you in any way that I can, and I **genuinely** care about your success and general welfare. Please **do not hesitate** to ask any questions, or voice any concerns.

Any changes in this syllabus will be communicated to you in class by the instructor.

First Assignment

Please complete this assignment by Friday, August 25.

1. Send me an e-mail at emily.quinn@okstate.edu. Write me a **paragraph** (not a list) including your name, year in school, major, hometown, last math class (and instructor if taken at OSU), and anything interesting about yourself you would like for me to know, especially your interests in and out of school. Please attach a picture of yourself as well. These e-mails let me know something about my students and help me get to know everyone. If you don't get a reply from me within a day, I probably didn't get the email – talk to me about it.
2. Read the Syllabus Attachment at <https://academicaffairs.okstate.edu>