Math Structures	**MATH 3603** **CRN 62246**	**Fall 2018**

Instructor:	Cynthia Francisco
Office:	MSCS 531
Office Hours:	Monday 10:00-11:00, Wednesday 9:00-10:00, Thursday 9:15-10:15, and by appointment, in MSCS 531
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Expected Response Time:	You can expect a response from me typically within 24 hours on weekdays and within 48 hours on weekends. For content questions, consider posting on the Facebook group.
Course Web Page:	online.okstate.edu

Facebook Group (recommended): There is an optional Facebook group for this course; go to https://www.facebook.com/groups/Math3603FranciscoFall18/ or search for Math 3603 Francisco, Fall 2018. This group is a closed group (searchable, but posts are only seen within the group), but I may change it to a secret group once everyone has had a chance to join (not searchable). I will post help and hints as questions come up. If you can give any input to help your fellow students, please do, but please do not post full solutions.

Course Prerequisites: Math 1483, Math 1493, or Math 1513

Required Textbook and Supplies.

- **Textbook:** *A Problem Solving Approach to Mathematics for Elementary School Teachers* by Billstein, Libeskind, and Lott.
- **Calculator:** You will want to have a calculator for this class, although no specific type is required. When calculators are allowed on exams, you will not be able to use cell phone or any calculator with internet access, a QWERTY keyboard, or symbolic manipulation capability.

Course Goals: This course explores mathematical topics that will be relevant to you as a future teacher at the early childhood or elementary level. Specifically, we will delve into understanding numbers, arithmetic, and related topics in great depth. As a teacher, you will obviously need to know the content you need to teach, but you will also need an enormous amount of flexibility in your thinking about mathematics. You will need to understand the content deeply so that you can apply your knowledge in unexpected ways. Sometimes students will approach a problem in a way that you didn't expect, and you will need to evaluate their solution. Often students will need to hear alternate explanations of a difficult concept and a variety of activities to explore the topic from multiple perspectives. Different curricula may approach topics in ways that you have never seen, and you will be expected to teach your students material that may look new to you. I hope that, when you are faced with these challenges, you will pause and think critically. If a student asks a tough question, I hope you will say, "Hmm, let me think about that one," and follow through. When you do, you will pass on to your students the confidence that they too can think about math.

Course Structure and Philosophy: To achieve the goal of developing your mathematical thinking skills, I will expect you to be actively doing mathematics, both inside and outside of class. There will be times when you feel frustrated – frustration is often where the real learning happens! I will, however, always be striving for a manageable amount of frustration. Expect to be outside of your comfort zone at times, but hopefully not so much that you become discouraged and shut down. If you are feeling too frustrated or overwhelmed, ask for help! Try to stay on top of the material at every class and ask help as soon as you have trouble. The material often builds, and you don't want to get behind.

What I expect of my students: In class, I expect that you will all be engaged in the current activity. If I am lecturing, you should be following and taking notes. When I stop and ask a question or assign an in-class activity or problem, you should give the task your full effort and help your classmates. If you are not meeting these expectations in class, you may not get some or all of your attendance credit for that class meeting.

Showing Work: Throughout the course, I will expect you to show your work on all problems. Showing your work means writing down enough so that I can follow your thinking. If you think it, write it. There will be times when I ask you to explain your reasoning in greater detail, but you should show clear work on all problems.

Grading:

- **Quizzes/Assignments/Other:** We will have regular quizzes and other assignments. Most assignments will be worth 10 points, although there may be occasional smaller or larger assignments. **At the end of the semester, I will drop the two lowest 10-point assignments.**
- **Attendance:** I will also calculate an attendance score based on the percentage of classes that you attend. (If you are not meeting the expectations above for class participation, you may lose some or all of your attendance credit for the day. If you arrive late or leave early, you may also lose some or all of your attendance credit for the day.) **If you absolutely must miss class, you need to provide documentation and have your absence approved in advance whenever possible.**
- I will calculate your course grade using the two different schemes below and give you the higher of the two resulting grades.

Scheme 1	
3 hour exams	15% each
Final exam	25%
Homework/other assignments	28%
Attendance	2%

Scheme 2	
3 hour exams	10% each
Final exam	40%
Homework/other assignments	28%
Attendance	2%

Earning 90% guarantees an A for the semester, 80% a B, 70% a C, and 60% a D. I reserve the right to use discretion if you are on the borderline between two grades.

Conflicts: Make-up exams will be given only for **serious, unavoidable, documented** conflicts, and only if I approve your request **in advance unless absolutely impossible**. You must provide documentation as soon as possible, or you forfeit your right to a make-up exam. If a make-up exam is approved, you will need to make arrangements with me to take the make-up exam as soon as possible.

Exam Dates: Our exams will be held on the following dates; mark your calendar.

Exam 1	Thursday, September 20
Exam 2	Thursday, October 18
Exam 3	Thursday, November 15
Final Exam	Thursday, 12/13, 10:00-11:50am

Academic Honesty: Don't cheat. Don't copy off of other students, allow other students to copy your work, have someone else do your work, or present work you find in printed or electronic sources as your own. **You should be working together, but you should write your solutions independently, without looking at what someone else has produced.** See the OSU Fall 2018 Syllabus Attachment for more information. For questions, contact the Office of Academic Affairs, 101 Whitehurst, (405) 744-5627, http://academicintegrity.okstate.edu. I deal with cheating very harshly; don't take any chances.

Special Accommodations for Students: If you have a qualifying disability, you must notify me privately during the first week of classes. See the Syllabus Attachment for more information.

Mental health resources and mandatory reporting: The university has a number of facilities and resources available to all students for your well-being. One such resource is the University Counseling Services (405-744-5472, ucs.okstate.edu). See the Fall 2018 Syllabus Attachment for more resources; you can also see me or an advisor if you need help locating the best resources for you. While I take each student's privacy seriously, as an instructor of record I am obligated to comply with Title IX by reporting any instances of sexual assault, harassment, or misconduct brought to my attention.

First Assignment – Introductory Email:

Due Friday, August 24

Send me an e-mail at cynthia.francisco@okstate.edu. Write me a **paragraph** (not a list) including your name, year in school, major, hometown, last math class, and anything interesting about yourself you want to tell me, especially your interests in and out of school. If you'd like, attach a picture of yourself. These e-mails let me know something about my students and help me get to know everyone.