**Instructor:** Neil Hoffman

**Office:** MSCS 523

**Office Hours:** TBA, and by appointment, in MSCS 523

**E-mail: neil.r.hoffman@okstate.edu**

**Expected Response** You can expect a response from me typically within 24 hours on

 **Time:** weekdays and within 48 hours on weekends. For content questions, consider posting on the class wiki.

**Course Web Page:** [online.okstate.edu](http://online.okstate.edu)

**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.

**Class wiki:** There will be a class wiki for the course (see below). Students should register for that as part of the first assignment. It will mainly serve as a place to post and critique the activity assignment. In some cases, I will also post aggregated/anonymized exam corrections there.

**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. Another goal for this course is to collectively develop a portfolio of activities, which you can consider using in your first-year teaching.

**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 would ask students to keep in mind, both success and mistakes are products of effort. On exams, you will be able to rework some problems and learn from your mistakes for partial credit. This serves two goals. First, learning from your mistakes and your fellow students will make you better teachers. Second, the material often builds on itself, so this will allow to you firm up your understanding of the foundational material. Try to stay on top of the material at every class and ask help as soon as you have trouble.

**What I expect of my students:** In class, I expect that you will all be engaged in the current activity in the hopes of building a learning community together. 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 your some or all of your attendance credit for that class meeting. On the class wiki, I expect all students to be civil and constructive.

**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 (e.g. the activity assignment and critique). **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 |  | Scheme 2 |
| 3 hour exams | 15% each |   | 3 hour exams | 10% each |
| Final exam | 25% |  | Final exam | 40% |
| Homework/other assignments | 28% |  | Homework/other assignments | 28% |
| Attendance | 2% |  | 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** | Tuesday, 12/11, 2:00-3:50pm |

**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. (This syllabus has been adapted from a syllabus written by Cynthia Francisco.)

**Special Accommodations for Students:** If you have a qualifying disability, please inform me privately and also arrange for Student Disability Services to notify me (early in the semester) about your accommodation. 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). While I take each student’s privacy seriously, as an instructor of record I am obligated to comply with Title IX and 1is2many by reporting any instances of sexual assault, harassment, or misconduct brought to my attention.

**First Assignment – Introductory Email, Google form, registration:**

**Due Saturday, August 28: 1)** Send me an e-mail at neil.r.hoffman@okstate.edu. Write me a **paragraph** (not a list) including your name, year in school, major, hometown, last math class, where you sit in the classroom, and anything interesting about yourself you want to tell me, especially your interests in and out of school. These e-mails let me know something about my students and help me get to know everyone.

**2)** Please fill out the office hours survey form here:

https://goo.gl/forms/o9W5DI5FCUwQfNFq2

**3)** Please register for the class wiki here:

https://www.jirka.org/MathStructures-Fall-2018-Hoffman/doku.php?id=start&do=admin&page=usermanager