Class Syllabus / Policy
Seminar in Mathematics
MTH 463 Section 001
Fall 2017

Instructors: Jane Long, Ph.D., Associate Professor, Department of Mathematics & Statistics
Clint Richardson, Ph.D., Associate Professor, Department of Mathematics & Statistics

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Office: Mathematics 318 (Dr. Long) Mathematics 306 (Dr. Richardson)
Office Hours:

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<thead>
<tr>
<th></th>
<th>Dr. Long</th>
<th>Dr. Richardson</th>
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<tbody>
<tr>
<td>Monday</td>
<td>3:30-4:30, if no colloquium</td>
<td>8:30-9:30am</td>
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<tr>
<td>Tuesday</td>
<td>8:30-9:30am, 10:45-11:30am</td>
<td>8:30-9:30am, 1-2pm</td>
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<tr>
<td>Wednesday</td>
<td>2:00-3:00pm</td>
<td>8:30-9:30am, 1:30-2:30pm</td>
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<tr>
<td>Thursday</td>
<td>8:30-9:30am, 10:45-11:30am</td>
<td>8:30-9:30am, 1-2pm</td>
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<tr>
<td>Friday</td>
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<td>8:30-9:30am</td>
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Class meeting time and place: 3:00-4:15 Wednesdays, Mathematics Building Room 357

Course description: Student participation in general and specific topics in mathematics; separate section for mathematics teacher certification. Because enrollment levels do not justify a separate section for teacher certification, activities will be adjusted to best benefit students seeking mathematics teacher certification. See also http://www2.sfasu.edu/math/courses/ugrad.html

Course Prerequisites: MTH 439 or concurrent enrollment. This course is designed to be taken in a student’s last year of the Bachelor of Science in mathematics program.

Course Goals:

- Comprehension of core mathematical concepts
- Procedural fluency
- Competencies in using various mathematical tools for problem solving
- Sound mathematical reasoning
- An understanding of the development and connectedness of mathematical ideas
- Proficiency in communicating mathematics in a format appropriate to expected audiences

Learning Objectives:

Students graduating from SFASU with a B.S. degree and a major in mathematics will:

- Demonstrate comprehension of core mathematical concepts
- Execute mathematical procedures accurately, appropriately, and efficiently
- Apply principles of logic to develop and analyze conjectures and proofs
- Demonstrate competence in using various mathematical tools, including technology, to formulate, represent, and solve problems
- Demonstrate proficiency in communicating mathematics in a format appropriate to expected audiences
Course Requirements:

- **Presentations on a nonstandard mathematical problem** begun in class and continued on your own. Your work on this problem and its presentation will be the main focus of this course. Your presentation will be given twice; the second presentation (at least two weeks later) should incorporate feedback you receive on your first presentation. Your presentation should incorporate slides (PowerPoint, Beamer or other) and should last about 15 minutes, plus time for questions from the audience. Expectations are listed below in the “Grading Policy” section. You should expect to meet with the professor regarding your problem, and to practice your presentation before giving it to the class. Mathematics faculty and students are encouraged to attend our presentations, and your presentations will be videotaped.
- **Written report** on your chosen problem to accompany your presentation.
- **Providing feedback** on your peers’ presentations. Written rubrics to turn in will be provided by the instructor.
- **Reading, responding to, and discussing the required text in class.**
- **D2L access.** You will be required to access SFA’s Learning Management Software (at http://d2l.sfasu.edu) periodically to access course materials.
- **In-class problem-solving activities**, designed to foster critical thinking, perseverance, and synthesis of different types of mathematical information into one endeavor. Active engagement in these activities is expected. These problems will be assigned to students to present, twice, near the end of the semester.
- **Attendance and participation in class** are expected. Most of our class time will be spent in problem-solving investigations, visitor presentations, book discussions, and student presentations. Learning within this framework requires active participation; see next items for information on how this will be assessed.
- **Viewing and quiz on Technically Speaking**, a video about how to give an effective mathematics presentation.
- **Attendance at three extracurricular mathematical activities**, including the Texas Undergraduate Math Conference, math teachers’ circle meetings, department colloquia, Putnam exam (not study sessions), or other activities. Math club and Pi Delta Tau meetings are excluded. Turn in a one-page (typed, 12-point font, double-spaced) reflection for each activity. For students preparing for a career in secondary teaching, one of these activities must be a teaching certification preparation meeting, time and place to be determined.
- **Resume critique and mock interview** through SFA Career Services.
- **Final Exam Week Meeting**, 2 hours, occurring Wednesday, December 13, 4-6pm. While there will be no final exam, presentations will be given during this time.
- **Late work will not be accepted.**
- **There is no extra credit.**
- **Initiative to seek help outside of class**, in addition to required appointments with the professor, may be necessary in order to succeed in the course.

**Learning Mathematics:**

In order to learn mathematics, you must put in time, effort, and practice. In-depth work on a long-term mathematical problem may be new to you, and you will need to get used to putting in time on a regular basis. Problem solving is another task that requires practice and sustained effort; you will cultivate this
skill throughout the semester. We expect that you will work hard in this class, and we are here to help you.

**Course Calendar: (Subject to change)**

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<tr>
<th>Week</th>
<th>Date</th>
<th>Day</th>
<th>Topic</th>
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| 1    | 8/30/2017  | Wednesday| • Course Orientation  
• Introductions  
• Problem solving activity (5 problems) |
| 2    | 9/6/2017   | Wednesday| • Problem solving activity (5 problems) |
| 3    | 9/13/2017  | Wednesday| • Problem solving activity (5 problems) |
| 4    | 9/20/2017  | Wednesday| • Problem solving activity (5 problems) |
| 5    | 9/27/2017  | Wednesday| • *Technically Speaking* response due (in D2L)  
• Presentation: problem assignment and date sign-ups  
• 5 Elements: Preface, Introduction, Chapter 1 discussion |
| 6    | 10/4/2017  | Wednesday| • View 3 student videos before class (see D2L)  
• Visitor presentation  
• 5 Elements: Chapters 2, 3, 4 discussion |
| 7    | 10/11/2017 | Wednesday| • Visitor presentation  
• 5 Elements: Chapter 5, Summary discussion |
| 8    | 10/18/2017 | Wednesday| • 4 presentations |
| 9    | 10/25/2017 | Wednesday| • 4 presentations |
| 10   | 11/1/2017  | Wednesday| • 4 presentations |
| 11   | 11/8/2017  | Wednesday| • 4 presentations |
| 12   | 11/15/2017 | Wednesday| • 4 presentations |
| 13   | 11/22/2017 | Wednesday| • No Class – Thanksgiving Holiday |
| 14   | 11/29/2017 | Wednesday| • 4 presentations |
| 15   | 12/6/2017  | Wednesday| • 4 presentations  
• Resumé Critique, Mock Interview completed** |
| 16   | 12/13/2017 | Wednesday| • Final Exam Week meeting, 4-6pm (6x2=12 presentations)  
• Extracurricular activity reflections, written report of presentation due at this week’s meeting **|

**Career services recommends filling out their request forms (at [http://www.sfasu.edu/careerservices/](http://www.sfasu.edu/careerservices/)) at least one week prior to desired appointment date**

**Grading Policy:**
- No late work is accepted
- There is no extra credit
- This course is graded on an A-F scale, with letter grades earned as follows:

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<tr>
<th>Grade</th>
<th>Description</th>
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<tr>
<td>D</td>
<td>All classes attended, all assignments completed satisfactorily, weak presentation</td>
</tr>
<tr>
<td>C</td>
<td>All classes attended, all assignments completed satisfactorily, acceptable presentation</td>
</tr>
<tr>
<td>B</td>
<td>All classes attended, all assignments completed satisfactorily, good participation, good presentation</td>
</tr>
<tr>
<td>A</td>
<td>All classes attended, all assignments completed satisfactorily, good participation, excellent presentation</td>
</tr>
<tr>
<td>F</td>
<td>Otherwise</td>
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Please refer to the “Course Requirements” section above for a list of all required assignments. Assignments submitted in advance of the due date may be returned for editing, otherwise they will be evaluated as-is. There is room for growth in the presentations; expect to receive feedback on your first presentation and make time to work to improve for the second presentation.

Expectations for student presentations are:

- **Presentation 1**
  - **Accurate mathematics**
  - Complete, self-contained overview of problem and solution
  - Preliminary practice meeting with instructor (≥1 week prior to first presentation, slides submitted 24 hours in advance of meeting)
  - Slides contain no errors
  - Time is ~15 minutes (neither too long nor too short)
  - Fields questions from audience well
  - Demonstrates ample preparation
  - Turns in written report to accompany presentation

- **Presentation 2**
  - **Accurate mathematics**
  - Complete, self-contained overview of problem and solution
  - Second (feedback) meeting with instructor (≤1 week from first presentation, view presentation video carefully in advance)
  - Slides contain no errors
  - Time is ~15 minutes (neither too long nor too short)
  - Fields questions from audience well
  - Demonstrates ample preparation
  - Incorporates feedback from first presentation
  - Does not reference first presentation during second presentation
  - Turns in written report to accompany presentation

**Attendance Policy:**
- Absences must be approved **beforehand** with documentation of a valid university sanctioned excuse.
- Late work is not accepted.
- Arrive on time (early) to class prepared to work.
- If you miss a class, contact one of the instructors immediately.
- The university’s Attendance and Excused Absences Policy can be found at [http://www.sfasu.edu/policies/class_attendance_excused_abs.asp](http://www.sfasu.edu/policies/class_attendance_excused_abs.asp)

**Classroom conduct:**
- **DO NOT** use your cell phone in class. This especially includes texting. Phones should be set to silent mode and put away during class time.
- We will send e-mails to the entire class during the course. Check your SFA e-mail address or have SFA forward your e-mail to an account you check at least daily.
- **Acceptable Student Behavior**
Classroom behavior should not interfere with the instructors’ ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

**Academic Integrity (A-9.1)**
Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

**Definition of Academic Dishonesty**
Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp)

**Withheld Grades Semester Grades Policy (A-54)**
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

**Students with Disabilities**
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices/](http://www.sfasu.edu/disabilityservices/).