Class Syllabus / Policy
Seminar in Mathematics
MATH 4180 Section 001
Fall 2020

Instructor: Jane Long, Ph.D., Associate Professor, Department of Mathematics & Statistics
Department: Mathematics & Statistics
Email: longjh@sfasu.edu
Phone: 936-468-1804
Office: Mathematics (Bush Mathematical Sciences) Building room 318

Office Hours:

<table>
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<tr>
<th>Day</th>
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<td>Monday</td>
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<td>Tuesday</td>
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<td>Thursday</td>
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<td>12:15-12:45pm</td>
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Other times by appointment. Office hours will be conducted via Zoom. Please request an appointment outside of the times listed above if you need to have a confidential conversation. Notice that the instructor is always available 30 minutes before and after class.

Class meeting time and place: 4:00-5:15 Wednesdays, via Zoom
We will meet via Zoom until at least October. At that time, we will reevaluate and see if meeting face-to-face makes sense. If we do meet face-to-face, we will meet in Mathematics Building room 357. If face-to-face meetings occur, students and instructor must follow:

COVID-19 MASK POLICY
Masks (cloth face coverings) must be worn over the nose and mouth at all times in this class and appropriate physical distancing must be observed. Students not wearing a mask and/or not observing appropriate physical distancing will be asked to leave the class. All incidents of not wearing a mask and/or not observing appropriate physical distancing will be reported to the Office of Student Rights and Responsibilities. Students who are reported for multiple infractions of not wearing a mask and/or not observing appropriate physical distancing may be subject to disciplinary actions.


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, certain activities will be adjusted to best benefit students seeking mathematics teacher certification. See also http://www2.sfasu.edu/math/courses/ugrad.html
SFASU Policy 5.4: The federal definition of a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates:

1. Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or 10 to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or
2. At least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

To this end, all students who wish to be successful should plan to spend at least two hours outside of class for every credit hour associated with this course. Expected activities to be completed in the time outside of class include reviewing notes from previous class meetings, reading assigned course resources, completing all assigned exercises and projects, and performing periodic assessment preparation.

Course Prerequisites: MATH 4330 (formerly 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: one practice presentation and the second presentation (at least two weeks later) will be open to the faculty and community. 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. Presentations will be videotaped and may occur via Zoom

- **Written report** on your chosen problem to accompany your presentation. This should include neat, detailed mathematical work to support claims and conclusions you make during your presentation
- **Providing feedback** on your peers’ presentations. Rubrics to turn in will be provided by the instructor
- **Reading, responding to, and discussing the required text in class**
- **Zoom access.** For at least the first few weeks of the semester, the class will meet via Zoom, which can be accessed through mySFA login. A link will be provided by the instructor. You will need to be able to participate in class, so you should have internet access, a microphone, and preferably a webcam
- **D2L access.** You will be required to access SFA’s Learning Management Software (at [http://d2l.sfasu.edu](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 individually 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 and the “Attendance Policy” section below
- **Viewing and quiz on Technically Speaking,** a video about how to give an effective mathematics presentation
- **Three virtual extracurricular mathematical activities,** in which students find and discuss substantial online mathematical lectures. With advance permission from the instructor, one other activity may be substituted for the third assignment. Math club and Pi Delta Tau meetings are excluded. Turn in a one-page (typed, 12-point font, double-spaced) reflection for each nonstandard 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. No reflection assignment is required for teaching certification preparation work
- **Two written self-assessments,** on class engagement and problem solving, provided by the instructor
- **Resume critique and mock interview** through SFA Career Services
- **Final Exam Week Meeting,** 2.5 hours, occurring Wednesday, December 9, 4:15-6:45pm. 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 project may be new to you, and you will need to get used to putting in time on a regular
Problem solving is another task that requires practice and sustained effort; you will cultivate this skill throughout the semester. I expect that you will work hard in this class, and I am 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    | 8/26/2020  | Wednesday | • Course orientation  
  • Introductions  
  • Problem solving activity |
| 2    | 9/2/2020   | Wednesday | • Problem solving activity                                              |
| 3    | 9/9/2020   | Wednesday | • Problem solving activity                                              |
| 4    | 9/16/2020  | Wednesday | • Technically Speaking response due (in D2L)  
  • View 3 student videos before class (see D2L)  
  • Presentations: problem ranking due, date sign-ups  
  • Presentation preparation discussion |
| 5    | 9/23/2020  | Wednesday | • Visitor presentation  
  • 5 Elements: Preface, Introduction, Chapter 1 discussion |
| 6    | 9/30/2020  | Wednesday | • Visitor presentation  
  • 5 Elements: Chapters 2, 3, 4 discussion |
| 7    | 10/7/2020  | Wednesday | • Visitor presentation  
  • 5 Elements: Chapter 5, Summary discussion |
| 8    | 10/14/2020 | Wednesday | • Center for Career and Professional Development presentation/mock interviews  
  • Virtual extracurricular activity post #1 due |
| 9    | 10/21/2020 | Wednesday | • Visitor presentation  
  • Problem solving activity |
| 10   | 10/28/2020 | Wednesday | • Practice presentations |
| 11   | 11/4/2020  | Wednesday | • Practice presentations |
| 12   | 11/11/2020 | Wednesday | • Problem Solving Activity  
  • Virtual extracurricular activity post #2 due |
| 13   | 11/18/2020 | Wednesday | • Final presentations  
  • Problem Solving Activity |
| 14   | 11/25/2020 | Wednesday | • No Class – Thanksgiving Holiday |
| 15   | 12/2/2019  | Wednesday | • Final presentations  
  • Resumé Critique, Mock Interview completed** |
| 16   | 12/9/2020  | Wednesday | • Final Exam Week meeting, 4:15-6:45pm (Final presentations)  
  • All assignments due at this week’s meeting |

** Center for Career and Professional Development 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. The pass/fail checklist is attached.

| All items on pass/fail checklist completed satisfactorily with adequate participation, weak presentation | D |
All items on pass/fail checklist completed satisfactorily with adequate participation, acceptable presentation  

All items on pass/fail checklist completed satisfactorily with good participation, good presentation  

All items on pass/fail checklist completed satisfactorily with good participation, excellent presentation  

Otherwise  

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<th>Grade</th>
<th>Description</th>
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<tr>
<td>C</td>
<td>All items on pass/fail checklist completed satisfactorily with adequate participation, acceptable presentation</td>
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<tr>
<td>B</td>
<td>All items on pass/fail checklist completed satisfactorily with good participation, good presentation</td>
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<tr>
<td>A</td>
<td>All items on pass/fail checklist completed satisfactorily with good participation, excellent presentation</td>
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<tr>
<td>F</td>
<td>Otherwise</td>
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Please refer to the “Course Requirements” section above for 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 practice presentation and make time to work to improve for the final presentation.

Expectations for student presentations are:

- **Correct mathematics**
- **Accurate communication of mathematical ideas**
- Complete, self-contained overview of problem and solution
- Preliminary practice meeting with instructor (≥1 week prior to practice presentation, slides submitted 24 hours in advance)
- Slides contain no errors
- Incorporates feedback from instructor and peers
- Second (feedback) meeting with instructor (≥1 week prior to in-class presentation, slides submitted 24 hours in advance)
- 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

**Attendance Policy:**
- *Please keep in communication with the instructor about all absences.* You should not miss class meetings. But, especially this semester, I understand that schoolwork and this course are not your only concerns. It is not my place to judge whether an absence from a synchronous, regular class meeting merits being “excused” or not; that is up to you to determine. If you cannot attend class at the scheduled time, you must
  1. View the Zoom recording and materials from the day
  2. Contact me as soon as possible

If you must miss a scheduled appointment with me, please let me know as soon as possible. Missing your final presentation date is much more problematic than missing a regular class meeting or an appointment, and you should not miss this day unless the situation is very serious. If you do not present on your scheduled date, you risk earning a grade withheld (incomplete), dropping a letter grade, or failing the course. If your level of engagement with the class is insufficient, you may fail the course.

- Come to class prepared and ready to listen, participate, and engage with the activities for the day
- 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 during 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.

With regard to your final problem presentation, do not present the work of others as your own. It will be very apparent to the audience if you are unable to answer questions about your mathematical problem due to lack of understanding.

**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/).

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**MATH 4180 Pass/Fail Checklist**

**Fall 2020**

Name: ____________________________________________________________

- Extracurricular activity #1 (with write-up): __________________________
- Extracurricular activity #2 (with write-up): __________________________
- Extracurricular activity #3 (with write-up): __________________________
  OR
  TExES pre-certification exam and follow-up with math department

- *Technically Speaking* video & D2L quiz
- Response to 3 student videos
- Problem ranking submitted
- Mock Interview
- Resumé Critique
- Self-assessment of classroom engagement (see D2L)
- Self-assessment of problem-solving experiences
- Participation in class discussions of The 5 Elements of Effective Thinking
  - 1
  - 2
  - 3
- Provides feedback for peer presentations
○ Practice presentations
  ○ In-class presentations

○ Preliminary presentation meeting
  ○ Submitted slides 24 hours in advance

○ Post-practice presentation meeting
  ○ Submitted slides 24 hours in advance

○ Attend all class meetings, or view Zoom recording and correspond with instructor
  ○ 9/2/2020 ○ 9/30/2020 ○ 10/28/2020 ○ 12/2/2020
  ○ 9/16/2020 ○ 10/14/2020 ○ 11/11/2020