

Math 489/MTE 551.01W Problem Solving for Teachers

COURSE SYLLABUS: Summer II 2026

Instructor: Rebecca Dibbs, PhD

Office Location: 110 Education North

Office Hours: MTWR 3-4 pm (ZOOM)

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COURSE INFORMATION

Materials

Textbook(s) Required: Problem Solving: Exploring Paths Less Traveled by Grassl & Mingus

MTE 551 - Fundamental Math for Tch

Hours: 3

Fundamental Mathematics for Teachers - This course is designed to prepare the teachers to create learning environments conducive to meeting the national and state standards regarding teaching and learning problem solving through number and operations, algebraic reasoning, geometry, and other techniques.

COURSE REQUIREMENTS

Course Activities

Lecture/Reading: For each problem-solving strategy we will study this semester, there are lectures discussing the strategy and demonstrating how to apply said strategy. You are expected to watch these the weeks they are assigned.

Problem Solving Practice: There are two sets of problems at the end of the workbook. Set 1 has labeled selected strategies, and set 2 does not. Each week a Problem Solving Practice is assigned, you need to complete any TEN problems from either Set 1 or Set 2. These assignments will be due that Sunday at 11:59 pm, or Thursday at 11:59 pm on Week 5.

Literature Review: Throughout the semester, you will conduct and write a five source review of the literature on a topic in math or science education of your choosing. I will talk more about this assignment in the literature review videos, but this project is designed to help you prepare for Math 595 and investigate a topic in math or science education. We will work on this a little each week, and this project will be instead of exams in this class.

Exams: There will be no exams in this class

Comps: If you are on the math education track of the master's program, this is a comps eligible course. This is a new course, so I haven't written a comp yet, but the comprehensive exam would be a combination of essay questions based on your literature review and/or problems to solve from the strategy sets that everyone completes.

Workload and Assistance: You should expect to spend a **minimum of TWO to THREE HOURS every day**, outside of class, on the course material. This includes watching the videos, labs, and working on your literature review. Some weeks may require more of your time, other weeks may require less, but *on average*, budget 8 to 12 hours each week. **I can't stress enough that in order to be successful in this class you should spend much of this time working with other students in the class!** Please ask questions and seek assistance as needed. You may email me at any time, and I encourage you to make use of my office hours

GRADING

This class will be graded on a weighted percentage system. Percentages are assigned as follows:

Assignment	Weight
Problem Solving Practice	60%
Literature Review	40%

All grades will be rounded up to the nearest whole percent before grades are assigned. This means an 89.1 rounds to an 90 and is an A, while a 78.9 rounds to a 79 and is a C:

A: 87-100%

C: 67-76%

F: 0-56%

B: 77-86%

D: 57-66%

TECHNOLOGY REQUIREMENTS

There is no specific technology required for this class, though you are welcome to use anything that is helpful. You will need access to a word processor for your literature review and a scanner to turn in your assignments. I recommend CamScanner if you don't already have a scanning app on your phone.

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement

My primary form of communication with the class will be through Email and Announcements. Any changes to the syllabus or other important information critical to the class will be disseminated to students in this way via your official University Email address available to me through MyLeo and in Announcements. It will be your responsibility to check your University Email and Announcements regularly.

Students who Email me outside of regular office hours can expect a reply within 24 hours M-F.

Students who Email me during holidays or over the weekend should expect a reply by the end of the next regularly scheduled business day.

myLeo Support

Your myLeo email address is required to send and receive all student correspondence. Please email helpdesk@tamuc.edu or call us at 903-468-6000 with any questions about setting up your myLeo email account. You may also access information at <https://leo.tamuc.edu>.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures

Academic Honesty

Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including (but not limited to) receiving a failing grade on the assignment, the possibility of failure in the course and dismissal from the University. Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. In **ALL** instances, incidents of academic dishonesty will be reported to the Department Head. Please be aware that academic dishonesty includes (but is not limited to) cheating, plagiarism, and collusion.

Cheating is defined as:

- Copying another's test or assignment
- Communication with another during an exam or assignment (i.e. written, oral or otherwise)
- Giving or seeking aid from another when not permitted by the instructor
- Possessing or using unauthorized materials during the test

- Buying, using, stealing, transporting, or soliciting a test, draft of a test, or answer key

Plagiarism is defined as:

- Using someone else's work in your assignment without appropriate acknowledgement
- Making slight variations in the language and then failing to give credit to the source

Collusion is defined as:

- Collaborating with another, without authorization, when preparing an assignment

If you have any questions regarding academic dishonesty, ask. Otherwise, I will assume that you have full knowledge of the academic dishonesty policy and agree to the conditions as set forth in this syllabus.

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

University Specific Procedures

ADA Statement

Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

COURSE OUTLINE / CALENDAR

Note: **BOLD** indicates an assignment that is due that week at 11:59 pm to D2L on Sundays (Weeks 1-4) or Thursday (Week 5). All assignments will remain open until the end of the course, but it is a **VERY BAD IDEA** to try and work binge your way through a summer class. Contact me ASAP if you are falling behind.

Videos to Watch	Problem Solving Assignment	Literature Review Assignment(s)
<ul style="list-style-type: none"> • Problem Solving Strategies 1-3 Video • Literature Review Overview • Finding Articles Video 	Set 1: Any ten problems in any problem set in the book	(1) Find your five articles (2) Topic Discussion Board
<ul style="list-style-type: none"> • Problem Solving Strategies 4-6 Video • Coding Articles Video • Make a Reference List Video 	Set 2: Any ten problems in any problem set in the book	(3) Make a reference list (4) Code 1 article
<ul style="list-style-type: none"> • Problem Solving Strategies 7-9 Video 	Set 3: Any ten problems in any problem set in the book	(5) Code remaining 4 articles
<ul style="list-style-type: none"> • Problem Solving Strategies 10-12 Video • Sorting Codes Video 	Set 4: Any ten problems in any problem set in the book	(6) Sort Codes
<ul style="list-style-type: none"> • Problem Solving Strategies 13-15 Video • Writing Literature Review Video • Writing a Reflection Video 	Set 5: Any ten problems in any problem set in the book	(7) Write one page* of literature review (8) Reflection Discussion Board

*One page or one pile, whichever is longer!