



MTE 551.01W Problem Solving for Teachers

COURSE SYLLABUS: Spring 2025

Instructor: Rebecca Dibbs, PhD

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Office Hours: TBD

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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.

Strategy Practice: After each lecture, there is a short assignment where you are asked to apply the specific strategy to a given problem. These assignments will be assigned during lecture weeks and will be due that Sunday at 11:59 pm

Problem Solving Practice: There are two sets of problems at the end of the workbook. Set A has labeled selected strategies, and set B does not. Each week a Problem Solving Practice is assigned, you need to complete any FOUR problems from either Set A or Set B. These assignments will be assigned between lecture weeks and be due that Sunday at 11:59 pm.

Literature Review: Throughout the semester, you will conduct and write a ten source review of the literature on problem solving. 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 how problem solving is taught. 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 studying for quizzes and exams. 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
Strategy Practice	30%
Problem Solving Practice	30%
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

StudentDisabilityServices@tamuc.edu

COURSE OUTLINE / CALENDAR

Note: BOLD indicates an assignment that is due that week at 11:59 pm to D2L

Week	Problem Solving or Strategy Assignment	Literature Review Assignment
1/13	Problem Solving Strategy Lecture; Strategies 1-3 and Strategy Practice 1	Watch Lit Review Overview Video
1/20	Problem Solving Practice 1: Do any 4 problems from the back of the workbook	Watch How to Find Sources; start looking for articles
1/27	Problem Solving Strategy Lecture; Strategies 4-6 and Strategy Practice 2	Finish finding articles; TURN IN REFERENCE LIST
2/3	Problem Solving Practice 2: Do any 4 problems from the back of the workbook	Watch How to Code Articles Video, CODE ONE ARTICLE; REVISE REFERENCE LIST
2/10	Problem Solving Strategy Lecture, Strategies 7-9 and Strategy Practice 3	CODE 3 ARTICLES
2/17	Problem Solving Practice 3: Do any 4 problems from the back of the workbook	CODE 3 ARTICLES
2/24	Problem Solving Strategy Lecture, Strategies 10-12 and Strategy Practice 4	CODE 3 ARTICLES
3/3	Problem Solving Practice 4: Do any 4 problems from the back of the workbook	Watch Sorting Codes Video; Cut out Codes
3/10	SPRING BREAK	Start Sorting Codes

3/17	Problem Solving Strategy Lecture, Strategies 13-15 and Strategy Practice 5	Finish Sorting Codes
3/24	Problem Solving Practice 5: Do any 4 problems from the back of the workbook	Watch Writing Lit Review Video, Start writing Lit Review
3/31	Problem Solving Practice 6: Do any 4 problems from the back of the workbook	ONE PAGE LIT REVIEW DUE
4/7	Problem Solving Practice 7: Do any 4 problems from the back of the workbook	Write Lit review
4/14	Problem Solving Practice 8: Do any 4 problems from the back of the workbook	Write Lit Review; LIT REVIEW DRAFT DUE
4/21	Problem Solving Practice 9: Do Any 4 problems from the back of the workbook	Watch Introduction Video, WRITE INTRODUCTION
4/28	Problem Solving Practice 10: Do any 4 problems from the back of the workbook	Watch Reflection Video WRITE REFLECTION
5/5	Finals Week; no Problem Solving Assignment	Final Lit Review Due May 9 th at 11:59 pm to D2L