

THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE
DEPARTMENT OF MATHEMATICAL SCIENCES

Course Number: MATH 4302 – 21977

Course Title: Fundamental Mathematics Concepts Taught in Grades 4-8

Credit Hrs: 3

Term: Spring 2021

Online Course Meetings: 4:30 PM - 5:50 PM (Tues & Thurs)

Prerequisite Courses: MATH 3308 with a grade “C” or better

Course Fee: None

Instructor: Kien Lim

Office Location: Bell Hall 301 (not in my office because of Covid-19 pandemic)

Contact Info: E-mail Address: kienlim@utep.edu
Office Phone: (915) 747-6772
Fax Number: (915) 747-6502
Emergency Contact: (915) 747-5761

Zoom Office Hours: Mondays: 1:00 PM – 2:00 PM
Wednesdays: 4:00 PM – 5:00 PM
<https://tinyurl.com/LimHours>

Course Description: Fundamental Mathematics Concepts Taught in Grades 4-8: Mathematics taught in grades 4-8 will be examined from an advanced standpoint. This course is intended to help preservice middle school mathematics teachers make connections between their undergraduate mathematics education and the mathematics they will teach. Topics will be chosen from: number concepts and relationships, fundamental ideas of number theory, discrete mathematics, probability and statistics, numerical literacy, Euclidean and non-Euclidean geometry, transformational geometry, patterns, variables, and functions, multiple representations of functions, mathematical modeling, and concepts of calculus.

Course Objectives: Students will

- (a) deepen their understanding of math concepts by comprehending math texts, interpreting symbols and representations, making connections, explaining and communicating their understanding;
- (b) develop problem solving skills (making sense of problems, using visual representations, trying multiple strategies, and persevering)
- (c) view mathematics as a discipline that requires sense-making, reasoning, modelling, conjecturing, and justifying;
- (d) cultivate a growth mindset through reflection and self-awareness;
- (e) experience the benefits and challenges in creating a positive learning atmosphere.

Course Structure: This course is designed to help students regain confidence in mathematical thinking and problem solving through problem solving and cultivating a growth mindset in a positive learning environment.

- Tuesday class meetings are dedicated to problem solving activities.
- Thursday class meetings are dedicated to reflection, discussion, effective learning, math thinking, and conceptual understanding.

Coursework: Attendance & Engagement (10%)

- Attend synchronous sessions via Zoom
- Participate in class discussion with webcam and microphone
- Collaborate in group work via shared Google slides
- Participate in classroom voting via i-Clicker on a mobile device

Reflection Log (20%)

- Complete a log entry on Class Notebook after each Tuesday class.
- Each log entry will have questions about either your perceptions of the learning environment, your progress in growth mindset, your problem-solving experience, your attitude towards math, or suggestions for improving the learning environment.

Math Homework (30%)

- Download weekly homework in Blackboard and upload completed homework by Sunday 11pm.
- You are encouraged to collaborate with your teammates and help each other understand the math underlying the solutions. However, you must write your own answers. Copied answers will result in a lower score for both the student who wrote the solution and the student who copied the solution.

Quizzes (20%)

- Take a 15-minute quiz before Tuesday class.
- Quiz items assess your understanding of the math covered in previous week.
- No notes are allowed.
- Exam items are designed to assess your understanding and application of the math concept covered, and your comprehension of the assigned reading.

Final Examination (20%)

- Take the final exam on the scheduled time on finals week.
- The final examination is comprehensive, covering all the math concepts related to in-class problems, homework problems, and assigned readings.
- A two-sided cheat sheet and a calculator are allowed.
- Exam items are designed to assess your conceptual understanding and problem-solving.

Grading Scheme: To compensate for the higher-cognitive demand, reasoning and sense-making in this course, the following scale is used:

A	≥ 80%
B	70% - 80%
C	60% - 70%
D	45% - 60%
F	< 45%

You are expected to put in an average of 9-12 hours per week for a 3-credit hour course.

Textbook & References: Required:

- *Developing Essential Understanding of Expressions, Equations & Functions: Grades 6-8*, NCTM. ISBN # 978-0-87353-815-2 (pdf)
ISBN # 978-0-87353-670-7 (paperback)

References:

- *Mathematics for Elementary Teachers with Activities* (5th Ed) by Sybilla Beckmann
- *Mathematics Teaching in the Middle School* journal articles

Technology & Resources:

1. A laptop or computer for Zoom sessions with webcam & microphone
2. Google slides for whole class interaction
3. A smart phone for iClicker Reef (register using your UTEP email)
4. OneNote for Class Notebook (free for UTEP students)
5. EdPuzzle.com (join at <https://edpuzzle.com/join/juteema>)
6. Respondus Lockdown Browser & Respondus Monitor

Test Proctoring Software:

Quizzes and final exam will make use of Respondus Lockdown Browser and Respondus Monitor inside of Blackboard to promote academic integrity.

- Quizzes and exam will only be available at the testing times. If the scheduled time for the final exam does not work for you, contact the instructor to arrange for an alternative time to take the exam.
- A reliable Internet connection is essential to completing the exam. If you must go to a location to take the exam (such as the library), be sure to follow their health and safety requirements.
- Once the window closes, your answers will be saved, and no changes can be made.
- Respondus Lockdown Browser will require that all internet tabs be closed prior to the start of the test.
- Respondus Monitor requires a webcam and microphone.
- You will be required to show the webcam your student ID prior to the start of the test.
- Your face should be completely visible during the test. Blocking the camera will disable the test.
- No textbook materials (except a one-page cheat sheet) are permitted during the test. Respondus Monitor requires you to take a video of your surrounding area (desk, chair, walls, etc.).
- You should not have conversations with other people and/or leave and return to the area during the test.
- Other than a calculator, mobile or electronic devices are not allowed.

In Case of Technical Issues:

- Back-up and submit your work with plenty of time to spare in the event that you have a technical issue with the course website, network, and/or your computer.
- If you are experiencing difficulties submitting your work through the course website, please contact the UTEP Help Desk. You can email me your back-up document as a last resort.

Important Dates: Census Day (Last Day to Drop without W): Feb 3
Course Drop Deadline (Last Day to Drop with a “W”): Apr 1

TEExES Competencies: TEExES 115 (Math 4-8): Competencies 1, 2,, 3, 4, 5, 6, 7, 15, 16

Academic Integrity Policy: Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another as ones' own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All suspected violations of academic integrity at The University of Texas at El Paso must be reported to the [Office of Student Conduct and Conflict Resolution \(OSCCR\)](#) for possible disciplinary action. To learn more, please visit [HOOP: Student Conduct and Discipline](#).

Incomplete Grade Policy: All grades of Incomplete must be accompanied by an Incomplete Contract that has been signed by the instructor of record, student, departmental chair, and the dean. The College of Science allows a period of one month to complete this contract. A grade of Incomplete is only used in extraordinary circumstances confined to a limited event such as a missed exam, project, or lab. If the student has missed a significant amount of work (e.g. multiple assignments or tasks), a grade of Incomplete is not appropriate or warranted.

Accommodation Policy: The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Reasonable accommodations will be made unless it is determined that doing so would cause undue hardship on the University. Students requesting an accommodation based on a disability must register with the [UTEP Center for Accommodations and Support Services \(CASS\)](#). Contact the Center for Accommodations and Support Services at 915-747-5148, or email them at cass@utep.edu, or apply for accommodations online via the [CASS portal](#).

COVID-19 Precautions: You must STAY AT HOME and REPORT if you (1) have been diagnosed with COVID-19, (2) are experiencing COVID-19 symptoms, or (3) have had recent contact with a person who has received a positive coronavirus test. Reports should be made at screening.utep.edu. If you know of anyone who should report any of these three criteria, you should encourage them to report. If the individual cannot report, you can report on their behalf by sending an email to COVIDaction@utep.edu.

For each day that you attend campus—for any reason—you must complete the questions on the UTEP screening website (screening.utep.edu) prior to arriving on campus. The website will verify if you are permitted to come to campus. Under no circumstances should anyone come to class when feeling ill or exhibiting any of the known COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, and alternative instruction will be provided. Students are advised to minimize the number of encounters with others to avoid infection.

Wear face coverings when in common areas of campus or when others are present. You must wear a face covering over your nose and mouth at all times in this class. If you choose not to wear a face covering, you may not enter the classroom. If you remove your face covering, you will be asked to put it on or leave the classroom. Students who refuse to wear a face covering and follow preventive COVID-19 guidelines will be dismissed from the class and will be subject to disciplinary action according to Section 1.2.3 *Health and Safety* and Section 1.2.2.5 *Disruptions* in the UTEP Handbook of Operating Procedures.

Services & Resources: [Help Desk](#)

Students experiencing technological challenges (email, Blackboard, software, etc.) can submit a ticket to the UTEP Helpdesk for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.

[UTEP Library](#)

Access a wide range of resources including online, full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.

[Math Tutoring Center \(MaRCS\)](#)

Ask a tutor for help and explore other available math resources.

[University Writing Center \(UWC\)](#)

Submit papers here for assistance with writing style and formatting, ask a tutor for help and explore other writing resources.

[RefWorks](#)

A bibliographic citation tool; check out the RefWorks tutorial and Fact Sheet and Quick-Start Guide.

[Military Student Success Center](#)

Assists personnel in any branch of service to reach their educational goals.

[Center for Accommodations and Support Services](#)

Assists students with ADA-related accommodations for coursework, housing, and internships.

[Counseling and Psychological Services](#)

Provides a variety of counseling services including individual, couples, and group sessions as well as career and disability assessments.