

University of Texas at El Paso
College of Education
Department of Teacher Education/ Division of STEM Education

MTED 3330
“Integration and Alternative Representation of
Basic Mathematical Principles”

Course Description:

A course, which integrates basic principles from various mathematical domains. Course will emphasize interrelationships among those principles and alternate conceptual representations of them. The representations will be analyzed to determine the mathematical skills and conceptual levels necessary to understand them.

Course Objectives:

The course will be organized as a concept study¹ with the following main objectives:

- Integrate basic principles across various mathematical domains
- Emphasize interrelationships among basic mathematical principles and ideas
- Use and understand multiple representations of basic principles and ideas
- Apply representations to make connections between mathematical domains

Meetings:

When: R 6:00 pm - 8:50 pm

Where: EDU605+on-line

Instructor:

Dr. Mourat Tchoshanov	Professor of Mathematics Education
Office:	EDU612
Office Hours:	4:00-6:00pm
Phone:	747-7668
E-mail:	mouratt@utep.edu
Homepage:	http://mourat.utep.edu/

Schedule of Classes:

The class will be structured as hybrid semi-independent study course using Teacher Learning Model (learning->planning->teaching->analysing) with the following structure:

- Several first classes of the semester will be face-to-face meetings
- There might be other face-to-face sessions/ conferences with individual or groups of students if needed
- The rest of the class sessions will be an independent study component when you conduct concept study in mathematics classroom and work on your proposal.

¹ Concept study is an in-depth investigation of a mathematical concept through problem-based learning. It combines the concept analysis and lesson study approaches.

Grades determined by the usual cutoffs (90-80-70-60), based on two parts:

- A. Concept Study Report (60%). Each student will conduct a concept study in mathematics classroom and submit a paper (15-18 pages). Student work and data form with collected evidence will be attached to the report. Your report must be written in APA style (American Psychological Association) with appropriate and complete citations, search www.apa.org.
- B. Concept Study Proposal Presentation (30%). Each student/ group of students will make Power Point presentation on the conducted concept study.
- C. Participation (10%). Student participation in class activities, discussions, and reflections are encouraged.

Course Schedule Changes

As course instructor, I reserve the right to adjust the course syllabus or change assignments as needed. I will be sure to give you plenty of notice prior to any changes. Remember that our course syllabus and class schedule are living documents and can be changed!

Professionalism

Along with basic standards of citizenship (e.g., “Student Conduct” and “Disruptive Acts Policy” in the UTEP *Catalog*), students in this course are required to display a positive attitude and professionalism. Be open to using or sharing opportunities for professional growth via Web CT Discussion Board option. In terms of written assignments, professionalism includes that all assignments be Word processed, checked for spelling/ grammar, and have any appropriate output/ graphics electronically pasted into the document.

Academic Integrity

The instructor trusts that you understand and especially appreciate that cheating, plagiarism and collusion in dishonest activities are serious acts, which erode the university’s purpose and integrity. It is expected that work you submit will represent your own effort, will not involve copying from or accessing unauthorized resources or people (e.g., from a previous year’s class), and will appropriately acknowledge (with complete citations) allowable references that you do consult. Also, do not resubmit work completed for other classes without specific acknowledgment and permission from the instructor. Violations are unacceptable and required to be referred to the Dean of Students Office for possible disciplinary action.

Copyright Notice

Many of the materials that are posted within this course are protected by copyright law. These materials are only for the use of students enrolled in this course and only for the purpose of this course. They may not be further retained or disseminated.

Disabled Student Statement

In Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990, if a student needs an accommodation then the Office of Disabled Student Services located at UTEP need to be contacted. If you have a condition, which may affect your ability to perform successfully in this course, you are encouraged to discuss this in confidence with the instructor and/or the director of the Disabled Student Services. You may call 915.747.5148 for general information about the American with Disabilities Act (ADA) and the rights that you have as a UTEP student with a disability. Individuals with disabilities have the right to equal access and opportunity. It is the student's responsibility to contact the instructor and The Disabled Student Services Office at The University of Texas at El Paso.