



MATH 3003 – Mathematics in Elementary Schools Fall 2018

Instructor: James Valles, Jr.
Section # and CRN: P01 (10023)
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Office Hours: MWF 9:00 – 11:00 AM, T-Th 9:30 – 10:00 AM;
Math Lab (W.R. Banks Room 303): T-Th 10:00 – 11:00 AM
Mode of Instruction: Face-to-face
Course Location: W.R. Banks Room 205
Class Days & Times: MWF 11:00 – 11:50 AM
Catalog Description: Credit 3 semester hours. A conceptual approach to introducing mathematics concepts and the integrating of content, pedagogy and assessment which include treatments of the nature of selective pre-algebra and discrete topics and the use of EC-4/4-8 TExES Standards V-VI.

Prerequisites: MATH 2163 with a grade of “C” or approval of the Mathematics Department
Co-requisites:

Required Texts: No textbook is required, but access to eCourses is required.

Calculator:

A scientific calculator is required. A TI-83 or TI-84 series graphing calculator is recommended.

Other Supplies:

A straightedge and graph paper are needed.

Recommended Texts: Sonnabend, T. (2010). *Mathematics for Teachers: An Interactive Approach for Grades K – 8*. 4th edition. ISBN-10: 0495561665, ISBN-13: 9780495561668

Miller, C., Heeren, V., Hornsby, J. & Heeren, C. (2016). *Mathematical Ideas*. 13th edition. Pearson. ISBN-13: 9780321977076.

Billstein, R., Libeskind, S, Lott, J., and Boschmans, B. *A problem solving approach to mathematics for elementary school teachers*. 12th edition. Pearson. ISBN-10: 0-321-98729-2.

Student Learning Outcomes:

	Upon successful completion of this course, students will be able to:	Program Learning Outcome # Alignment	Core Curriculum Outcome Alignment	TEKS Standards
1	Identify definitions and properties of fundamental geometric objects	1, 4	1, 4	3, 5, 6
2	Solve problems involving measurement of geometric objects	1, 4	1, 4	3, 5, 6
3	Solve problems involving transformations of geometric objects	1, 4	1, 4	3, 5, 6
4	Identify and solve problems involving similar triangles and congruent triangles	1, 4	1, 4	3, 5, 6
5	Solve problems involving basic statistics and the interpretation of data	3, 4	1, 4	4, 5, 6
6	Solve problems involving elementary probability	4	1, 4	4, 5, 6
7	Solve problems involving basic financial literacy	3, 4	1, 4	3, 5, 6

Program Learning Outcomes:

1. Demonstrate basic mathematical computational skills and distinguish uses of concepts in Calculus, Algebra, and Applied Mathematics.
2. Demonstrate the ability to write mathematically rigorous proofs.
3. Demonstrate the ability to perform advanced mathematical computations.
4. Demonstrate a breadth and depth of knowledge in mathematics.

Core Curriculum Learning Outcomes:

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|-----------------------------|--------------------------------------|
| 1. Critical Thinking Skills | 4. Empirical and Quantitative Skills |
| 2. Communication Skills | 5. Personal Responsibility |
| 3. Teamwork | 6. Social Responsibility |

TEKS Standards

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| 1. Number Concepts | 2. Patterns and Algebra |
| 3. Geometry and Measurement | 4. Probability and Statistics |
| 5. Mathematical Processes | 6. Mathematical Perspectives |
| 7. Mathematical Learning and Instruction | 8. Mathematical Assessment |
| 9. Professional Development | |

Major Course Requirements

Method of Determining Final Course Grade

Course Grade Requirement	Value	Total
Homework		20%
Class Presentations		5%
Reading and Research		5%
Tests		45%
Final Exam	Comprehensive	25%
Total:		100%

Grading Criteria and Conversion:

- A = 90 – 100%
- B = 80 – 89%
- C = 70 – 79%
- D = 60 – 69%
- F = 0 – 59%

Detailed Description of Major Assignments:

Assignment Title or Grade Requirement

Description

Homework	assignments designed to supplement and reinforce course material
Class Presentations	Individual presentation made in class on a topic relevant to EC-6 or 4-8 or 7-12 instruction
Reading and Research	Students will be asked to find articles relevant to educational research as well as to write summaries of scholarly articles
Tests	assignments designed to measure knowledge of presented course material
Final Exam	assignment designed to measure knowledge of presented course material comprehensively at the end of the semester

Course Procedures or Additional Instructor Policies

Taskstream

Taskstream is a tool that Prairie View A&M University uses for assessment purposes. One of your assignments may be considered an "artifact," an item of coursework that serves as evidence that course objectives are met. More information will be provided during the semester, but for general information, you can visit Taskstream via the link in eCourses.

Attendance Policy (See <http://catalog.pvamu.edu/generalacademicinformation/undergraduate/#attendancetext> for more details.)

Prairie View A&M University requires regular class attendance. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class during regular semesters and summer terms. Each faculty member will include the University's attendance policy in each course syllabus.

Attendance is included in the final overall grade. For the purposes of this course, six (6) unexcused absences may constitute an automatic grade of "F" for the course.

Specific Attendance Policies for This Course Include the Following:

Students are required to attend all class meetings.

In order for an absence to be taken into consideration for being a valid "excused" absence, you must provide appropriate documentation to the instructor when you return from your absence. Appropriate documentation includes official doctor's excuses (for reasons of illness), court documents, a copy of an official memo from respective Prairie View faculty/staff, &c. This dated documentation must be submitted to Dr. Valles no later than 3 class periods after the student's return to class or your absence will be counted as "unexcused."

0 or 1 unexcused absence = you will be allowed to replace the lowest test grade (Test 1, Midterm, Test 3) with the Final Exam grade

****Six (6) unexcused absences may constitute an automatic "F" for this course!****

Course Policies

1. The use of cellular phones for any purpose not related to classroom work (including but not limited to phone calls, texting, music, internet access, access to social networks) is expressly prohibited. If you need to have one in your possession, turn it off (not on vibrate, not on silence, not in Airplane Mode). iPods, other music players, and headphones are not allowed under any circumstance. Unless approval is given, they are not to be visible at all.
2. University policies on cheating will be enforced. See the Student Handbook.
3. Students have one calendar week to schedule and complete any test that was missed. Appropriate documentation *is required*. This privilege must not conflict with the professor's scheduled classes.
4. Homework requirements: It is imperative that you complete the homework assignments and keep up with the assessments. The assignments need to be completed by the due date – late assignments will not be accepted. Any homework to be completed for submission through eCourses will need to be uploaded by the due date and time – late assignments will not be accepted. You are certainly welcome to complete the assignments early and submit them for grading early, but this does not guarantee that the assignment will be graded before the due date and time.
5. Letter grades will be assigned as per catalog.
6. Attendance: Class will start at the prescribed time. Absences are accumulated beginning with the first day of class.

7. Students are expected to read the textbooks, ask questions about specific difficulties experienced when solving a problem, and demonstrate growth in thinking mathematically.
8. Student Academic Appeals Process (See <http://catalog.pvamu.edu/generalacademicinformation/undergraduate/#academicappealstext> for more detailed information). Note that according to the Appeals Process, students should meet with the instructor, then their Academic Advisor if the issue is not resolved, then the Department Head if the Instructor and Academic Advisor cannot resolve the issue. This is not the full description, but keep in mind that you are required by the process to begin any appeal with the instructor.
9. All assignments (if any are to be submitted on paper) are due at the beginning of the class. If you cannot submit an assignment on time, make arrangements to submit it early or have someone else submit it for you. Assignments can always be submitted early, but not late. If you will not be in class due to an excused absence, you *must* submit your work early as I will not accept it after you return.
10. Assignments can always be submitted early, but not late. Assignments submitted in eCourses will be due at 11:55 PM on the due date, and the system will be set up to not allow late submissions. Do not e-mail the assignment to the instructor, and do not turn in a paper copy, because neither of these will be graded. Assignments submitted as any file type other than pdf will not be graded.
11. Adjustments in the proposed timeline for course implementation may be necessary because of unforeseen interventions or failed technical resources. Please note that this does not constitute a failure to follow the syllabus.
12. Be aware that (sometimes) mistakes do happen. I try my best to ensure that all assignments are graded consistently and fairly. If there happens to be an error in grading, or if you feel I did not grade your assignment consistently compared to another student's assignment, it is your responsibility to alert me to the error. I cannot correct what I do not know about, but I will gladly correct any error in grading I might make.
13. Classroom Conduct and Professional Behavior. Students are expected to assist in maintaining an environment conducive to learning. Students are to treat faculty and other students with respect. Attendance, punctuality, the quality of your interactions with peers and instructors, ability to abstain from distracting electronic devices, and the quality and timeliness regarding completing assignments all determine your professionalism. In this class, I will not only lecture, but I will expect you to participate in classroom discussion and activities. If you feel you cannot appreciate the comments and questions of others in this class, respect the attendance and punctuality expectations, refrain from using unauthorized electronic devices, or handle the workload for this course this semester, you might consider registering during another semester. Any violation in regards to the Student Conduct Code will be reported to Student Affairs.
14. Oftentimes, end-of-course grades are scrutinized due to where they fall. Sometimes, a student may have a grade of 69.3 and wonder if the submitted course grade will be a D or a C. Several factors play into this determination, such as attendance and attentiveness to Homework assignments. One factor definitely considered is the grade earned on the final exam. In order for extraordinary rounding of a grade to be considered, you must have earned on the final exam at least the grade you would like considered. For example, you should earn at least a 70% on the final exam in order for me to consider extraordinary rounding of your course grade to a C (similarly, 80% earned on final for a B or 90% earned on final for an A). This is not a guarantee in any way extraordinary rounding will be implemented, but without meeting this benchmark it will absolutely not be considered.
15. E-mail communication will be conducted through your PVAMU student e-mail. Be professional in your e-mail messages. I do not check and I will not respond to messages sent to any other system (eCourses, WebAssign, MyMathLab, &c).
16. If you wish to discuss your grade, this needs to be done during my office hours or some time other than class. I will not discuss personal grades in class, immediately after class, or especially if there is the potential to get emotional.
17. Homework and projects, as possible, will be submitted to eCourses as pdf files. It is the responsibility of the student to acquire and learn how to use an appropriate app (either on a cellular phone or tablet) that can save assignments as a multipage pdf file. (A scanner would also work for this purpose.) Per assignment, eCourses will be set up to accept only one file, thus requiring the student to possibly submit multipage files instead of many files for one assignment. Some possible (free) apps to consider using are ScanBot, CamScanner, GeniusScan, TinyScanner, Google Drive, Fast Scanner, Evernote Scannable, Microsoft Office Lens, TurboScan, and Scanner Pro. (This is not an exhaustive list, but it is recommended you find one you are comfortable with and can use.)

Study Hints

1. Attend class regularly.
2. You *must* read the material from the textbook before coming to class. The accompanying calendar shows the class schedule and the corresponding text material for each class meeting. If you miss a class, you are expected to find out which material was covered and to familiarize yourself with it. This calendar will also be available in more detail in eCourses.
3. Please ask questions if you have any. Some students do not like to be called out (even privately) if it is evident they are struggling. Remember that you are in charge of your learning as well as your grade. I will call on students, though, if I feel I need to draw your attention to what is going on in class or just to encourage participation.
4. Form study groups with classmates.
5. Make use of the professor's office hours.
6. Make use of the Math Tutorial Lab in WR Banks, Room 303.

7. Use the Center for Academic Support, located in the Coleman Library, Room 209. Visit <http://www.pvamu.edu/universitycollege/ae/cas/> for more information.
8. Study regularly instead of cramming for the exams.
9. There will be material on the homework that we will not explicitly cover in class. This is done on purpose. Use the textbook, do research online for similar problems, and just jump in and attempt to work on the problem. Keep in mind that one component of this course is the development of your problem-solving skills. This is one method of doing so.
10. Do not assume a “study guide” or a “test review” will be provided for any tests. You have the homework problems, the quizzes, your class notes, and the textbook. Use these materials to prepare yourself for the class exams. If a test review is provided, it is done as a courtesy and not as a requirement of the course.

Professional Organizations

The National Council of Teachers of Mathematics
 Mathematical Association of America
 Association for Women in Mathematics
 Texas Classroom Teachers Association
 Association of Texas Professional Educators

The Texas Council of Teachers of Mathematics
 Association of Mathematics Teacher Educators
 The School Science and Mathematics Association
 Association of Mathematics Teacher Educators in Texas

Professional Journals

Mathematics Teacher
 Journal for Research in Mathematics Education
 School Science and Mathematics
 Australian Mathematics Teacher
 International Journal of Mathematical Education in Science
 and Technology

Journal of Mathematics Teacher Education
 The Mathematics Educator
 Issues in the Undergraduate Mathematics Preparation of
 School Teachers: The Journal
 Journal of Urban Mathematics Education
 For the Learning of Mathematics

References

1. TEKS chart and NCTM Standards
2. Video and other courseware available in the Mathematics Dept.
3. Graphing Calculator and Keystroke Sequence
4. NCTM's Addenda Series
5. New York Times Newspaper weekly education section
6. Resources in Mathematics Library in W.R. Banks Room 314

Semester Calendar

Week of	Readings
Aug. 27	Monday: Wednesday: Plane Figures Friday:
Sept. 3	Monday: Labor Day (no classes) Wednesday: Plane Curves and Polygons Friday:
Sept. 10	Monday: Figures in Space Wednesday: Friday: Measurements (US Customary and Metric)
Sept. 17	Monday: Area and Perimeter Wednesday: Friday: The Pythagorean Theorem
Sept. 24	Monday: Volume Wednesday: Surface Area Friday:
Oct. 1	Monday: Test #1 Wednesday: Rotations and Reflections Friday:
Oct. 8	Monday: Patterns and Symmetries Wednesday: Tessellations Friday:
Oct. 15	Monday: Congruent Triangles Wednesday: Friday: Similar Triangles
Oct. 22	Monday: Statistics: Representing Data Wednesday: Friday: Measures of Central Tendency and Variation of Data
Oct. 29	Monday: Wednesday: Statistical Inference Friday:
Nov. 5	Monday: Test #2 Wednesday: Probability Basics Friday: Fundamental Counting Principle
Nov. 12	Monday: Probability Trees Wednesday: Permutations and Combinations Friday: Probability Simulations
Nov. 19	Monday: Financial Literacy Wednesday: Friday: Thanksgiving (no classes)
Nov. 26	Monday: Class Presentations Wednesday: Class Presentations Friday: Class Presentations
Dec. 3	Monday: Review for Final Exam
	Final Exam

Student Support and Success

John B. Coleman Library

The library and its partners have as their mission "to provide resources and instructional material in support of the evolving curriculum, as a partner in Prairie View A&M University's mission of teaching, research, and service" and to support the University's core values of "access and quality, diversity, leadership, relevance, and social responsibility" through emphasis on ten key areas of service. It maintains library collections and access both on campus, online, and through local agreements to further the educational goals of students and faculty.

Center for Academic Support

The Center for Academic Support (CAS) offers Tutoring via peer tutoring. The services include workshops (i.e., Save My Semester, Recalculate Your Route), seminars (i.e., Tools You Can Use: T1-84), group review sessions (i.e., College Algebra Topic Reviews, GRE Preparation), group study opportunities (i.e., TSIA, HESI, Study Break, Exam Cram), and test-taking strategies (How to take Notes, Study Buddy, 5 Day Study Guide). The Tutoring Center is a nationally certified tutoring program through the National Tutoring Association. The peer tutors are trained and certified by the coordinator each semester. Location: J.B. Coleman Library

COMPASS

The Center for the Oversight and Management of Personalized Academic Student Success (COMPASS) is designed to help Prairie View students in their second year and beyond navigate towards graduation by providing the following services: Academic Advisement, Targeted Tutorials for Personalized Learning, Campus-Wide Referrals, and Academic & Social Workshops. Location: J.B. Coleman Library

Writing Center

The Writing Center provides student consultants on all aspects of the writing process and a variety of writing assignments. Writing Center consultations assist students in such areas as prewriting, brainstorming, audience awareness, organization, research, and citation. Location: Hilliard Hall 121

University Rules and Procedures

Disability statement (See Student Handbook):

Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

Academic misconduct (See Student Handbook):

You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of academic dishonesty:

1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.
2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.
3. Fabrication: use of invented information or falsified research.
4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's own work also constitutes plagiarism.

Nonacademic misconduct (See Student Handbook)

The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the

instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual misconduct (See Student Handbook):

Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Attendance Policy

Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class.

Student Academic Appeals Process

Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

Disability statement (See Student Handbook):

Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

TECHNICAL CONSIDERATIONS

Minimum Recommended Hardware and Software:

- Intel PC or Laptop with Windows 7; Mac with OS X; Smartphone or iPad/Tablet with Wi-Fi
- High speed Internet access
- 8 GB Memory
- Hard drive with 320 GB storage space
- 15" monitor, 800x600, color or 16 bit
- Sound card w/speakers
- Microphone and recording software
- Keyboard & mouse
- Most current version of Google Chrome, Safari, Internet Explorer or Firefox

Note: Be sure to enable Java & pop-ups

Participants should have a basic proficiency of the following computer skills:

- Sending and receiving email
- A working knowledge of the Internet
- Proficiency in Microsoft Word (or a program convertible to Word)
- Proficiency in the Acrobat PDF Reader
- Basic knowledge of Windows or Mac O.S.

Netiquette (online etiquette):

Students are expected to participate in all discussions and virtual classroom chats as directed. Students are to be respectful and courteous to others on discussions boards. Foul or abusive language will not be tolerated.

Technical Support:

Students should go to <https://mypassword.pvamu.edu/> if they have password issues. The page will provide instructions for resetting passwords and contact information if login issues persist. For other technical questions regarding eCourses, call the Office of Distance Learning at 936-261-3283

Communication Expectations and Standards:

Emails or discussion postings will receive a response from the instructor, usually in less than 48 hours. Urgent emails should be marked as such. Check regularly for responses.

Discussion Requirement:

Online courses often require minimal to no face-to-face meetings. However, conversations about the readings, lectures, materials, and other aspects of the course can take place in a seminar fashion. This will be accomplished by the use of the discussion board. The exact use of discussion will be determined by the instructor.

It is strongly suggested that students type their discussion postings in a word processing application and save it to their PC or a removable drive before posting to the discussion board. This is important for two reasons: 1) If for some reason your discussion responses are lost in your online course, you will have another copy; 2) Grammatical errors can be greatly minimized by the use of the spell-and-grammar check functions in word processing applications. Once the post(s) have been typed and corrected in the word processing application, it should be copied and pasted to the discussion board.