

University of West Georgia

MATH 3803: Algebra for P-8 Teachers I

Spring 2013

Course Syllabus

Instructor: Dr. Veena Paliwal

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Office: 318 Boyd Building

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Class Location: 307 Boyd Building

Class Meeting: MWF 9:55-10:45 a.m.

Office Hours: MWF 11:00 a.m.—12:00 p.m., 1:00 p.m.—2:30 p.m.

Catalog Description:

This **course** has a special emphasis for teachers of grades P-8. It broadens understanding of the fundamental concepts of **algebra** with particular **attention to specific methods** and materials of instruction.

Required Books:

Bilstein, R., Libeskind, S., & LoU, J. (2012). *A problem solving approach to mathematics for elementary school teachers*, (11th ed.). Boston, MA: Pearson Addison-Wesley.

Student Learning Outcomes:

The teacher candidates should be able to do the following:

- Strengthen their understanding of algebraic vocabulary, notation and symbols.
- Deepen their understanding of fundamental concepts of algebra including linear equations, inequalities, ratios, proportions, functions, polynomials, exponents, and radicals.
- Recognize and correct “common errors” in algebra.
- Use algebra to problem solve in multiple contexts.
- Communicate algebraic ideas and concepts effectively and successfully.
- Become familiar with the National Council for Teachers of Mathematics via the organization, website, journals, and other resources.
- Establish personalized reform-based visions for promoting algebraic thinking aligned with the Common Core State Standards for Mathematics.

Evaluations and Grading Procedures:

Homework and quizzes (20%): There will be homework assignments and in-class quizzes. Group homework assignments will be given at the end of a class and will be due at the next meeting. **NO LATE HOMEWORK WILL BE ACCEPTED.** Quizzes will be pop-up quizzes given in the last 15 minutes of the class and will be announced on a particular day itself. It is therefore important to attend the class every day. Most of the times the quizzes will be based on the material covered in the class that day.

Micro-teaching (10%): I really want each student to come and share their ideas about mathematics teaching and learning with rest of the class. Therefore, I want each group to present a micro-teaching lesson (15-20 minutes) in the last week of the class. Your grade will be based on my evaluation and other groups’ evaluation of your groups’ presentation.

Exams (45%): There will be 3 one-hour exams, and each exam will be announced at least one (1) week prior to the exam date. Unexcused absences from an exam will result in a grade of zero (0) for that exam.

Final Exam (25% of the grade): A **comprehensive** final exam will be given during Finals Week.

Letter grades will be assigned by the following scale:

90-100%	A
80-89%	B
70-79%	C
60-69%	D
Below 60%	E

Attendance Policy: You will be allowed ONE unexcused absence. You will be allowed TWO additional absences with a documented excuse that was beyond your control (doctor said so, car accident, etc.) Poor planning and poor judgment, which result in missing class, do not count as excused. For every absence beyond those mentioned above, your overall course grade will be lowered by 5%. Students are expected to attend class and complete all work when assigned. Students are responsible for the topics covered and assignments due whether present or not. **“I was not here” is NOT a valid excuse. You will be responsible for signing the attendance sheet during each class period.**

Make-up and extra credit policy: There will be NO make-ups for HW assignments, quizzes, or exams will be allowed. **Please note that NO extra credit will be given!** Points can be earned only as stated above.

Class Rules: You are to turn off your cellular phone during the class. You are not allowed to use your phone as a calculator. Please respect your instructor and other students in the class. No talking or any distracting behavior. If you fall asleep in class, you will be asked to leave.

University policies: Please refer to university’s policy at [http:// tinyurl.com/UWGSyllabusPolicies](http://tinyurl.com/UWGSyllabusPolicies)

Meeting with instructor and tutoring center: Meeting instructor can be beneficial and is encouraged. Meeting should occur during the instructor's office hours, whenever possible. If these hours conflict with a student's schedule, then appointments should be made. Please use the tutoring center at Boyd 205 You can just walk in and get help.

This is a tentative schedule of assignments and topics to be covered in class sessions.

Changes will be made as needed. Once we finish a section, we will immediately move along to the next section. It is recommended that you read over text sections BEFORE we cover them in class. After we cover topics, you should complete assignments and do any extra practice or get help as needed. Don’t wait until its too late (like after doing bad on a test).

Week 1: Number properties and relations

Week 2: Expressions and equations

Week 3: Graphs

Week 4: Review and exam 1

Week 5: Slope concepts and Inequalities

Week 6: Inequalities and system of equations

Week 7: Ratio and proportional reasoning

Week 8: Functions

Week 9: Review and exam 2

Week 10: Exponents and polynomials

Week 11: Factoring, roots and radicals

Week 12: Quadratic equations and algebraic problem solving

Week 13: Review exam 3

Week 14: Micro-teaching

Week 15: Review for the final exam