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

Course Number: MATH 3305 - 21430

Course Title: Proportion and Algebra

Credit Hrs: 3

Term: Spring 2017

Course Meetings & Location: Mondays and Wednesdays from 10:30 am to 11:50 am LART 207

MATH 2303 with a grade “C” or better

Course Fee: (if applicable) None

Instructor: Dr. Rocio E. Gallardo

Office Location: Bell Hall 130E

Contact Info: E-mail Address: regallardo@utep.edu
Office Phone: 915-747-5703
Fax Number: TBA
Emergency Contact: (915) 747-5703

Office Hours: Wednesday 9:00 am to 10:30 am
Wednesday 12:00 p.m. to 1:30 p.m. or by appointment

Textbook(s), Materials: Required: Mathematics for Elementary Teachers with Activities (4th Ed) By Sybilla Beckmann (purchase online with a discount code)

Course Description: This course focuses on proportional and algebraic reasoning for prospective elementary teachers. Topics include ratios as measures, ratios as multiplicative comparisons, proportions, rates of change, patterns, linear functions and solving linear equations, inequalities and systems. The focus is on identifying relationships between quantities in contextualized problems, using inductive reasoning to identify patterns and express them algebraically making connections among verbal, graphic, numeric and symbolic representations, solving problems, using concrete numeric, tabular, graphic and algebraic methods, and addressing student's misconceptions and errors.

Course Objectives: Students will
(a) deepen their understanding of ratios, proportions, change, and functions by explaining why and making connections;
(b) strengthen their quantitative reasoning and algebraic reasoning;
(c) conceive mathematics as a problem solving endeavor that involves sense-making and thinking; and
(d) develop the habits of attending to meaning, of analyzing problem situations, and of making conjectures and providing justifications; and
(e) develop the skills of active reading and understanding mathematical texts.
Course Activities/Assignments: This course uses the support of learning communities and the active participation of students to create, enhance, and support conceptual mathematical understanding. Students should be able to make connections between mathematical concepts and their out of school application. Students are expected to analyze course materials in a genuine search for further mathematical clarification, complete individual online homework, and submit reflection prior to each class meeting. During class meetings, students will clarify their understandings, apply their knowledge to solve challenging problems, and take an in-class assessment. Homework will be assigned after each class meeting. Students will need to have internet access to sites like Blackboard and MyMathLab.

IMPORTANT: Students must read the material before the class to understand the material taught in class and be ready to take the quiz.

Assessment of Course Objectives:

- In-class assessments are administered at the end of the sections. The questions in these assessments are designed to assess your understanding of the assigned readings and online work.
- Online assignments are done via MyMathLab, which requires to have an access code. MyMathLab homeworks will be not accepted on paper (there is no excuse).
- Group and individual projects are posted via MyMathLab or Blackboard and will be presented the date indicated by the teacher.
- Online assignments are posted on MyMathLab and are due the date indicated by the teacher.
- Examinations are based on your understanding of the concepts. Some exam problems are similar to those in the textbook, in-class assessments, and in-class activities. Most problems require you to think and apply your understanding. To compensate for the higher-cognitive demand questions, the following scale is used for exams:

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

- The final examination is comprehensive.

Course Schedule:

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<th>Weeks</th>
<th>Sections</th>
<th>Topic</th>
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<tr>
<td>1 – 3</td>
<td>6.4 – 6.6</td>
<td>Division</td>
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<td>4 – 6</td>
<td>7.1 – 7.5</td>
<td>Ratio &amp; Proportional Relationships</td>
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<tr>
<td>7 – 9</td>
<td>9.1 – 9.5</td>
<td>Expressions, Variables, Equations (Midterm Examination I)</td>
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<td>10 – 12</td>
<td>8.1 – 8.7</td>
<td>Number Theory</td>
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<td>13 – 15</td>
<td>9.6 – 9.8</td>
<td>Sequences &amp; Functions (Midterm Examination II)</td>
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TExES Competencies: Competencies 15, 18, & 14 (Generalist EC-6)
Competencies 19, 22, & 18 (Bilingual Generalist EC-6)
Competencies 12, 13, 14, 15 & 24 (Generalist 4-8)
Competencies 16, 17, 18, 19 & 28 (Bilingual Generalist 4-8)
Competencies 3, 4, 5, 15 & 16 (Mathematics 4-8)

Important Dates: Census Day – Last Day to Drop without a “W” (Wednesday February 1\textsuperscript{st} )
Last Day to Drop with a “W” (Thursday March 30\textsuperscript{th}).
Students who decide to drop the course must process a drop form, in
person, at the Registrar's Office, by March 30\textsuperscript{th}.
Final Examination Friday May 12\textsuperscript{th} from 10:00 a.m. to 12:45 p.m.

Grading Policy: In-class Assessments 10%
Group and Project Presentation 15%
Assignments
  Homework at Mymathlab 10%
  Homework at hard copy 10%
Mid-term Examination I 15%
Midterm Examination II 15%
Final Examination 25%
Total 100%

Make-up Policy: There will be no make up for homework assignments, quizzes or exam. If
you should miss the exam, quiz or homework, the possibility of a make-up
them will be determined you can provide documentation to support your
reason. If it is not documented, your exam, quiz or homework grade will be
counted as the missed grade.

Attendance Policy: Attendance will be taken.

Academic Integrity Policy: Any student who commits an act of scholastic dishonesty is subject to
discipline. Scholastic dishonesty includes, but is not limited to cheating,
plagiarism, collusion, the submission for credit of any work or materials that
are attributable in whole or in part to another person, taking an examination
for another person, any act designed to give unfair advantage to a student or
the attempt to commit such acts. Refer to the UTEP’s Policy at

Civility Statement: Be punctual. If you are late for class you will not be given extra time to
complete your quiz and 20% of your score will be deducted.

Disability Statement: If you have a disability and need classroom accommodations, please contact
The Center for Accommodations and Support Services (CASS) at 747-5148,
or by email to cass@utep.edu, or visit their office located in UTEP Union
East, Room 106. For additional information, please visit the CASS website
at www.sa.utep.edu/cass.

Military Statement: If you are a military student with the potential of being called to military
service and/or training during the course of the semester, please inform your
instructor as soon as possible.