THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE

Course #: MATH 3305 - 13228
Course Title: Mathematics from Multiple Perspectives 1
Course Hrs: 3
Term: Fall 2009

Course Meeting & Location:

BUSN 302
Tuesday – Thursday, 1:30 PM – 2:50 PM

Prerequisite Courses: Math 2303 with C or better.

Course Fee: none

Instructor: Lawrence W. Swienciki, Ph.D.

Office Location: Bell Hall 316

Contact Information: E-mail: lwswienciki@utep.edu
Phone: (915)-747-7004

Office Hours: Tuesday, Thursday 10 – 11 AM; TBA (Time by Appointment)


Course Objectives:

Conceptual Mathematics from Multiple Perspectives 1 is a 45-hr course designed for prospective elementary school teachers to deepen their understanding of fundamental mathematical principles. The course includes concepts of ratio, proportion, 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 students’ misconceptions and errors. This course focuses on Chapters 1, 8, 9, 12, 13, 15, and sections 14.1 and 14.2.

Course Activities/Assignments:

1. For each major topic, a worksheet for discussion and homework will be provided to you. They will guide our discussion of the course-topics; provide
follow up practice for homework. We will discuss the homework assignment at
the next class to form closure of the topic. You will have the opportunity to
refine your homework, because it will be due at the next class.

2. Your attendance and participation in the discussion is very important. There
will be a sign-in sheet at each class session. Please sign the attendance
sheet when you come in or before leaving.

3. There is a project providing you with the opportunity to apply the course-
principles in your own creative way. Meet with me to set up the objectives of
the project, which fits one of three general categories:

(a) How you would apply course concepts to a hypothetical class you might
teach;

(b) Observe two different math classes, taught by different teachers and
discuss how the course-principles appear in your observation.

(c) A topic you propose, related to the course-principles.

The project is submitted as a formal paper, with documented sources. It is
due on or before, November 19, 2009. There is no specific length required. A
reasonable length can be 5-10 pages, excluding any footnotes and
bibliography, and can depend on the style of the writing. What makes a good
paper is one that is clear, instructive, and related to course principles.

4. There is one mid-term exam, based on the chapters covered from the
beginning. The questions are similar to those found on the topic-homework
sheets.

5. The final examination follows the same structure as the midterm, but is more
comprehensive. More emphasis is placed on discussion-homework sheets
covered after the midterm. The questions are based upon similar examples –
but, not necessarily the same.

Assessment of Course and Grading:

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<tr>
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<th>pts</th>
<th>Grade</th>
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<tbody>
<tr>
<td>Homework</td>
<td>70</td>
<td>A</td>
</tr>
<tr>
<td>Attendance</td>
<td>60</td>
<td>B</td>
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<tr>
<td>Project</td>
<td>50</td>
<td>C</td>
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<tr>
<td>Midterm Exam</td>
<td>60</td>
<td>D</td>
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<tr>
<td>Final Exam</td>
<td>60</td>
<td>F Below 150 pts</td>
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Make-Up Policy: There are no retakes on exams, and no exam grades dropped. Missed
class work cannot be made up. Late assignments are not accepted. With sufficient
documentation, the instructor, at his discretion, allow make up exams.

Attendance Policy: Attendance is expected and required. There is an attendance sheet for
the students to sign in at the beginning of the period. Attendance is part of the grade, as
shown above.
Academic Integrity Policy: Acts of academic dishonesty are not accepted. Lapses in academic integrity are referred to the Dean of Students, as required at: http://academics.tep/Default.aspx?tabid=23785.

Classroom Environment:
This course is presented in a professional environment. Turn off cell phones, computers, and electronic devices. Put them away. Do not record conversations or take pictures. The privacy rights of everyone in class are to be maintained. Do not bring food/beverages to class. If for health reason, you need bottled water, it is acceptable in class.

Disability Statement:
If a student has or suspects he/she has a disability and needs an accommodation, he/she should contact the Disabled Student Services Office (DSS0) at (915)-747-5148 or at dss@utep.edu or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any DSS accommodation letters and instructions. Once this is done the instructor will in this course will happily comply with all of the requirements.

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, you are encouraged to contact me as soon as it appears that your service will interfere with this course. The instructor will work with you to ensure that your service will not adversely affect your academic progress.

Course Schedules:
Starts: Monday, August 24, 2009
Final Exam: Wednesday, December 9, 2009, 4 PM – 6:45 PM in BUSN 302