Instructor Information
John Lamb, Ph.D., Professor of Mathematics Education
Office: BEP 248
Office Hours: Mondays 1:00-2:00, Tuesdays 1:00-2:00, and Wednesdays 10:00-11:00 or by appointment
Telephone: 903-566-7390
Email address: jlamb@uttyler.edu
Indication of best way to contact the instructor: Phone and Email

Last Day to Withdraw from Courses: March 30, 2020

Course Catalog Description
Topics in teaching mathematical content in EC6 classrooms through mathematical problem-solving techniques such as problem- and project-based instruction. Prerequisite: MATH 1350

Student Learning Outcomes & Assessments

<table>
<thead>
<tr>
<th>Course Topics and/or Student Learning Outcomes</th>
<th>Assessment (including performance-based)</th>
<th>Standards Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student is expected to…</td>
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<tr>
<td>Research, identify, examine, and discuss the historical principles and strategies of problem solving in the mathematics classroom.</td>
<td>Exams</td>
<td>Mathematics Generalist EC-6 Standards: Standard VI INTASC Standards: 4 and 5 TEKS: 111.1 – 111.26</td>
</tr>
<tr>
<td>Solve and analyze non-routine problems addressing mathematical content at or below the intermediate grade level.</td>
<td>Exams</td>
<td>Mathematics Generalist EC-6 Standards: Standard VI INTASC Standards: 4 TEKS: 111.1 – 111.26</td>
</tr>
<tr>
<td>Demonstrate content knowledge based on 6th grade mathematics standards.</td>
<td>6th Grade Exam</td>
<td>TEKS: 111.26</td>
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</tbody>
</table>

Evaluation and Grading

<table>
<thead>
<tr>
<th>Online Investigative Reports</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th Grade Equivalency Test</td>
<td>10%</td>
</tr>
<tr>
<td>Exams</td>
<td>60%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
</tr>
<tr>
<td>A = 90-100%</td>
<td>C = 70-79%</td>
</tr>
<tr>
<td>B = 80-89%</td>
<td>D = 60-69%</td>
</tr>
<tr>
<td>F = 0-59%</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: I expect that for every hour spent in class, two hours should be spent outside of class reading and working on assignments.

Teaching Strategies
1. Investigative Reports: Two investigative reporting assignments will be completed by students during the semester. These assignments will require students to create and solve real-world problems connected to Tyler and the surrounding area.

2. 6th Grade Equivalency Test: Each student will complete two 6th Grade Equivalency Tests in Mathematics during the semester. The tests will have 40-50 questions and students will have 60 minutes to complete each test. One test will be during
the first week of the semester, and the second test will be during the last week of the semester. If a student scores 90% or higher on the first attempt, they do not have to take the second attempt.

3. Exams: The student will be required to complete three in-class exams plus one final exam requiring students to solve non-routine problems covering mathematical content from the intermediate classrooms and answer questions pertaining to educational significance of problem solving in the mathematics classroom. The exams will include various types of assessment items. The exams will be cumulative throughout the semester, and no calculators will be allowed during the exams. The final exam will be cumulative and required for all students having less than an A average following the last in-class exam.

Required Text, Materials/Supplies, and Related Readings

"A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer."

Internet Resources
- TEA [http://www.tea.state.tx.us/](http://www.tea.state.tx.us/)
- National Technology Standards [http://cnets.iste.org/index2.html](http://cnets.iste.org/index2.html)
- National Council of Teachers of Mathematics [http://www.nctm.org](http://www.nctm.org)
- Shodor Interactivate [http://www.shodor.org/interactivate](http://www.shodor.org/interactivate)
- Database search for educational journals [http://library.uttyler.edu/](http://library.uttyler.edu/)
- Creative Publications [www.creativepublications.com](http://www.creativepublications.com)
- EAI Education [www.eaieducation.com](http://www.eaieducation.com)
- AIMS [www.AIMSedu.org](http://www.AIMSedu.org)
- Eye on Education [www.eyeoneducation.com](http://www.eyeoneducation.com)
- NASCO [www.eNASCO.com](http://www.eNASCO.com)

Tentative Course Outline: (The Instructor reserves the right to adapt this outline as needed during the semester.)

<table>
<thead>
<tr>
<th>Day</th>
<th>Topic</th>
<th>Due</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Historical Perspective of Problem Solving (PS) Work Problems</td>
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</tr>
<tr>
<td>2</td>
<td>6th Grade Equivalency Test /Work Problems</td>
<td>6th Grade Test (In-Class Exam)</td>
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<tr>
<td>3</td>
<td>Work Problems</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Work Problems</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1st Exam</td>
<td>1st Exam (In-Class Exam)</td>
</tr>
<tr>
<td>6</td>
<td>Work Problems</td>
<td>Investigative Report #1 Due</td>
</tr>
<tr>
<td>7</td>
<td>Work Problems</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Work Problems</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>2nd Exam</td>
<td>2nd Exam (In-Class Exam)</td>
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<tr>
<td>10</td>
<td>Work Problems</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Work Problems</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Work Problems</td>
<td>Investigative Report #2 Due</td>
</tr>
<tr>
<td>13</td>
<td>3rd Exam</td>
<td>3rd Exam (In-Class Exam) 6th Grade Test (2nd Attempt Online)</td>
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<tr>
<td>14</td>
<td>Final Exam</td>
<td>Final Exam</td>
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Course Policies
Online participation is imperative to the success in this online course. Students are expected to regularly review the course management system, check email, and contribute to course assignments.

All assignments are due on or before the dates provided in the [Topical Outline](#). Each written assignment must be typewritten and submitted in Canvas. General guidelines for written assignments are:

1. On Time
2. Word-Processed, Double-Spaced, Times New Roman 12 Font
3. Free of typographical errors

No email attachments of assignments will be accepted. Submission deadlines are final, and links will be removed after deadline has expired. NO LATE assignments will be accepted unless a valid pre-approved or medical reason has been discussed with the professor. If an assignment is not completed on time due to a documented illness, funeral, or other
university related activity, then a make-up date can be scheduled with the professor. All late assignments or non-submitted assignments will receive a score of zero points.

If an assignment is plagiarized, then the student will receive a zero for the assignment. Academic dishonesty is not tolerated. The professor reserves the right to assign a failing grade for the course and report student behavior to university officials if offenses are egregious or occur more than once.

UNIVERSITY POLICIES

UT Tyler Honor Code
Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

For a full list of university policies including information related to the topics listed below, click here.

- Students Rights and Responsibilities
- Campus Carry
- Tobacco-Free University
- Grade Replacement/Forgiveness and Census Date Policies
- State-Mandated Course Drop Policy
- Disability Services
- Student Absence due to Religious Observance
- Student Absence for University-Sponsored Events and Activities
- Social Security and FERPA Statement
- Emergency Exits and Evacuation
- Student Standards of Academic Conduct

UT Tyler Resources for Students:
- UT Tyler Writing Center (903.565.5995), writingcenter@uttyler.edu, http://www.uttyler.edu/writingcenter/
- UT Tyler Tutoring Center (903.565.5964), tutoring@uttyler.edu, https://www.uttyler.edu/tutoring/
- The Mathematics Learning Center, RBN 4021, This is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.
- UT Tyler Counseling Center (903.566.7254) https://www.uttyler.edu/counseling/

University Guidelines, Links and Policies

COLLEGE OF EDUCATION AND PSYCHOLOGY (CEP) VISION AND MISSION

Vision: The College of Education and Psychology is nationally recognized and respected for its academic programs and opportunities. It is a center of academic excellence, scholarly inquiry, and public service. The College prepares leaders to meet the critical challenges of the 21st Century through productive contributions to local and global communities and toward individual and cultural equity.

Mission: The mission of the College of Education and Psychology is to provide a positive environment that fosters the acquisition of knowledge and skills. The mission is individually and collectively realized through a community of scholars that contributes to knowledge through scholarly inquiry; organizes knowledge for application, understanding and communication; and provides leadership and service. We affirm and promote global perspectives that value individual and cultural diversity to enhance learning, service, and scholarship.

UT TYLER’S SCHOOL OF EDUCATION STANDARDS FOR EDUCATOR PREPARATION PROGRAMS

Texas Education Standards: The School of Education are committed to teaching and implementing the Texas Educator Standards at the highest level. The School of Education faculty use the Texas Education Standards, along with the Interstate New Teacher Assessment and Support Consortium (InTASC) standards used by educator preparation programs throughout the United States.

The list of Texas Education Standards can be accessed here.