A. COURSE INFORMATION

Course number/section: MATH-5324.001
Class meeting time:
MATH 5324 T 7:00pm – 9:30pm (BH-201) Blended
Course Website: TAMU-CC Blackboard https://bb9.tamucc.edu

B. INSTRUCTOR INFORMATION

Instructor: Celil Ekici, PhD
Office location: CI-312
Office hours: MWR 9:00am-11:00AMpm and by appointment
Telephone: (361) 825-2819 (office)
e-mail: celil.ekici@tamucc.edu
Appointments: Please email me, and include information about your availability.

C. DETAILED COURSE DESCRIPTION

This course introduces participants to the theory and practice of teacher-led inquiry within mathematics education. The course prepares teachers to engage in a school-based mathematics education action research project. It is intended for in-service mathematics teachers. (3 credits)
This course offers an opportunity to do an action research project individually or collaborative in a mathematics classroom or across subjects in their school. Using all phases of action research and emphasizing teacher-level factors, curriculum enactment, and student motivation, teachers will develop and implement action research plans for their own classrooms and their schools in an area of school mathematics curriculum. Each student will provide a major paper based on his/her own action research.

D. PREREQUISITES AND COREQUISITES

Prerequisites: None.
E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES


NCTM’s Principles to Actions Professional Learning Toolkit (http://www.nctm.org/ptatoolkit)- Online

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT Content Standards:
Through whole-class instruction, cooperative learning groups, student to class presentations, and hands-on activities, by the end of this course, students will:

understand the action research process in an educational setting;
• to provide students with the opportunity to study and improve their own teaching through the enactment of an action research project;
• to help students learn the importance of collaboration in examining their own teaching, through membership in a research group;
• to show students how research on the improvement of one’s own teaching can have a transformative effect on school improvement and change.

More specifically students will be able to

● Identify needs of grade 7-12 students in their schools and in their classrooms; understanding that the students have a wide range of learning styles and a wide range of abilities.
● Apply the 5 phases of action research
● Develop a plan for collecting and organizing data specific to a need
● Analyze and interpret data collected
● Write and implement an action research plan to address the need targeted
● Submit a major paper based on action research performed in the course

The paper should be the draft of an article resulting from the research and should be well on the way to being worthy of publication in a professional journal. Students are encouraged to complete this project and submit it to an appropriate professional journal following the completion of the course.

Students should become familiar with scholarly writing style by the American Psychological Association (APA) and follow their guidelines very closely regarding citations, reference lists, quotations, and labeling of tables and figures. These guidelines are available in: American Psychological Association. (2001). Publication manual of the American Psychological Association (5th ed.). Washington, DC: Author.

The final paper should be written APA Style having mastered these guidelines! Consult your
G. INSTRUCTIONAL METHODS AND ACTIVITIES
The course will be a combination of lectures, whole-class discussions, and many individual investigations of conducting collaborative action research. Participants in this course will be actively involved in discourse, sharing ideas and analyzing critical issues in secondary mathematics teaching. We will utilize the strategies learned to demonstrate current best practices in the teaching of secondary mathematics to assure the inclusion of all grades 7-12 students by meeting needs and interests for a wide range of learning styles and a wide range of abilities. Assessment of demonstration lessons and class presentations will be largely guided by the demonstration of the applicable objectives above. Students will develop a portfolio of an action research plan for their classrooms, including identification of the needs of their grades 7-12 students from handling the data appropriately to taking action. Students will critique each others’ portfolios and share resources and ideas. Students are collaborative engaged in doing the following activities: Establishing a conceptual framework for action research in schools. Selecting an area of focus in a mathematics course they currently teach; Collecting data; Organizing data; Analyzing and interpreting data; Taking action.

All participants are expected to engage in group and whole class activities by contributing knowledge and thoughtful evaluation of others’ contributions.

H. MAJOR COURSE REQUIREMENTS AND GRADING
Grades will be based on the percentage of total points the student earns. There will be points given on the following:
Consideration will be given to:
- Quality of methods used at each of the 5 phases of the process
- Major Paper
- Presentation of major paper
- Draft manuscript for an article for publication
- The action research portfolio must be completed during the semester of enrollment of the course.
- The major paper must be substantially underway by the close of the semester.

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<thead>
<tr>
<th>ACTIVITY/ASSIGNMENT</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Participation (Online &amp; Class-Including engagement)</td>
<td>%10</td>
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<tr>
<td>Mid-term Exam on Action research</td>
<td>%10</td>
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<td>Portfolio</td>
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<tr>
<td>1. Project Proposal</td>
<td>%10</td>
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<td>2. Reflections on the readings and Phases</td>
<td>%10</td>
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<tr>
<td>3. Action research self-Reflections and Assessment</td>
<td>%5</td>
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<tr>
<td>4. Action Project Report/Paper</td>
<td>%30</td>
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<tr>
<td>5. Reflections and Critique of Other’s Action research of Teaching/Learning secondary Math</td>
<td>%10</td>
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Final Presentation        %15
Totaling up to            %100

Specific directions for course activities/assignments (e.g., content, format, submission, deadlines, feedback) will be announced in class and/or posted on TAMUCC-Blackboard, at https://bb9.tamucc.edu/. Throughout the semester you will gather selected pieces of your work and write reflections on your learning through that work. The collection of work will be submitted electronically as a portfolio at the end of the semester. You will have a portfolio entry submission link in blackboard. Multiple submissions will be allowed for your portfolio entries to submit update. The papers and presentations (powerpoint and oral presentations) will be graded both by the instructor and two peers, using an action research assessment rubric which will be posted online.

Final grades will be assigned according to the following table:

**Percentage Grade** If Grade ≥90.0% - A; if Grade ≥80.0% - B; if Grade ≥70.0% - C; if Grade ≥60.0% - D; if Grade, Below 60% F.

I. COURSE CONTENT OUTLINE
Week 1: What is action research in a classroom setting? Readings and discussions
Week 2: Identification of grade 7-12 students’ instructional needs
    Readings and discussions
    Preliminary Proposal
Week 3: Initial Data Collection of data on mathematics learning experiences in classroom
    Discussing and critiquing action research samples
Week 4: Data organization
    Peer review by sharing and critiquing each other’s work surrounding research
Week 5: Analysis and interpretation of data
Week 6: Development of presentations for sharing findings and interpretation with colleagues
    Participate actively in discussions of the five phases of action research.
    Discuss the identification of student needs.
Week 7: Revisiting and developing action research plan, carrying it out, and reporting on it.
Week 8: Develop and share with colleagues a plan for meeting identified needs, critique colleagues’ plans openly and respectfully.
Week 9-10-11: Carry out a plan for action and collect, organize, analyze and interpret data from the action. Share results with colleagues and others through presentations.
Week 11-12: Discuss the dissemination plans. Development of an article for publication in a journal devoted to the mathematics teaching profession
Week 13-14: Oral Presentations
Final Report with Draft manuscript is due.
Share results more widely with an article for presentation. Students are responsible to follow course related postings from Blackboard and Shared Drive.

I. Important Dates:

January 20, Monday Martin Luther King, Jr. Holiday – Campus Closed
January 28, Tuesday Last day to register or add a class
March 4-25, Wednesday-Wednesday Mid-Term Grading
March 9-13, Monday-Friday Spring Break
March 12-13, Thursday-Friday Campus Closed
April 10, Friday Last day to drop a class
April 16, Thursday Last day to apply for Spring graduation
May 6, Wednesday Last day of classes
May 7, Thursday Reading Day
May 8, Friday; Final examinations
May 11-14, Monday-Thursday
May 15-18, Friday-Monday Grading days
May 16, Saturday Spring Commencement
May 19, Tuesday Spring grades due

Note: Changes in this course schedule may be necessary and will be announced to the class by the instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

J. COURSE POLICIES Attendance/Tardiness

You are expected to attend every class session, and arrive on time. There is no make up for class activities, you need to be present to participate. All the absences will be considered “unexcused” unless you have an exceptional situation (e.g., documented illness, family situation), and you email the instructor about it. You can meet some of the class expectations by reading & working through the class materials and notes posted on Blackboard, or by contacting a friend from class and requesting any materials & assignments that you have missed. All handouts and assignments will be posted in Blackboard.

Late Work and Make-up Exams

Late assignments will not be accepted, unless exceptional circumstances prevent you from completing them. Extension of deadlines will be at the instructor’s discretion. Late assignments may result in partial or total loss of credit. There are NO make-ups for quizzes, exams, or in-class activities.

Extra Credit

There may be extra credit offered for this course. This possibility will be
announced and discussed in class. **Cell Phone Use** Please silence phones before coming to class. If you need to take a call, please go outside the classroom. **Laptop Use** In general, you cannot use your laptops during class activities or exams. For special circumstances (e.g., presentations), or special needs, please talk with the instructor. **Food in Class** Refrain from bringing food to class. For special needs or occasions, please talk with the instructor. **Missed Exam** Exceptional circumstances (e.g., documented illness, family situations) may be considered at the instructor’s discretion. **Participation** You are expected to come to class prepared every time, and participate in class activities.

**K. COLLEGE AND UNIVERSITY POLICIES**

**Academic Integrity (University)** University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

**Classroom/Professional Behavior** Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

**Statement of Civility** Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

**Deadline for Dropping a Course with a Grade of W (University)** The grade of W will be assigned to any student officially dropping a course. Please consult with the instructor
before you decide to drop to be sure it is the best thing to do. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Should dropping the course be the best course of action, visit the Office of the University Registrar for the Course Drop Form that must be submitted. No student is eligible to receive a W without completing the official drop process by this deadline. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calender/) for the last day to drop a course.

**Grade Appeals (College of Science and Engineering)** As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

**Disability Services** The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816. http://disabilityservices.tamucc.edu/

**Statement of Academic Continuity** In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be
operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

**L. OTHER INFORMATION Academic Advising** The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

**M. GENERAL DISCLAIMER**

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.