

# COLLABORATION

## FOR LEARNING & LEADING

### CUIN 7340: Issues in Mathematics Education

**MMT Standard IX: Mentoring and Leadership:** The Master Mathematics Teacher facilitates appropriate standards-based mathematics instruction by communicating and collaborating with educational stake-holders; mentoring, coaching, exhibiting leadership, and consulting with colleagues; providing professional development opportunities for faculty; and making instructional decisions based on data and supported by evidence from research.

**T.E.K.S. addressed:** NA

### Course Description and Assessment Methodology for Course Objectives

CUIN 7340, Issues in Mathematics Education, is designed for Curriculum and Instruction M.Ed and Ed.D students seeking an emphasis in mathematics education. Activities and assignments of this course will increase students' awareness and understanding of current issues in mathematic education and the corresponding research about said issues. This course is also about applying this understanding to students' current and future role as a leader and mentor in mathematics education. Course activities include presenting and leading discussions, providing constructive feedback to colleagues, engaging in face-to-face and electronic discussions related to issues in mathematics education, and developing products intended to support the teaching and learning of mathematics.

| The Student of CUIN 7340 will  | Key Course Assignments  |
|--|---|
| Develop and refine skills in summarizing and evaluating empirical studies in mathematics education.  | Snapshot & Analysis of research articles  |
| Demonstrate effective communication skills in oral and written form in discussing issues in mathematics education and its corresponding research | Presenting & Leading Discussions<br>Role as an evaluator of peer-constructed course products<br>Issues Paper Assignment   |
| Know models and features of professional development for mathematics teachers and the corresponding research about said models                   | Discussions about PD literature and research<br>M.E.T. grant application<br>( <a href="http://www.nctm.org/met.aspx">http://www.nctm.org/met.aspx</a> ) and possible implementation |
| Demonstrate knowledge of mentoring   | Case Study Scenarios  |

## CUIN 7340: Assignment/activity Descriptions and Corresponding Assessment Criteria

### Snapshot & Analysis of Research Articles.

Snapshot: Students will create a “snapshot” for the assigned readings of the course. The purpose is to create a one-two page synopsis about the reading that highlights important ideas. The snapshot must include: accurate APA citation, the methodology/research design, the theoretical perspective (if provided), who/what was being studied, purpose/rationale of the study, conclusions, implications, and limitations of the study.

Analysis: Students will evaluate research studies in terms of criteria brought forward in course readings and class discussions [see Corbin & Strauss (1990), Eisenhart (1988), Lester (1996), Lester & Kerr (1979), Schoenfeld (2007).]

Criteria to assess the Snapshot & Analysis Assignment: This assignment will be evaluated based on the extent to which the assignment is complete, the writing is grammatically correct, relevant criteria are addressed and claims are supported with evidence.

Issues paper & presentation: The student will choose an issue within mathematics education of interest to him or her. The goal is to 1) investigate what current literature reports about the issue and to 2) provide an analysis that compares and contrasts multiple perspectives about the issue. The paper is developed over the semester in stages.

- Stage 1: Issues paper references/Topic statement: Student provides a statement of the issue with at least 10 references in APA style where 3 must be research studies.
- Stage 2: Issue paper draft 1. Student has 10-20 readings (at least 5 are research studies) and provides 5 snapshots (only) of the articles, two of which are research studies. Student provides a first draft.
- Stage 2 (Feedback): Students provide constructive feedback to peers’ draft papers.
- Stage 3: Issue paper draft 2: Student provides a revised draft.
- Stage 3 (Feedback): Students provide constructive feedback to peers’ draft papers.
- Stage 4: Issue paper final version  
Criteria to assess the paper: The paper is evaluated on the extent to which it is organized, multiple perspectives are provided and supported with appropriate literature, and an unbiased analysis of contrasting perspectives was provided.
- Presentation: Student does a 20-minute presentation that includes a brief introduction, highlights the important ideas regarding the issue, and conclusions.  
Criteria to assess the presentation: The presentation is evaluated on the extent to which the presentation is coherent and professionally presented.

M.E.T. grant application (<http://www.nctm.org/met.aspx>) (or equivalent) With his or her campus administrator or supervisor, the MMT candidate submits a proposal for funding opportunities available for professional development for his or her campus. If applicable, the MMT candidates implements and evaluates the proposed program. As with the Issues Paper, this project is developed in stages where feedback from peers is provided.

Criteria to assess the grant proposal: This assignment is evaluated on the extent to which it meets the criteria provided in the call for proposals and the extent to which ideas are presented clearly and supported by current relevant research.

Case Study Scenarios: Case Study Scenarios are intended to develop and assess skills in mentoring teachers. They consist of cases similar to the TExMaT.

Criteria to assess the Case Study Scenarios: This assignment is evaluated on the extent to which the MMT accurately identifies strengths and weaknesses embedded in the case, applies appropriate mentoring strategies, and provides a rationale supported by relevant research.