## NEW COURSE PROPOSAL FORM

**TO:** STUDENT ASSESSMENT COMMITTEE

**ACADEMIC AREA:** SCHOOL OF EDUCATION

**PROPOSEd by**: Mary Robertson

**PRESENTER:** TYPE IN NAME OF WHO WILL PRESENT THIS PROPOSAL IF DIFFERENT FROM ABOVE

**DATE:** 11/2/2010

**COURSE PREFIX, NUMBER AND TITLE:**

### MAE 3823C –Teaching Algebra in Middle School Mathematics with practicum – 4 Credits

### SECTION I

**COURSE INFORMATION: TYPE iN THE APPROPRIATE INFORMATION FOR EACH ITEM:**

**DEPARTMENT: School of Education**

**COURSE PREREQUISITE(S):** Admission into the Bachelor of Science in Education program or special permission from the Associate Dean of the School of Education.  
  
EDG 4004 Special Topics in Education, EDG 3410 Classroom Management, EDM 3230 Middle Grades Curriculum and Instruction

**MINIMUM GRADE OF prereqUISITE(s):** 2.5

**COURSE COREQUISITE(S):** LIST ALL COREQUISITES IN SEQUENTIAL ORDER

**COURSE CREDITS OR CLOCK HOURS:** 4

**credit type: COLLEGE CREDIT (TRANSFERABLE)**

**CONTACT HOURS:** 3

**COURSE DESCRIPTION:**

This course is required in the undergraduate Middle Grades Mathematics Education program. This course is designed to develop a background for the middle school mathematics teacher to understand the relationship between the brain and learning, the meaning of conceptual change, some of the historic symbolic language, the geometric terms used for shapes and simple relationships, the significance for readiness of abstract thought and the importance of variety in teaching through presentations that utilize technology and connections to out-of-school experiences. The course will emphasize the constructivist approach and the teaching of solving problems mathematically. The course will utilize National Council of Teachers of Mathematics (NCTM) Standards and Sunshine State Standards (SSS) in problem solving in algebraic and geometric applications as well as applications with basic numerical operations. This course includes a 30-hour practicum in a middle grades algebra classroom.

**GENERAL TOPIC OUTLINE:**

* Knowledge of the major goals and characteristics; scope and sequence of middle school mathematics programs, and aspects of theories of learning
* Current developments and research in education
* Assessment procedures, problem-solving processes, and instructional procedures
* Educational technology concepts, their principles, and applications
* Rational number operations, number theory, algebraic thinking, geometry, measurement, spatial visualization, data analysis and probability

**LEARNING OUTCOMES:**

TYPE IN ALL OF THE LEARNING OUTCOMES, ASSESSMENTS AND GEN ED COMPETENCIES AS THEY SHOULD BE DISPLAYED IN THE SYLLABUS

|  |  |  |
| --- | --- | --- |
| LEARNING OUTCOMES | ASSESSMENTS | GENERAL EDUCATION COMPETENCIES |
| The teacher candidate will analyze the relationship between the brain and learning. | Algebraic Lesson Plan  Quizzes  Tests | CT |
| The teacher candidate will investigate the history of symbolic language, specifically algebraic symbols. | Instructional Wiki  Quizzes  Tests | CT  TIM |
| The teacher candidate will analyze conceptual change and readiness for algebraic thinking. | Assessment of Algebraic Readiness  Quizzes  Tests | CT  TIM |
| The teacher candidate will apply concepts of multiple intelligences to their application of middle school teaching. | Algebraic Lesson Plan  Quizzes  Tests | CT  TIM |
| The teacher candidate will connect the meaning of problem solving or solving problems mathematically to their classroom and real life experiences. | Algebraic Lesson Plan  Family Math Night Activity  Quizzes  Tests | CT |
| The teacher candidate will create and implement techniques for teaching using geometric terms and basic geometric relationships. | Geometric Lesson Plan  Family Math Night Activity  Quizzes  Tests |  |
| The teacher candidate will apply algebraic process to problem solving. | Algebraic Lesson Plan  Quizzes  Tests |  |
| The teacher candidate will integrate algebraic skills with geometric situations to solve problems. | Geometric Lesson Plan  Quizzes  Test |  |

### SECTION II

**ICS CODE FOR THIS COURSE:** ADVANCED AND PROFESSIONAL - 1.14.08 - EDUCATION

**IF YOU INTEND TO RESTRICT STUDENT REGISTRATION BASED ON THE STUDENTS’ MAJOR(S), ENTER ALL APPLICABLE MAJOR RESTRICTION CODE(S):** MEDM

**GRADE MODE:** STANDARD GRADING

**IS THIS A GENERAL EDUCATION COURSE?** NO

**IS THIS A WRITING INTENSIVE COURSE?** NO

**iS THIS AN HONORS COURSE?** NO

**IS THIS A REPEATABLE COURSE?** NO

**IF SO, WHAT IS THE MAXIMUM NUMBER OF CREDITS A STUDENT CAN EARN FOR THIS COURSE?** ENTER NUMBER

**DO YOU EXPECT TO OFFER THIS COURSE THREE TIMES OR LESS?** NO

**WILL THIS NEW COURSE HAVE AN IMPACT ON OTHER COURSES, PROGRAMS OR DEPARTMENTS?** NO

**eXPLAIN:**

CLICK HERE TO ENTER TEXT.

**IF YES, HAVE YOU DISCUSSED THIS PROPOSAL WITH ANYONE (FROM OTHER DEPARTMENTS AND/OR PROGRAMS) REGARDING THE IMPACT? WERE ANY AGREEMENTS REACHED?**

CLICK HERE TO ENTER TEXT.

**DO YOU ANTICIPATE THAT STUDENTS WILL BE TAKING ANY OF THE PREREQUISITES LISTED FOR THIS COURSE IN DIFFERENT PARTS OF THE SAME TERM?** NO

**IS ANY COREQUISITE LISTED ON THIS COURSE ALSO LISTED AS A COREQUISITE ON ITS PAIRED COURSE?** SELECT ANSWER.

eXAMPLE: CHM 2032 IS A COREQUISITE FOR CHM 2032L AND CHM 2032L IS A COREQUISITE FOR CHM 2032.

### SECTION III

**PROVIDE JUSTIFICATION FOR CURRICULUM ACTION (OTHER EXPLANATORY INFORMATION):**

CLICK HERE TO ENTER TEXT.

**NOTE:**

CHANGES FOR THE UPCOMING FALL TERM MUST BE SUBMITTED AND APPROVED NO LATER THAN THE FEBRUARY CURRICULUM COMMITTEE MEETING PRIOR TO THE START OF THE NEXT ACADEMIC YEAR. CHANGES DURING MID-SCHOOL YEAR ARE NOT ALLOWED. EXTREME CIRCUMSTANCES WILL REQUIRE APPROVAL FROM THE VICE PRESIDENT OF ACADEMIC AND STUDENT AFFAIRS TO BEGIN IN THE SPRING TERM. THE PROPOSED CHANGES MUST BE PRESENTED AND APPROVED BY THE SEPTEMBER CURRICULUM COMMITTEE PRIOR TO THE SPRING SEMESTER.

**EXCEPTION:**   
COURSES PUBLISHED IN THE 2010-2011 CATALOG THAT ARE PENDING CURRICULUM APPROVAL WILL BE EFFECTIVE SPRING 2011.

**TERM IN WHICH PROPOSED ACTION WILL TAKE PLACE:** SELECT EFFECTIVE TERM TYPE OTHER

VPASA SIGNATURE (IF NECESSARY) TO APPROVE CURRICULUM ACTION MID-YEAR:

APPROVED EFFECTIVE TERM



**FACULTY ENDORSEMENTS:**PLEASE SEPARATE FACULTY MEMBERS WITH A COMMA (,)



**DEPARTMENT CHAIR / PROGRAM COORDINATOR ENDORSEMENT:**

 PLEASE SELECT TODAY’S DATE.

**ASSOCIATE / ACADEMIC DEAN ENDORSEMENT:**

 PLEASE SELECT TODAY’S DATE.

**STUDENT ASSESSMENT COMMITTEE CHAIR ENDORSMENT:**

 PLEASE SELECT TODAY’S DATE.

**DISTRICT DEAN OF INSTRUCTION ENDORSEMENT:**

 PLEASE SELECT TODAY’S DATE.

AFTER REVIEWING AND SIGNING THIS PROPOSAL, THE DISTRICT DEAN WILL RETURN THE PROPOSAL TO THE DEPARTMENT CHAIR OR PROGRAM COORDINATOR WILL SUBMIT THE PROPOSAL TO THE VPASA OFFICE.

THE DEPARTMENT CHAIR/PROGRAM COORDINATOR WILL SEND THIS PROPOSAL ALONG WITH ANY OTHER PROPOSALS FROM HIS/HER DEPARTMENT BEING SUBMITTED FOR REVIEW BY THE CURRICULUM COMMITTEE TO THE STUDENT ASSESSMENT COMMITTEE FOR REVIEW. ONCE APPROVED BY THE STUDENT ASSESSMENT COMMITTEE, SUBMIT THE PROPOSAL(S) TO THE OFFICE OF THE VICE PRESIDENT OF ACADEMIC AND STUDENT AFFAIRS AT LEAST TWO FRIDAYS PRIOR TO THE NEXT SCHEDULED CURRICULUM COMMITTEE MEETING.

FOR MORE DETAILS, PLEASE REFER TO THE CURRICULUM COMMITTEE GUIDELINES, CURRICULUM PROCESS FLOW CHART AND THE CRITICAL DATES TABLE BY CLICKING CURRICULUM COMIITTEE ON THE FACULTY/STAFF LINK FROM THE EDISON HOMEPAGE (CLICK ON THE CURRICULUM PROCESS LINK).

REVISED: 8/25/10