Professional Education Unit
Department of Middle Grades and Secondary Education

TEACHING MATHEMATICS IN THE MIDDLE GRADES (ITV)
EDMG 341 – 200, 202, 203, 204
T 1:00 - 4:00 p.m.
W 10: 00 – 12:00 am
Fall 2011

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Office Hours: T 1:00 – 4:00 p. m. and W 10:00-12:00 a.m.
(Other conference hours are by appointment only).

Course Description: This course includes the presentation of essential number concepts for the middle grades learner with emphasis upon functional arithmetic and its application. The course will examine various methodologies used in the middle grades. Field experiences in grades 5-9 are an integral part of this course.
Prerequisites: Admission to the Teacher Education Program (TEP), EDEM330, Math 231 (Math202), and Math 232 (Math 201).

The instructor will emphasize best - practice teaching strategies, theories, and assessment procedures consistent with the *KY Teacher Standards*, the *KY* Content Standards, the *KY EPSB Themes*, NMSA Standards, and National Council of Teachers of Mathematics Standards. The instructor will also emphasize the review of pedagogy necessary for effective teaching and for Praxis preparation. The candidate will practice these skills during field experience and evaluate his / her impact on student learning through written reflections, class discussions, and various activities performed in and outside class.

Required Field Experience Hours: 10 Hours – Level 3

"Community Engagement: A Light to and from the Mountains"

The Professional Education Unit at Morehead State University delivers rigorous, high quality programs that prepare professionals informed by best national and international scholarship, plus research, literature, and experiences specific to Appalachia- preparing professionals to improve the schools, quality of life, and the communities in which they live and serve. This statement is not only the strategic mission for the College, but it also incorporates the conceptual framework that guides all our activities.

Conceptual Framework Outcomes (CFO's):

The Unit and the faculty within individual programs assess the degree to which its graduates:

1) Master the content knowledge, professional and the twenty – first century skills need to make an optimal contribution to "whole" student learning in education settings.

2) Are competent in the collection and use of data to inform decision – making and to demonstrate accountability for student learning.

3) Demonstrate professional dispositions

4) Are culturally competent and understand the regions from which they have come utilizing knowledge and experiences to effectively "bridge the gaps" (economic, achievement, and geographic) ensuring optimal learning for all students.

5) Engage in authentic field experiences in collaboration with committed school – based partners and are empowered to improve the quality of education throughout this region and beyond.

Student Learning Outcomes (SLO's): By the end of this course, the candidate will be able to:

1. **articulate** major trends and pedagogy affecting middle level mathematics education in our country today;
2. **identify** and **explain** the impact of student diversity (i.e., SES, ethnicity, ability, sexual orientation, etc.) on the teaching of middle level mathematics in our country today;
3. **employ** numerous mathematics *teaching strategies* which accommodate learners of all ability and interest levels;
4. **ascertain** *developmentally appropriate teaching strategies* for a diverse group of middle level students;
5. **evaluate** and **reflect** upon the effectiveness of assessment procedures on student learning;
6. **integrate** technology (i.e., Smartboards, Powerpoint, United Streaming, etc.) for effective Mathematics instruction and student learning;
7. **integrate** best – practice literacy strategies for effective middle level social studies instruction and student learning;
8. **align** unit and daily lesson plans to local, state, and national mathematics standards in order to close the achievement gap in social studies;
9. **demonstrate** conceptual understanding of mathematics skills and knowledge;
10. **demonstrate** resourcefulness in the acquisition of mathematics content for informed and competent teaching.

Required Textbooks:

1. R. N. Rubenstein, C. E. Beckman, & D. R. Thompson (2004). Teaching and Learning Middle School Mathematics. John Wiley and Sons, Inc. Hoboken, NJ.

2. I. Forte & S. Schurr (2001). Meeting National Math Standards with active learning strategies. Nashville, TN; Incentive Publications

3. I.Forte & S. Schurr (2003). Curriculum and Project Planner. Nashville, TN; Incentive Publications

All students in this course are required to purchase a Folio 180 account.

To purchase Folio180 online or through the MSU Bookstore:
1. Purchase Folio180 at the MSU Bookstore and follow the instructions included with that purchase.
2. To purchase online, go to www.folio180.com/msuky/coe <http://www.folio180.com/msuky/coe>
3. Complete registration and payment information. Your login information will be emailed to you.
4. Note: if you have a Tk20 account, you will NOT need to purchase Folio180--we will provide your Folio180 account information to you via email. Announcements and instructions will also be made on the CoE Facebook page.
5. You will be able to continue using your Folio180 account through any graduate programs you might enroll in through MSU.

6. NOTE: students must have purchased or activated their Folio180 account by midterm or they will receive an "E" at midterm per TEP policy.

Course Evaluation:
The candidate's course evaluation will be determined by in – class and out – of class assignments, to include: lesson plans / reflections, quizzes, exams, and papers. The course evaluation is based upon 600 points. The instructor expects all assignments to be turned in on time, in Blackboard, using Times New Roman (12 font) on all work. *** Explanation of assignments and their point values are explained in the following two tables.

NCATE/ EPSB Accreditation Alignment of SLO's and CFO's:

Program:	**Middle Grades (5-9)**		**Mathematics (EDMG 341)**		
Aligned with → **Assessment ↓ (point values)**	**Kentucky Teacher Standards (KYS)**	**Kentucky Core Academic Standards (KCAS)**	**Education Professional Standards Board (EPSB)**	**National Council for Teachers of Mathematics (NCTM)**	**NCATE**
Attendance (100) **CFO: 3** **SLO: n/a**	7, 8, 9, 10	n/a	n/a	n/a	**n/a**
Field Experience (100) **CFO: 1 - 5** **SLO: 3 – 10**	1 - 9	1-8 and the connections to the all content standards.	Diversity, assessment, literacy, achievement gap, technology	**Principles (P)** **Content Standards (CS);** **Process Standards (PS)**	**1,2,3, 4**
PSSM Paper (20) **CFO: 4** **SLO: 2 – 4**	1, 2, 3, 7	1-8 and the connections to the all content standards.	Diversity, assessment, literacy, achievement gap, technology	**P, CS, PS**	**1,4**
NCTM Journal Review (30) **CFO: 1, 4** **SLO: 1 – 4, 7, 8**	2, 3, 4, 5, 7, 9	1-8 and the connections to the all content standards.	Diversity, assessment, literacy, achievement gap, technology	**CS. PS**	**1,4**
Math Activity File (50) **CFO: 1-5** **SLO: 1-4, 7-8**	1, 2, 3, 7	1-8 and the connections to the all content standards.	Diversity, assessment, literacy, achievement gap, technology	P, CS, PS	1,4
Textbook/ Ancillary Materials Review (50) **CFO: 1, 4** **SLO: 1 – 4, 7, 8**	1, 2, 4, 5, 6	1-8 and the connections to the all content standards.	Diversity, assessment, literacy, achievement gap, technology	**P, CS, PS**	**1,4**
Good Questions (25)	1-6		Diversity, assessment,	**CS, PS**	**1,4**

CFO: 1-5 **SLO: 1-4, 7, 8**			literacy, achievement gap, technology		
KTIP Lesson Plans (100) **CFO: 1- 5** **SLO: 3 – 10**	1 - 6	1-8 and the connections to the all content standards.	Diversity, assessment, literacy, achievement gap, technology	**PS, CS, P**	**1,4**
Why Math Activities and Diversity (25 **CFO: 1-5** **SLO: 1-4**	1-9	1-8 and the connections to the all content standards.	Diversity, literacy, Achievement gap	**P, PS, CS**	**1,4**
Mid-Term Exam (50) **CFO: 1, 2, 4** **SLO: 1 – 10**	1 - 9	1-8 and the connections to the all content standards.	Diversity, assessment, literacy, achievement gap, technology	**P, PS, CS**	**1,4**
Final Exam (50) **CFO: 1, 2, 4** **SLO: 1 – 10**	1 - 9	1-8 and the connections to the all content standards.	Diversity, assessment, literacy, achievement gap, technology	P, PS, CS	**1-5**

Assignment Descriptions:

Program: Middle Grades (5-9) Teaching Mathematics in the Middle Grades 341	
Assessment (point value)	**Description**
Attendance (100)	Attendance is an important professional disposition within the College of Education. Attendance at all class meetings and Field Experiences is required. ***Please read "Attendance Policy" below.
Field Experience (100)	The candidate will visit the public schools 10 times during the semester. These visits will include observation and whole – class teaching. The candidate will consult with his/ her cooperating teacher for appropriate mathematics topics to plan and teach. Strategies will be designed for each lesson taught and content will be of the cooperating teacher's choice.***Complete assignment details in Blackboard.
Principles and Standards paper (20)	The Professor will assign the candidate either a NCTM Principle or Standard. The candidate will define the topic from various NCTM resources, find a mathematics activity, and give an account of the real life connection to mathematical concept or skill.*** Complete assignment details in Blackboard.
NCTM Journal Review (30)	The candidate will peruse recent issues of Mathematics Teaching in the Middle School and select 3 articles. These articles should, but are not required, to complement the planning and teaching of lessons during Field Experiences this semester. *** Complete assignment details in Blackboard.
Mathematics Activity File (50)	.
Textbook Ancillary Materials Review (50)	The candidate will review the mathematics textbook series used during Field Experience according to the KY Textbook Adoption form and recommendations of NCSS. *** Complete assignment details in Blackboard.
Good Questions (25)	The candidate will develop good questions according to Bloom's Taxonomy and the 2 Forte and Schurr pamphlets for the Project Learning Unit.*** Complete assignment details in Blackboard.
KTIP Lesson Plans (100)	The candidate will develop KTIP lesson plans for all teaching lessons.

	These lesson plans will be based on the given topics of the cooperating teacher. Included in these lesson The candidate will use the 4 Big Ideas of the combined content for KERA to gather and organize fifty (50) Mat h Activities developmentally appropriate for middle school. Minimum of 5 resources are required for the mathematics file. The candidate can elect to organize the file using the NCTM Standards.. ***Complete assignment details in Blackboardplans are 5 single lesson plans and a 5 day lesson plan for "PROJECT LEARNING". . *** Complete assignment details in Blackboard
Why Math Activities (25)	The candidate will review the 4 objectives for choosing a Math activity and find examples for each objective. Justification will be written for each activity. *** Complete assignment details in Blackboard.
Mid-Term Exam (50)	The mid-term exam will apply to course lectures, Field Experiences, readings, and activities. ***Will be take – home and completed in Blackboard.
Final Exam (50)	The final exam will apply to course lectures, Field Experiences, readings, and activities. ***Will be take – home and completed in Blackboard.

Format for Completing Assignements:

1. Put name, course # and Section #, date and assignment title in upper right hand corner.
2. Use Times New Roman, 12 – font only
3. Double – space all assignments
4. Use 1" margins all the way around.

Grading Scale

A= 600-540	**100-90 %**
B= 539-480	**89-80%**
C= 479-420	**79-70%**
D= 419-360	**69-60%**
E= below 359	**59% and below**

Attendance Policy: Attendance at both class meetings and field experiences is a professional disposition for the candidate. Therefore, attendance is a requirement for this course. The candidate may be excused from only two class meetings. Every candidate begins the semester with 100 attendance points. The student loses 50 points for the 3rd excused or unexcused absence. Fourth excused/ unexcused absence results in a loss of 50 points for a total of zero points in attendance. Missed Field Experiences MUST be made up by the student, and are arranged by the candidate.

Links to Websites for NCATE/ EPSB Alignment:

http://www.kyepsb.net/teacherprep/standards.asp This site contains the revised KYS.

http://www.education.ky.gov/ This site contains the KERA Combined Curriculum Documents 4.1 (Academic Expectations, Program of Studies, and Core Content for Assessment with DOK Levels).

http://www.kyepsb.net/teacherprep/cart/themes6.asp This site lists the four themes of pre-service teacher preparation that are integrated within this course.

www.nctm.org This is the site for the National Council of Teachers of Mathematics and will be used for many of the assignments for this course.

Academic Honesty
Cheating, fabrication, plagiarism or helping others to commit these acts will not be tolerated. Academic dishonesty will result in severe disciplinary action including, but not limited to, failure of the student assessment item or course, and/ or dismissal from MSU. If you are not sure what constitutes academic dishonesty, read the Eagle: Student Handbook or ask your instructor. An example of plagiarism is copying information from the internet when appropriate credit is not given. The policy is located at http://morehead-st.edu/units/studentlife/handbook/academicdishonesty.html

Americans with Disabilities Act (ADA)
In compliance with the ADA, all students with a documented disability are entitled to reasonable accommodations and services to support their academic success and safety. Though a request for services may be made at any time, services are best applied when they are requested at or before the start of the semester. To receive accommodations and services the student should immediately contact the Disability Services Coordinator in the Office of Academic and Career Services, 223 Allie Young Hall, 606-783-5188, www.moreheadstate.edu/acs/

Campus Safety Statement:
Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at http://www.moreheadstate.edu/emergency

***Please SILENCE your cell phones during class.

***Please DO NOT USE COMPUTERS / Laptops during class (unless otherwise instructed by Dr. Lafferty) ---- Absolutely NO Emailing, Texting, instant messaging, net – surfing, etc during class!

Registration for Blackboard is REQUIRED. Most of your work will be submitted in Blackboard.Registration for TK20 is REQUIRED.

EDMG 341 – 200, 202, 203, 204 (ITV)
Fall 2011 Tentative Schedule

Date	Topic	Readings and Assignments	Assignments Due
Tues. 8/23	Introduction, course syllabus and calendar	Read Chapter 1 Read carefully the syllabus and calendar	Be present and accounted for on roster
Thurs. 8/25	Discuss the History of the Mathematics Curriculum Assign PSSM (Power Point presentation)	Complete the assignment for the PSSM that was your specific topic. ** Read Chapter 2	
Tues. 8/30	Discuss the Principles and Standards of School Mathematics – student presentations Discuss journal reviews	Locate three journal article in three different months of the **Mathematics Teaching in the Middle School –** Review as instructed on Bb. Read Chapter 4	PSSM Assignment** (30)
Thurs. 9/1	KTIP Format for Teaching lessons – modified Discuss KERA for Math	Finish Journal Articles, Math text books to next class.	

Tues. 9/6	Journal Article discussion and reports	Read Ch. 5	Journal Articles Due ** (30)
Thurs.9/8	Questioning Skills Writing Objectives and Connections Math Activity File	Write five good questions and 5 objectives Read Chapter 8 and 9	
Tues. 9/13	Writing objectives, connecting and aligning objectives to assessments	Write five objectives and assessments	
Thurs. 9/15	Assessment	Get a topic for writing a four day unit.	
Tues. 9/20	. *** Observe in classroom of field experience.	Find a trade book for your topic. Complete observation questions	Assessment due
* Thurs. 9/22	*** Observe in classroom of field experience.	Bring foldables to next class. Bring a lap top computer to next class. Complete observation questions Bring to next class your Pythagoras Lesson Plan - Design Pythagoras Lesson	Day 1 Observation questions due.
Tues. 9/27	Review Pythagoras Lesson	Write an assessment Read Chapter 6"	Day 2 Observation questions due. Pythagoras Lesson - Due
*Thurs. 9/29	Teach Lesson Plan on Pythagoras	Develop topic for Project Learning"	Pythagoras Lesson Plan
Tues. 10/4	Developing Project Learning	Study for mid term exam	
*Thurs. 10/6	Mid term exam – no ITV class	Work on project learning	Summative: Mid -term exam by midnight on Bb (50)*
Tues. 10/11	Developing Project Learning Math Activity File		1st Draft of Project Learning.
^Thurs. 10/13	Fall Break – No CLASS	Finish Project Learning	
Tues. 10/18	TEACH PROJECT LEARNING	Reflections and changes	Reflect on Teaching
Thurs. 10/20	TEACH PROJECT LEARNING	Reflections and changes	Reflect on Teaching
*Tues. 10/25	TEACH PROJECT LEARNING	Reflections and changes	Reflect on Teaching
*Thurs. 10/27	TEACH PROJECT LEARNING	Reflections and assessments Prepare to report on Project Learning	Reflect on Teaching
*Tues. 11/1	TEACH PROJECT LEARNING		Reflect on Teaching
*Thurs. 11/3	Geometry in the classroom	Work on Math Activity File. Use New Core Content Standards – Senate bill 1 Integrate diversity, differentiation, and multiple intelligences - Gardner	"Reflect on Teaching

Tues. 11/8	Algebra in the classroom		
*Thurs. 11/10	AMLE Conference – no class		
Tues. 11/15	Math activities in the middle grades – Mathematics Programs - Commercialized	Bring a textbook to class – It may be the textbook that is used in the classroom in which you taught your unit.	
^Thurs. 11/17	Textbooks in middle School Mathematics - Using tests and evaluating the materials	Prepare a written evaluation of your textbook.	Submit field Experience hours to TK20
Tues. 11/22	Probability	Bring a calculator activity to class that you can demonstrate to your peers.	Evaluation of your textbook
Tues. 11/29	Calculator activities for middle grades	Math Activity File and final note book for project learning Prepare your presentations.	
Thurs. 12/1	**Present a math activity from your file to the class – 4 presenters.**	Prepare your presentations.	Math Activity File and final note book for project learning
Tues. 12/6	**Present a math activity from your file to the class – 4 presenters.**	Prepare your presentations.	
^Thurs. 12/8	**Present a math activity from your file to the class – 4 presenters.**	Prepare for the final exam.	
	Final Exam (50)		

* - Submit to Bb
** - Submit to Bb and present in class
*** - Teach at assigned Schools and no ITV class at MSU