

**MAED 3500 Syllabus**  
**Curriculum and Methods for Teaching Middle Grades Mathematics**

**Department of Mathematics and Computer Science**  
**College of Arts and Sciences**  
**Valdosta State University**

**Guiding Principles (DEPOSITS)**

(Adapted from the Georgia Systemic Teacher Education Program Accomplished Teacher Framework)

**Dispositions** Principle: Productive dispositions positively affect learners, professional growth, and the learning environment.

**Equity** Principle: All learners deserve high expectations and support.

**Process** Principle: Learning is a lifelong process of development and growth.

**Ownership** Principle: Professionals are committed to and assume responsibility for the future of their disciplines.

**Support** Principle: Successful engagement in the process of learning requires collaboration among multiple partners.

**Impact** Principle: Effective practice yields evidence of learning.

**Technology** Principle: Technology facilitates teaching, learning, community-building, and resource acquisition.

**Standards** Principle: Evidence-based standards systematically guide professional preparation and development.

**InTASC Model Core Teacher Standards\***

*(To be used for all teacher preparation program courses. Identify those that apply specifically to this course.)*

**Standard #1: Learner Development.** The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.

**Standard #2: Learning Differences.** The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.

**Standard #3: Learning Environments.** The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self motivation.

**Standard #4: Content Knowledge.** The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make the discipline accessible and meaningful for learners to assure mastery of the content.

**Standard #5: Application of Content.** The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

**Standard #6: Assessment.** The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.

**Standard #7: Planning for Instruction.** The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

Standard #8: Instructional Strategies. The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.

Standard #9: Professional Learning and Ethical Practice. The teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.

Standard #10: Leadership and Collaboration. The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.

\*Council of Chief State School Offices, (2013, April). *INTASC model core teacher standards and learning progressions for teachers 1.0*. Retrieved from [http://www.ccsso.org/Documents/2013/2013\\_INTASC\\_Learning\\_Progressions\\_for\\_Teachers.pdf](http://www.ccsso.org/Documents/2013/2013_INTASC_Learning_Progressions_for_Teachers.pdf)

## INSTRUCTOR

Name:

Office Number:

Telephone Number:

Email Address:

Office Hours:

Website:

## COURSE DESCRIPTION

**Hours: 3-1-3**

**Prerequisite: MAED 2999, EDUC 2110, EDUC 2120, EDUC 2130, MATH 2262**

A study of the characteristics of the middle grades mathematics learner and the development of appropriate activities for the grade 6-8 learner. Students will assess learners and apply learning theories in order to develop appropriate activities. Activities will be inquiry-based, problem-centered, and appropriate for the learner. Appropriate technology will also be included in these activities. A field experience with a minimum of 100 hours is required and integrated into this course.

## REQUIRED TEXTBOOKS/RESOURCE MATERIALS

*Textbooks:*

Van de Walle, J., Karp, K., & Bay-Williams, J. (2009). *Elementary and middle school mathematics: Teaching developmentally*, 7<sup>th</sup> ed. Boston: Allyn & Bacon

Bay-Williams, J., & Van de Walle, J. (2009). *Field experience guide for elementary and middle school mathematics: Teaching developmentally*, 7<sup>th</sup> ed. Boston: Allyn & Bacon

Rubenstein, R., Beckmann, C., & Thompson, D. (2008). *Teaching and learning middle grades math*. Hoboken, NJ: Wiley.

Johnson, A., & Norris, K. (2005). *Teaching today's mathematics in the middle grades*. Boston: Allyn & Bacon.

LiveText Inc. (2004). *College LiveText edu solutions*. La Grange, IL: United Learning Inc.

*Additional Sources:*

National Council of Teachers of Mathematics (2000). *Principles and standards for school mathematics*. Reston, VA: Authors.

National Council of Teachers of Mathematics (2001). *Navigating through Algebra in Grades 6-8*. Reston, VA: Authors

National Council of Teachers of Mathematics (2002). *Navigating through Geometry in Grades 6-8*. Reston, VA: Authors.

National Council of Teachers of Mathematics (2003). *Navigating through Data Analysis in Grades 6-8*. Reston, VA: Authors.

National Council of Teachers of Mathematics (2003). *Navigating through Probability in Grades 6-8*. Reston, VA: Authors.

*Technology:*  
Graphing calculator  
Geogebra software/The Geometer's Sketchpad software  
Microsoft Excel

## **COURSE OBJECTIVES**

The student will:

- (1) Demonstrate an understanding of middle grades students and how they learn mathematics (InTASC S1, S2)
- (2) Demonstrate competency in planning activities that incorporate a broad understanding of mathematical learning outcomes. (InTASC S4, S5, S6, S7, S8)
- (3) Plan instruction based on state standards and the National Council of Teachers of Mathematics Standards. (InTASC S4, S5, S6, S7)
- (4) Understand, choose, develop, and use effective means of assessing individual learner's performance and knowledge. (InTASC S4, S5, S6, S7)
- (5) Choose, develop, and utilize appropriate curriculum and activities based on assessment of the individual learner. (InTASC S4, S5, S6, S7)
- (6) Choose, develop, and utilize inquiry-based, problem-centered activities. (InTASC S3, S7, S8, S7)
- (7) Evaluate and select instructional materials and resources, including technology, as appropriate. (InTASC S7, S8)
- (8) Become involved in appropriate professional organizations to deepen his/her knowledge of mathematics and maintain current knowledge of developments in mathematics education. (InTASC S9, S10)

## **COURSE ACTIVITIES/ASSIGNMENTS/REQUIREMENTS**

Students will be evaluated on the basis of: written and oral communication skills in mathematics, pedagogical content knowledge, knowledge of evidence-based strategies through development and implementation of lesson plans, teaching observations, impact on grade 6-12 learning, and assessment skills. In order to assess these areas, instructors may use a variety projects, readings, and examinations.

*Required Assessments (to meet department, university, and accreditation requirements):*

- Assessment of middle grade learners' mathematical knowledge project(s)
- Development and implementation of lesson plans
- Demonstrate an impact on learning (implementing lesson plans, pre/post test to show growth)
- Field experience observation and participation (teacher candidates are required a minimum of 100 hours in a middle grades mathematics classroom)

- LiveText Initial Program Portfolio as assigned by the instructor
- Comprehensive final exam

*Other Assignments Determined by the Instructor:*

- Professional readings and reading responses
- In-class participation and discussion
- Class assignments
- Problem solving
- Quizzes
- Unit exams

## **STUDENT EVALUATION**

*Assessment documentation:*

- Documentation of field experiences
- Middle grade learner's project
- Lesson plans implementation
- Reflective writings
- In-class participation and discussion
- Class assignments
- Problem solving
- Quizzes
- Unit exams

## **ATTENDANCE POLICY**

### **Field Experience**

Teacher candidates must be in the school each day for the hours scheduled. Teacher candidates who arrive late, leave early, or are absent without prior notification are subject to removal from the school setting. Teacher candidates will document attendance on a time sheet that will be verified and signed by the mentor teacher and submitted to the university supervisor at the conclusion of the field experience. There should be no absences during the field experience. If absences are necessary, due to emergencies or illness, the school/mentor must be notified at the earliest possible time via the telephone. You must also notify your VSU supervisor if you have to be absent from school; it is acceptable to use e-mail for this purpose. The teacher candidate should schedule appointments or other business so as not to interfere with regularly scheduled practicum hours.

## **PROFESSIONALISM**

As a teacher candidate, you are expected to conduct yourself in the professional educator role as defined by the Georgia Professional Standards Commission Code of Ethics for Educators. Failure to follow the Code of Ethics will result in disciplinary actions through the College of Education Concern Form process.

## **ACCESSIBILITY STATEMENT**

Valdosta State University is an equal opportunity educational institution. It is not the intent of the institution to discriminate against any applicant for admission or any student or employee of the institution based on

the age, sex, race, religion, color, national origin, disability, or sexual orientation of the individual. It is the intent of the institution to comply with the Civil Rights Act of 1964 and subsequent Executive Orders as well as Title IX, Equal Pay Act of 1963, Vietnam Era Veterans Readjustment Assistance Act of 1974, Age Discrimination in Employment Act of 1967, and the Rehabilitation Act of 1973.

Students with disabilities who are experiencing barriers in this course may contact the Access Office for assistance in determining and implementing reasonable accommodations. The Access Office is located in Farber Hall. The phone numbers are 229-245-2498 (V), 229-375-5871 (VP) and 229-219-1348 (TTY). For more information, please visit <http://www.valdosta.edu/access> or email: [access@valdosta.edu](mailto:access@valdosta.edu).

## **STUDENT OPINION OF INSTRUCTION**

As a teacher candidate, you are expected to conduct yourself in the professional educator role as defined by the Georgia Professional Standards Commission Code of Ethics for Educators. At the end of the term, all students will be expected to complete an online Student Opinion of Instruction survey (SOI) that will be available on BANNER. Students will receive an email notification through their VSU email address when the SOI is available (generally at least one week before the end of the term). SOI responses are anonymous, and instructors will be able to view only a summary of all responses two weeks after they have submitted final grades. While instructors will not be able to view individual responses or to access any of the responses until after final grade submission, they will be able to see which students have or have not completed their SOIs, and student compliance may be considered in the determination of the final course grade. These compliance and non-compliance reports will not be available once instructors are able to access the results. Complete information about the SOIs, including how to access the survey and a timetable for this term is available at <http://www.valdosta.edu/academic/OnlineSOIPilotProject.shtml>. Failure to follow the Code of Ethics will result in disciplinary actions through the College of Education Concern Form process.

## **COURSE EFFECTIVENESS**

The effectiveness of the course will be evaluated based on:

- Development and implementation of lesson plan(s) based on the learner's mathematical knowledge
- Impact on grade 6-8 students' learning (pre/post-test to demonstrate growth)
- Student use of the methods course content in grades 6-8 classroom
- Student opinions of instruction for the course
- Alumni surveys