

Dewar College of Education and Human Services
Valdosta State University
Department of Middle, Secondary, Reading, and Deaf Education

MGED 4100
Mathematics Methods for Middle Grades Education
3 SEMESTER HOURS

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.

National Professional Association/Accreditor Standards/Competencies/ Learning Outcomes

InTASC Model Core Teacher Standards*

(To be used for all educator 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

COURSE DESCRIPTION

Prerequisites: Appropriate 2999 course and admission to the MGED professional program; Co-requisite: MGED 4620. An examination of teaching methods in middle grades (4th-8th) mathematics, emphasizing principles and methods for teaching concepts, skills, and relationships in middle grades mathematics in accordance with national and state standards. A field experience is required.

REQUIRED TEXTBOOKS / RESOURCE MATERIALS

A *LiveText* software account is required. Undergraduate seniors should purchase the three-year edition, and it must be purchased online. Other undergraduates will purchase the five-year edition, and it may be purchased at the bookstore or online.

Georgia Department of Education. *Georgia Standards of Excellence for Mathematics* (available at www.georgiastandards.org).

Additional readings will be assigned.

COURSE OBJECTIVES *(Show alignment to InTASC Model Core Teacher Standards for all educator preparation courses).*

Upon completion of this course, the student will be able to:

1. Demonstrate skills needed for teaching mathematics in middle grades classrooms in accordance with ethical conduct and professional standards (InTASC Standards 1, 2, 3, 4, 5, 6, 7, 8; EDL_{1.2}, FL_{1.1}, FL_{1.2}, FL_{1.3}, FL_{2.2}, CPL_{2.1}, CPL_{2.2}, CPL_{2.3}).
2. Use a variety of strategies, motivational techniques, and assessment procedures for problem solving (InTASC Standards 4, 5, 6, 8; TL_{1.2}, AL_{1.3}).
3. Develop math lessons based on the Common Core Georgia Performance Standards that will instruct and motivate students, as well as provide for individual differences of middle grades students. Use technology to analyze instructional effectiveness. (InTASC Standards 1, 2, 4, 5, 7, 8, 9; DL_{2.1}, DL_{2.2}, DL_{2.3}, TL_{1.2}, AL_{1.1}, FL_{1.1}, FL_{1.2}, FL_{1.3}, FL_{2.2}, CPL_{1.3}, CPL_{2.1}).
4. Use concrete models to teach new concepts, to expand and reinforce established concepts, and to help students see familiar topics in new and different ways (InTASC Standards 5, 8; FL_{1.2}, FL_{1.3}, CPL_{1.1}, CPL_{1.2}).
5. Use technology to assist in students' learning mathematics content and process skills, and to meet the diverse needs of students (InTASC Standards 5, 7, 8; TL_{2.1}, TL_{2.2}, AL_{1.3}, FL_{2.3}).
6. Collaborate with other educators to plan and provide for students' effective learning experiences

(InTASC Standards 4, 5, 7, 8, 10; EDL_{2.2}).

7. Connect mathematics and technology to other disciplines through applications and interdisciplinary curriculum models (InTASC Standards 1, 2, 3, 4, 5, 7, 8, 10; TL_{2.1}, TL_{2.2}).
8. Demonstrate a developmentally appropriate learner-oriented approach to teaching mathematics while accommodating the multicultural diversity of middle level students (InTASC Standards 1, 2, 3 9; DL_{2.2}, DL_{2.3}, CPL_{3.1}, CPL_{3.2}, CPL_{3.3}).
9. Demonstrate knowledge of state and national professional mathematics organizations, the services they offer, and professional literature available for middle grades mathematics teachers (InTASC Standards 4, 9, 10; TL_{1.3}, EDL_{1.1}, FL_{1.2}, CPL_{1.1}).

COURSE ACTIVITIES/ASSIGNMENTS/REQUIREMENTS

This course is evaluated with many performance assessments. It is important that you view each assignment as an opportunity to demonstrate evidence that you understand important pedagogical knowledge as outlined by the InTASC Standards. You should demonstrate insight and depth of understanding and go well beyond a superficial “participation” assignment.

EdTPA Task 1 and Learning Segment (30 points total). During the semester, you will choose a mathematics topic for a Learning Segment (3 lesson plans), write those lesson plans, and then analyze those three lessons based on instructions in Task 1 of the edTPA. The first lesson plan will be returned with comments and simulated grading. The next two lesson plans will be graded. You will use the MSRD approved lesson plan format. Lesson plans should indicate the appropriate connections to the Common Core Georgia Performance Standards. You may obtain strategies from professional journals, professional books, class discussions, or your independent study. Lesson plans: 2 @ 10 points each; edTPA Task 1 Document: 10 points.

Professional Literature Review (10 points). You will overview an issue of NCTM’s journal for middle grades mathematics teachers, *Mathematics Teaching in the Middle School* following the provided guidelines.

Designing a Learning Environment (10 points). Middle grades educators must create learning environments that encourage positive social interaction, active engagement in learning, and self-motivation. You will design your own learning environment.

Clinical Practice: Planning, Teaching, and Reflecting (10 points). For some field experience clinical sessions in a middle school classroom, you will follow specific instructions for the sessions. You will respond to reflective questions and submit them as requested.

Teaching Simulations (10 points). You will prepare and present a given mathematics topic, with appropriate manipulatives and assessment, to a group of classmates (2 simulations @ 5 points each). One of the simulations will include a foldable.

Mathematics Tasks Prepared for Class (24 points). For specific classes, you will complete CCGPS Mathematics Tasks. The tasks will be provided for you. All parts of each activity must be completed prior to class. (6 tasks @ 4 points each)

Notebook and Participation (6 points). A 3-ring notebook will be kept for MGED 4100. In the notebook will first be the Syllabus and the Course Schedule, followed by two tabbed sections: ***Class Notes and Handouts*** and ***Assignments***. Materials in the notebook should be organized chronologically

within each section. **Dated class notes must be evident for each class meeting** and handouts, exercises, and activities related to the lesson should be kept with the notes for that class. Keeping the notebook allows you to collect and organize a file of mathematics learning materials which should prove valuable as you prepare for student teaching and to enter the teaching profession. Notebooks will be turned in for scoring. They will be returned during that week. Please see the attendance policy for specific information on absences and late assignments. The grade for *Notebook and Participation* includes the notebook itself kept as directed, attendance, evidence of preparation and planning for class, demonstrated ability to interact effectively with peers, completing an equal share of group assignments, and adequately completing clinical experiences.

COURSE EVALUATION

If 0 points are accumulated in any of the following categories, a student will be ineligible to receive a grade of A.

	Possible Points	Earned Points
edTPA Task 1 and Learning Segment (30 total points)		
Lesson Plan II	10	_____
Lesson Plan III	10	_____
edTPA Task 1	10	_____
Professional Literature Review	10	_____
Designing a Learning Environment	10	_____
Clinical Practice Planning, Teaching, and Reflecting	10	_____
Teaching Simulations (2)	10	_____
Mathematics Tasks Prepared for Class	24	_____
MGED 4100 Notebook/Participation	6	_____
Total Points	100	

A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = < 60

ATTENDANCE POLICY

If you must be absent from class for any reason, you should immediately contact the instructor.

Students are developing professionals and are therefore expected to attend all classes and field experiences. Punctuality is also essential. Students who are absent from 3 or more classes may fail the course. Multiple tardies will count as absences.

PROFESSIONALISM

The following areas describe the professional expectations for all preservice students in the Department of Middle, Secondary, Reading, and Deaf Education.

Professionalism - Ethics

Educators are professionals guided by ethical commitments to their students, their families and to the communities in which they work. (See: The Code of Ethics for Educators at <http://www.gapsc.com/Rules/Current/Ethics/505-6-.01.pdf>).

Professional values of teachers include respect, integrity, collaboration, active participation, building alliances, resolving conflicts, and reflective, intellectual inquiry. It is expected that future teachers

conduct themselves with the professionalism that is required of practicing teachers. If at any time a student's actions or attitudes are judged to be less than professional appropriate remedial action will be taken. You will participate in the Code of Ethics training conducted at Lowndes Middle School during the first week of the semester.

Professionalism – Dress code

In this course, classes are held in public schools. Professional dress code is required.

Professionalism - Communication

Effective written and verbal communication skills are critical to you as a professional educator as you interact with students, colleagues, administrators, and parents. Those individuals whose communication skills (verbal or written) indicate a need for assistance will be referred to the appropriate services on campus.

Professionalism - Assignments

All assignments should conform to the professional standards expected of university students. Papers must be typed, double-spaced in an appropriate font style and size with no spelling or grammatical errors. Assignments will be graded on content, composition, spelling, punctuation, and grammar. In papers, ideas obtained from sources must be documented using APA style. Proofread and correct papers before they are submitted.

Professionalism - Diversity

Professional educators are expected to embrace diversity. A variety of materials and instructional strategies will be used to meet the needs of different learning styles of diverse learners in the class. Students will be provided with opportunities to gain the knowledge, skills and understanding to provide effective instruction in multicultural classrooms. Mutual respect for people of diverse characteristics, beliefs, and abilities should be evident for all teacher candidates.

Professionalism - Technology

As part of our conceptual framework, the College of Education is committed to preparing professional educators who are technology competent. As a result, technology has been infused into our education courses.

Professional Improvement Plan

The purpose of the Professional Improvement Plan (PIP) process is for faculty to identify students who may need remediation or intervention to successfully complete the professional requirements for their program of study. For more information see the [Professional Improvement Plan Process](http://www.valdosta.edu/colleges/education/deans-office/policy-statement-of-plagiarism.php) on the COEHS website.

DEWAR COLLEGE OF EDUCATION & HUMAN SERVICES POLICY ON PLAGIARISM

<http://www.valdosta.edu/colleges/education/deans-office/policy-statement-of-plagiarism.php>

DEPARTMENT OF MIDDLE, SECONDARY, READING, AND DEAF EDUCATION STATEMENT ON ACADEMIC INTEGRITY

- In assignments and discussion postings, you should never provide names or identifying information about other people (students, other professionals, or parents). For confidentiality,

you should use pseudonyms for students and should not identify schools unless you are using information that is publically available.

- All assignments should be your own original work, not group work. If you use ideas from other sources, you must provide a full citation using APA style – name(s) of author(s); date of publication; title of article/book/web page; name and location of publisher (book), name of journal, or URL of website. Do not share your work with others. If student A uses work from student B with or without permission, both students receive zero grades for the assignment.

DESCRIPTION OF ACADEMIC DISHONESTY

To ensure there are no chances for students to misunderstand what constitutes plagiarism, cheating, or prohibited collaboration across the University System of Georgia, this section will describe in some detail the behaviors which are viewed as academically dishonest.

While students are likely to understand plagiarism as stealing someone's words as their own, there are many types of plagiarism.

- **Stealing Verbatim:** This is exactly as it sounds. If, when composing an assignment, students take a sentence, a portion of a phrase, or even a unique expression which is not theirs, and submit it as their own (without quoting the original source), they have committed plagiarism. **Sentences that are verbatim or nearly verbatim (more than 70% match) should be both quoted and cited.**
- **Use of Professional Resources Without Acknowledgement.** Students may not use published professional resources, including lesson plans, learning activities, or PowerPoint presentations, without citing the source.
- **Misquoting:** If, when composing an assignment, students directly quote a source and cite it, but alter the author's words to strengthen their argument, they have committed plagiarism.
- **Paraphrasing or Summarizing Without Citing:** An allowable practice in academia is for students to take an author's words, change the words (without changing the meaning) so that it better fits their narrative. Paraphrasing goes beyond changing a couple of words. However, even when paraphrasing or summarizing another author's words, students *must* cite that original source. If they do not cite the original source, they have effectively stolen the original author's idea and have committed plagiarism.
- **Duplicating Publication:** Students may not reuse or recycle any previous assignments used in another course, or in any other published venue, without the explicit permission from the course instructor. Instructors do *not* allow students to reuse or recycle their assignments in any course. If students have done this, they have committed plagiarism.
- **Duplication of Peer Student Work:** Students may not submit assignments that duplicate in whole or part the work of other students, with or without the other student's express consent or knowledge.

Note: Assignments in this course may be checked electronically for plagiarism.

By taking this course, you agree that all required course work may be subject to submission for textual similarity review within BlazeVIEW and GOML. For more information on the use of Turnitin at VSU see [Turnitin for Students](http://www.valdosta.edu/academics/academic-affairs/vp-office/turnitin-for-students.php) (<http://www.valdosta.edu/academics/academic-affairs/vp-office/turnitin-for-students.php>).

TITLE IX STATEMENT

Valdosta State University (VSU) is committed to creating a diverse and inclusive work and learning environment free from discrimination and harassment. VSU is dedicated to creating an environment where all campus community members feel valued, respected, and included. Valdosta State University prohibits discrimination on the basis of race, color, ethnicity, national origin, sex (including pregnancy status, sexual harassment and sexual violence), sexual orientation, gender identity, religion, age, national origin, disability, genetic information, or veteran status, in the University's programs and activities as required by applicable laws and regulations such as Title IX. The individual designated with responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination policies is the University's Title IX Coordinator: Director of the Office of Social Equity, titleix@valdosta.edu, 1208 N. Patterson St., Valdosta State University, Valdosta, Georgia 31608, 229-333-5463.

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 Farbar Hall. The phone numbers are 229-245-2498 (V), 229-375-5871 (VP) and 229-219-1348 (TTY). For more information, please visit VSU's Access Office or email: access@valdosta.edu.

STUDENT OPINION OF INSTRUCTION

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. Instructors will not be able to view individual responses or to access any of the responses until after final grade submission. 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>.