



# CHIPOLA COLLEGE

## COURSE SYLLABUS

Chipola's website: [www.chipola.edu](http://www.chipola.edu)

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**COURSE TITLE:**

Teaching Methods in Secondary School Mathematics

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**COURSE NUMBER:**

MAE 4330

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**COURSE DESCRIPTION (with prerequisites):**

This course is designed for students who are majoring in mathematics education and is offered concurrently with the practicum in teaching secondary mathematics. It addresses the required instructional methods, techniques, strategies, resources, and assessment considerations for effective teaching of secondary mathematics including the pedagogy of early algebra, geometry, trigonometry and calculus using problem solving, cooperative learning and appropriate technology. This course addresses specific state-adopted standards, subject matter competencies, and pedagogy pertinent to the discipline and required for certification. 3 semester hours credit.

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**NAME(S) OF INSTRUCTORS:**

Lisa Purvee  
purveel@chipola.edu |

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**EFFECTIVE ACADEMIC YEAR:**

2023-2024 |

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**REQUIRED TEXTBOOKS AND INSTRUCTIONAL MATERIALS:**

*Teaching Secondary and Middle School Mathematics*, Daniel J. Brahier, 5th ed., 2016. Taylor and Francis (Routledge), ISBN: 9781138922785.

Appropriate dress for field experience: black slacks and School of Education polo (Polos are available in the campus bookstore.) |

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**GRADING POLICY:**

The standing of a student in each course is expressed by one of the following letters and corresponding grading system:

**A – 90 – 100**

**B – 80 – 89**

**C – 70 – 79**

**D – 60 – 69**

**F – 59 or less**

The Chipola Catalog provides policies and procedures regarding the grading system. A student's Grade Point Average is derived from the grading system/quality point scale.

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**ATTENDANCE AND WITHDRAWAL POLICIES:**

Chipola College expects regular attendance of all students, and all instructors record attendance daily. Students who are absent from classes for any reason other than official college activities must satisfy the instructor concerned that the absence was due to illness or other clearly unavoidable reasons. Otherwise, the student may suffer grade loss at the discretion of the instructor. Chipola policy allows each instructor to specify in the Instructor First Day Handout whether or not an absence is excusable and what affect the absence or tardy may have on the grade.

A student is allowed to repeat a course a maximum of three (3) times. **On the third attempt a student (1) must bear the full cost of instruction (unless waived by Student Services), (2) cannot withdraw, and (3) must receive a grade.**

#### **MAKE-UP POLICY:**

Chipola allows each instructor to specify in the Instructor First Day Handout the makeup policy.

#### **ACADEMIC HONOR CODE POLICY:**

Students are expected to uphold the Academic Honor Code. Chipola College's Honor Code is based on the premise that each student has the responsibility to (1) uphold the highest standards of academic honesty in his/her own work; (2) refuse to tolerate academic dishonesty in the college community; and (3) foster a high sense of honor and social responsibility on the part of students. Further information regarding the Academic Honor Code may be found in the Chipola Catalog, Student Governance section.

#### **STUDENTS WITH DISABILITIES POLICY:**

Chipola College is committed to making all programs and facilities accessible to anyone with a disability. Chipola's goal is for students to obtain maximum benefit from their educational experience and to effectively transition into the college environment. Students with disabilities are requested to voluntarily contact the Office of Students with Disabilities to complete the intake process and determine their eligibility for reasonable accommodations.

#### **NOTICE OF EQUAL ACCESS/EQUAL OPPORTUNITY AND NONDISCRIMINATION:**

Chipola College does not discriminate against any persons, employees, students, applicants or others affiliated with the college with regard to race, color, religion, ethnicity, national origin, age, veteran's status, disability, gender, genetic information, marital status, pregnancy or any other protected class under applicable federal and state laws, in any college program, activity or employment.

Wendy Phippen, Associate Vice President of Human Resources, Equity Officer and Title IX Coordinator, 3094 Indian Circle, Marianna, FL 32446, Building A, Room 183C, 850-718-2269, [pippenw@chipola.edu](mailto:pippenw@chipola.edu).

#### **LIBRARY AND ON-LINE REFERENCE MATERIALS:**

The library is a comprehensive learning resource center providing information in print, electronic, and multimedia format to support the educational objectives of the College. On-line catalogs, e-books and electronic databases can be accessed by using the *LINCCWeb* icon on the Chipola Library website at [www.chipola.edu/library](http://www.chipola.edu/library). If you have questions about database usage consult the “How to Use the Chipola Databases” on the Library website or call the Library at 850/718-2274 during regular hours. Library hours are posted each semester at the building entrance and on the Library website. See your Instructor First Day Handout for individual instructor recommendations and resources.

### **TECHNOLOGY RESOURCES:**

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The college’s learning management system is **Canvas**. Classes become available on Canvas on the first day of the semester. It is the student’s responsibility to log onto the Canvas system the first day of class to establish the first day of attendance and to check announcements. All official class communication must be through Canvas. For further information, contact your instructor or the Director of eLearning. The Canvas support hotline is available online in live chat and on the phone, toll-free, at 855-308-2812 for any issues in accessing or utilizing Canvas. The **Technology Center**, located in the library, is equipped with computer workstations. Lab hours are posted each semester at the building entrance and on the Library website.

### **FREE TUTORING RESOURCES:**

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The Academic Center for Excellence (**ACE**) Lab, located in Building L, offers free tutoring from 8 a.m. to 5 p.m. and is equipped with computer workstations. ACE lab hours are posted each semester at the room entrance and on the website. Additionally, live online tutoring conferences and individual tutoring sessions are available for a variety of courses through ACE@Home. For a conference schedule or to schedule an individual appointment, visit “ACE Tutoring” in the left navigation from any course in Canvas.

### **ELECTRONIC DEVICE USAGE STATEMENT:**

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Classrooms should be free of all unnecessary distractions from the task of learning. Therefore, as a general rule, students should silence and avoid use of all electronic devices (laptops, phones, tablets, etc.) not being used for coursework. Consult first-day handouts for any specific policies related to the use of electronic devices in the classroom, as they may vary depending upon the nature of the course or the guidelines of the instructor. Faculty reserve the right to regulate the use of electronic devices and their accessories in class.

### **DISCIPLINE SPECIFIC COMPETENCIES / LEARNING OUTCOMES:**

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- E – 1 Demonstrate understanding of instructional design and lesson planning by applying concepts from human development and learning theories.
- E – 2 Demonstrate ability to maintain a student-centered learning environment that is safe, organized, equitable, flexible, inclusive and collaborative.
- E – 3 Demonstrate effective instructional delivery and facilitation by utilizing deep and comprehensive knowledge of mathematics.

- E – 4 Demonstrate understanding of assessment by analyzing and applying data from multiple assessments to diagnose learning needs and inform instruction.
- E – 5 Demonstrate continuous improvement by designing purposeful goals to strengthen instructional effectiveness and impact student learning.
- E – 6 Demonstrates professional responsibility and ethical conduct and fulfills expected obligations to students, the public, and the education profession.

<b>LINKING COURSE-LEVEL STUDENT LEARNING OUTCOMES WITH DISCIPLINE-SPECIFIC COMPETENCIES, ASSESSMENT METHODS, AND ARTIFACTS</b>					
<b>STUDENT LEARNING OUTCOMES FOR MAE 4330</b> The student will:	<b>State-Approved Standards</b>	<b>FEAPs (Discipline Outcomes)</b>	<b>FL Competencies and Skills:</b>		<b>Assessment Activities</b>
			<b>Mathematics 6 - 12</b>	<b>Professional Education</b>	
Understand the history and use of NCTM and State-Adopted mathematical standards		E -1			Test
Create long range and short range plans for instruction at a high school.		E – 1, E-3	Various content standards based upon teaching assignments	1.1, 1.2, 1.3, 1.6, 1.7, 1.8, 1.9, 5.3, 8.5, 8.6	Test
Build a repertoire of effective teaching strategies, which address learning styles and developmental levels of the high school student.		E-1, E-3		2.2, 2.3, 3.2	Task 2.2.1 - RU
Review mathematic skills contained in the state-adopted standards.	All standards	E- 3, E-5	Various content standards based upon teaching assignments		Task CC8M-RU
Plan and critique grade/age appropriate mathematics lessons in at least one of the content areas: functions, algebra, geometry, trigonometry, statistics/probability, and calculus.	Selected standards dependent on student lesson topic	E-1, E-3	10.3, Various content standards based upon teaching assignments	3.4,.3.5,.3.6,.3.7, 3.8, 3.9	Teaching assignments and accompanying lesson plans - SD
Participate in professional growth opportunities.		E-5		5.1, 5.2, 5.3	Task CC3B - RU
Teach with effective use of questioning, engagement of students and adaptation to student learning needs.	Selected standards dependent on student lesson topic	E-2, E-3	10.7		Task 2.2.1
Include accommodations in lesson plans and during teaching that meet the needs of ESOL students and/or students with varying learning styles.		E-2, E-6	10.8	7.4	Task 5.4.2
Demonstrate an effective instructional strategy for		E-3	10.1, 10.3		Teaching assignment - SD

conducting a review of a unit.					
Effectively use technology and manipulatives to teach content.	Selected benchmarks dependent on student lesson topic	E-2, E-3, E-6	10.5	2.1, 6.4	Teaching assignments - SD Task 2.2.1 - RU

**\*\*Assessment Codes**

<b>T</b> = Tests <b>Pre/Post</b> = Pre- and Post-Tests <b>OT</b> = Objective Tests <b>UT</b> = Unit Tests <b>Q</b> = Quizzes <b>F</b> = Final Examination <b>CF</b> = Cumulative Final <b>EX</b> = Departmental Exam <b>SE</b> = Nat'l or State Standardized Exam	<b>RPT</b> = Report/Presentation <b>SP</b> = Skills Performance <b>SD</b> = Skills Demonstration <b>W</b> = Writing Assignments <b>E</b> = Essays <b>DE</b> = Documented Essays <b>RP</b> = Research papers <b>J</b> = Jury <b>R</b> = Recital	<b>Proj.</b> = Projects <b>Exp.</b> = Experiments <b>Cap. Proj.</b> = Capstone Project <b>Cap. Course</b> = Capstone Course <b>Prac.</b> = Practicum <b>Intern.</b> = Internship <b>H</b> = Homework <b>PS</b> = Problem Solving <b>DB</b> = Discussion Board	<b>BO</b> = Behavioral Observation <b>Clin.</b> = Clinicals <b>CS</b> = Case Study <b>CP</b> = Case Plan <b>Port.</b> = Portfolio <b>Obs.</b> = Teacher Observation <b>Sk. Check</b> = Skills Check-off Curriculum Frameworks <b>JP</b> = Judged Performance/Exhibition
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**MEANS OF ACCOMPLISHING STUDENT LEARNING OUTCOMES:**

The primary methods of instruction include class discussions, experiential learning opportunities, interactive lecture, and assigned readings. Learning strategies may include case studies, questioning, practicums, small group discussions, demonstrations, and presentations. Active student participation is expected. Additionally, students are expected to complete assigned projects by the assigned due dates.

**ASSIGNMENT AND/OR COURSE OUTLINE**

See your Instructor First Day Handout for individual instructor assignment schedule.