Course Description
Practical techniques and methods of guiding the learning experiences of the young child in arithmetic. The development and use of teaching materials and equipment in the early childhood education program, with emphasis on informal explanation and experimentation in Grades K-2.

Textbook

College Live Text Education Solutions membership [www.LiveText.com](http://www.LiveText.com) *(All students are required to have a current LiveText account.)*

Angel Learning [una.angellearning.com](http://una.angellearning.com) – use for all class correspondence

Course Objectives: These objectives will be covered using the course text book, AMSTI modules and materials, and supplementary resources.

Upon completion of ECE 306, the student will be able to demonstrate knowledge of

2. the role that mathematics plays in everyday life; 290-3-3-.03(3)(c).3(i), CF1
3. concepts and relationships in number systems; 290-3-3-.03(3)(c).3(ii), CF2
4. the appropriate use of various types of reasoning, including inductive, deductive, spatial and proportional, and understanding of valid and invalid forms of reasoning; 290-3-3-.03(3)(c).3(iii), CF3
5. both metric and customary measurement and fundamental geometric concepts, including shapes and their properties and relationships; 290-3-3-.03(3)(c).3(iv), CF2
6. academic content and methods to plan and provide a developmentally appropriate curriculum for elementary students in accordance with *Alabama Course of Study: Mathematics*; 290-3-3-.06(2)(b).3.(ii)(I) CF4
7. the major concepts and procedures that define number and operations, algebra, geometry, measurement, and data analysis and probability as stated in the *Alabama Course of Study: Mathematics*; 290-3-3-.06(2)(b).3.(ii)(II) CF3
8. the components of comprehensive, researched-based effective mathematics programs and initiatives, including the Alabama Math, Science and Technology Initiative (AMSTI); 290-3-3-.06(2)(b).3.(ii)(III) CF3
9. developmentally appropriate strategies for teaching mathematics, including inquiry and application based instruction as advocated by the Alabama Math, Science, and Technology Initiative (AMSTI); 290-3-3-.06(2)(b).3.(ii)(V) CF6 and
10. an understanding of working effectively with children of different backgrounds and abilities. *UNA Global Initiative*; CF: 5

Course Content
I. Concept Development in Mathematics
   A. How concepts develop in Mathematics
B. How concepts are acquired  
C. Promoting Young Children’s Concept Development through problem solving  
D. Assessing the child’s developmental level  

II. FUNDAMENTAL CONCEPTS AND SKILLS  
A. One-to-One Correspondence  
B. Number Sense and Counting  
C. Logic and Classifying  
D. Comparing  
E. Early Geometry: Shape and Spatial Sense  
F. Parts and Wholes  
G. Language and Concept Formation  

III. APPLYING FUNDAMENTAL CONCEPTS, ATTITUDES, AND SKILLS  
A. Ordering, Seriation, and Patterning  
B. Measurement: Volume, Weight, Length, Temperature, and Time  
C. Interpreting Data Using Graphs  
D. Integrating the Curriculum through Dramatic Play and Thematic Units and Projects  

IV. SYMBOLS AND HIGHER LEVEL ACTIVITIES  
A. Symbols  
B. Groups and Symbols  
C. Higher-Level Activities and Concepts  

V. MATHEMATICS CONCEPTS AND OPERATIONS FOR THE PRIMARY GRADES  
A. Operations with Whole Numbers  
B. Patterns  
C. Fractions  
D. Numbers above 10 and Place Value  
E. Geometry, Data Collection, and Algebraic Thinking  
F. Measurement with Standard Units  

VI. THE MATH ENVIRONMENT  
A. Materials and Resources for Math  
B. Math in Action  
C. Math in the Home  

Resources (to be used for course requirements):  
Alabama Course of Study (ALCOS) http://alex.state.al.us  
Common Core State Standards http://www.corestandards.org  
National Council of Teachers of Mathematics (NCTM)  

Materials needed: spiral notebook for math journal, 30 file folders, file box for folders, glue stick  

Course Requirements  
All requirements of the course must be satisfactorily completed to receive credit for the course.  
*Review Alabama Course of Study (ALCOS) for K-2/Common Core (K-2)  
*Conduct an interview concerning the role that mathematics plays in everyday life  
*Create a math materials list for your future classroom  
*Keep an in-class AMSTI journal/participate in class discussions (use spiral notebook for math journal)  
*Select and review developmentally appropriate children’s literature for your future math classroom  
*Review math web sites  
*Share one children’s book in small group/make connection to the appropriate math standard/select one or more math web sites that will support a developmentally appropriate lesson  
*Create a math activity that could be used for enrichment of the standard requirements for an early childhood classroom  
*Livetext requirements (see instructions in LT rubrics for lesson plans)  
*Complete AMSTI file folders and write a reflection about the learning process and use of the folders
*Mid-term and Final examinations will be required for the completion of this course.

DEMOGRAPHIC CLUSTERS for observations/clinicals will be provided in class.

Clinical Experience (Do not start prior to the first class meeting):
Students will complete three (3) hours of observation in K through Grade 2 classrooms.
Students will observe/participate in AMSTI activities including Calendar, Daily Data, and Math Workshop.
A minimum of three (3) hours of clinical experience will take place in first through second grade classrooms.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Rubric</th>
<th>Points</th>
<th>Code</th>
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<tbody>
<tr>
<td>Share in class Book Review &amp; Math Website (include related standard from ALCOS)</td>
<td>rubric</td>
<td>25</td>
<td>290-3-3.-06(2)(b)3.(ii)(II) CF3</td>
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<tr>
<td>Children’s literature (typed reviews of 5 books)</td>
<td>rubric</td>
<td>20</td>
<td>290-3-3.-06(2)(b)3.(ii)(II) CF3</td>
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<tr>
<td>Math Website Reviews (5 sites)</td>
<td>rubric</td>
<td>20</td>
<td>290-3-3.-06(2)(b)3.(ii)(II) CF3</td>
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<tr>
<td>Math Journal (AMSTI) and discussion</td>
<td>rubric</td>
<td>20</td>
<td>290-3-3.-03(3)(c)3.(iii), CF3</td>
</tr>
<tr>
<td>Create Math Activity (Bring teacher-made materials to class for demonstration.)</td>
<td>rubric</td>
<td>25</td>
<td>290-3-3.-06(2)(b)3.(ii)(I) CF4</td>
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<tr>
<td>AMSTI File Folder Completion and Reflection</td>
<td>rubric</td>
<td>25</td>
<td>290-3-3.-06(2)(b)3.(ii)(V) CF6</td>
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<tr>
<td>LiveText Lesson Plan</td>
<td>COE</td>
<td>25</td>
<td>290-3-3.-06(2)(b)3.(ii)(I) CF4</td>
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<tr>
<td>Math Clinicals</td>
<td>rubric</td>
<td>100</td>
<td>290-3-3.-06(2)(b)3.(ii)(I) CF4</td>
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<tr>
<td>Interview (role of mathematics)</td>
<td>rubric</td>
<td>10</td>
<td>290-3-3.-03(3)(c)3.(i), CF1</td>
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<tr>
<td>Mid-term Exam</td>
<td>rubric</td>
<td>100</td>
<td>290-3-3.-03(3)(c)3.(ii), CF2</td>
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<td>Final Examination</td>
<td>rubric</td>
<td>100</td>
<td>290-3-3.-03(3)(c)3.(iv), CF2</td>
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Class Participation (attend all classes for all pts) 30 points

Total Number of Points 500 POINTS

How to Learn the Most this Semester
1. Produce high-quality work, as you will want all your students to do. Only word-processed assignments will be accepted. Keep a copy of all assignments on your hard drive.
2. Demonstrate respect for all class members by listening to diverse points of view to gain understanding without giving critical feedback.
3. Arrange for a private conference to discuss concerns, personal needs, and requests.
4. Actively participate (demonstrated by a positive attitude and constructive contributions) in the learning process by completing all assignments on time, by attending class and positively contributing to building a learning climate.

Attendance:
Your success is dependent upon class attendance and active participation. Although many of the activities will be small group in nature, each of you retains the responsibility for your own learning. You are expected to attend all class sessions. **After three (3) absences (excused or unexcused) your grade is subject to being lowered. Three tardies (for any reason) equals one absence.**
[After eight (8) absences without a withdrawal from the class, the final grade for the course will be recorded as an F.]
Grading Scale

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<tr>
<th>Score Range</th>
<th>Grade</th>
<th>Notes</th>
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<tr>
<td>465-500</td>
<td>93-100 A</td>
<td>Assignments are due at the beginning of the class period.</td>
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<tr>
<td>420-464</td>
<td>84-92 B</td>
<td>(Late assignments for unexcused absences will not be accepted.)</td>
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<tr>
<td>375-419</td>
<td>75-83 C</td>
<td>*Student athletes and those attending university sponsored events must submit assignments in advance.</td>
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<tr>
<td>325-374</td>
<td>65-74 D</td>
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<tr>
<td>0-324</td>
<td>F</td>
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To receive AMSTI Preservice Math Year 1 Certification for the course, all requirements must be satisfactorily completed. (Final course average - B or better.)

To apply for credit for this course to a Teacher Education program, the candidate must complete all requirements and earn a C or better.

A professional subjective evaluation will be made on all assignments. **Criteria for grading procedures will also include an evaluation of oral and written communication skills.**

**Policies:**
- It is the responsibility of the student to read and understand the syllabus.
- After written and oral explanations of assignments and policies are given it is the student's responsibility to fully understand what is required and expected.
- Lack of professionalism during class and for observations/clinicals may result in a deduction of a letter grade.
  - No cell phone use in the classroom once class has begun.

**Accommodation Statement**

In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documented learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Amendment Act of 2008, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. It is the responsibility of the student to contact Disability Support Services to initiate the process to develop an accommodation plan. This accommodation plan will not be applied retroactively. Appropriate reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact Disability Support Services (256-764-4214).

**Academic Honesty:** All members of the university community are expected to be honorable and observe standards of conduct appropriate to a community of scholars. Students are expected to behave in an ethical manner. Individuals who disregard the core values of truth and honesty bring disrespect to themselves and the University. A university community that allows academic dishonesty will suffer harm to the reputation of students, faculty, and graduates.

It is in the best interest of the entire university community to sanction any individual who chooses not to accept the principles of academic honesty by committing acts such as cheating, plagiarism, or misrepresentation. Offenses are reported to the Vice President for Academic Affairs and Provost for referral to the University Student Discipline System for disposition. (UNA 2011-2012 Catalog)

**Use of another student’s work as your own will result no credit for the work submitted.**
I have received a copy of the syllabus for ECE 306-01/02 for the Spring 2012 term. I have read the syllabus and have been offered an opportunity to ask questions about it. I understand and agree to the requirements in this syllabus.

Name: ___________________________ Date: ________________

INFORMATION FOR ECE 306-01/02 (Circle the appropriate section.)

Name: ___________________________

Current Address: ___________________________

(hometown if different from address) ___________________________

Phone Number(s): ___________________________

UNA E-mail: ___________________________

Live Text Name: ___________________________

Career Goal: ___________________________

Student athlete (sport- ________________/In advance provide schedule of events that will affect class attendance.)

Any special concerns that the professor needs to know about in advance.

____________________________________________________________________________________

Please sign below if you give permission to share your paper/projects, for example, the use of student work as a model in future classes, presentations, and/or workshops.

____________________________________________________________________________________

(Your signature)

Current schedule for this semester

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<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
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Please add something about yourself that you would like to share.