

Welcome to MATH 1350 – Math for Middle Grade Teacher Certification

I

Semester Syllabus

Delete these instructions after following them: Instructors must make the following customizations:

- Change all highlighted text and remove highlights. Text highlighted in yellow should be customized; text highlighted in green is instructions that should be followed and then deleted.
- It is impossible to arrange the vertical spacing correctly on the master syllabus, as each instructor will be adding and deleting items. Consider starting each of the Level 1 Headings (The Basics, Course Calendar, Getting Help, Grades, Course Content, and The Details) at the top of a new page.
- In order to make the document accessible to screen readers, the master syllabus uses styles for text. The 6 styles in use are Title, Subtitle, Heading 1, Heading 2, Normal, and [hyperlink](#). If you would like to customize these styles with different fonts or formatting, please do so using Styles. Right click on the style you want to change and choose Modify.
- Please do not add tables without following accessibility procedures. Previous syllabi that contained critical information on the first page without a table do not meet accessibility requirements.

THE BASICS

About Your Instructor

Name: Insert info here

The best way to reach me is: Insert info here

Phone number: Insert info here

Email: Insert info here

Office location (and/or link if appropriate): Insert info here

Office hours: Insert info here

To schedule a conference outside of office hours: Insert info here

About Your Course

Instructional Methodology: Delete these instructions after following them: Choose the correct option and delete the other options

Classroom Section: This course is taught in the classroom primarily as a lecture/discussion course.

DLS—Synchronous Virtual Class Meetings Required: Instruction is fully online with required online meetings during the specified days and times listed.

ONL—Online: Instruction and testing are fully online without required class times.

HYC—Hybrid Classroom: Instruction is mostly on-campus with remaining instruction online.

Synonym: Insert info here

Section: Insert info here

Meeting location: Insert info here

Meeting times: Insert info here

Prerequisites: MATH 1314, MATH 1324, or MATH 1414 with a grade of C or better. OR satisfactory score on the ACC Higher Level Mathematics Placement Test.

Required Materials

This is a First Day™ class. The cost of required course materials, including an online version of the textbook, has been added to your tuition and fees bill.

Textbook: *Mathematics for Elementary School Teachers*, 7th Edition by Bassarear & Moss, Cengage Learning. Optional Purchase: ISBN (Bound paperback): 978-1-337-62996-6, or ISBN (Loose-leaf): 978-0-357-04387-5

Explorations Manual (available online in your EWA account). Your instructor will provide instructions on how to use Blackboard to access your required Enhanced WebAssign (EWA) account, where you will access the texts and online homework

Other Technology: Delete these instructions after following them: Delete webcam info if it does not apply; add any other needed technology. Access to a webcam and microphone are required for this course. Eligible students can check out required technology at <https://www.austincc.edu/students/student-technology-services>.

COURSE CALENDAR

Delete these instructions after following them: This is the recommended 16-week calendar from the course committee. The syllabus should contain a course outline for the lecture (and laboratory), outlining what students will be doing on what days, identifying test dates and other due dates. (Sections in Bold tend to require more time, so feel free to adjust accordingly. To save time, section 1.1 can be assigned as a reading/written response section) See the document “Suggested Course Calendars” for other options and customize this chart as appropriate.

Note: Schedule changes may occur during the semester. Any changes will be announced in class and posted as a Blackboard Announcement.

Week	Sections	Material
1	1.1, 1.2	Mathematical Intro, Number Properties and Sets
2	2.1	Whole Numbers (including other bases)
3	2.2	Fractions
4	2.3	Decimals, Integers and Real Numbers & Test 1
5	3.1, 3.2	Adding Whole Numbers and Subtracting Whole Numbers
6	3.3	Adding and Subtracting Fractions
7	3.4-4.1	Decimals and Integers; Test; Multiplying Whole Numbers
8	4.2	Dividing Whole Numbers
9	4.3	Multiplying and Dividing Fractions
10	4.4	Multiplying and Dividing Decimals, Integers and Order of Operations & Test
11	5.1	Ratios and Proportions
12	5.2	Percents
13	6.1, 6.2	Patterns, Relations, and Functions; Math Situations and Algebraic Symbols
14	6.3	Math Models and Quantitative Relationships
15	6.4	Changes in Various Contexts (Graphs and Verbal Representations)
16		Wrap-up, Final Assessment

Important Dates

Last day to withdraw: Insert date here

Holidays: Insert ACC holidays for current semester

(Please note these are the **ONLY** holidays this semester.)

Making Time to Learn

We learn math by thinking about and working on mathematical problems, which takes time. Practice is crucial in a math course. To ensure that you have adequate time, set aside 8-12 hours per week outside of class time to practice and study for this course. Ask for help immediately when something isn't clear.

GETTING HELP

ACC provides several free resources for students who need help; descriptions and links are below:

Office hours: Another name for office hours is “student hours.” This is the time your instructor has set aside to answer student questions, so feel free to drop by if you have questions. Office hours may be virtual or on campus; see information above.

Instructional Associates: Instructional Associates specific to the course you are taking are available for tutoring. To make an appointment, go to <https://sites.google.com/a/austincc.edu/math-students/meet/list> and then click on your course.

Learning Labs: The ACC Learning Labs provide tutoring in math and other subjects. To schedule an appointment, go to <https://www.austincc.edu/students/learning-lab>. This site includes information about in person and virtual tutoring options.

Academic Coaching: Academic coaches offer extra support to students with study strategies; they want to help you learn to be an active participant in your own learning process. For more information or to make an appointment with an academic coach, go to <https://www.austincc.edu/students/academic-coaching>.

ACC Student Services: Services are offered in many areas, including Academic, Financial, Personal, and Technology Support. For more information, go to <https://www.austincc.edu/student-support>.

GRADES

Delete these instructions after following them: Grading criteria must be clearly explained in the syllabus. The criteria should specify the number of exams and other graded material (homework, assignments, projects, etc.). **Instructors must include where students can access their grades.** Instructors should discuss the format and administration of exams. Guidelines for other graded materials, such as homework or projects, should also be included in the syllabus. An example is given below; you should modify it to fit your course.

*** Your specific grading policies must meet the criteria outlined in the “Policy Summary” provided on the MATH 1350 course page. *** **You might also include a short statement on how you will proctor exams.**

Grade Components

Major Proctored Assessments (Tests): 50%

Major Unproctored Assessments: 20%-25%

Minor Assessments: 25%-30%

Delete these instructions after following them: Be sure to detail the subcategories in Minor Assessments as you see fit. See the course policies for a suggestion.

Grading Scale

A: 90 - 100

B: 80 – 89

C: 70 – 79

D: 60 – 69

F: < 60

Where can I find my grades?

Grades will be posted in Blackboard.

What will we do in this class?

Delete these instructions after following them: Be sure to give details about any subcategories listed in your grading scheme. Delete any items that do not apply.

Tests: Insert info here

Projects or Take-Home components: Insert info here

Homework (online and written): Insert info here

Activity Write-Ups: Insert info here

Other: Insert info here

What happens if I miss something?

Dropped Grade Policy: Insert info here

Late Work Policy: Insert info here

Missed Exam Policy: Insert info here

Attendance/Class Participation Policy: Regular and punctual class attendance is expected of all students. **Much of what you learn will evolve from in-class explorations, experiences and discussions.** If attendance or compliance with other course policies is unsatisfactory, the instructor may withdraw students from the class. For attendance, unsatisfactory compliance is usually 4 or more absences.

In the event the college or campus closes due to unforeseen circumstances (for example, severe weather or other emergency), the student is responsible for communicating with their professor during the closure and completing any assignments or other activities designated by their professor as a result of class sessions being missed.

COURSE CONTENT

Course Description

Credit Hours: 3, Contact Hours: 3

MATH 1350 - Mathematics for Middle Grade Teacher Certification I (3-3-0). Concepts of sets, functions, numeration systems, number theory and properties of the natural numbers, integers, rational and real number systems with an emphasis on problem solving and critical thinking.

Course Rationale

MATH 1350 is the first semester of a two-semester sequence (1350/1351) designed for prospective elementary and middle school teachers. This course extends the foundational ideas of mathematics so that the prospective teachers (Early Childhood - 8) have an explicit understanding of these concepts. This sequence of courses transfers to UT-Austin as M316K and M316L, to Texas State University as 2311 and 2312, and to some other four-year institutions.

Common Course Objectives

MATH 1350 should:

- a) increase students' explicit understanding (a level of understanding which allows one to clearly and accurately communicate mathematical ideas) of some elementary & middle grade mathematics including;
 - 1. number and number properties through experiences which emphasize sorting and classifying,
 - 2. operations for real numbers with explorations of multiple interpretations,
 - 3. problem solving,
 - 4. algebraic thinking with investigations of patterns and a focus on sets and functions,
 - 5. number theory,
 - 6. proportional reasoning
- b) increase students' ability to *independently* increase their own understanding of mathematics (they need to be able to learn math and be confident that they understand it since we can't get to everything they will need to teach elementary or middle school students);
- c) challenge students' beliefs about mathematics and, hopefully, enhance their attitudes in a positive way;
- d) provide students with an opportunity to experience mathematics in a constructivist learning environment, as they may be expected to teach in this manner (for further information see NCTM's *Professional Standards*);
- e) introduce common manipulatives; through use, rather than demonstration
- f) begin to develop effective communication skills that will be useful to the student when they begin teaching.

Student Learning Outcomes

Upon successful completion of the course, a student should be able to:

- 1. Determine patterns and explain the patterns in writing. When appropriate, students will find an explicit formula for the pattern.

2. Compare and contrast numeration systems, such as the Roman number system, Alphabitia (base 5) , and our decimal system. Students will convert numbers between base 10 and other bases, and perform addition and subtraction in Alphabitia (base 5) and in other bases.
3. Solve arithmetic problems in multiple ways, including using base 10 blocks, write explanations for multiple methods for solving arithmetic problems, and find and explain errors in other's computations
4. Define and explain in writing various number theory concepts such as divisibility, prime and composite numbers, prime factorization, least common multiples and greatest common factors
5. Do computations with integers, rational numbers, decimals and real numbers, explain in writing the concepts, and use manipulatives such as two-sided disks, base 10 blocks, pattern blocks, and fraction bars or fraction circles to illustrate properties and computations.
6. Solve problems involving proportions and percents and explain the concepts in writing.
7. Represent numbers using a variety of models (e.g., fraction strips, fraction circles, diagrams, shaded regions, number lines)
8. Use a variety of concrete and visual representations to demonstrate the connections between operations and algorithms.

THE DETAILS

[Delete these instructions after following them: Remove the following two paragraphs if your class is not online]

Distance Education Information: This class is fully online. Successful online students actively participate in class on a regular basis just like in an on-campus class and avoid putting off classwork until the last minute. This includes reading assignments, taking quizzes and tests, and any other activities assigned by your professor. You will need to stay motivated and routinely log in to your classes in order to keep on top of your assignments.

Students will use the Blackboard learning management system for assignment instructions, submitting assignments, and collaboration. Students are encouraged to read ACC Distance Education General Information available at <https://online.austincc.edu/faq/>.

First Day Access: To enhance your learning experience and provide affordable access to the right course material, this course is part of an inclusive access model called First Day™. You can easily access the required materials for this course through Blackboard, at a discounted price, and benefit from single sign-on access. Austin Community College includes the discounted price as a course fee in your registration fees for this course.

It is NOT recommended that you Opt Out, as these materials are required to complete the course. You can choose to Opt Out on the first day of class, but you will be responsible for purchasing your course materials at the full retail price and access to your materials may be suspended. See your course in Blackboard for details.

Withdrawal Policy: It is the responsibility of each student to ensure that his or her name is removed from the roll should he or she decide to withdraw from the class. The instructor does, however, reserve the right to drop a student should he or she feel it is necessary. If a student decides to withdraw, he or she should also verify that the withdrawal is submitted before the Final Withdrawal Date. The student is also strongly encouraged to retain their copy of the withdrawal form for their records.

Students who enroll for the third or subsequent time in a course taken since Fall 2002 may be charged a higher tuition rate for that course. State law permits students to withdraw from no more than six courses during their entire undergraduate career at Texas public colleges or universities. With certain exceptions, all

course withdrawals automatically count towards this limit. Details regarding this policy can be found in the ACC college catalog.

Reinstatement Policy: Students who withdrew or were withdrawn will not be reinstated unless they have completed all coursework, projects, and exams necessary to place them at the same level of course completion as the rest of the class. Reinstatement is up to the instructor's approval.

Incomplete Grade Policy: Incomplete grades (I) will be given only in very rare circumstances. Generally, to receive a grade of "I", a student must be up to date on coursework and have a passing grade, and after the last date to withdraw, have a legitimate reason that prevents course completion. An incomplete grade cannot be carried beyond the established date in the following semester. The completion date is determined by the instructor but may not be later than the final deadline for withdrawal in the subsequent semester.

Communication with Your Instructor: All e-mail communication to students will be sent solely to the student's ACCmail account or math software if applicable, with the expectation that such communications will be read in a timely fashion. Likewise, students should use their ACCmail account or math software when communicating with instructors. Instructors will respond to student emails within 3 business days, if no response has been received by the student at the end of that time, then the student should send a reminder to the instructor.

Name Change Information: If you want to change how your name appears online at ACC, go to <https://www.austincc.edu/admissions/update-student-information/chosen-name>.

General College Policies: Policies that apply to all courses at ACC can be found here: <https://www.austincc.edu/offices/academic-outcomes-assessment/master-syllabi/college-policies>.