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# Syllabus

MATH 1009, version 2.0

Effective: September, 2021

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## MATH 1009—Mathematics for Prospective Elementary School Teachers I

**Course Description:** Logic; counting numbers, integers, rational numbers, real numbers; emphasis on field properties; set nomenclature and some number theory; units of measurement.

### Textbooks and Other Materials

Students enrolling in ODL courses are required to follow the textbook ordering information provided in the syllabus and Getting Started module of the course.

ODL is not responsible for student purchases that result *in the receipt of the wrong materials*. *It is the responsibility of the student to order the correct textbook materials*. Courses are written to specific textbook editions; edition substitutions *are not allowed*.

#### Textbook

Rick Billstein, Shlomo Libeskind, and Johnny Lott. *MyLab Math with Pearson eText for A Problem Solving Approach to Mathematics for Elementary School Teachers*. Thirteenth edition. Boston, MA: Pearson Education, Inc., 2020.

**ISBN-13:** 9780135190074

**Notice:** This is an eText accessible only through MyMathLab.

Access to the eText and MyMathLab can be purchased from the publisher's website at <http://www.mypearsonstore.com/> (enter the ISBN to search) or from the MyLab site, <http://www.pearsonmylabandmastering.com/>.

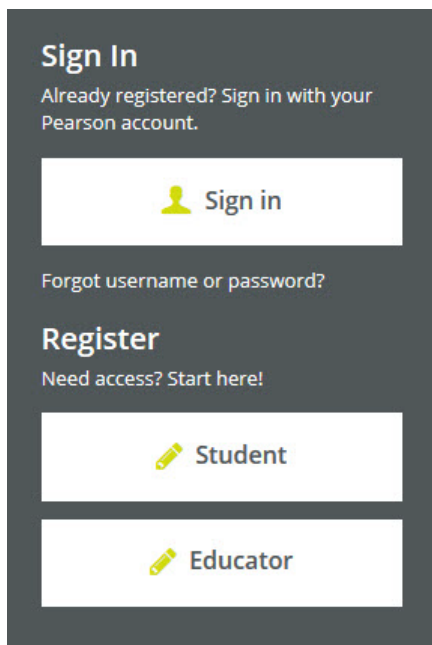
If you choose to purchase access from the MyMathLab site, follow the instructions listed in the "Ordering Information" section below, or the "Materials" section in Moodle.

### Ordering Information

#### Steps for Purchasing Access to MyMathLab Course and eText

To purchase access from the MyMathLab site, follow these steps:

1. Go to <http://www.mymathlab.com>.
2. On the home screen, click "Student" in the sign-in/registration box.



3. On the next screen, you will click "Register now." Make sure that you have the three things required to register successfully: an e-mail address, your course ID, and either an access code (purchased prior) or a credit card or Pay Pal account (if you do not already have a code). Your Course ID for this course can be found in the Getting Started module and the Materials link on the course Moodle page.
4. On the next screen, you will see the name of the course listed in the "Your Course" box on the right side of the screen. It should read **MATH 1009 2.0.(4): Mathematics for Prospective Elementary School Teachers I**, taught by "LSU ODL." Disregard the course end date. At this point, you should create a Pearson account. Once you complete the registration steps, you will have a choice between using a previously purchased access code (see below) and purchasing access with a credit card or PayPal.

Please review the following tips for ordering your course materials:

1. Do not purchase your textbooks until your enrollment is approved. During the processing period, a new section may be opened that could require a different textbook or edition.
2. *Always order by the ISBN.* Publishers and vendors often offer the same textbook title under different ISBNs. You must have the correct ISBN to access your online website.
3. If you are having problems locating a textbook, contact us at [Answers@outreach.lsu.edu](mailto:Answers@outreach.lsu.edu) for assistance.

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### **Other Materials and Resources**

Written module assignments may be submitted using a recent version of MS Word. However, many of the solutions to the exercises will be difficult to type or may involve drawing pictures. Therefore, access to a camera or scanner will be necessary.

**Software:** MS Word, Web Browser, Adobe Acrobat Reader

A recent version of MS Word is required to open the guided lecture notes and written assignments in each module.

It is recommended that you use Mozilla Firefox or Google Chrome as your web browser. Internet Explorer is not compatible with your Moodle course site.

Adobe Acrobat Reader is required to view PDF document files.

**Hardware:** Web cam with a microphone (built-in or external), headphones or working speakers, and high-speed internet

Proctored exams are completed online and require the hardware listed above. Students are encouraged to review the technical requirements provided on the ProctorU website and to perform a test on their equipment prior to enrolling in this course to make sure they have the necessary resources available. There is a separate charge for each proctored exam.

**Technical Requirements:** <http://www.proctoru.com/tech.php>

**Equipment Test:** <http://www.proctoru.com/testitout/>

### Nature and Purpose of the Course

**Course Outcomes.** Upon completion of this course, students are expected to be able to:

1. Use the terminology and tools of logic to determine whether statements are true or false.
2. Use place value in the familiar base 10 system, as well as in other numeration systems and other base systems.
3. Use Venn diagrams and set operations to solve problems.
4. Use the tools of basic number theory, including prime factorization, greatest common divisor, and least common multiple.
5. Identify and use properties of whole numbers, integers, rational numbers, irrational numbers, and real numbers.
6. Explain and perform addition, subtraction, multiplication, and division of whole numbers, integers, rational numbers, and real numbers.
7. Solve problems involving ratio and proportion.
8. Solve problems involving percent and interest.
9. Use variables and equations to solve problems.
10. Define and identify relations and functions and their properties.

This course is intended for students pursuing an elementary education degree or certificate. It covers many properties of the real number system and specific skills and concepts found in elementary school curricula across the country. You will learn not only to perform computational algorithms, but also to show why they work. You will learn a wide variety of problem-solving strategies and techniques.

This is not a course in methods of teaching mathematics. It is a math course designed to teach you the math content you must know well to effectively teach elementary school math and science. As an elementary school teacher, you will be teaching mathematics and answering questions about mathematics on an almost daily basis. It is hoped that this course will help you to explain mathematical concepts to your students and to introduce ideas to them that will make mathematics interesting and enjoyable.

### Working with the Course Materials

Remember, this course covers an entire semester of work, or the equivalent of a classroom course lasting 15 weeks. That means that each module in this course equals nearly a week of course work and will require the same time and effort on your part. *Do not expect to complete each module in a single study session. Understand, too, that if you choose to submit assignments at a very high pace, your instructor may not be able to grade your work at the same rate.*

Each module contains information, activities, and assignments organized under a consistent series of headings. Get familiar with how the module is organized. Each module in this course is organized into the following sections: the Module Learning Objectives, the Reading

Assignment, the graded MyMathLab assignment, and the graded Moodle Written Assignment. You should work through these parts of the module in order. Specific recommendations are provided in a link to the course module instructions, which you should review before beginning the first module.

Begin each module by downloading the guided lecture notes. Use these notes as you read the assigned sections in the eText. Fill in answers to the questions, work through the examples, and make notes of any definitions, rules, and procedures given in the eText.

Each module contains two graded assignments, one in MyMathLab and one in Moodle. Complete the MyMathLab assignment first and then move on to the Moodle written assignment.

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### **Suggested Study Techniques**

1. Carefully review the module objectives to help you focus on the information that will be covered on the exams.
2. Concentrate on the reading assignments, the module lecture material, and any additional resources provided. This review should include a detailed examination of any illustrative problems and examples. After an assignment has been completed, a rapid re-reading of the related text and other materials is strongly recommended.
3. Put yourself on a definite schedule. Set aside a certain block of hours per day or week for this course and work in a place where distractions are minimal.
4. Try to submit at least one assignment each week or at least every two weeks. Delays in submitting assignments usually result in lagging interest and the inability to complete the course.
5. Review your module assignments after they have been graded, paying special attention to any instructor feedback provided. We suggest that you wait for assignment feedback before you submit subsequent assignments.
6. Regardless of how you complete your graded assignments, keep in mind that module completion should not be your sole preparation for your exams. As with any college course, you should study for your exams.

### **Reading Assignments**

To do well in this course, it is essential that you read and study the eText before attempting the module assignments. Begin each module by downloading the guided lecture notes. Use these notes as you read the assigned sections in the eText. Fill in answers to the questions, work through the examples, and make notes of any definitions, rules, and procedures given in the eText.

You will read an average of 20 pages per module. Specific reading assignments will be given in each module.

### Topic Outline

This course covers the following specific topics:

<b>Module</b>	<b>Topic</b>
01	Problem Solving; Patterns and Sequences
02	Logic
03	Sets, Set Operations, and Venn Diagrams
04	Numeration Systems; Bases Other Than 10
05	Whole Number Addition and Subtraction
06	Whole Number Multiplication and Division
07	Basic Number Theory
<b>Mid-Course Examination</b>	
08	Addition and Subtraction of Integers; Absolute Value
09	Multiplication and Division of Integers; Ordering Integers
10	Rational Numbers; Addition and Subtraction of Rational Numbers
11	Multiplication and Division of Rational Numbers; Exponents with Rational Numbers
12	Ratio and Proportion
13	Decimals; Operations on Decimals
14	Percent and Interest; Real Numbers
15	Variables, Equations, and Functions
<b>Final Examination</b>	

### Module Assignments

Each module contains two assignments: one in MyMathLab and a written assignment in Moodle. Once you have thoroughly read the assigned sections in the eText and reviewed your guided lecture notes, you are ready to start the MyMathLab assignment.

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### MyMathLab Assignments

Most of the MyMathLab exercises are algorithmically generated, have learning aids readily available to show you how to work the exercises, and can be attempted more than once. This means you can and should use the MyMathLab exercises to practice and master the skills.

Your goal is to be able to work these exercises without help of any kind, not just to get a good grade on the assignment.

When working your MyMathLab assignments, you should save after completing each exercise. If you rely on the MyMathLab learning aids or other help to get the correct answer, then use the "Similar Exercise" feature and rework the exercise repeatedly until you complete it correctly without any help. This is essential. Many students who become overly dependent on the learning aids or other assistance to get a score of 100% on the homework assignment find that they score much lower on the exams. Note that exercises labeled "Mathematical Connections" have a limited number of attempts.

### **Assignment Verification: Getting Credit for Your MyMathLab Assignment**

When you have completed a module assignment in MyMathLab, you must also submit the corresponding assignment verification in Moodle. This sends a notice to your instructor that you have completed the assignment in MyMathLab and the grade can be transferred to the Moodle gradebook. You can review your completed assignments in the gradebook in MyMathLab.

To submit the module assignment verification in Moodle, click on "Module XX MyMathLab Assignment Verification" in the module and follow the instructions given there. Do not submit the assignment verification in Moodle until you are satisfied with your attempts in MyMathLab. Your assignment grade is not final until it is entered in the Moodle gradebook.

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### **Moodle Written Assignments**

Once you have completed the MyMathLab assignment, you are ready to prepare and submit the written assignment in Moodle.

Download the file and complete the exercises. You must show your work in order to receive credit on this assignment. You may type your work in MS Word when appropriate, but in most cases, you will find it necessary to handwrite or draw the solutions. If you decide you want to handwrite your answers, print out the document and write directly in spaces provided. When finished, either take a photograph of your document and convert the image file to a PDF, or scan the document and convert the file to a PDF. Scanning is preferred.

If you are unable to save your document as a PDF with your existing software, there are many PDF creators available for free on the Web. Before submitting your assignment for grading, be sure to review the PDF to make sure all text, tables, and figures are displayed properly and that there are no inconsistencies between the PDF and your original document.

If typing your answers, there is no need to convert to a PDF; you can upload the file as a Word document. Only one attempt is allowed for the written assignments.

### Coursework Completion Notification

After submitting the module 15 written assignment, review your assignments to make sure you have completed and submitted all of the required MyMathLab assignments, corresponding Moodle verifications, and the Moodle written assignments. Then, go to MyMathLab and submit the "Coursework Completion Notification" as well as the corresponding verification in Moodle.

By submitting this verification, you are stating that all of your assignments are complete and you are ready to take the final exam. Your instructor will be notified and will review your work and three-week enrollment date before grading the notification. The coursework completion notification requires a grade to unlock access to the final exam. However, the grade does *not* count toward your final course grade.

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### Permission to Take the Final Exam

You must have a grade posted in the Moodle grade book for the Module 15 MyMathLab Assignment, the Module 15 Written Assignment, as well as the Coursework Completion Notification in MyMathLab in order to unlock access to the Final Exam.

Your instructor will normally post a grade for your assignments within seven calendar days of submission. Understand that occasional delays will occur, such as during holidays and semester breaks or if you submit several module assignments within the same week. You must have been enrolled in the course for *at least three weeks*, regardless of when the modules and other exams are completed, before you are eligible to take the final exam.

## Academic Integrity

Students in Online Distance Learning (ODL) courses must comply with the *LSU Code of Student Conduct*. Suspected violations of the academic integrity policy may be referred to LSU Student Advocacy & Accountability (SAA), a unit of the Dean of Students. If found responsible of a violation, you will then be subject to whatever penalty SAA determines and will forfeit all course tuition and fees.

### Plagiarism

Students are responsible for completing and submitting their own course work and preparing their own modules. All work submitted in the course modules must be the student's own work unless outside work is appropriate to the assignment; all outside material must be properly acknowledged. It is also unacceptable to copy directly from your textbook or to use published answer keys or the teacher's edition of a textbook.



## Collaboration

Unauthorized collaboration constitutes plagiarism. Collaborative efforts that extend beyond the limits approved by the instructor are violations of the academic integrity policy. Students who study together are expected to prepare and write their own individual work for submission and grading.

For more information and links to the *LSU Code of Student Conduct* and the SAA website, go to the [ODL Academic Integrity policy](#) on our website.

## Examinations and Grading Policy

There will be two proctored exams that you will take in MyMathLab. The mid-course exam covers material from modules 01-07 and follows module 07. The final exam is comprehensive and follows module 15. Each exam has approximately 45 questions. The exercises will be similar to those in the MyMathLab assignments and the written Moodle assignments, and may include multiple-choice and true-or-false questions. You will not be expected to show work in MyMathLab on either exam.

You are not permitted to use textbooks, tables, a calculator, or any other aids during the examinations. This means you must learn the formulas and processes as they are presented. You do not need to learn proofs of theorems for the examinations.

You are allowed a blank white board during the exam. To verify the white board is blank, you must show your white board to the proctor before you begin your exam. At the end of the exam, the proctor will instruct you to wipe clean the white board; the proctor must witness you wiping clean the white board.

Just like the MyMathLab assignments, once you have completed your exam in MyMathLab, you must also submit your "Exam Verification" in Moodle.

You will have a maximum of *three* hours to complete the exam.

The MyMathLab module homework assignments are worth varying numbers of points, depending on the assignment; your homework assignment grade is the percentage score of available points earned.

The written module assignments in Moodle are each worth 25 points. Your grade on each of these assignments will be the percentage of the 25 points you earned.

The mid-course exam is 100 points.

The final exam is 100 points.

**YOU MUST PASS THE FINAL EXAMINATION  
IN ORDER TO PASS THE COURSE.**

If you pass the final exam, your course grade will be computed as follows. Course grade = average of module assignments + average of quizzes + exam scores. Each component is weighted by the percentages in the table below.

Course grade =

<b>Component</b>	<b>Weight (%)</b>
Average of MyMathLab Assignments	15%
Average of Moodle Written Assignments	15%
Mid-Course Exam	30%
Final Exam	40%

The following grading scale applies.

- 97%–100% = A+
- 93%–96% = A
- 90%–92% = A-
- 87%–89% = B+
- 83%–86% = B
- 80%–82% = B-
- 77%–79% = C+
- 73%–76% = C
- 70%–72% = C-
- 67%–69% = D+
- 63%–66% = D
- 60%–62% = D-
- 0%–59% = F

**IMPORTANT:** Remember, the final exam cannot be taken until you meet the following requirements. Under no circumstances may the final exam be taken earlier.

1. You must have been enrolled in the course for *at least three weeks*, regardless of when the modules and other exams are completed.
2. You must have a *grade posted in the Moodle grade book for the module 15 MyMathLab and Moodle Written Assignments, as well as the Coursework Completion Notification in MyMathLab in order to unlock access to the Final Exam*. Please allow at least seven days for the final assignment grades to be posted in the gradebook.

To read the full exam policy and other policy statements, visit <http://www.outreach.lsu.edu/Distance-Learning/Online-Distance-Learning/Guidelines-Policies/Policies/Academic-Integrity>. Go to Continuing Education's homepage. Click on *Extended Campus*, select *Online Distance Learning*, and then click the link for *Guidelines and Policies*.

## Taking Your Examinations

You are *required* to create a Louisiana State University ODL ProctorU account and to take your examinations through ProctorU, a remote proctoring service that allows you to take exams anywhere with internet access (some restrictions apply). Information on creating your ProctorU account can be found in the *Getting Started* module. You cannot use an account created through another university, so if you already have an account, you will still need to create an account associated with LSU Online Distance Learning (ODL).

The ProctorU website provides links you can use to find out how ProctorU works and to check your computer to see that it meets the technical requirements. In addition, to test using ProctorU, you need *access to a web cam with a microphone (built-in or external), headphones or working speakers, and high speed internet* to use this service. A complete list of technical requirements is available from the ProctorU website.

You should schedule your exams about a week before you are ready to take them in order to avoid any additional charges.

## Transcript Information

After you have completed this course, your grade will be filed with the Office of the University Registrar. If a transcript is needed, it is your responsibility to make a request to the registrar. If you would like to order a transcript, visit the Office of the University Registrar Transcript Requests page to view your options (<https://www.lsu.edu/registrar/student-services/transcript.php>).

## Copyright

## Syllabus

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DB, TK; JM