

# Chicago Public Schools and City Colleges of Chicago

## Math 90: Mathematical Literacy for College Students

2018-2019

Upon successful completion of this course, students will be allowed to enroll in Math 118 or Math 125. **You must receive a C or higher in both semesters of Math 90** in order to be eligible for these math classes.

Instructor Information	
Math 90 Instructor	<i>Ms. Maletsky</i>
E-mail	<i>ms.maletsky@comlinkshs.org</i>

Required Course Materials	
Textbook & MyMathLab	<ul style="list-style-type: none"> <li>• <b>Textbook:</b> <i>Math Lit: A Pathway to College Mathematics</i>, 2<sup>nd</sup> ed., Kathy Almy, Pearson, 2017.</li> <li>• MyOpenMath access, which includes exercises, study aids, an electronic version of the textbook and much more. Quizzes and homework must be completed on MyOpenMath.</li> </ul>
MyOpenMath Account	<a href="http://www.myopenmath.com">www.myopenmath.com</a> <b>Course code: 39793</b> <b>Enrollment key: CLHSmath90</b>
Additional Materials	<ul style="list-style-type: none"> <li>• One spiral notebook used for this class only</li> <li>• One folder or binder</li> <li>• Pen/pencil</li> <li>• Calculator: you will have the opportunity to borrow a CLHS calculator for the year</li> </ul>

Course Overview	
Course Description	<p>Mathematical Literacy for College Students is designed to enable students to develop conceptual understanding and problem solving competence as preparation for quantitative and statistical reasoning level math. This course integrates numeracy; proportional, algebraic &amp; statistical reasoning; functions and modeling and focuses on developing mathematical maturity through problem solving, critical thinking, data analysis, and the writing and communications of mathematics. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. Emphasis is placed on modeling and problem solving, with techniques and manipulations covered in context. Throughout the course, Math success content will be integrated with mathematical topics. Credit earned does not count toward any degree, nor does it transfer.</p>
Course Objectives	<ul style="list-style-type: none"> <li>• Apply the concepts of numeracy in multiple contexts.</li> <li>• Recognize proportional relationships and use proportional reasoning to solve problems.</li> <li>• Use algebra to write relationships that involve variables, interpret those relationships, and solve problems.</li> <li>• Interpret and move flexibly between multiple formats including words, graphs, tables, and equations.</li> </ul>

	<ul style="list-style-type: none"> <li>● Develop the ability to think critically and solve problems in a variety of contexts using the tools of mathematics and technology.</li> <li>● Demonstrate understanding of the characteristics of functions and apply this knowledge in modeling and problem solving.</li> <li>● Use mathematically correct vocabulary and symbolism to communicate orally- and in writing- problem statements, problem-solving methods, and interpretations of the solutions to problems.</li> <li>● Recognize statistical relationships and use statistical reasoning to solve problems.</li> </ul>
Student Learning Outcomes	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <ul style="list-style-type: none"> <li>● Demonstrate operation sense and communicate verbally and symbolically the effects of common operations on numbers.</li> <li>● Demonstrate an understanding of and competency in using magnitude in the context of place values, fractions, and numbers written in scientific notation.</li> <li>● Use estimation skills, knowing how and when to estimate results and to what precision, to solve problems, detect errors, and check accuracy.</li> <li>● Demonstrate measurement sense. (Calculate geometry formulas; Convert units; Find unknown values with appropriate units; etc.)</li> <li>● Demonstrate an understanding of the mathematical properties and uses of different types of mathematical summaries of data (e.g., measures of central tendency) and mathematical models.</li> <li>● Read, interpret, and make decisions based on data from graphical displays (e.g., line graphs, bar graphs, scatterplots, and histograms).</li> <li>● Interpret the structure of expressions: Identify parts of an expression, such as terms factors and coefficients.</li> <li>● Write expressions in equivalent forms to solve problems. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.</li> <li>● Perform arithmetic operations on polynomials</li> <li>● Use Factoring to Solve Equations.</li> <li>● Create equations that describe relationships. Create equations and inequalities in one variable and use them to solve problems.</li> <li>● Solve equations and inequalities in one variable, including equations with coefficients represented by letters.</li> <li>● Solve systems of equations algebraically &amp; graphically</li> <li>● Interpret equations that arise in applications in terms of the context</li> <li>● Analyze equations using different representations</li> <li>● Determine linear equations that models a relationship between two quantities</li> <li>● Compare linear, quadratic, and exponential models and solve problems</li> <li>● Recognize proportional relationships from verbal and numeric representations.</li> <li>● Compare proportional relationships represented in different ways.</li> <li>● Apply quantitative reasoning strategies to solve real-world problems with proportional relationships. (including similar triangles)</li> <li>● Apply formulas of Area, Perimeter and Volume to basic 2- &amp; 3- dimensional figures</li> <li>● Know and Apply the Pythagorean Theorem to various contextual situations</li> <li>● Demonstrate written and verbal skills in relation as appropriate to course content.</li> <li>● Demonstrate critical thinking by analyzing ideas, patterns, and principles.</li> <li>● Develop the ability to use mathematical skills in diverse scenarios and contexts, and demonstrate flexibility with mathematics through various contexts and presentations of information (tables, graphs, words, equations).</li> </ul>

## Evaluation

Attendance	<p><b>Attendance is an essential part of the course. Regular attendance is expected of all students in the course. If you are absent, you are responsible for all work and assignments covered in that day's class.</b></p> <ul style="list-style-type: none"> <li>● If your absence is excused, any homework previously assigned is due on the day you return. You will have one day for every day you missed to make up new work.</li> <li>● If your absence is unexcused, you will get a 0 for any class work that day.</li> </ul>												
Participation	Participation will be measured using a variety of techniques including in-class and group discussions. You should be actively engaged.												
Homework (HW/CW) & Quizzes	<p><b>Homework is an essential part of the learning process; do not expect to do well in this course without keeping up with the homework.</b> Students will be given three (3) opportunities per quiz, receiving credit for the highest one.</p> <p><b>In order to take each quiz you must complete 60% of each homework assignment for that section.</b></p> <p>In-Class Quizzes will occur 2 weeks before/after each exam (4 Total)</p>												
Exams	There will be a total of eight (8) exams given during this course. <b>The midterm (exam 4) and final exam (exam 8) are comprehensive exams, covering all previously covered material.</b>												
Academic honesty	Academic integrity is expected. <b>If you are caught cheating you will receive a zero (0) for that assignment. If you are caught a second time you will be administered an F for the course.</b>												
Grade Weights	<p>Your semester grade will be determined by the following weighted average.</p> <table> <tr> <td>10%</td> <td>Participation</td> </tr> <tr> <td>20%</td> <td>Homework (MyOpenMath and Written)</td> </tr> <tr> <td>10%</td> <td>Projects</td> </tr> <tr> <td>10%</td> <td>Quizzes</td> </tr> <tr> <td>30%</td> <td>Exams</td> </tr> <tr> <td>20%</td> <td>Final Exam</td> </tr> </table> <p><b>Before determining the grade given for quizzes, the lowest quiz score will be dropped.</b></p> <p>**a few extra credit opportunities may be given throughout the semester, as determined appropriate by the instructor**</p>	10%	Participation	20%	Homework (MyOpenMath and Written)	10%	Projects	10%	Quizzes	30%	Exams	20%	Final Exam
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Grading scale	<table> <tr> <td>A</td> <td>90 and above</td> </tr> <tr> <td>B</td> <td>80 up to 90</td> </tr> <tr> <td>C</td> <td>70 up to 80</td> </tr> <tr> <td>D</td> <td>60 up to 70</td> </tr> <tr> <td>F</td> <td>below 60</td> </tr> </table>	A	90 and above	B	80 up to 90	C	70 up to 80	D	60 up to 70	F	below 60		
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Makeup Policy	Permission to make up a quiz or an exam is subject to the discretion of the instructor, and will be granted only in cases of emergency (an unavoidable absence). If an absence is anticipated, the student should notify his/her instructor prior to the absence. Students need to present written documentation to qualify for a make-up exam.												

**Revision Clause:**

As the instructor, I reserve the right to edit, update, and/or add to this syllabus at any time during the semester. All changes will be announced in class and posted on MyOpenMath. Students are responsible for any changes whether or not they were present when the changes were announced.

Student Signature: \_\_\_\_\_

Date: \_\_\_\_\_