# MATH 50 OUTLINE

**PRE-ALGEBRA**


Approved: May 11, 2012 (Rev. Dec 2014)  
Effective: FALL 2015

<table>
<thead>
<tr>
<th>MATERIAL TO BE COVERED</th>
<th>SECTIONS FROM TEXT</th>
<th>TIME LINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rounding, tables, charts, graphs. Introduction to solving equations. Introduction to exponents. Order of operations. Mean and median. Perimeter, area, volume of geometric figures.</td>
<td>1.1 - 1.6</td>
<td>3.5 Hours</td>
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<tr>
<td>Operations with integers. Exponents, square roots, order of operations. Applications.</td>
<td>2.1 - 2.6</td>
<td>5 Hours</td>
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<tr>
<td>Simplifying algebraic expressions. Adding, subtracting, multiplying polynomials. Laws of exponents. Prime factorization, Greatest Common Factor. Introduction to factoring.</td>
<td>3.1 - 3.7</td>
<td>6.5 Hours</td>
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<tr>
<td>Solving equations. Translating word sentences to equations.</td>
<td>4.1 - 4.5</td>
<td>4 Hours</td>
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<tr>
<td>Operations with rational expressions: simplifying, evaluating, solving equations. Least Common Multiple. Irrational numbers. Circumference and area of a circle.</td>
<td>5.1 - 5.8</td>
<td>7 Hours</td>
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<tr>
<td>Operations with decimals: simplifying, evaluating, solving. Converting between decimals and fractions. Scientific notation. Pythagorean Theorem.</td>
<td>6.1 - 6.6</td>
<td>3.5 Hours</td>
</tr>
<tr>
<td>Ratios, proportions, unit conversion (American). Optional: conversion of metric units. Optional: uniform motion applications.</td>
<td>7.1 - 7.3</td>
<td>3 Hours</td>
</tr>
<tr>
<td>Percents. Conversion between percent, fraction, decimal. Percent equations. Percent applications.</td>
<td>8.1 - 8.4</td>
<td>4 Hours</td>
</tr>
<tr>
<td>Rectangular coordinate system. Graphing linear equations. Optional: Points, lines and angles; applications with graphing.</td>
<td>9.2 - 9.3</td>
<td>1.5 Hours</td>
</tr>
<tr>
<td></td>
<td>Optional: 9.1 &amp; 9.4</td>
<td></td>
</tr>
</tbody>
</table>

*** One Hour = 1 hour of face time.  
****This outline allows for 4.5 hours of exams.

16 Week Term: 1 week = 2.8333 hours (face time)  
6 Week Term: 1 week = 7.5 hours (face time)

**NOTES:**

1. It is imperative to follow the timeline listed above to ensure adequate coverage is given to ALL topics listed.

2. This course should be taught as an algebra course and not an arithmetic course. Student success in Math 51 and Math 51A depends on the algebra skills they develop in this course. Arithmetic problems should be assigned as homework, but tests and quizzes should emphasize algebra concepts.

3. Please refer to the attached Math 50 Final Exam Sample Problems as a guide for the difficulty level at which this course is expected to be taught.

4. Conversion of American units should be taught using the unit conversion fraction, memorization of American units is not required.

**See reverse side for important Department Policy**

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Rev: Dec 2014
MATH DEPARTMENT POLICY

1. Two to four exams during the semester are recommended. The exams should generally be closed book, covering large blocks of material (usually more than one chapter). Students should demonstrate problem-solving skills by showing work for a significant number of problems on exams. Students should demonstrate their communication skills by writing their answers in complete sentence form for all application problems and wherever else appropriate.

2. The final exam should be comprehensive and must be given during the time stipulated in the college final exam schedule. It should stress the core material and should comprise at least 25%, but not more than 50%, of the course grade.

3. Instructors should be sensitive to the level of the course, treat review material as review, and teach to the level of the subject. Lack of proficiency in the prerequisite material and/or lack of commitment to the course work on the part of the student should not affect the content of the course, the level of instruction, or the difficulty of the problems assigned and tested.

4. Grading Policy:

   For Math 50, 51, 51A, 51B, 52, 71, 71A, 71B, 72

   At least 85% of the grade should be based on proctored, individual quizzes and exams (including the final exam).

   For Math 100 and 110H, 210

   At least 75% of the grade should be based on proctored, individual quizzes and exams (including the final exam).

   For all other Math classes

   At least 80% of the grade should be based on proctored, individual quizzes and exams (including the final exam).

Math Department: Approved 12/10/04