# Mathematics Department

## Math 99 – Intermediate Algebra with Geometry - Course Syllabus & Calendar

**Summer 2009 / 5 Credit Hours / MML Pilot Program**

<table>
<thead>
<tr>
<th><strong>Instructor</strong></th>
<th>Simon Aman, Ph.D.</th>
</tr>
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<tbody>
<tr>
<td><strong>Office</strong></td>
<td>Room 3810</td>
</tr>
<tr>
<td><strong>Email</strong></td>
<td><a href="mailto:saman2@ccc.edu">saman2@ccc.edu</a> (email is the best way to reach me. Include your name and section)</td>
</tr>
<tr>
<td><strong>Phone</strong></td>
<td>(773) 907-4083</td>
</tr>
<tr>
<td><strong>WWW</strong></td>
<td><a href="http://faculty.ccc.edu/saman2">http://faculty.ccc.edu/saman2</a> &amp; <a href="http://www.coursecompass.com">www.coursecompass.com</a></td>
</tr>
<tr>
<td><strong>Office Hours</strong></td>
<td>Immediately after each class!</td>
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</tbody>
</table>

## Prerequisites

- COMPASS Algebra score \( \geq 49 \) or \( \geq C \) on Math 98!

## Online Textbook & Technology Resources

- MyMathLab student access kit is required. This online tool includes the electronic version of the textbook, the assignments & much more. You may buy this access code either from the Beck’s Bookstore OR online at [www.coursecompas.com](http://www.coursecompas.com) (it is cheaper online).
- Beginning & Intermediate Algebra, 4th e, Martin-Gay, Pearson/Prentice Hall is the recommended textbook. It is **NOT** required! But the MyMathLab access code is required.
- Access to your assignments and other online tools via [www.coursecompass.com](http://www.coursecompass.com) website. Registration and log-in instructions will be provided in class.

## Calculator

- Any scientific calculator is acceptable! I recommend the TI-30XII scientific calculator (it costs less than $20).

## Course Description

Algebraic topics include: rational exponents; scientific notation; radical and rational expressions; linear, quadratic, quadratic in form, rational, radical, and absolute value equations; compound linear inequalities; literal equations; systems of linear equations in two and three variables; systems of linear inequalities; and introduction to functions. Geometric topics include: perimeter; area; volume; Pythagorean Theorem; and similarity and proportions. Students should be exposed to graphing calculator technology and/or computer algebra systems. Writing assignments, as appropriate to the discipline, are part of the course.

## Class work & Homework assignments

There will be graded online class-work and homework assignments @ [www.coursecompass.com](http://www.coursecompass.com) on each topic covered in class. You will get immediate feedback on each class work and homework problem, and incorrectly worked problems can be repeated with a new version of the problem provided by the computer until a correct solution is obtained. Tips and examples are available for each problem. Assignments must be completed before the beginning of the next class day after the section is covered in class. Homework may be done at any location with an internet access. Do not wait till the last minute to complete your assignments and quizzes because a computer glitch may prevent you from accessing your account. For emergency access to homework assignments and quizzes online use: [http://www.mathxl.com/login_mml.htm](http://www.mathxl.com/login_mml.htm)

## Quizzes

Timed online quizzes will be assigned as take-home assignments. Tips and examples are **NOT** available during quizzes and tests.

## Tests

There will be two tests. The second test is going to be the final exam. Some parts of the tests may be given on paper-and-pencil format.

## COMPASS exam

All students are required to take the COMPASS test during the last week of the semester at room L912 - the Assessment Center.

## Academic Support

- [http://www.trumancollege.cc/studentservices/tutoring](http://www.trumancollege.cc/studentservices/tutoring) (Tutoring Center)
- [http://www.trumancollege.cc/studentservices/ssli](http://www.trumancollege.cc/studentservices/ssli) (Student Services)

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6/3/2009
Computer Labs: Room 3817, (CL) Room 3186; (WAC) Room 2247; (CTC) Room L112; Room L933

Attendance & Active participation Policy: Attendance will be taken at every class meeting. Those who repeatedly come to class late or leave early will only receive 1 or 2 points for attendance.

Active pursuit of course objectives Policy (ADW): You may be administratively withdrawn from this class if any two of the following occur:
1. You fail to complete & submit at least 70% of ALL assignments during the first half of the semester.
2. You fail to complete & submit at least 70% of ALL quizzes & tests during the first half of the semester.
3. You fail to attend more than 50% of class meetings during the first half of the semester.
4. You fail to attend for two consecutive weeks during the first half of the semester.

Make up policy: No makeup work will be allowed on quizzes. The lowest quiz score will be dropped.

Cell phone policy: Cell phones are NOT allowed in classroom. Your cell phone needs to be out of sight and turned off. Cell phones are not allowed to be used as calculators.

Academic Dishonesty: Any student discovered receiving assistance from or giving assistance to another student on an exam or quiz, or cheating in any other way will be given a zero grade for that exam or quiz. A second infraction will result in a failing grade (F) for the class.

Accommodation: Contact the Disability Access Center (Room 1428) as soon as possible and if you are willing, let me know how I can help.

Grading Policy:

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<tr>
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<th>Percent</th>
<th>Total Score</th>
<th>Final grade</th>
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<tbody>
<tr>
<td>Midterm Exam</td>
<td>20%</td>
<td>[90%, 100%]</td>
<td>A</td>
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<tr>
<td>Final Exam</td>
<td>30%</td>
<td>[80%, 90%)</td>
<td>B</td>
</tr>
<tr>
<td>Class work &amp; Homework</td>
<td>35%</td>
<td>[70%, 80%)</td>
<td>C</td>
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<tr>
<td>Take-home Quizzes</td>
<td>5%</td>
<td>[60%, 70%)</td>
<td>D</td>
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<tr>
<td>Attendance</td>
<td>5%</td>
<td>[0%, 60%)</td>
<td>F</td>
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<td>Portfolio*</td>
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NOTE: if your Algebra score on the COMPASS exit test is 49 or more, you will be able to pass this class no matter what your course grade is!

*Portfolio: At least 2 problems from each section must be worked out on paper written with mathematical & logical accuracy. These sample problems will be collected and evaluated periodically. For each sample problem of your choice, include title and section of the text book. A sample work will be posted online.

I expect each of my students to:

- Read the syllabus carefully & regularly
- Attend class regularly and come to class on time and prepared.
- Participate and pay attention to class discussions.
- Do the assignments on time.
- Contact me or visit the Tutoring Center if you need help with assignments.
- Respect the class and me by NOT talking while I or another student is talking.
- Have high standards of conduct and work ethic.
- Turn off your cell phones during class-time. Talk to me about any exceptions!
Course Objectives:

1. Develop the algebraic skills necessary for problem solving.
2. Develop the ability to model linear, quadratic, and other nonlinear relations, including the use of the graphing techniques and geometrical principles as tools, for the purpose of solving contextual (real-world) problems.
3. Manipulate and apply literal equations for the purposes of solving contextual (real-world) problems.
4. Writing and communicating the results of problem solving appropriately.
5. Use technology as one aide for the purposes of solving contextual (real-world) problems.

Student Learning Outcomes:
Upon satisfactory completion of the course, students will be able to:

1. Simplify expressions containing rational exponents.
2. Perform operations on and simplify radicals.
3. Perform operations on and simplify rational expressions.
4. Solve quadratic equations with real solutions, including the use of the quadratic formula.
5. Solve rational equations.
6. Solve absolute value equations of the form \(|ax + b| = c\).
7. Solve radical equations of the form: \(\sqrt{ax + b} = c\).
8. Solve compound linear inequalities.
9. Solve systems of linear inequalities in two variables.
10. Solve systems of linear equations in two and three variables.
11. Formulate and apply an equation, inequality or system of linear equations to a contextual (real-world) situation.
12. Solve and evaluate literal equations, including nonlinear equations.
13. Formulate and apply nonlinear literal equations to a contextual (real-world) situation.
14. Graph linear and quadratic equations.
15. Determine equations of lines, including parallel and perpendicular lines.
16. Determine whether given relationships represented in multiple forms are functions.
17. Determine domain and range from the graph of a function.
18. Formulate and apply the concept of a function to a contextual (real-world) situation.
19. Interpret slope in a linear model as a rate of change.
20. Apply formulas of perimeter, area, and volume to basic 2- and 3-dimensional figures in a contextual (real-world) situation.
21. Apply the Pythagorean Theorem to various contextual (real-world) situations.
22. Apply the concepts of similarity and congruency of triangles to a contextual (real-world) situation.

6/3/2009
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<tr>
<th>Week</th>
<th>MONDAY</th>
<th>TUESDAY Math 98</th>
<th>WEDNESDAY</th>
<th>THURSDAY Math 98</th>
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<td>June 2 NO CLASS</td>
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<td>June 9 Section 8.1 Section 8.2</td>
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<td>June 11 Section 8.3 Section 4.3 Section 4.4</td>
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<td>June 18 Section 7.2 Section 7.3 Section 7.4</td>
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<td>June 23 Section 7.5 Section 7.6</td>
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<td>June 25 Section 7.7 Section 9.1</td>
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<td>July 2 Section 10.1 Section 10.2 Section 10.3</td>
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<td>July 7 Section 10.4 Section 10.5</td>
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<td>July 9 Section 10.6 Section 10.7 Section 11.1</td>
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<td>July 14 Section 11.2 Section 11.3</td>
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<td>July 16 Section 11.4 Section 11.5</td>
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<td>July 21 Section 11.6</td>
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<td>July 23 Review Final Exam</td>
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