



MIDDLESEX COUNTY COLLEGE
EDISON, NEW JERSEY

MATHEMATICS DEPARTMENT

Date: July 14, 2009

Course Title: Combination Course/Basic Mathematics Alternative and Algebra I

Course No.: MAT 009/013

Class Hours: 4 per week

Laboratory Hours: 15 per semester

Credit Hours: 0

Dept. Head Approval: _____
Maria DeLucia, Ph.D.

Dean Approval: _____
Reginald Luke, Ph.D.

Prerequisite

Appropriate cut-off score on the Accuplacer placement exam

NOTE: A minimum grade of 'C' is required for movement from one remedial course to another and for completion of the remedial requirements to qualify for credit courses

Textbook of Course

Author: Miller, O'Neill, Hyde
Title: Introductory Algebra 2nd Edition
Publisher: McGraw-Hill

Software for the course- the textbook comes packaged with access codes for the following:

1. ALEKS is a Web-based, artificially intelligent assessment and learning system. Aleks uses adaptive questioning and accurately determines exactly what a student knows and what a student doesn't know in the course. Aleks will be used extensively in the lab for the Mat-009 part of the course and will be a requirement in the algebra portion of the course. More information about Aleks will be provided in written detailed instructions and during instructor orientation that takes place the week before the semester begins.

2. MathZone is a powerful Web-based tutorial for homework, quizzing, testing and multimedia instruction. MathZone offers practice exercises, videos, animated tutorials called e-professors and access to NetTutor. It is not mandatory that you use MathZone in any specific way.

Calculator

Students are not permitted to use a calculator for any part of the Mat-009 course. Students may use a scientific calculator (not a graphing calculator) after Test #1 on operations with integers in the Mat-013 component of the course.

Catalog Course Description for Mat-009

This course focuses on computational skills and problem solving. Topics include addition, subtraction, multiplication and division of whole numbers, fractions and decimals, ratio and proportion, percent, measurement areas and perimeters of geometric figures, Pythagorean theorem and measures of central tendency (mean, median and mode). Applications are included as well.

Objectives of Mat-009

The student will demonstrate through quizzes, written exams, homework assignments and online assessments the ability to :

- 1.add, subtract, multiply and divide whole numbers
- 2.solve word problems with whole numbers
- 3.name common fractions in lower and higher terms
- 4.put common fractions in ascending order
5. add, subtract, multiply, and divide common fractions
- 6.solve word problems with common fractions
7. put decimal fractions in ascending order
8. add, subtract, multiply and divide decimal fractions
9. solve word problems with decimals.
- 10.write ratios as fractions and in simplest form
11. write rates as fractions and find unit rates and prices
- 12.write sentences as proportions and solve problems by writing proportions
- 13.solve word problems involving proportions
14. understand the meaning of percent
- 15.rename common fractions as percents and decimal fractions
- 16.rename percents as decimal fractions and common fractions
- 18.solve percentage word problems
- 19.compute area and perimeter of rectangles, squares, triangles and circles
- 20.understand and apply the Pythagorean Theorem
- 21.find the mean, median and mode of a data set

Catalogue Course Description for Mat-013

This is the first of a two-course sequence in algebra designed to introduce and develop the elementary concepts embodied in the topics listed above. Students will be trained in critical thinking, oral and written skills as they pertain to algebra and mathematics in general.

Objectives of Mat-013

This is the first of a two-course sequence in algebra designed to introduce and develop the elementary concepts embodied in the topics listed above. Students will be trained in critical thinking oral and written skills as they pertain to algebra and mathematics in general.

NOTE:A minimum grade of 'C' is required to be considered remediated in each of the above courses

GRADE POLICY FOR MAT-009

The grade for this course will be based on online computer work using Aleks, quizzes administered in the lab using Aleks and a cumulative paper and pencil basic mathematics final exam. The work on the Aleks pie will comprise 20% of the final grade, Aleks quizzes will comprise 30% of the final grade and the final exam will comprise 50% of the final grade. (Students must score a minimum of a 65% on the final exam to pass the course with a grade of 'C' or better). Students who do not attain at least a 'C' in the 009 part of the course by mid-semester (the exact date will be available in other handouts) will be administratively withdrawn from the Algebra part of the course.

The grades will be assigned as follows::

92%-100%	A	77%-78%	C+
89%-91%	A-	70%-76%	C
87%-88%	B+	60%-69%	D
82%-86%	B	below 60%	F
79%-81%	B-		

GRADE POLICY FOR MAT-013

ALEKS Pie	15%
ALEKS quizzes and in-class quizzes	15%
4 Tests	40%
Final Exam	30%

Grades should be assigned as follows:

92% - 100%	A	77% - 78%	C+
89% - 91%	A-	70% - 76%	C
87% - 88%	B+	60% - 69%	D
82% - 86%	B	below 60%	F
79% - 81%	B-		

Tests for Mat-013

There are **four** tests. Each instructor is responsible to produce his or her own tests.

Quizzes for Mat-013

ALEKS (on-line) quizzes will be set up for you and it is suggested that in-class quizzes are given frequently also for a total of 15% of student's grade. It is suggested that quizzes be given throughout the course, especially the first three weeks into the semester for early assessment. If a student finds the pace of the course difficult at the beginning of the semester you should suggest switching to **Mat 013A** (Algebra I Part A). The switch can be done only within the first **four** weeks of the semester.

Homework for Mat-013

Homework should be assigned each class meeting and periodically checked. Whether textbook assignments are graded or not, students should be made aware that doing homework is of the utmost importance in order to solidify learned skills and to provide a strong foundation upon which they can learn new material.

Attendance for Mat-013

There is no official attendance policy. However, students should be made aware of how important attendance is for their success. Some instructors build in extra quizzes to encourage good attendance. Whatever you choose, some students will have attendance problems and the issue needs to be addressed.

Final Exam

There is a standardized final exam for both the Mat-009 and the Mat-013 course. The final exam for Mat-009 will be given in class after the 6th week of the semester. You will be notified in a memo as to when the exam should be given. **Any student who has not completed the Mat-009 lab requirement will NOT be allowed to take the Mat-009 final exam.** Those students will receive an 'F' in Mat-009 and will be administratively dropped from Mat-013. Students must score a minimum of 65% on the Mat-009 final exam to receive a grade of 'C' or better.

The two-hour Mat-013 final exam will be administered during the last class session. It is a departmental exam and a requirement of the course. **A minimum grade of 60% on the Final Exam is required to pass the class with a grade of C or better.**

Cheating Policy

A cheating policy should be given in writing to students on the student outline.

Extra Help

Students should be informed where they can get help if they have difficulty with the subject matter. Some suggestions are:

1. If you are a full-time instructor, students should be encouraged to come for help during your office hours.
2. Students can get tutoring at two different locations:
 - a. The Tutoring Center in JLC is open many hours during the day and evening. Faculty volunteer during selected hours and peer tutors are often available to answer students' questions. A schedule of hours for the JLC Tutoring Center is made available at the beginning of the semester.

- b. The Developmental Mathematics Lab/Tutoring Center in MH 142 is available for students many hours during the day and evening. In addition to tutoring, students have access to computers on which they will be able to review and practice the skills which they have learned in class. They will be able to work on required online assignment as well as on other programs which cover basic mathematics and algebra skills.
3. Students should be encouraged to work in study groups. This will be fostered if you allow students to work in groups, at times, during your class sessions,, especially on review days.

End-Term Procedure

Review packets for the final exam are available in Center 2 and online. You will be asked to fill out an end-of-year summary sheet at end of the semester.

The following is a suggested course outline for Mat-009/013 for classes meeting twice a week. The full set of objectives is available on the Department outline for Mat-013.

NOTE: *Although you will not be teaching basic mathematics in class during the first five or six weeks of the class, your students will be working on Mat-009 in the lab. You should be keeping track of the students' time in the lab and the performance on mastery quizzes. The lab staff will send you a record of student time spent in the lab and the mastery quizzes for you to grade. The final exams will be available in Center 2. There are review packets for the Mat-009 final exam in Center 2. This would be a good idea to distribute these to your students to help review for the final exam.*

The sections that are listed below do not include the objectives to be covered. This detailed information is included in the department outline of the Mat-013 course.

<u>DAY #</u>	<u>MATERIAL COVERED</u>
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|----|---|
| 1. | Introduction <i>(During this introduction, the instructor should hand out the course syllabus, day-to-day outline and a handout on the <u>Mechanics of the Course</u>. Many of the students do not understand the concept of the course and will rely on the instructor to make things clear by giving a thorough explanation. In particular, students should be made aware that there is an additional lab requirement for this course for the first six weeks of the semester.</i> |
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Students should sign the contract and keep the yellow copy. The instructor gets the white copy and you can give the pink copy to Julie in Center 2 to file in case it is needed.

1.3-1.5

- | | |
|----|------------|
| 2. | 1.6 |
|----|------------|

Developmental Mathematics Lab/Tutoring Center Orientation

Your class has been scheduled to have a lab orientation in MH 142 for the last 90 minutes of this session. During this time, one of the lab staff will introduce you and your students to the rules, regulations and mechanics of the lab. The staff member will demonstrate some of the software that is available and help students register for the ALEKS program. Students will take an assessment test on ALEKS during this second meeting. Students will also sign up for an hour lab time per week during this lab orientation.

- 3. 2.1, 2.2
- 4. 2.3, 2.4
- 5. R.4, 2.6
- 6. TEST #1
- 7. 5.1, 5.2
- 8. 5.3, 5.4
- 9. 5.5, 5.6
- 10. 5.7, Review for Test #2
- 11. TEST #2
- 12. **FINAL EXAM FOR MAT-009** (*this final exam might not be given exactly on the 12th session. You will be notified during which week you should administer the final exam and then you can adjust your outline accordingly*).

NOTE: Students who have not completed their entire requirement for the Mat-009 course will not be allowed to take the final exam. The names of these students will be submitted to Dr. DeLucia who will administratively withdraw the students from Mat-013.

- 13. 6.1, 6.2, 6.3
- 14. 6.4, 6.5
- 15. 6.7, 6.8
- 16. 7.1, 7.2
- 17. 7.3, 7.4
- 18. 8.1, 8.2, 8.3
- 19. Catch-up and Review for Test #3
- 20. TEST #3
- 21. 3.1, 3.2
- 22. 3.3, 3.4
- 23. 3.5, 4.1
- 24. 4.2, 4.3
- 25. 4.4 and Review for Test #4
- 26. TEST #4
- 27. Final Exam Review
- 28. Mat-013 Final Exam

Check List

The following are things you will need throughout the semester:

1. *Student contracts to be signed during the second class meeting*

2. *Student syllabi (you create these using the information about the course and hand them out on the first day of class.*
3. *Final Exams (ordered for you and available in Center 2 on the day of the final)*
4. *End-term summary-to be handed in at the end of the semester*

If you have any questions, please contact Susan Shulman at Ext. #3734 or at SShulman@middlesexcc.edu or at smshulman@yahoo.com.

Thank you in advance for your cooperation.