

MIDDLESEX COUNTY COLLEGE
EDISON, NEW JERSEY

MATHEMATICS DEPARTMENT

Date: January 2010

Course Title: Basic Mathematics (Part B)

Course No. MAT 010B

Class Hours: 3

Laboratory Hours 0

Credit Hours: 0

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

Dean Approval: _____
Stephen Larkin, Acting Dean

Prerequisite: MAT 010A or equivalent

Textbook of Course:

Author: Miller, O'Neill and Hyde

Title: Basic College Mathematics, 2e

Publisher: McGraw-Hill

Software packaged with the text

Most students will have the Mat-010 text from their Mat-010A course, as well as a login and password for Aleks. These students will be allowed to work on Aleks this semester without having to pay extra for its use. Those who never worked on Aleks should have an access code to allow them to register for Aleks. There are stand-alone Aleks codes on sale in the bookstore for students who do not have an access code. The mechanics of moving the students who used Aleks for Mat-010A into the Mat-010B course might be complicated and will be handled for you either before the semester or at the very beginning of the semester. These details will be clearly explained during the compulsory orientation that will take place the week before classes begin.

Catalog Course Description:

This course is the second half of a two-semester course that focuses on computational skills and problem solving. Topics include ratio and proportion, percent, measurement, area and perimeter of geometric figures, the Pythagorean Theorem, and operations with integers. Applications are included as well. Students who successfully complete MAT 010A and MAT 010B will have fulfilled the MAT 010 requirement.

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

Goals:

This course shall enable students who plan to take Algebra I to become better acquainted with the elementary arithmetic fundamentals. The course is also designed to aid the student who does not need additional mathematics courses in his/her curriculum to gain competency in arithmetic fundamentals so that he or she may better function in the real world.

Objectives of the Course:

The student will demonstrate through quizzes, examinations, and homework the ability to:

1. write ratios as fractions and in simplest form
2. write rates as fractions and find unit rates and prices
3. write sentences as proportions and solve problems by writing proportions
4. understand percent
5. rename common fractions as percents and decimal fractions
6. rename decimal fractions as common fractions and percents
7. rename percents as decimal fractions and common fractions
8. solve percentage word problems
9. compute area and perimeter of rectangles, squares, triangles and circles
10. define US units of length, weight, and capacity and convert from one unit to another
11. define metric units of length, weight, and capacity and convert from one unit to another
12. understand and apply the Pythagorean Theorem
13. perform operations with integers

Grading Criteria:

- a. In order for a student to be considered remediated in MAT 010B, **a student has to achieve a minimum grade of 'C' in the course.** Please make sure that your students are aware of this at the beginning of the semester. This information should be in writing for the students in the course outline that you will be giving them on the first day of class. Since there are some students who will miss the first few sessions, it would be a good idea to mention these guidelines several times throughout the semester.
- b. The final grade is comprised of four parts:
- | | |
|---|-----|
| ❖ Aleks Pie | 15% |
| ❖ Aleks quizzes (required) and in-class quizzes | 15% |
| ❖ Tests | 40% |
| ❖ Cumulative Final Exam | 30% |
- (Students must score at least a 60% on the final exam to receive a 'C' in the course).

NOTE:

MAT 010B students take the same final exam as the MAT 010 students. Make sure that your students are prepared to answer questions on the final exam that were part of the MAT 010A curriculum.

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-		

Chapter Tests

There are **no** Chapter Tests specifically for MAT 010B classes. However, you can use the tests for the MAT 010 classes as a guideline. If you use many of the questions from the MAT 010 department tests to create your MAT 010B tests, please do not let the students take the tests home. If the tests are completely your own, you can determine the policy.

*ALEKS

The student textbook comes with an access code to Aleks, a program that students will be required to use. You will receive a separate instructor guide and student guides to give to your students to fully explain this program and the registration process. There will be workshops held during the week before the semester begins to familiarize you with Aleks, explain how it will be incorporated into the course and to give you an opportunity to bring up questions or concerns.

MathZone

The student textbook also comes packaged with an access code to an excellent multimedia program called *MathZone*. It provides the student with the online version of the textbook (e-book), videos of lessons on selected course objectives, step-by-step solutions to exercises, and hundreds of tracked tutorial exercises. **Because ALEKS will be compulsory for your class Math Zone should be optional as a resource for students practicing on their own.**

Note:

As an instructor, you will be registered for ALEKS. You will be given a login and password for each and you will receive a course code so that your students can register for both programs. Your students will be able to work on MathZone with or without a course code. However, if you want to see the work they are doing in MathZone you will need to be registered and receive a course code. If you would like this option, please let Susan Shulman know and a course code will be generated for you.

Homework

Most teachers give homework assigned from the textbook after each class meeting and take questions on those problems during the next class session. Some instructors collect and grade textbook homework, but due to time constraints, many do not. 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.

Because students will be working on ALEKS, you will probably want to streamline the homework from the text so that they are not overwhelmed with work.

The *MathZone* software mentioned above is another option that instructors may use for homework assignments. Test reviews and worksheets on topics that many students find difficult have been generated for use by your students. Because *ALEKS* is required, it is assumed that most students will not have time to work on *MathZone* as well.

Quizzes

Five Aleks mastery quizzes online are required of your students. There are also practice quizzes that may be taken as many times as the student would like, with the mastery quizzes being taken only twice. In addition to the Aleks quizzes, you will most likely give your own in-class quizzes. The mean of the Aleks mastery quizzes and your own quizzes should make up 15% of the final grade.

Quizzes serve many purposes during the semester. They are a fast way for you and your students to assess their understanding of the material presented in between tests. Because there is no formal attendance policy at the College, many instructors give quizzes

Attendance

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.

Extra Help

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

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 help at two different locations on campus.
 - a. The Developmental Mathematics Lab/Tutoring Center in MH 142 is available for any developmental mathematics student. The lab is well-equipped with very competent tutors and computers where students can practice their skills. It should be made clear to the students that the tutors are not private tutors and that they must be shared among all students in the lab. Also, it is always best if a student comes prepared with a specific topic or problem that is causing difficulty. The schedule for the MH 142 lab will be handed out at the beginning of the semester and posted on the window of the lab for your students' convenience.
 - b. The Tutoring Center in JL is open many hours during the day and evening. Mathematics faculty volunteer during selected hours and peer tutors are available to answer students' questions. A schedule of hours for the JL Tutoring Center will also be available at the beginning of the semester.

3. Students should be encouraged to work in study groups. This will be fostered if you allow students to work in groups, at times, (review days are a good opportunity for group work) during your class sessions. In particular, ask Susan Shulman about projects that are available in Center 2 on given topics. These projects lend themselves to cooperative learning in the classroom and encourages group work, while sometimes raising the motivation level. The projects can also be found the Faculty Orientation Manual that is online at: <http://www.middlesexcc.edu/academi/mat/> or by looking at a hard copy in Center 2.

Final Examination

A **standardized** final exam will be available for you to administer to your classes. MAat-010B classes will take the Mat-010 final exam (this covers all topics, including those taught in Mat-010A) on the last meeting of the class

IMPORTANT NOTES:

Students must score at least a 60 % on the Mat-010B final exam in order to receive a grade of 'C' or better in the course.

Please remember that the MAT 010B class will take the MAT 010 final exam that covers both MAT 010A and MAT 010B. Students should review the material from MAT 010A in addition to the MAT 010B material before taking the final exam. You might want to set some class time aside for this type of review.

End-Term Summary

A summary of your students' performance is needed at the end of the semester. You will receive a form to fill out at the end of the semester.

The following is a suggested course outline for MAT 010B (for classes meeting twice a week) These are suggested guidelines for you to follow and you might want to make adjustments to fit your own style

Day #	Material Covered	Guide for ALEKS
1	5.1	Work on Practice Quiz 1 (PQ1-Chapter 5)
2	5.2	Complete Mastery Quiz 2 (MQ1
3	5.3	Chapter 5) before Test #1
4	5.4	
5	Review Test #1 (Chapter 5)	
6	TEST #1 (Chapter 5)	
7	6.1	Work on Practice Quizzes 2 and
8	6.2	3 (PQ2 6.1-6.4 and PQ3 6.5-6.7)
9	6.3-6.4	Complete Mastery Quizzes 2
10	6.5	and 3 (MQ3 6.1-6.4 and MQ4
11	6.6	6.5-6.7) before Test #2
12	6.7	
13	Review Test #2 (Chapter 6)	
14	TEST #2 (Chapter 6)	
15	7.1 – 7.4	Work on Practice Quiz 4
16	8.3	(PQ4 Chapters 7 and 8)
17	8.2 (Pythagorean Theorem and applications)	Complete Mastery Quiz 4 (MQ4 Chapters 7 and 8)
18	8.4-8.5	before taking Test #3
19	Review for Test #3 (Chapters 7 & 8)	
20	TEST #3 (Chapters 7 & 8)	
21	10.1-10.2	Work on Practice Quiz 5
22	10.3	(PQ5 Chapter 10)
23	10.4-10.5	Complete Mastery Quiz 5
24	Review Test #4 (Chapter 10)	(MQ5 Chapter 10) before Test #4
25	TEST #4(Chapter10)	
26	Final Exam Review	
27	Final Exam Review	
28	FINAL EXAM	

****Trouble Shooting**

A Mat-010 Final Exam item analysis was performed during the fall 2009 semester to let us know the strengths and weaknesses of our students. You will receive a copy of this item analysis at the beginning of the semester. Please note the topics that cause most problems and make sure to emphasize while teaching the curriculum. There are also worksheets in the packet and on *MathZone* that correspond to these topics in order to provide your students with more practice.

CHECK LIST

The following are things you will need throughout the semester:

1. First Day Needs
 - a. On the first day of class you should give each student a course outline with pertinent information (course title, your name, how they can reach you, day-to-day outline, grading criteria, cheating policy and anything else you think they should know).
 - b. When you are registered as an instructor for Aleks (this will be done for you), a course code will be generated. You must give this course code to your students on the first day of class.
2. Throughout the semester you will be receiving memos and directives from various people on campus and in the Department. Please read these carefully and respond to them in a timely fashion.
3. The Final Exam will be ordered for you, packaged for your students and kept in Center 2 until the day you will be administering the final.
4. End term summary forms will be in your mailbox at the end of the semester for you to fill out and return to Susan Shulman.

If you have any questions, please contact Basic Mathematics Coordinator, Susan Shulman at Extension 3734.

Thank you in advance for cooperation.