

This syllabus consists of two parts: a departmental part which is given to all Basic Mathematics II students and an instructor's supplement that is given to my class only.

There is also a Blackboard Website associated with this course that contains additional information.

HOWARD UNIVERSITY
SCHOOL OF EDUCATION
CENTER FOR ACADEMIC REINFORCEMENT

ACAD 015 BASIC MATH II

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Conceptual Framework: Mission and Outcomes

Mission

The mission of the school of education is to (a) prepare teachers, administrators, researchers, evaluators, counselors, counseling, educational and school psychologists, and human development, professionals for leadership in urban, underserved, and diverse education and human service settings locally, nationally, and globally; (b) significantly influence the national education and human service agenda, from social justice perspectives for African American and other culturally diverse youth and adults; (c) conduct and disseminate research that supports the belief that all youth and adults can learn, achieve, and have fulfilling lives; and (d) provide a research-based agenda, which is asset-based, multi-disciplinary, multi-contextual, and culturally responsive for developing professionals capable of creating environments that cultivate the abilities and talents of all youth and adult students and clients.

The Basic Mathematics I course is designed to help the student to understand elementary concepts about the real number system through computations with various types of numbers (i.e. whole numbers, integers, rational numbers, and irrational numbers). Topics covering percent are included with a special emphasis on problem solving. Additionally, elementary algebra is introduced through discussions of topics on operations on polynomials, linear equations, and linear inequalities.

Basic Math II is a continuation of Basic Math I. It is designed to cover topics including factoring, rational expressions, linear equations in two variables and their graphs, systems of equations, roots and radicals, quadratic equations and applications. Emphasis is placed on building a strong foundation for college mathematics.

Additionally, the School of Education has identified eight student outcomes that are important in achieving the goals and objectives of this course. Specifically, upon the completion of the course, students should be able to: 1) think critically, 2) analyze and solve problems, 3) make

ethical decisions, 4) apply knowledge by linking theory with practice, 5) understand and use technology, 6) know and understand self, history, and community, 7) assume leadership roles in the global community, and 8) demonstrate knowledge, sensitivity, and skill in working with special needs and diverse populations.

OVERVIEW AND PURPOSE

Knowledge and understanding of mathematical concepts and facility with mathematical computations and manipulations either manually or with the aid of a calculator or a computer have become essential in so many fields of endeavor and in so many day-to-day activities that existence without some mastery of at least elementary mathematics can be difficult.

Although several pedagogical approaches are used, the aim is to present material in the context of concrete examples, and then generalize the ideas as rules or theorems, after which more examples are presented. Mathematical concepts are motivated by need and explained through example and discussion. Students are motivated by showing them the utility of mathematics in many applications and by including examples and exercises through which they can discover some of the intrinsic beauty of mathematics.

Every student has the right to experience success, both in this course and in subsequent ones, and every effort will be made to ensure that success.

COURSE DESCRIPTION:

Basic Mathematics II (ACAD 015)

This course is a continuation of Basic Mathematics I. The topics include factoring, rational expressions, linear equations in two variables and their graphs, systems of equations, roots and radicals, quadratic equations and applications. Emphasis is placed on building a strong foundation for college mathematics.

COURSE LEARNING OBJECTIVES:

Basic Mathematics II

Upon completion of the course, the student should be able to:

- Factor the GCF from a polynomial
- Recognize and factor a “difference of two squares”
- Factor selected trinomials into a product of binomials
- Factor by “grouping”
- Reduce rational expressions to lowest terms
- Add and subtract rational expressions
- Multiply and divide rational expressions

- Simplify complex fractions involving rational expressions
- Solve literal equations
- Rewrite an expression involving negative exponents using only positive exponents
- State the meaning of square root and cube root
- Explain the meaning of fractional exponents
- Convert radical expressions to expressions involving exponents and vice versa
- Simplify radical expressions
- Rationalize denominators
- Perform elementary operations on radical expressions
- Solve quadratic equations by factoring
- Solve quadratic equations by completing the square technique
- State the quadratic formula
- Solve any quadratic equation by use of the quadratic formula
- Solve quadratic equations by “Square Root” method
- Plot points in the plane, given the coordinates
- Recognize and graph the equation of a straight line
- Find x-intercept and y-intercept of a line from the equation of a line
- Recognize the slope and y-intercept of a line from the equation of a line
- Find the slope of a line given two points
- Find the equation of a line given two points
- Determine whether a line contains a specific point

GENERAL EXPECTATIONS:

Attendance

All students are expected to attend classes regularly and promptly. Students who are absent from classes or laboratory periods are held responsible, nevertheless, for the entire work of the course. Members of the faculty will hold students responsible for regular and prompt attendance.

CURRICULAR DESIGN:

Assignments

All written assignments must be done neatly and turned in on time. Assignments, quizzes or tests that are not neat or on time may receive a grade of zero.

Laboratory assignments, including those that are to be completed on the computer or the video player, are to be done promptly. Assistance in operating the equipment will be provided upon request.

Individual instructors may require additional assignments.

REQUIRED TEXT AND MATERIALS

Introductory Algebra for College Students, 5th Edition: Robert Blitzer, Prentice Hall

Separate notebook (for mathematics only)
Loose Leaf paper for assignments (8½ x 11)
Calculator
Pencils

GRADE EVALUATION CRITERIA

To successfully complete a Basic Mathematics course, a student must have an overall average including the final exam, of at least 75% or the necessary point total determined by the instructor.

The instructor will determine the number of tests to be given in each section.

Any student who does not take a scheduled examination must obtain the approval of his or her instructor in order to take a substitute examination. A student who does not secure such approval will receive a grade of zero for the examination missed.

A student will receive the satisfactory grade of "S" if he or she receives an overall average, including the final examination, of at least 75% or the necessary point total determined by the instructor. Otherwise, the student will receive the grade of "U" (Unsatisfactory).

FINAL EXAMINATION ANNOUNCEMENT

The Final Examination will be given on April 27, 2010, 1:00PM-3:00PM. Your instructor will announce the place of the examination.

STATEMENT OF ADA PROCEDURES

Howard University is committed to providing an educational environment that is accessible to all students. In accordance with this commitment, students in need of accommodations due to a disability should contact the Office of the Dean for Special Student Services for verification and determination of reasonable accommodations as soon as possible after admission to the University, or at the beginning of each academic semester. The Office of the Dean for Special Student Services may be reached at (202) 238-2420.

ACADEMIC DISHONESTY

Cheating and other forms of academic dishonesty will not be tolerated. If a student is suspected of cheating, that student will be referred to the appropriate University officer. Any assignment on which a student cheats will be given a grade of 0 (zero).

Copying another student's homework or examination is considered to be cheating. Helping another student do an online examination or quiz or receiving help from another in doing an online quiz or examination is considered to be cheating unless expressly approved by the

instructor.

BASIC MATHEMATICS II SUPPLEMENT TO THE DEPARTMENTAL SYLLABUS

INSTRUCTOR: THOMAS H. LAWSON Jr. OFFICE: 107 ASB
OFFICE PHONE: (202) 806-5322 MAIN OFFICE (CAR): (202) 806-7634
E-MAIL: tlawson@howard.edu

BLACKBOARD WEBSITE

This class is supplemented by a Blackboard Website. Information related to this course, including documents, will be displayed there. Students are expected to check the Blackboard Website each day for updated information.

ATTENDANCE

Every student is expected to attend each class session promptly. You are responsible for all work covered in class whether you are present or not.

The roll will be taken at the beginning of class. Students who are not present when the roll is taken will be marked absent. Tardy students are responsible for notifying the instructor of their presence at the end of class.

A student who is absent four or more times will be in violation of the instructor's attendance policy. Students who are in violation of the instructor's attendance policy are usually ineligible for all special considerations: extra credit, bonus points, extra retests, benefit of the doubt, etc.

Students who anticipate missing class work due to official University business (sports teams, School of Business trips, etc.) shall notify the instructor as soon as possible. These students are expected to provide the instructor with a schedule of events as soon as possible.

Students who are absent for health reasons are expected to present documentation as soon as possible.

HOMEWORK, QUIZZES, OFFICE VISITATION

Regular homework assignments will be given. Students should keep their completed General Homework Assignments in their mathematics notebook. Students will be asked to hand in selected homework problems. These assignments will be graded. Students may also be required to complete homework assignments online through WEbWork.

Students are encouraged to visit the instructor in his office regularly and work problems. The instructor will take this into consideration when computing final grades.

Announced and unannounced quizzes may be given. Some of the quiz problems will be taken from the General Homework problems.

There will be no make up quizzes or make up homework assignments.

HOURLY EXAMINATION, RETEST, AND MISCELLANEOUS POLICIES

There will be five hourly examinations. A student, whose examination score is less than 75% and who is not in violation of the instructor's attendance policy, is eligible to take a retest. The maximum score that a student can earn on a retest is 90%. If the retest score is higher than the original examination score, it will replace the original examination score. Students ordinarily will not be able to take a retest for the last hourly examination of the semester or for any take home examination.

Students are usually limited to one retest per examination except under special circumstances as determined by the instructor. A student who is in violation of the instructor's attendance policy may be prohibited from taking retests for some examinations.

After an examination has been returned, eligible students have five days (excluding Saturday, Sundays, and holidays) in which to schedule a retest. The instructor will determine the date, time and location of the retest.

Under special circumstances, a student, with the approval of the instructor, may use a retest to replace a missed examination. The instructor will use attendance and class participation as factors in his decision. The maximum score that the student can earn for this kind of retest is 100%.

There will be no makeup examinations. A student who misses an examination due to illness must present documentation as soon as possible. The instructor will review the documentation and make a determination as to whether the student is eligible to take a retest (substitute) for a missed examination. Students who miss an examination due to official University business must receive prior approval from the instructor in order to take a retest (substitute) for that examination. Students who miss an examination that is given the week before or the week after Spring Break will not be allowed to take a retest (substitute) for that examination.

ASSESSMENT

Student grades will be computed using a point system as indicated below.

Five hourly examinations (100 points each)	500
*Homework and quizzes (15 will be counted at 10 points each)	150
Final examination	200
Total	850

* Homework grades may include WebWork grades as well as grades from homework that has been handed in.

Late assignments, missed assignments, and missed examinations will receive grades of 0 (zero).

A student whose point total is greater than or equal to 625 will receive an S (satisfactory) grade. A student whose point total is less than 625 will receive a U (unsatisfactory) grade.

Materials

- Textbook (Bring it to each class.)
- Calculator (Bring it to each class.)
- Mathematics notebook
- Pencils (Bring at least two to each class.)
- Loose-leaf paper and graph paper (8-1/2 by 11, 8.5 by 10, or similarly sized.)

Important Additional Information

- Students will be graded on whether they write the correct steps and get the correct answer.
- Students will not receive credit if the steps are not written properly.
- All work to be handed in must be done in #2 pencil (Work that is done in ink will not be accepted.)
- All steps should be written under each other when doing problems. Numbers and words should not run together. There must be a space between problems.
- All work that is handed in should state the original problem except in the case of word problems.
- All problems must be numbered. The page number must also be given.
- All work must be written clearly and neatly and steps must be written properly.
- All word problems must be answered with complete sentences with proper punctuation.
- All work to be handed in must be folded lengthwise with the student's name and ID number clearly written on the back. The student's name must also appear on each page.
- No work will be done on the back of any paper unless indicated by the instructor.
- All work must be done on 8 ½ by 10 or other similarly sized white paper unless otherwise requested.
- Partial credit will rarely be given.
- Students are encouraged to visit the instructor in his office and work problems. If a student's performance is border line, the instructor will use office visits, attendance, and class participation in determining whether the student will receive a passing grade.
- If circumstances beyond the instructor's control prevent the instructor from giving a fifth examination, the maximum possible point total will be 750. If this occurs, a student will need to earn 550 points or higher to receive an S grade.
- Students are required to attend the classes immediately after and immediately before any holiday; this includes Spring Break. Students will not be allowed to make up any work given on those days under any circumstances.

FINAL EXAMINATION

The Final Examination will be given on April 27, 2010, 1:00 PM-3:00 PM. The location of the Final Examination will be announced by your instructor.

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THERE IS A BLACKBOARD WEBSITE ASSOCIATED WITH THIS COURSE. SELECTED INFORMATION FROM THE WEBSITE FOLLOWS.

INTRODUCTION

Welcome Basic Mathematics students.

Syllabi can be accessed by selecting COURSE INFORMATION.

Office Hours can be accessed by selecting COURSE INFORMATION.

Final Examination information and other important examination information can be accessed by selecting COURSE INFORMATION.

General Homework Assignments and Homework Assignments to Pass In can be accessed by selecting ASSIGNMENTS.

Sample Examinations and Practice Examinations can be accessed by selecting COURSE DOCUMENTS.

Helpful Handouts, worked out examples, and other documents can be accessed by selecting COURSE DOCUMENTS and then selecting Supplemental Materials.

You may check your grades by selecting Tools and then selecting Check Grades.

WebWork can be accessed by selecting EXTERNAL LINKS. (WebWork is located at BASIC MATH II Lawson).

Other helpful sites can also be reached by selecting EXTERNAL LINKS.

Some documents are in PDF format and will require the use of Acrobat Reader.

Some documents will be in Microsoft Word format and will require a program that reads MS Word documents.

Check Blackboard after each class meeting.

Check HOMEWORK ASSIGNMENTS TO PASS IN after each class meeting.

UPDATE YOUR EMAIL ADDRESS

Instructions for updating your email address on Blackboard.

Update your email address in Blackboard by selecting the tab My Institution at the top of the page, then click personal information. Update your email address and click submit.

ABOUT WEBWORK

Go to the WebWork site. The site can be accessed by selecting External Links and then selecting Basic Math II Lawson. (The site can also be accessed by going to the Mathematics Department website and choosing the WebWork tab). Your username is the first letter of your first name along with the letters of your last name (no capitals). If your name is Barack Obama, your username is bobama.

Your password is your ID number without the @.

After logging onto WebWork, update your email address in WebWork. Updating your email address in WebWork is independent of updating your email address in Blackboard.

Next do problem set 0. Problem set 0 provides information on entering answers in WebWork.

Tutorial Lab Information

Attention everyone.

Please note that the Mathematics Tutorial Lab is now open for the spring 2010 semester with both undergraduate tutors and mathematics faculty assistance available.

The lab is located in ASB-B, room 109.

The hours of operation are Monday-Thursday, 9:00 AM to 6:00 PM & Friday, 9:00 AM to 5:00 PM.

Office Hours:

10:40AM-10:55AM, 1:10PM -1:40PM Monday

11:00AM-12:00PM Tuesday

1:10PM-2:30PM Wednesday

1:10PM-1:40PM Friday

Other times are available by appointment.