

MATH 30-PRE-CALCULUS
BRONX COMMUNITY COLLEGE, CUNY

INSTRUCTOR: Mehdi Lejmi

OFFICE: CP 123

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OFFICE HOURS: Monday-Wednesday: 4pm-5pm or by appointment

COURSE DESCRIPTION/OBJECTIVE:

Successful students will become proficient in understanding basic concepts of functions and in definitions and properties of polynomials, rational functions, exponential and logarithmic functions and trigonometric functions.

PREREQUISITES: MATH 06 or equivalent.

TEXT:

- *Precalculus (Fourth edition)*, by Robert E. Blitzer
(Prentice Hall ISBN: 978-0-321-55984-5)

AND

- Workbook:
<http://fsw01.bcc.cuny.edu/mathdepartment/Courses/Math/MTH30/iyer-workbook30-version2-spring2014.pdf>

CALCULATORS: Calculators are NOT permitted for tests, exams and quizzes.

WEBSITE (CUNY BLACKBOARD) : <http://bbhosted.cuny.edu>

HOMEWORK ONLINE SYSTEM (WEBWORK): https://wvm01.bcc.cuny.edu/webwork2/MTH30_Spring2017_Lejmi/

TO LOGIN IN WEBWORK: Your username and password are 'firstlast' (e.g. Jane Smith-Doe would be janesmith-doe, no capitalization or spaces but hyphens stay in). You should change your password and add an email address using the 'email/password' link on the left-hand side-bar.

GRADING: Homework will be assigned and to be turned in approximately weekly from the textbook, workbook and the online system WebWork.

Please regularly check CUNY Blackboard for announcements regarding Exams/Homework/Quizzes. Homework and quizzes will be given at the instructor's discretion. *No make-up quizzes will be given. Your lowest two Homeworks/quizzes will be dropped.* Homework assignments will assist in understanding the material but will NOT be sufficient to learn this material well. You should be doing many more problems.

There will be two in-class term tests. *No make-up tests will be given.* If you miss a test, you must contact me within 24 hours should you wish to have your absence excused. A doctor's note is needed to justify illness. Any student with a *justified* absence during a test will have his or her (*uncurved*) final exam grade count in place of the missed test. You are responsible for the material in the course readings in addition to any material and announcements made during lecture, regardless of whether or not you were in attendance.

HW/Quizzes	25%
Test 1	20%
Test 2	20%
Final Exam	35%

RESOURCES: Office Hours: M, W 4pm - 5pm, or by appointment.
 Math Tutoring Lab: <http://fsw01.bcc.cuny.edu/mathdepartment/tutoringlab/lab.htm>

TENTATIVE SCHEDULE:

WEEK	TOPIC	SUGGESTED PROBLEMS
1	<ul style="list-style-type: none"> • Sec 1.2: Basics of Functions and their Graphs • Sec 1.3: More on Functions and their Graphs 	<ul style="list-style-type: none"> • 1.2: 11-31 (odd), 45, 47, 53-57, 71, 72, 75, 76 • 1.3: 11, 15, 17, 23, 69-76, 81
2	<ul style="list-style-type: none"> • Sec 1.6: Transformation of Functions • Sec 1.7: Combinations/Composition of Functions • Sec 1.8 Inverse Functions 	<ul style="list-style-type: none"> • 1.6: 1-87 (odd) • 1.7: 5-11, 17-33, 81-88 • 1.8: 1-5, 11-25, 29-37
3	<ul style="list-style-type: none"> • Sec 2.2: Quadratic Functions • Sec 2.3: Polynomials Functions 	<ul style="list-style-type: none"> • 2.2: 9-55 (odd) • 2.3: 3-7, 15-20, 21, 25, 27-33, 37, 39, 41-47
4	<ul style="list-style-type: none"> • Sec 2.4: Dividing Polynomials; Remainder/Factor Theorems • Sec 2.5: Zeros of Polynomials 	<ul style="list-style-type: none"> • 2.4: 13, 15, 17-25, 33-41 • 2.5: 1-17, 19, 21, 23, 25-31
5	<ul style="list-style-type: none"> • Sec 2.6: Rational Functions • Sec 2.7: Polynomial and Rational Inequalities 	<ul style="list-style-type: none"> • 2.6: 1-7, 9-14, 21-35, 37, 41, 49, 55, 63 • 2.7: 1-23 (odd) 43-45, 55-57, 69, 70
6	<ul style="list-style-type: none"> • Sec 3.1: Exponential Functions • Sec 3.2: Logarithmic Functions 	<ul style="list-style-type: none"> • 3.1: 11-17, 19-24, 25-31, 35-37, 41, 43 • 3.2: 1-29, 43, 44, 47-53, 55, 59, 63, 71, 75-79, 81-89
7	<ul style="list-style-type: none"> • Sec 3.3: Properties of Logarithmic Functions • Sec 3.4: Exponential and Logarithmic Equations 	<ul style="list-style-type: none"> • 3.3: 1-27, 35, 37, 41-57, 67, 71-77 • 3.4: 1-21, 27-43, 49-57, 67-69, 85, 87

WEEK	TOPIC	SUGGESTED PROBLEMS
8	<ul style="list-style-type: none"> • Sec 4.1: Angles and Radian Measure • Sec 4.2: Trig Functions: Unit Circle 	<ul style="list-style-type: none"> • 4.1: 1-10, 13-28, 41-56, 60-63 • 4.2: 1-55
9	<ul style="list-style-type: none"> • Sec 4.3: Right triangle trigonometry • Sec 4.4: Trig functions of any angle 	<ul style="list-style-type: none"> • 4.3: 3-15, 21-31 • 4.4: 1-21, 23-17, 35-43, 61-73
10	<ul style="list-style-type: none"> • Sec 4.5: Graphs of Sine and Cosine • Sec 4.7: Inverse Trig Functions 	<ul style="list-style-type: none"> • 4.5: 1-25 (odd), 43-49 • 4.7: 1-11, 19-41, 47-53, 63-67
11	<ul style="list-style-type: none"> • Sec 5.1: Verifying Trig Identities • Sec 5.2: Sum Difference Formula 	<ul style="list-style-type: none"> • 5.1: 1-35 • 5.2: 1, 3, 5, 13, 15, 21, 23, 33, 35
12	<ul style="list-style-type: none"> • Sec 5.5: Trigonometric Equations 	<ul style="list-style-type: none"> • 5.5: 11, 15, 19, 25, 39, 41, 57, 59
13	<ul style="list-style-type: none"> • Review 	<ul style="list-style-type: none"> • Review