

# Precalculus - MTH 30, Sec. D03

**Professor:** Dr. Luis Fernández

**Class times and room:** Tu, Th, 9:00–11:15, LH 33.

**Course page:** <http://fsw01.bcc.cuny.edu/luis.fernandez01/>

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**Office hours:** Mo 2:00–3:00 pm, We 2:00–3:00 pm.

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## Overview of the course.

This course will provide some basic tools that you will need in your studies in maths and sciences. **It is important that you master these tools as you will need them in your next courses.**

## Some resources for learning:

- **Classes:** Attendance is mandatory, and essential to succeed in the class. In class you will have time to learn new material, practice, and ask questions.
- **Internet:** There are a lot of excellent materials for learning online. If you have not understood something in class, do a web search of the topic and you will probably find excellent explanations. I encourage you to use this resource.
- **Free tutoring:** In room CPH 303 there are permanent tutors for all Math courses. Opens 10am to 8pm Monday to Friday, 10am to 3pm weekends. You can also get online tutoring—check Blackboard.
- **Meetings with the instructor:** If you need help with any part of the course, or for any other matters, please come to my office during office hours (above) or write me an email to set up an appointment.
- **Emailing the instructor:** If you have questions while doing homework and need help quickly, please email me anytime (address above).

## Textbook

- *Precalculus* by Jay Abramson. Free download at OpenStax: <https://openstax.org/details/books/prec calculus>
- A **scientific calculator** is also required. **CELLPHONES ARE NOT ALLOWED AS CALCULATORS.**

## Student's responsibilities

- Obtain all the material necessary for the class (textbook and calculator) in the first week.
- Study the material, using any resource to achieve the goal: to learn.
- Attend, be on time, be involved, and have an active participation in every class.
- Do and submit all the homework assignments in time.
- Treat peers and instructor in a respectful manner.

## Instructor's obligations and responsibilities

- Act as *facilitator* of the learning process of the students, and assist with any question that students may have.
- Give tests and exams of appropriate difficulty. Grade tests and exams promptly and explain the students the meaning of their grades.
- Treat the students respectfully and impartially.

## Classroom Rules

- **Students with 6 absences or more will automatically receive an F (Fail) in the course.**
- Cell phones and earphones are not allowed during class time or tests unless required by the instructor.
- There will be a break in the middle of each class. Students will be allowed to use cell phones during breaks.
- **In-class tests will not be repeated.** The only **exception** is if the instructor receives **notice** of the absence (via e-mail, telephone, message, a friend, ...) **on or before the day of the test.**

## Exams and homework:

- There will be **three in-class tests** during the term, **each worth 20%** of the final grade, but I will only use the two highest grades, totalling **40%** of the final grade.
- **Homework:** You will have weekly homework of **two types**:
  - Written homework, to hand in, due the week after.
  - Online homework, via WeBWoRK, due the week after.Homework will count a **20%** of the final grade.
- The **final exam** will count **40%** of the final grade.

## Academic Integrity:

Academic dishonesty (such as plagiarism and cheating) is prohibited at Bronx Community College and is punishable by penalties, including failing grades, dismissal and expulsion. For additional information and the full policy on Academic Integrity, please consult the BCC College Catalog.

## Accommodations/Disabilities:

Bronx Community College respects and welcomes students of all backgrounds and abilities. In the event you encounter any barrier(s) to full participation in this course due to the impact of a disability, please contact the disAbility Services Office as soon as possible this semester. The disAbility Services specialists will meet with you to discuss the barriers you are experiencing and explain the eligibility process for establishing academic accommodations for this course. You can reach the disAbility Services Office at: [disability.services@bcc.cuny.edu](mailto:disability.services@bcc.cuny.edu), Loew Hall, Room 211, (718) 289-5874.

## Class plan and assigned exercises. MTH 30. Professor Luis Fernández

Use this to prepare each class in advance. Note that dates may change depending on how fast we advance.

Date	Section number from text	Paper/WeBWoRK assignment	Practice exercises from text
Mo 1/29	1.1 Functions and Function Notation	<b>HW 1</b> due 2/7	<b>p. 18:</b> 6-19, 27-33, 40-47, 52-75, 88-91
We 1/31	1.2 Domain and Range		<b>p. 35:</b> 6-25, 27-37
	2.1 Linear Functions		<b>p. 139:</b> 20-37
	2.2 Graphs of Linear Functions		<b>p. 159:</b> 6-29, 44-58, 65-69
Mo 2/5	3.2 Quadratic Functions and their graphs	<b>HW 2</b> due 2/14	<b>p. 21:</b> 6-25, 53-64, 85-94
We 2/7	3.3 Power and Polynomial Functions		<b>p. 236:</b> 17-30
Mo 2/12	NO CLASS	<b>HW 3</b> due 2/21	<b>p. 264:</b> 14-26, 29-35, 38-43, 49-53
We 2/14	3.5 Dividing Polynomials		
Mo 2/19	NO CLASS	<b>HW 4</b> due 2/28	<b>p. 276:</b> 22-32, 40-43, 46-49. <b>p. 254:</b> 6-23, 30-47
We 2/21	3.6 Zeros of Polynomial Functions. Polynomial Equations.		
Th 2/22	3.4 Graphs of Polynomial Functions		
Mo 2/26	3.7 Rational Functions and Equations	<b>HW 5</b> due 3/13	<b>p. 295:</b> 6-29, 39-43
We 2/28	Review for Midterm 1 <b>Midterm 1. Sections covered up to 3.6.</b>		
Mo 3/4	4.1 Exponential Functions	<b>HW 6</b> due 3/13	<b>p. 340:</b> 14-17, 56-68 <b>p. 361:</b> 6-53 <b>p. 389:</b> 3-29
We 3/6	4.3 Logarithmic Functions		
	4.5 Logarithmic Properties		
Mo 3/11	4.6 Exponential and Logarithmic Equations	<b>HW 7</b> due 3/20	<b>p. 399:</b> 4-50, 65-67, 79, 80 <b>p. 352:</b> 11, 12, 26-28 <b>p. 377:</b> 6-15, 26-43
We 3/13	4.2 Graphs of Exponential Functions		
	4.4 Graphs of Logarithmic Functions		
Mo 3/18	5.4 Right Triangle Trigonometry	<b>HW 8</b> due 3/27	<b>p. 495:</b> 6-41, 52-56
We 3/20	Review for Midterm 2 <b>Midterm 2. Sections covered up to 5.4.</b>		
Mo 3/25	5.1 Angles	<b>HW 9</b> due 4/3	<b>p. 455:</b> 6-23, 26-45, 50-57 <b>p. 470:</b> 6-53, 60-69
We 3/27	5.2 Unit Circle: Sine and Cosine		
Mo 4/1	5.3 The Other Trigonometric Functions	<b>HW 10</b> due 4/10  <b>HW 11</b> due 4/17	<b>p. 484:</b> 6-41, 49-51 <b>p. 520:</b> 6-14, 18,21 <b>p. 538:</b> 19, 22-26
We 4/3	6.1 Graphs of Sine and Cosine		
	6.2 Graphs of Other Trig. Functions		
Mo 4/8	7.1 Trigonometric Identities		<b>p. 568:</b> 16-18, 29-33, 40-42 <b>p. 582:</b> 4-7, 10-13, 20, 21, 49-51 <b>p. 614:</b> 4-9, 13-25, 41, 42
	7.2 Sum and Difference Identities		
We 4/10	7.5 Solving Trigonometric Equations		
Mo 4/15	1.1 Functions and Function Notation	<b>HW 12</b> due 5/8	<b>p. 18:</b> 6-19, 27-33, 40-47, 52-75, 88-91 <b>p. 35:</b> 6-25, 27-37
We 4/17	1.2 Domain and Range Review for Midterm 2 <b>Midterm 3. Sections covered up 7.5.</b>		
Mo 4/22	NO CLASS - SPRING BREAK		
We 4/24	NO CLASS - SPRING BREAK		
Mo 4/29	NO CLASS - SPRING BREAK	<b>HW 12</b> due 5/15	<b>p. 48:</b> 5-21 <b>p. 60:</b> 5-17, 72-76
We 5/1	1.3 Behavior of Graphs 1.4 Composition of Functions		
Mo 5/6	1.5 Transformation of Functions		<b>p. 85:</b> 6-19, 24-26, 49-52 <b>p. 98:</b> 20-34 <b>p. 110:</b> 7-12,16 <b>p. 550:</b> 8-11, 24, 26, 28
We 5/8	1.6 Absolute Value Functions		
	1.7 Inverse Functions 6.3 Inverse Trigonometric Functions		
Mo 5/13	3.6 Polynomial and rational Inequalities	<b>HW 13</b>	<b>p. 276:</b> 22-32, 40-43, 46-49.
We 5/15	<b>Review for the final exam</b>		
We 5/29 ?	<b>Final Exam.</b> All sections included		