# MTH 161 Precalculus Syllabus
# Spring 2021 (7 Week)

## INSTRUCTOR INFORMATION


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**Textbook:** College Algebra. 3/e Corrected Edition July 2013
Stitz and Zeager.
Book available free: http://stitz-zeager.com/

**Software:** MyOpenMath Online Homework: https://www.myopenmath.com/
**Course ID:** 102401
**Enrollment key:** mth161

## GRADING/EVALUATION

| Description | Percentage |
|---|---|
| Tests (3) | 60% |
| Introductory Quiz | 2% |
| Homework | 18% |
| Final Exam | 20% |
| **Total:** | **100%** |

| Last Date to Complete Test | |
|---|---|
| Test 1 | February 15 |
| Test 2 | March 2 |
| Test 3 | March 17 |
| Final | March 19 |

**Introductory Quiz:** You must take the introductory quiz in Canvas by the end of the first week or you will be withdrawn for non-participation in the course.

**Tests**.

1. There will be three (3) tests administered through the MyOpenMath homework software.
2. You may take the tests from home.
3. The password for each of those is simply the word “password”, without the quotes.
4. You will have 90 minutes to complete the test. (There are 15 extra minutes so that you can submit a scan of your work).
5. You may use a calculator but you **MAY NOT** use any of the symbolic abilities your calculator may have. This includes but is not limited to graphing and solving of equations of any type.
6. You MUST submit a photograph or scan of all your work that you wrote while you were taking the test through MyOpenMath before you submit your test. Work should be neat and legible, and problems should be numbered so that I can easily see which work goes with which problem. The work should be complete as if you were solving the question in an in-class environment. It is not "notes" or "scratch work". The app Office Lens from Microsoft seems to do a good job with creating a single small file.

7. There will be no make-up tests. Any missed test will receive the score of "0". See Final Exam below.
8. Tests may be taken early.
9. *The average on all tests will count as 60% of the course grade*

**Final Exam**. There will be one comprehensive final given the last day of class. The score on the final will replace the lowest test score (including any missed test) if that will improve your final average. Testing procedures are the same for final as for the tests except you have 120 minutes to complete the final. *The final will count as at least 20% of the course grade.*

## HOMEWORK:

Giving your best effort on homework is the single best thing you can do to help your mathematics. As such, the homework will be submitted through the MyOpenMath software and will count for a significant portion of the grade. (18%) The homework is due the day before the test with the same material. Academic Assistance also has qualified tutors who can work with you on a regular basis.

## CALCULATOR:

A scientific calculator is recommended. If you own a calculator do not buy a new one. If you do not own a calculator don't spend a lot of money on one. I recommend the TI-30X IIS calculator.

## EMAIL POLICY

If you send me an e-mail always use your NRCC issued email address. Be sure that your email client includes your name in the header. You should always include a descriptive subject line that includes the course number. Please remember to use complete sentences and follow the rules of grammar. The Purdue OWL website (click) has excellent information about creating a professional email. I communicate through email to your NRCC issued address. I WILL NOT be replying to email that does not conform to these requirements. I do reply to email within 24 hours during the week. Weekends may be longer.

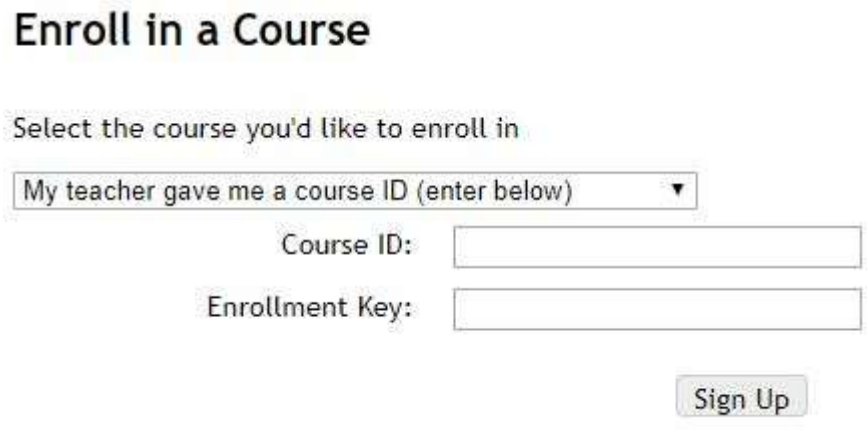
**STUDENT REGISTRATION:**

1. Enter https://www.myopenmath.com/ in your Web Browser.

2a. If you already have an account, you can log on and go to "enroll in a new class".


2b. If you are a new student to the system, register as a new student


3. Enter the course information. Enter your **Course ID** and **Enrollment Key** exactly as provided by your instructor (See Page 1) and click "**Submit**". *Your course information should appear. If not, contact your instructor to verify the correct Course ID.*




4. Verify that you are in the right class by returning the main page.

| Week | Section | Title | Text Homework |
|---|---|---|---|
| | **1** | **Relations and Functions** | |
| 1 | 1.1 | Sets of Real Numbers and the Cartesian Coordinate Plane | p. 14 #1, 2 - 20 even, 21, 22, 24, 26, 32, 34, 37, 38 |
| | 1.2 | Relations | p. 29 #2, 3, 7, 9, 11, 15, 21, 22, 27, 28, 31-36, 41 -49 odd |
| | 1.3 | Introduction to Functions | p. 49 #1-14, 16 - 30 even, 33, 36, 39, 42, 45, 48 |
| | 1.4 | Function Notation | p. 63 #2-14 even, 20, 22, 26, 28, 30, 35, 36, 38 - 50 even, 64, 71, 72, 73 |
| | 1.5 | Function Arithmetic | p. 84 #2-12 even, 16, 18, 22-28, 46, 47, 51, 53 |
| | 1.6 | Graphs of Functions | p. 107 #1 - 6, 13 - 15, 17, 22, 24, 26, 29, 36, 58 - 73, 78-90, 96 |
| | 1.7 | Transformations | p. 140 #12, 3, 4, 5, 7, 9, 10, 11, 15, 19-23, 25, 29, 30, 31, 33, 35, 36, 38, 39, 41, 42, 44, 54-61 |
| 2 | **2** | **Linear and Quadratic Functions** | |
| | 2.1 | Linear Functions | p. 163 #1-19 odd, 21 - 26, 28, 30, 32, 34, 39, 42, 44, 56, 60-70 even |
| | 2.2 | Absolute Value Functions | p. 183 # 2 - 12 even, 16, 17, 22, 23, 26, 28 |
| | 2.3 | Quadratic Functions | p. 200 #1 - 8, 10, 12, 16, 17, 22, 23, 31 |
| | 2.4 | Inequalities with Absolute Value and Quadratic Functions | p. 220 # 1 - 7 odd, 17 - 25 odd |
| 3 | | **Test 1** | **Chapters 1 and 2** |
| | | | |
| | **3** | **Polynomial Functions** | |
| | 3.1 | Graphs of Polynomials | p. 235 #1 - 25 odd |
| | 3.2 | The Factor Theorem and the Remainder Theorem | p. 257 #1 - 27 odd, 31, 33, 35, 38, 41, 42, 43 |
| | 3.3 | Real Zeros of Polynomials | p. 269 #1, 6, 7, 9, 11, 13, 15, 19, 21, 23, 31 |
| | 3.4 | Complex Zeros and the Fundamental Theorem of Algebra | p. 287 #1 - 20, 27 - 30, 47 - 50 |
| 4 | | | |
| | **4** | **Rational Functions** | |
| | 4.1 | Introduction to Rational Functions | p. 314 #1 - 10, 19, 20 |
| | 4.2 | Graphs of Rational Functions | p. 333 #1 - 6, 9 |
| | 4.3 | Rational Inequalities and Applications | p. 353 # 1 -5, 7, 8, 9 |
| 5 | | **Test 2** | **Chapters 3 and 4** |
| | | | |
| | **5** | **Further Topics in Functions** | |
| | 5.1 | Function Composition | p. 369 #1 - 23 odd, 31, 33, 56 - 61 |
| | 5.2 | Inverse Functions | p. 394 #1 - 17 odd |
| | **6** | **Exponential and Logarithmic Functions** | |

| | | | |
|---|---|---|---|
| | 6.1 | Introduction to Exponential and Logaritmic Functions | p. 429 #1-35 odd, 43, 45, 58, 59, 60, 64, 75, 77 |
| 6 | 6.2 | Properties of Logarithms | p.445 #1-6, 10-14, 16-22, 35, 37, 39 |
| | 6.3 | Exponential Equations and Inequalities | p. 456 #1-23 odd |
| | 6.4 | Logarithmic Equations and Inequalities | p. 466 #1-19 odd |
| | 6.5 | Application of Exponential and Logarithmic Functions | p. 482 #1, 2, 5, 6, 8-11, 15, 17, 21-25, 27, 28, 29 |
| 7 | **8** | **Systems of Equations and Matrices** | |
| | 8.1 | Systems of Linear Equations: Gaussian Elimination | p. 562 # 1 - 15 odd, 21 |
| | 8.6 | Partial Fraction Decomposition | p. 635 #1 - 6, 7, 8, 9, 11 |
| | | **Test 3** | **Chapters 5, 6 and 8** |
| | | **Final** | |