

Department of Mathematics  
William Paterson University, NJ  
Math 1150 - Section 080  
Course Syllabus

Dr. Jyoti Champanerkar

1. Title of Course, Course Number and Section:

College Algebra - Math 1150, Section 080

2. Credits: 3.0 credits

3. Semester: Winter 2022

4. Class Meets: ONLINE

5. Departmental Information:

- Secretary: Kathy Garbowski
- email: garbowskik@wpunj.edu

6. Instructor's Information:

- Name: Jyoti Champanerkar
- Email: [champanerkarj@wpunj.edu](mailto:champanerkarj@wpunj.edu) (best way to contact me)
- Office: Science Hall East 3030C

7. Required MyLab Access:

*MyLab Math with Pearson eText – 18 Week Instant Access – for College Algebra and Trigonometry, Fourth Edition; Ratti and McWaters; Pearson. ISBN-13: 978-0-135-96372-2*

MyLab Math is **required**. It includes an e-book, which is sufficient.

**Printed book is not necessary.**

8. Course Prerequisites:

Basic Skills Placement

9. Course Objectives:

To prepare students for precalculus by strengthening their understanding of algebraic topics and their use of algebraic techniques. To develop and enhance the skills necessary for solving algebraic problems analytically.

10. Student Learning Outcomes: Students will be able to :

- (a) Work analytically with algebraic expressions involving exponents, the factoring of polynomials and the simplification of rational quantities.
- (b) Solve linear and nonlinear equations and inequalities algebraically.
- (c) Understand and express the definition of a function and the classification of functions.
- (d) Graph and transform linear, polynomial and rational functions.
- (e) Critically analyze characteristics of polynomial and rational functions.
- (f) Effectively express algebraic concepts in presenting solutions to algebraic problems.
- (g) Locate algebraic quantities in applied problems and use the relevant information to solve the problems.

11. Topical Outline of the Course Content:

- (a) The Real Number System
  - Real Numbers and their Properties
  - Exponents and Radicals
  - Absolute Value
  - Polynomials and Factoring
  - Rational Expressions
- (b) Solving Equations and Inequalities
  - Linear Equations
  - Quadratic Equations
  - Complex Numbers
  - Solving Other Types of Equations Algebraically
  - Linear Inequalities
  - Polynomial and Rational Inequalities
  - Equations and Inequalities Involving Absolute Value
- (c) Functions and Their Graphs
  - The Cartesian Coordinate System
  - Definition of a Function and Function Notation
  - Graphs of Functions and The Vertical Line Test
  - Linear Transformations of Graphs (Shifting, Reflecting and Stretching)
  - Linear Functions and Equations of Lines
  - Solving Systems of Linear Equations in Two Variables
  - Operations on Functions
- (d) Polynomial and Rational Functions
  - Polynomial Functions
  - Graphs of Polynomial Functions
  - Zeros of Polynomial Functions and The Fundamental Theorem of Algebra
  - Rational Functions and Asymptotes
  - Graphs of Rational Functions

12. Teaching Methods:

This course is taught using videos and pdf slides, which are posted weekly on Blackboard.

13. Course Expectations:

*It is very crucial that you learn actively, by working out the problems while watching videos or viewing pdf slides, and do your homework in a timely manner in order to keep up with the material taught.*

14. Methods of Student Assessment (Student Learning Outcomes) MyLab Math based online homework and four chapter tests.15. MyLab Math Homework: This is a browser-based, online homework and can be done on any internet-enabled computer. Problems are assigned for every section. Please see **MyLab Math Instructions** in Blackboard → Syllabus in order to register.16. Chapter Tests: Typically the tests contain 50 questions, to be answered within 2 hours. Once you start a test, you may not stop till you are done. You will need a computer with a robust internet connection to take the tests. Mobile apps may not render the test correctly.

Four chapter tests (due by 11:59pm 1/7 (Fri), 1/11 (Tue), 1/17(Mon), 1/21 (Fri))

17. Grading Policy:

Your final letter grade will be based on the following (standard) grade curve:

Your total score will be computed using the following weights.

Activity Weights	
MyMathLab Homework	20%
Chapter P Test	20%
Chapter 1 Test	20%
Chapter 2 & Sec 8.1 Test	20%
Chapter 3 Test	20%

A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	60-66
F	0-59

**The requirements and policies may be modified as circumstances dictate.**

***Tentative Schedule of Classes, Homework and Tests***

<b>Day</b>	<b>Dates</b>	<b>Agenda</b>
<b><i>All videos, notes shells, other slides are posted on Blackboard -&gt; Course Material</i></b> <b><i>All Tests and Homework are due by <u>11:59 p.m.</u></i></b>		
1	Jan 3, 2022	<ul style="list-style-type: none"> <li>• Go over the syllabus</li> <li>• Register for MyLab (instructions on Bb)</li> <li>• Print notes shell for chapter P</li> <li>• Study sections P.1, P.2</li> </ul>
2	Jan 4, 2022	<b>Homework due: P.1, P.2</b> Study sections P.3, P.4, P.5, P.6
3	Jan 5, 2022	<b>Homework due: P.3, P.4</b> Study sections P.5, P.6
4	Jan 6, 2022	<b>Homework due: P.5, P.6</b> Review Chapter P from your notes
5	Jan 7, 2022 (Fri)	<b>Chapter P Test on Bb</b> Print notes shell for Chapter 1
6	Jan 8, 2022	<b>Homework due: 1.1, 1.2, 1.3</b>
7	Jan 9, 2022	<b>Homework due: 1.4, 1.5</b>
8	Jan 10, 2022	<b>Homework due: 1.6, 1.7</b>
9	Jan 11, 2022 (Tue)	Review Chapter 1 from your notes <b>Chapter 1 Test on Bb</b>
10	Jan 12, 2022	Print notes shell for Chapter 2 & section 8.1 <b>Homework due: 2.1, 2.2, 2.3</b>
11	Jan 13, 2022	<b>Homework due: 8.1, 2.4 (eqn)</b>
12	Jan 14, 2022	<b>Homework due: 2.8, 2.9</b>
13	Jan 15, 2022	<b>Homework due: 2.4 (graphs), 2.5, 2.6</b>
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*All Tests and Homework are due by 11:59 p.m.*

14	Jan 16, 2022	<b>Homework due: 2.7</b> Review Chapter 2 & Section 8.1 from your notes
15	Jan 17, 2022 (Mon)	<b>Chapter 2 &amp; Sec 8.1 Test on Bb</b> Print notes shell for chapter 3
16	Jan 18, 2022	<b>Homework due: 3.1, 3.2</b>
17	Jan 19, 2022	<b>Homework due: 3.3, 3.4</b>
18	Jan 20, 2022	<b>Homework due: 3.5, 3.6</b> Review Chapter 3 from your notes
19	Jan 21, 2022 (Fri)	<b>Chapter 3 Test on Bb</b>

## NOTES:

Chapter Tests will be posted on Blackboard -> Chapter Tests