Math 20 CRN 11542 Portland Community College

Winter 2025 – Barry Edwards
Pre-Algebra Syllabus

Instructor:	Barry Edwards (he, him, his)
E-Mail:	bedwards@pcc.edu
Classroom:	**T & Th 9 am to 11:20 am in Scott 202**
Office Times:	**T & Th 8:30 am to 9 am in classroom**
Office Location:	**SCOM 202**
PCC SE Campus:	2305 SE Division, Portland OR 97216

Class Motto:

"The only stupid question is the one you don't ask!"
– Barry Edwards

Winter Term 2025 and Illness Issues:
In our class, we will follow standard norms for in-person classes, however if you wish, you may choose to practice precautions, such as social distancing and wearing of masks. Social distancing/medical supplies continue to be available in the classroom for those who wish to use them.
All are encouraged to stay home if they feel ill. If this occurs, reach out to ALL your instructors for class make-up informations.

PCC remains a Sanctuary College:
PCC promotes the success, dignity, and worth of each individual by providing a safe environment where the examination of divergent ideas, experiences and systems of inequality adds depth to the learning experience. PCC strives to provide opportunity to all students and the appropriate level of support services to ensure the highest level of success. **For more information and resources**, see The DREAMers Resource Center at:
https://www.pcc.edu/resources/undocumented-students/

Course Description:
Introduces algebraic concepts and processes with a focus on functions, linear systems, polynomials, and quadratic equations. Applications, graphs, functions, formulas, and proper mathematical notation are emphasized throughout the course. A scientific calculator is required.

Late Add Policy and Attendance:
The policy of the instructor for adding the course late is that it must be completed by the end of the second week of the course. No student will be added after this date for ANY reason, due to the rapidly decreasing chance of student success when starting later than such a late date.
After the first week of the term, students may attend this course only if registered. Students who are unable to attend must drop the course online or through the Registration Office. To have tuition charges removed, the student must drop the course before the drop deadline posted on MyPCC and in the Class Schedule. Students who never attend, or stop attending, without dropping could receive a W or a failing grade and be required to pay for the course.

Prerequisites:
Placement into Math 20. Please ask your instructor or the Registrar's Office if you have any questions.

Required Materials:
Textbook: Basic College Mathematics, 3rd Edition, Miller, O'Neill, & Hyde. This text is available at campus Bookstores in both a hard copy edition and (hopefully) an e-book format.
A **scientific calculator** with fraction capabilities is required. The recommended model is the TI-30XS, available at the SE Campus Bookstore and many retail outlets. The TI-30X-IIS is also an acceptable calculator. **A small 6-inch ruler** is also VERY useful for students to have in class and while doing homework. The student should familiarize themselves with the basic features of their calculator prior to the first week of class.

Communicating with Your Instructor Via Email:
Based on FERPA (Family Education Rights and Privacy Act) rules, you should communicate with your instructor via email using ONLY your PCC email account. This allows your instructor to be reasonably sure that it is truly you that s/he is communicating with and your privacy is preserved and respected. Your instructor will not post grades at any time, but will provide your grade information via email IF you use your PCC email account to make the request. The information will be given in the form of a "reply" to that same PCC email account. No other email accounts will be accepted for communications that involve student information.

Title IX Statement:
Portland Community College is committed to creating and fostering a learning and working environment based on open communication and mutual respect. If you believe you have encountered sexual harassment, sexual misconduct, sexual assault, or discrimination based on race, color, religion, age, national origin, veteran status, sex, sexual orientation, gender identity, or disability please contact the Office of Equity and Inclusion at (971) 722-5840 or equity.inclusion@pcc.edu

Accessible Ed & Disability Resources:
PCC is committed to ensuring that classes are accessible. Accessible Ed & Disability Resources [www.pcc.edu/disability] works with students and faculty to minimize barriers. If students elect to use approved academic accommodations, they must provide in advance formal notification from Accessible Ed & Disability Resources to the instructor.

Classroom Behavior:
It is expected that students conduct themselves in a manner that is respectful of their fellow students, the instructor, and in such a way that does not detract from their fellow student's learning process, in accordance with policies of the instructor, the Southeast Campus, and the Student Rights and Responsibilities Handbook (viewable online at www.pcc.edu/about/policy/student-rights/student-rights.pdf#code-of-student-conduct). It is particularly important that student read the Code of Student Conduct in the Student Rights and Responsibilities Handbook. **Examples of inappropriate behavior include arriving late class meetings, allowing use of cell phones, sharpening pencils, and conversations during lectures.**

Positive behaviors, including the appropriate and inoffensive use of humor, helping classmates outside of lecture times, and asking questions of the instructor during lectures are greatly appreciated.
Students are required to complete this course in accordance with the Student Rights and Responsibilities Handbook. Dishonest activities such as cheating on exams and submitting or copying work done by others will result in disciplinary actions including but not limited to receiving a failing grade. See the Academic Integrity Policy for further details: www.pcc.edu/about/policy/student-rights/student-rights.pdf#academic-integrity

Flexibility in Instruction:
The instructor reserves the right to modify course content and/or substitute assignments and learning activities in response to institutional, class, or weather situations.

Attendance and Turning in Homework:

"Ninety percent of success is showing up."
– Woody Allen

The textbook is intended to be a reference and a resource for the student in this course, but it will not be the focus of the course. Therefore, **excellent attendance is absolutely necessary** for the student to realize the full potential of the material in this course. Nevertheless, attendance is taken only during the first week of classes for registration related purposes. Sometimes, missing a class meeting is unavoidable. **If you miss a class meeting, it's your responsibility to make up any work assigned**, get any notes or handouts, and turn in any work that is due. If you need to contact me, I would suggest that personal interview or e-mail are the most effective methods. I will share with you that I'm not very fond of voice mail …
The textbook is intended to be a reference and a resource for the student in this course, but it will not be the focus of the course. Therefore, **excellent attendance is absolutely necessary** for the student to realize the full potential of the material in this course. Nevertheless, attendance is taken only during the first week of classes for registration related purposes. Sometimes, missing a class meeting is unavoidable. **If you miss a class meeting, it's your responsibility to make up any work assigned**, obtain any videos, notes, or handouts, and turn in any work that is due. If you need to contact me, I would suggest that e-mail is the most effective method.

ALL work is officially due into my email box by 12 midnight on the evening of the due date. Please reach out to me **before** you start piling up late work. It's easier to get caught up if you act more proactively.

Resources for Help: There are many resources available for helping the student with the material in this course. First, **the instructor is available outside of class to help students "one-to-one", via ZOOM**, including during Office Hours (the half-hour just before or just after class). I can also answer email questions. **There is free tutoring online from the Sylvania Campus.** Check out the SE Campus Tutoring Center's website for more details**.** As additional resources become known to me, I will share them with the class during a ZOOM session, or via email.

Learning Mathematics:

"Genius is one percent inspiration and ninety-nine percent perspiration."
– Thomas Alva Edison

Learning mathematics is an active process for the student. **It is the student's responsibility to put in the time and work to learn mathematics.** It is the instructor's responsibility to facilitate that process. Occasionally, you will encounter a topic that is difficult for the student to master. If you are persistent, and ask for help as needed, the obstacle will be overcome and the topic will be mastered. **PLEASE, come and see me if you have ANY questions or problems concerning anything in this course.** I am here to help. **Questions in class are encouraged**. If after asking a question during class, my answer still does not help you to understand the topic, come and see me outside of class and we can sit down and work it out "one-to-one".

Teamwork:
Students may work in small teams in this course. For many, the team approach is a radical change to their prior experience in learning mathematics. You will be required to work with other students in a forum of cooperation and respect. There are some students that prefer to work on their own for one reason or another. I ask you to **give this approach your best effort**, and in the long run I believe you will benefit from it.

There are many reasons for using this team approach. First, this approach is **an example of the way people work** together in many situations that you will find yourself in the real world. Second, a student that understands a topic well can **help another student** in the team that is having a difficult time with that topic. Third, the team approach helps students to form "study groups" of students with similar schedules. **Studying together (with your own team members) outside of class is highly recommended.** Fourth, working within your teams helps the student **develop effective communication skills**, especially within the framework of mathematical terminology.

Grading Policy:

"How can I get an 'A' from the fat, funny, furry guy?"
– Anonymous

PCC Grading Guidelines: You can view the college's course grading guidelines using the following link:
https://catalog.pcc.edu/handbook/g301-gradingguidelines/#policytext

There are four types of graded work expected of the student in this course:

1) ***Activities:*** During the term, there will be activities (some may be outside of class) that will either introduce new topics, assist the student to grasp a previously introduced topic, or assess the student's understanding of a topic. Unless otherwise stated, activities are to be completed and turned in as a team by the beginning of the next class meeting. **Activities are worth up to 5 points for each student.**

2) ***Weekly Homework:*** On a weekly basis, students will be given problem sets designed mainly to allow the student an opportunity to practice their new skills. These assignments will be graded only on whether they are completed, not on correctness. "Completed" means that your work includes the problem statement, all work is shown, and the answer is written in a complete sentence. Neatness in all graded work is extremely important. **Homework Assignments are worth up to 5 points each.** Generally, these assignments are given in class on Thursday and are due the following Thursday by midnight.

3) ***Midterm:*** A midterm will be given in-class midway through the term. Look in the Tentative Schedule for the date. The Midterm covers cover the material stated by your instructor. The Midterm is closed book and closed notes. **The Midterm is worth up to 50 points.**

Percent	Grade
90 - 100%	A
80 - 89.9%	B
70 - 79.9%	C
60 - 69.9%	D
Below 60%	F

4) ***Final Exam:*** The final exam will be **an exam covering all the material in the course**. This exam is closed book and closed notes. This exam will be given according to the tentative schedule and will be **worth a maximum of 50 points**.

After all assignments are graded and each student's total points are calculated, students will receive a letter grade based on the grade distribution at right. **The projected total possible points for this course is 200 points.** Students that do not achieve at least 70% of the total possible points in the course have not demonstrated sufficient mastery of the material in the course and will be expected to repeat the course before moving on to the next level of mathematics at PCC. Final grades will be posted on MyPCC by the Tuesday after Finals Week. **Please do not ask your instructor to give out your course grade early.**

Submitting Graded Work via email:
You may submit work via email when it is not convenient to do so in class. Completed work should be scanned, then emailed to the instructor at the address at the top of the Syllabus. Genius Scan is a free app for your iOS or Android smartphone/tablet that works great. You will be provided with a guide to using Genius Scan, should you choose to use it.

A scan for a single graded assignment should include all the pages in a single file. Thus, each graded assignment will be a single file, though often there will be multiple pages. The file's name should tell the reader the contents of the file. Make your scans as readable as possible for accurate grading. If the scan is not readable, it will be returned for resubmission. **ALL emailed work MUST BE SUBMITTED IN PDF FORMAT.** Any work submitted in a different format will be returned ungraded. Please, **send the actual files, no links, please**.

Extra Credit Policy: A student wishing extra credit should devise a plan that includes a specific set of problems, a project, a book report, or similar work that the student would like to perform. A written copy of this plan with a proposed point value (not to exceed 15 points) will then be submitted to the instructor for negotiation. Once an agreement with the instructor is reached, the instructor will initial and date the revised plan. This copy of the plan is to be attached to the back of the completed work. **You may submit an extra credit proposal any time on or before the Thursday of Week 9 (March 7) at 12 midnight.**

Incomplete Policy: Incompletes are available only at the sole discretion of the instructor and will be available **only for students with "passing grades" and extreme last-minute emergencies**. If you are unsure about your ability to complete this course "on time" you should consider taking this course at another time.

Math 20
Problem Solving Tactics

The following checklist will be reviewed in class. It is a good overview of how you can organize your thoughts and your work when doing the "dreaded story problem"!

Checklist:

- ☐ **Read the problem "normally"**, as you would a newspaper story or a novel.
- ☐ **Re-read the problem.** As you read the problem, **write down the important information** and the **question** the problem asks.
- ☐ **Define any "unknown value.** The unknown you define should be the unknown "you are asked to find".
- ☐ If appropriate, **draw a picture** of the situation, labeling the picture with the known information.
- ☐ Use the information above to **set up a numerical expression** in terms of the unknown value you are trying to find.
- ☐ **Simplify the numerical expression** and **answer the problem's question** in a sentence.
- ☐ **Check your answer** with the original problem to see if it "makes sense", both mathematically and realistically.

Math 20
Inequality Symbols and Their Meanings

The following information is offered to help student's recall the meaning of inequality symbols for use in this course. Any student would benefit from review of this material.

Symbol	Meaning(s)	Example	Opposite	Meaning of Opposite
$>$	**Greater than** Not less than or equal to Not at most	$13 > 5$	$\leq$	**Less than or equal to** At most Not greater then
$<$	**Less than** Not greater than or equal to Not at least	$2 < 14$	$\geq$	**Greater than or equal to** At least Not less than
$\geq$	**Greater than or equal to** At least Not less than	$7 \geq 5$	$<$	**Less than** Not greater than or equal to Not at least
$\leq$	**Less than or equal to** At most Not greater than	$3 \leq 6$	$>$	**Greater than** Not less than or equal to Not at most
$\neq$	**Not equal to** Less than or greater than	$15 \neq 15.1$	$=$	**Equal to**

Math 20 Winter 2025
Tentative Schedule and Calendar

This calendar is basically my projected lesson schedule, with added information for students to be aware of. Use it to prepare for class and keep track of due dates and important deadlines.

Week	Monday	Tuesday	Wednesday	Thursday	Friday
1	**Jan 6**	**7** Course Introduction Whole Numbers: Addition and Subtraction (1.1 – 1.3)	**8** *Last day to drop with a refund is Sat Jan 11*	**9** Whole Numbers: Multiplication and Division (1.4 – 1.6) **ACT 1 – Whole Numbers**	**10** *Last day to add, drop, or choose audit option is Tues Jan 14*
2	**13**	**14** Whole Numbers: Exponents & PEMDAS (1.7 – 1.8)	**15** *Are you staying caught up with your homework?*	**16** Fractions & Prime Numbers (2.1 – 2.3) **ACT 2 – Exponents & Prime Numbers**	**17**
3	**20** **MLK Jr. Day** **NO CLASS**	**21** Fractions: x and ÷ (2.4 – 2.6)	**22**	**23** Fractions: + and – (3.1 – 3.3) **ACT 3 – LCM, GCF, & PEMDAS**	**24**
4	**27** *PCC Scholarship app. deadline is Feb 1*	**28** Fractions: + and – (3.4 – 3.5) **ACT 4 – Fractions**	**29**	**30** Decimals: Part 1 (4.1 – 4.3)	**31** *Are you staying caught up with your homework?*
5	**Feb 3**	**4** Decimals: Part 2 (4.4 – 4.5) **ACT 5 – Decimals**	**5**	**6** Backup/Midterm Prep Day	**7**
6	**10** *Are you staying caught up with your homework?*	**11** **Midterm Exam** **Chapters 1 – 4**	**12**	**13** Real Numbers: Part 2 (10.4 – 10.5) **ACT 6 – Real Numbers**	**14**
7	**17**	**18** Real Numbers: Part 1 (10.1 – 10.3)	**19**	**20** Ratios (5.1 – 5.2)	**21**
8	**24**	**25** Proportions (5.3 – 5.4) **ACT 7 – Ratios & Proportions**	**26** *Are you staying caught up with your homework?*	**27** Percent Basics (6.1 – 6.2)	**28**
9	**Mar 3**	**4** Percent Calculations (6.3 – 6.4, 6,6) **ACT 8 – Percents**	**5** *Last day to propose Extra Credit is Thurs Mar 6*	**6** Conversions: Part 1 (7.1 – 7.3)	**7**
10	**10** *Are you staying caught up with your homework?*	**11** Conversions: Part 2 (7.4 – 7.5) **ACT 9 - Conversions**	**12**	**13** Graphs and Statistics (9.1 & 9.4) **ACT 10 – Graphs and Statistics**	**14** *Last day to change grade option, withdraw from a class is Sat Mar 15*
F	**17**	**18** **Final Exam** **(9 to 10:50 pm, Scott 202)**	**19**	**20** **NO CLASS MEETING**	**21** ***Grades available Tue Mar 25 online***

Math 20 Winter 2025
Weekly Homework

The following homework assignments from the "Exercise Set" portion of each section are typically assigned Wednesday of each week and are due in class on Wednesday of the next week. These problems are the minimum require for credit.

It is especially important to stay "caught up" with the homework. A wise student will read the section(s) studied on a particular day both before and after class. Note any questions concerning homework on your paper, so you can remember to ask them in class.

HW #	Sec.	Problems
	1.1	#3-19 (odd), 27-39 (odd), 51, 53, 57, 61, 63
	1.2	#15-47 (odd), 53-69 (odd), 85, 87, 91, 95
	1.3	#25-55 (odd), 61, 65, 71, 77, 83, 85, 89
	1.4	#11-27 (odd), 31, 33, 39, 45, 49
	1.5	#9-39 (odd), 43, 51, 57, 63, 67, 75, 85
	1.6	#11-31 (odd), 41, 45, 49, 51, 61, 71, 73, 91
	1.7	#9-37 (odd), 43, 45, 57, 69, 77, 79, 85, 101
	1.8	#19, 23, 31, 37, 41, 45, 51, 57, 61
	2.1	#3-27 (odd), 39, 47, 53, 59, 65, 75, 79, 85
	2.2	#21, 27, 31-45 (odd), 51, 57-67 (odd), 83
	2.3	#3-23 (odd), 25-49 (eoo), 73, 75, 77
	2.4	#7-25 (odd), 27-51 (eoo), 55-83 (odd), 91
	2.5	#13-55 (odd), 67-83 (odd), 89, 93
	2.6	#17-45 (eoo), 51-67 (odd)
	3.1	#9-21 (odd), 29-43 (odd), 53, 55, 75, 77, 81
	3.2	#9-37 (odd), 41-53 (odd), 71, 75, 79
	3.3	#15-63 (eoo), 67, 71, 73, 75
	3.4	#9-41 (eoo), 47, 51, 53, 57, 59, 81, 85
	3.5	#17-41 (eoo), 47, 49, 53, 57, 63, 67
	4.1	#3-43 (eoo), 5-77 (eoo), 85-95 (odd)
	4.2	#11-27 (odd), 35-59 (eoo), 61, 63, 69
	4.3	#7-51 (eoo), 61-93 (eoo), 95
	4.4	#9-47 (eoo), 51-71 (odd), 75-95 (odd)

HW #	Sec.	Problems
	4.5	#11-55 (odd), 65-77 (eoo)
	10.1	#3-23 (odd), 25-61 (eoo), 73-101 (eoo)
	10.2	#9-41 (eoo), 43-83 (eoo), 87-99 (odd)
	10.3	#11-43 (odd), 45-93 (eoo)
	10.4	#9-45 (eoo), 47-95 (eoo), 97-117 (eoo)
	10.5	#9-61 (eoo), 63, 65, 67
	5.1	#3-11 (odd), 13-57 (eoo)
	5.2	#9-53 (eoo)
	5.3	#3-25 (odd), 29-69 (eoo)
	5.4	#13, 17, 21, 27, 33, 35, 39, 43-55 (odd)
	6.1	#3-55 (eoo), 71, 75, 77
	6.2	#11-41 (odd), 43-63 (eoo)
	6.3	#15-35 (odd), 37-65 (eoo), 71, 75, 77, 81
	6.4	#11-51 (eoo), 57, 61, 63
	6.6	#13-19 (odd), 23, 27, 29, 33, 37, 39
	7.1	#3-95 (eoo)
	7.2	#9-31 (odd), 39, 41-73 (odd)
	7.3	#13-59 (odd)
	7.4	#9-69 (odd), 75, 79, 81, 85, 89
	7.5	#11-37 (odd), 39, 43, 45, 49, 53, 63, 65, 67
	9.1	#3-35 (odd)
	9.4	#3-47 (eoo)

1-13 (odd) means do 1, 3, 5, 7, 9, 11, and 13 (skip all even problems)

1-13 (eoo) means do 1, 5, 9, and 13 (do the first problem, then every fourth problem)

Math 20
Miscellaneous Rules (Also known as "Teacher's Pet Peeves")

- **If you are planning on missing more than two (2) class meetings**, you should re-think whether this course is the right one for you at this time. **ALL students must take the Final Exam on time to pass the course.** NO EXCEPTIONS except due to illness, disability accommodations, or dire emergency as determined solely by the instructor.

- **If you can hear classmates "chat" during lectures and class discussions, they're too loud! Please take such discussions outside or offline.** Your classmates will thank you.

- **Students are responsible for their own education.** Please take your studies and your progress seriously and your instructor will do likewise. "well-prepared students" will **read each section of the text before attending class**, and then re-read the text just after class and do a few problems as a brief review.

- **Class will begin on time** each day. Do not ask the instructor to repeat items discussed during class if you are late.

- **Late students** should enter the classroom or ZOOM Meeting as quickly and quietly as possible, to avoid disrupting their fellow students and the instructor. You should **NEVER be late to a test or exam!** FYI: Attending a ZOOM meeting with your camera off and your attention elsewhere is the same as NOT attending.

- **Working with teammates on homework outside of class is highly encouraged**. I would consider working on homework (as soon as possible) after class with classmates …

- Please (for your sake and mine!) **use pencil**!!! Number 2 lead is best.

- To label a homework assignment, put your **name**, **Math 20**, the **date**, and **homework assignment number** (e.g. – "HW#4") at the top of the first page. And **use only PDF format**!

- **Be neat and orderly**; rewrite your work if necessary. Leave a space between each problem for easier reading. Neatness counts! **Use a ruler or straight edge** when drawing graphics, tables, or sketches. **Neatness** is a very important part of your assignments. **Report answers** to application problems **in complete sentences**.

- Verify your answers with the original problem. **Does your answer make sense?** Your answers should be written in **complete sentences**, as if you were reporting your findings to an employer. After all, someday this may be the case!

- **Show all your work. Include the problem statement with your problem**. You can print a copy from the book, then apply it to your work with a glue stick, write it, or use some other method. Think of your work as a "burnt offering" to the "god of grading". Don't anger the "god" by leaving an unacceptable offering! A favorable "offering" could result in highly desired "partial credit"!

- **Staple (or submit) only one "weekly homework", activity, or other graded work together**, please do not "combine assignments" with staples or paper clips! Arrange the pages carefully, staple the left-hand corner, and write your name legibly in the upper right-hand corner of the first sheet. It helps me in my grading. And **please DO NOT ask for grading work after you just turned it in**.

- **Be sure you are completely prepared for tests and the Final Exam.** Have your calculator and other supplies ready before you leave home. Get a good night's sleep the night before a test … it's often better than cramming.

- **Requests for letters of recommendation** will be considered only for students earning course grades of "A" in a previous course taken from this instructor, as per instructor's policy.

Student Work Checklist

Course Math 20 CRN 11542 **Winter Term 2025**

Assignment	Due Date	Score	Notes
HW#1			
HW#2			
HW#3			
HW#4			
HW#5			
HW#6			
HW#7			
HW#8			
HW#9			
HW#10			
ACT#1: Whole Numbers			
ACT#2: Prime Numbers, etc.			
ACT#3: LCM, GCF, etc.			
ACT#4: Fractions			
ACT#5: Decimals			
ACT#6: Real Numbers			
ACT#7: Ratios & Proportions			
ACT#8: Percents			
ACT#9: Conversions			
ACT#10: Graphs & Statistics			
MIDTERM			
FINAL			
EXTRA CREDIT			

Total Projected Points = 200