

Math 107, Sections 9 Algebra for Pre-calculus Spring 2022 Syllabus

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	Mondays at 3:45-4:15, NOTE: Other office hours by appointment.	

MATH 107 Algebra for Pre-Calculus 2 credits

Linear equations including graphing, exponents, radicals, function notation, and quadratic equations.

Prerequisite: Math 95 or suitable placement score.

Learning Outcomes: Factoring and simplifying rational expressions, interval notation, solving absolute value equations, linear inequalities, rules of exponents, and logs, solving exponential equations, functional notation, evaluation of functions and graphs.

Text: Elementary & Intermediate Algebra, 5th Ed., by Alan S. Tussy and R. David Gustafson, customized for UWSP.

Structure of the Course: This course will be taught virtually online. I have organized the course week by week in Canvas. Each week you will have video lessons to watch, followed by homework assignments to complete in WebAssign. In addition to watching the lesson videos, you should also read your textbook, and copy all the examples given, so you understand the steps required to work each problem. Then you will be better prepared to do your homework. After week one, each week will also include a quiz or a unit exam.

Due Dates: It is your responsibility to make every effort to keep up with the scheduled work. Only in rare cases will I extend a homework due date beyond the automatic extension period. Quizzes and exams may not be made up unless arranged with me ahead of time, and then only for sufficient reason. You may reach out for help at any time! You may work ahead; however, the quizzes and tests must be taken on the scheduled days. Dates for the quizzes and exams will be emailed to you, it is your responsibility to check your email.

Calculators: You may use any four-function, scientific, or graphing calculator, **except** calculators including pocket organizers, handheld or laptop computers, electronic writing pads, pen-input devices or **calculators built into cellular phones or other wireless communication devices**, calculators with a typewriter keypad with keys in QWERTY format, calculators with built-in computer algebra systems; *prohibited* calculators in this category include: Casio: Algebra fx 2.0, ClassPad 300, and all model numbers that begin with CFX-9970G, Texas Instruments: All model numbers that begin with TI-89 or TI-92, Hewlett-Packard: hp 48GII and all model numbers that begin with

Homework will be assigned daily and will consist of problems you will complete in WebAssign. You will have five tries to answer each question. Each assignment is due by 11:59pm on its respective due date

(except for the very last assignment). The average number of questions is 18, and the average estimated time to complete an assignment is 48-50 minutes. Remember that for each hour we would be meeting in class if we were meeting in person, you should expect to spend about two hours studying and completing homework. So you should plan to invest about 12 hours per week on this class.

When you do your homework, it is advisable to do your work on paper in an organized way (I suggest keeping a notebook so all your work is together), just as you would do if you were doing the problems directly from the textbook and handing it in to be graded. Your exams and quizzes will be in deltamath.

Quizzes and Exams: You will have 3 quizzes, and 2 unit exams. They will be made available only on the scheduled dates, and be open from 7am until 11:59pm. They will have time limits, and so plan to complete your quiz or test in one sitting. Unlike homework, you cannot start and stop, and come back later to finish it.

Final Exam: the comprehensive final exam is scheduled for **Monday, December 14, 5-7pm. BE SURE TO KEEP THIS TIME SLOT OPEN AND AVAILABLE IN YOUR SCHEDULE!!** (You will not be required to submit your work for the final.)

Evaluation: Your final course grade will be determined by the following weights:

22% for daily homework	22% for the comprehensive final exam
56% for Exams (2 exams 22% each) and (3 quizzes at 4% each)	

Grading Scale:

A: $\geq 92\%$	A - : $\geq 90\%$ but $< 92\%$	
B + : $\geq 88\%$ but $< 90\%$	B : $\geq 82\%$ but $< 87\%$	B - : $\geq 80\%$ but $< 82\%$
C + : $\geq 78\%$ but $< 80\%$	C : $\geq 74\%$ but $< 77\%$	C - : $\geq 72\%$ but $< 70\%$
D + : $\geq 68\%$ but $< 70\%$	D : $\geq 63\%$ but $< 68\%$	D - : $\geq 60\%$ but $< 62\%$

Incompletes: A grade of incomplete may be given when circumstances arise which are beyond the student's control and the student is unable to complete the course AND the student is passing when the circumstances arise.

For Help: 1) Ask questions as they arise, send me an email. 2) Drop my virtual office hour. (In Canvas, select Zoom in the menu, and join the meeting for that day and time. 3) Make use of the MathPad. 3) Tutoring services (through the TLC) are available for this course. More specifics for options 3 and 4 will be provided in Canvas when they become available.

General Course Policies:

- 1) UWSP is committed to providing reasonable and appropriate accommodations to students with disabilities and temporary impairments. If you have a disability or acquire a condition during the semester where you need assistance, please contact the Disability and Assistive Technology Center on the 6th floor of Albertson Hall (library) as soon as possible. DATC can be reached at 715-346-3365 or DATC@uwsp.edu.

- 2) You should be fully aware of your rights and responsibilities as a UWSP student. Refer to <http://www.uwsp.edu/dos/Pages/Student-Conduct.aspx> for more information regarding the UWSP Community Bill of Rights and Responsibilities, the UWSP Student Academic Disciplinary Procedures, and the Non-Academic Standards and Disciplinary Procedures.

TOPICS COVERED:

Note. The order of the sections listed below is not the order in which they are covered.

5. EXPONENTS AND POLYNOMIALS

- 5.1 Rules for Exponents
- 5.2 Zero and Negative Exponents

8. TRANSITION TO INTERMEDIATE ALGEBRA

- 8.2 Functions
- 8.6 Review of Factoring Methods: GCF, Grouping, Trinomials
- 8.7 Review of Factoring Methods: The Difference of Two Squares; the Sum and Difference of Two Cubes

6. FACTORING AND QUADRATIC EQUATIONS

- 6.6 A Factoring Strategy
- 6.7 Solving Quadratic Equations by Factoring

9. RADICAL EXPRESSIONS AND EQUATIONS

- 9.1 Radical Expressions and Radical Functions
- 9.2 Rational Exponents
- 9.3 Simplifying and Combining Radical Expressions
- 9.4 Multiplying and Dividing Radical Expressions
- 9.5 Solving Radical Equations
- 9.6 Geometric Applications of Radicals

10. QUADRATIC EQUATIONS, FUNCTIONS, AND INEQUALITIES

- 10.1 The Square Root Property and Completing the Square
- 10.2 The Quadratic Formula
- 10.3 The Discriminant and Equations That Can Be Written in Quadratic Form

Math 95 WebAssign Homework			
Assignment	# questions	estimated time	# points
getting started	22	22	25
5.1 Rules for Exponents 1	20	46	44
5.1 Rules for Exponents 2	20	45	23
5.2 Zero and Negative Exponents	30	70	42
8.6 Review of Factoring Methods: GCF, Grouping, Trinomials 1	18	43	21
8.6 Review of Factoring Methods: GCF, Grouping, Trinomials 2	14	49	14
8.7 Review of Factoring Methods: The Difference of Two Squares; the Sum and Difference of Two Cubes 1	15	45	18
8.7 Review of Factoring Methods: The Difference of Two Squares; the Sum and Difference of Two Cubes 2	11	43	13
6.6 A Factoring Strategy	23	64	23
6.7 Solving Quadratic Equations by Factoring	23	45	25
10.1 The Square Root Property	12	27	16
10.1 Completing the Square	12	49	15
10.2 The Quadratic Formula 1	13	49	19
10.2 The Quadratic Formula 2	10	43	14
10.3 The Discriminant and Equations That Can Be Written in Quadratic Form	13	50	13
8.2 Functions 1	20	38	39
8.2 Functions 2	14	49	16
9.1 Radical Expressions and Radical Functions 1	28	39	30
9.1 Radical Expressions and Radical Functions 2	30	66	45
9.2 Rational Exponents 1	25	36	34
9.2 Rational Exponents 2	21	52	22
9.3 Simplifying and Combining Radical Expressions 1	16	37	27
9.3 Simplifying and Combining Radical Expressions 2	18	50	18
9.3 Simplifying and Combining Radical Expressions 3	18	57	22
9.4 Multiplying and Dividing Radical Expressions 1	19	60	22
9.4 Multiplying and Dividing Radical Expressions 2	23	58	23
9.5 Solving Radical Equations 1	16	45	28
9.5 Solving Radical Equations 2	14	51	17
9.6 Geometric Applications of Radicals	18	57	27
on average:	18	48	24