

Algebra 1A Course Syllabus

INSTRUCTOR INFORMATION

Please go to your course and access the 'Course Home' for detailed instructor information.

CONTACT INFORMATION

Please feel free to contact me if you have any questions regarding your assignments or course content. Course facilitators respond to emails within 24 hours on weekdays and 48 hours on weekends. If you don't receive a response in that time, please reach out again just in case I did not get your message.

COURSE REQUIREMENTS

All learners must have computer and internet access. Participants in online classes must be comfortable with the basic functions of word-processing software, including GOOGLE DOCS. All materials and texts are available in the course itself.

COURSE DESCRIPTION

This Algebra course introduces the learner to algebraic concepts including: developing symbolic reasoning using variables which abstract real life, and emphasizing problem-solving skills which can be applied to any situation. Real world applications, critical thinking, understanding of the logic behind formulas and which to use, and problem solving are emphasized throughout the course. Opportunities for practical application of the concepts are given to students through the presentation and are tied in with relevant situations, helping learners make sense of the study of algebra, and develop critical problem-solving skills for a wide variety of real-world applications. This course is designed to provide the tools to lead learners into the study of Geometry and Algebra 2.

COURSE GOALS

This course is designed for those students entering a high school level/college prep math track. Before starting this course students should have finished a Pre-Algebra or equivalent course (8th grade math as an example). Upon completion of Algebra 1A and Algebra 1B students can take Geometry.

STANDARDS MET

This course covers the California state math standards for the first semester of Algebra 1 including these anchor standards:

<https://www.cde.ca.gov/be/st/ss/documents/ccsmathstandardaug2013.pdf>

Specific standards met for each assignment are listed with the assignment in the course itself.

REQUIRED TEXTS

All reading materials are available online, but will also be provided as links through the course website.

Other selected readings for nonfiction available within the course.

COURSE OUTLINE

Below is a summary of the topics of study covered in this course.

BLOCK 1 Evaluating Expressions

BLOCK 1 ASSIGNMENT #1 Evaluate each expression using MDAS

BLOCK 1 ASSIGNMENT #2 Evaluate expressions using Order of Operations

BLOCK 2 Variables and Expressions

BLOCK 2 ASSIGNMENT #1 Evaluating expressions with one variable

BLOCK 2 ASSIGNMENT #2 Evaluating expressions with two variables

BLOCK 2 ASSIGNMENT #3 Using expressions in real world applications

BLOCK 3 One-Step and Two-Step Equations

BLOCK 3 ASSIGNMENT #1 Solve one-step equations

BLOCK 3 ASSIGNMENT # 2 Solve two-step equations

BLOCK 4 Multi-step Equations

BLOCK 4 ASSIGNMENT #1 Combining like terms with negative coefficients & distribution

BLOCK 4 ASSIGNMENT #2 Simplifying expressions

BLOCK 5 Equations with Variables on Both Sides

BLOCK 5 ASSIGNMENT #1 First step in solving equations

BLOCK 5 ASSIGNMENT #2 Solving equations with variables on both sides of the equal sign

BLOCK 6 One-Step Inequalities

BLOCK 6 ASSIGNMENT #1 Solving inequalities

BLOCK 6 ASSIGNMENT #2 Two-Variable Inequalities

BLOCK 7 Halfway Point

BLOCK 8 Exponents

BLOCK 8 ASSIGNMENT #1 Negative exponents and zero exponent

BLOCK 8 ASSIGNMENT #2 Simplify exponents

BLOCK 9 Multiplying & Dividing Monomials

BLOCK 9 ASSIGNMENT #1 Multiply & divide monomials

BLOCK 10 Polynomials

BLOCK 10 ASSIGNMENT #1 Identify polynomials

BLOCK 10 ASSIGNMENT #2 Simplifying expressions

BLOCK 11 Multiplying Polynomials

BLOCK 11 ASSIGNMENT #1 Multiply polynomials

BLOCK 12 Factoring Polynomials

BLOCK 12 ASSIGNMENT #1 Factoring out the greatest common factor

BLOCK 12 ASSIGNMENT #2 Factoring quadratic equations

BLOCK 12 ASSIGNMENT #3 Factoring quadratic equations

BLOCK 13 More Factoring

BLOCK 13 ASSIGNMENT #1 Factor by grouping

BLOCK 13 ASSIGNMENT #2 Factor quadratic equations

BLOCK 14 Trinomials

BLOCK 14 ASSIGNMENT #1 Factoring perfect square trinomials

BLOCK 14 ASSIGNMENT #2 Difference of squares

BLOCK 14 ASSIGNMENT #3 Factoring methods

RESOURCES/MATERIALS USED IN THIS COURSE

Blocks 1-4 Resources:

- Youtube: videos on evaluating expressions using MDAS, order of operations, variables and expressions, evaluating expressions with one variable, evaluating expressions with two variables, using expressions in real world applications, solving one-step equations, solving two-step equations, combining like terms, distribution, and simplifying expressions
- Facilitator created content: Notes on order of operations, video on evaluating expressions, practice evaluating expressions using MDAS, practice with one-variable and two-variable expressions, practice using expressions in real world applications, practice solving one-step equations, notes on examples of two-step equations, practice multi-step equations, notes on combining like terms with negative coefficients, notes on distribution, practice simplifying expressions
- Khan Academy: Practice order of operations, practice evaluating expressions, practice solving one-step equations, practice solving two-step equations, practice simplifying expressions
- CK12: Notes on definition of variable

Blocks 5-10 Resources:

- Youtube: videos on equations with variables on both sides, solving inequalities, graphing inequalities, two-variable inequalities, exponents, negative exponents, zero exponent, simplifying exponents, multiplying and dividing monomials
- Facilitator created content: Practice problems on solving equations with variables on both sides, notes on the steps for solving equations, notes on inequalities, notes on graphing inequalities, notes on two-variable inequalities, notes on inequality divided by a negative number, Mid-term Exam quiz, practice problems on negative exponents, zero exponents, and simplifying exponents, examples of exponent rules, practice multiplying and dividing monomials

- Khan Academy: Practice solving inequalities, practice graphing inequalities, practice exponents, practice multiplying and dividing monomials
- IXL: Practice solving two-step inequalities
- Just Mathematics: Practice worksheet on inequalities

Blocks 11-15 Resources:

- Youtube: videos on polynomials, multiplying polynomials, factoring polynomials, factoring by grouping, factoring quadratic equations, perfect square trinomials, difference of squares, factoring methods review
- Facilitator created content: Notes on identifying polynomials, notes on multiplying polynomials, practice with trinomials, practice with factor by grouping, worksheet on perfect square trinomials to practice and key to check work, notes on which factoring method to use, practice factoring quadratic equations, practice difference of squares
- Khan Academy: Practice adding and subtracting polynomials, multiplying binomials, factoring polynomials
- Math Warehouse: Notes on adding polynomials
- Cool Math: Review different types of factoring

METHODS OF INSTRUCTION

This is an online course, and while there is flexibility in how and when you do assignments, it is best to log in and complete work each day according to the posted pacing schedule. Each BLOCK in a course is worth about 1 week of work during the regular semester. You can find our suggested pacing guide at ileadonline.org under 'CALENDARS'. It is highly recommended that learners follow the pacing schedule posted. Please be sure to check in with your teacher of record (coach/EF/Guide/ES) for guidance with scheduling.

This course uses project based learning to encourage an authentic, developed appreciation of the topics covered. That means that while it may include quizzes and some traditional assessments, the bulk of the coursework focuses on projects that require learners to display their learning in a thorough and creative manner. If you are struggling to complete your work or you need some assistance with an alternate schedule or workload, please contact me as soon as possible. I am more than happy to help support your success in the class!

LEARNER EXPECTATIONS

The learner is expected to participate in the course via e-mail, discussion boards (or other communication) with the facilitator, by reading the assigned readings, submitting assignments and completing and submitting original work.

Learners are expected to check their course and email account every day and complete work on time as assigned with designated dates and time.

Learners are expected to communicate with their instructor and each other in a respectful manner. Please follow the guidelines below:

1. **Make sure identification is clear in all communications.** If you are emailing or messaging your instructor or each other, please be sure they know who you are and what class you're in. That really helps with clear communication.
2. **Review what you wrote and try to interpret it objectively.** When we speak face to face and are misunderstood, we have an on-the-spot opportunity to rephrase our words. In writing, we must strive twice as hard to be understood, as we do not have the benefit of modifying or elaborating in real time. All caps ("I'M SHOUTING") and exclamation points ("Give me a break!!!") can be misinterpreted as intense anger or humor without the appropriate context.
3. **If you wouldn't say it face to face, don't say it online.** When you're working online, you're safe behind a screen, but that's no excuse to be ill-mannered or say things you would never say in public.
4. **Use emoticons when appropriate.** In casual chatroom settings, emoticons can help convey feelings that may otherwise get lost in translation, including humor, exasperation, exhaustion and even confusion. These aren't the best choice for formal assignments or projects though.
5. **Respect others' voices and be kind.** We all come from different backgrounds and have our own stories. Assume the best of each other and always be kind in your communication.
6. **Remember, if it's on the internet, it's everywhere.** Don't share personal information about yourself in a public online forum, especially something that could put your safety or security at risk.
7. **Practice Patience:** All your facilitators are doing their best to grade work in a timely manner. We also want to give you meaningful feedback, which takes some time. If you feel like there has been an error or an assignment was missed, please reach out with your name and class and we will do our best to sort it out.

(UTEP Connect)

GRADING

Each assignment is given a specific number of points. The number of points earned by the student is determined and a percentage is calculated. The raw score is recorded in the grade book.

An overall grade in the course will be determined according to your school's grading scale.

SUBMITTING ASSIGNMENTS

All work must be submitted to Brightspace, our learning management system. This is very important for record keeping and compliance. You have access to directions on how to do this in the 'Course Resources' folder of this class and in your Orientation class. If you need any help submitting work please reach out to your instructor and we will make time to ensure that you're able to turn in work to Brightspace.

HONESTY AND PLAGIARISM

Academic Integrity is essential to authentic learning. We want you to get the most out of your courses, and a BIG part of that is learning how to:

- Come up with your own ideas
- Use technology (like AI and other Online resources) to inform your original ideas
- Research in ways that help you develop your thoughts
- Give credit where credit is due
- Explore and use tools (like AI, citation generators, etc.) that help you grow as a person and a learner

Please review [THIS RESOURCE](#) for more information on plagiarism and [this guide for choosing, using and citing resources](#).

Our goal is to support you so that you can learn in a meaningful, authentic way. Any plagiarized work (this includes work generated solely by AI) will be given a zero and referred to your EF/COACH/GUIDE for review. From there we will work with you to support you as best we can.

PRIVACY POLICY

All work submitted is the property of the author and is not available to anyone not in the class. If work is to be submitted or viewed outside of this website, I will obtain permission from the author. [FERPA Info](#)