



Algebra I



ELIGIBLE STUDENTS:

Grades 9th, advanced 8th (10th – 12th welcomed): This course is designed for students who have successfully completed Pre-Algebra or its equivalent.

School-wide Class Dates: Tuesday, September 6, 2022; through Friday, May 26, 2023.

Class Times: MWF: 11:00am-12:15pm (EST)

Instructor: Dr. Fransell Riley

E-mail: friley.scholeacademy@gmail.com

SCHEDULE FOR ALGEBRA I

CLASS SESSIONS DATES:

The school year is 32 weeks and meets weekly except during holiday breaks which can be found on the school [academic calendar](#).

**Please note that all dates are subject to change as the instructor's circumstances might dictate (e.g. illness, family emergency). Any classes canceled by the instructor will be made up at an alternate time designated by the instructor.*

ALGEBRA I COURSE MAP:

Unit 1: Functions

Unit 2: Linear Functions and Relations

Unit 3: Nonlinear Expressions, Equations, and Functions

Unit 4: Advanced Functions and Equations

Unit 5: Data Analysis

OFFICE HOURS: In addition to scheduled class times, the instructor is available for questions after class. Students and/or parents can request meetings to ask questions, seek assistance, or review class material that are brief in nature, however, such meetings are not meant to be tutoring sessions.

ALGEBRA I COURSE DESCRIPTION:

Algebra I serves as the foundation for all future mathematics and science courses. Students begin to formulate abstract algebraic generalizations from their concrete understanding of mathematics. Students will learn to solve problems using equations, inequalities, and graphs. Students will investigate linear relationships, translating those relationships into mathematical equations and then functions. Students will explore: simplifying algebraic and radical expressions, linear and nonlinear functions, exponents, polynomials, solving quadratic equations, data analysis, and probability. Students will begin learning to write proofs and will work challenging problem sets from math competition books, college algebra books, and other resources. Students will also learn the history of Algebra and participate in philosophical discussions of the course content.

SUMMER ASSIGNMENTS:

Students will receive early, summer access to ALEKS and complete moderate summer assignments to maintain retention, remediate if necessary, and ensure readiness.

REQUIRED MATERIALS:

- **Digital Textbook: Reveal Math Algebra with ALEKS**
 - The instructor does not teach from the book but uses it for example problems, class work problems, student reference, and structure. Notwithstanding, this book has a superb presentation of functions, organization of content, and presents problems at various levels of difficulty with less pre-algebra review.
 - ALEKS delivers textbook practice problems to the students in a manner that promotes mastery and retention. Students work all problems on paper and turn them in for the instructor to review. Students are required to correct their work using ALEKS' step-by-step solution; thus, they learn from their errors before trying another similar problem.
 - Purchased via instructor (\$40) by 5/31. Info. will be sent via email in May.
- **Mathematics for the Nonmathematician (used print or digital will work)**
 - This text will be used to learn some of the related history and philosophy of the concepts covered. It provides students with interesting and challenging problems.
- Digital tablet. Choose from: Wacom Intuos, Huion, XP-Pen, or other.
- Three-ring notebook with five dividers or 5-subject spiral notebook
- Binder Pencil Pouch with multiple sharpened pencils, erasers
- Scientific Calculator Examples: TI, Sharp, other
- Notebook Paper and Graph paper
- Free web accounts: student.desmos.com, ziteboard.com, desmos.calculator
 - Ziteboard is used often as a virtual classroom chalkboard, the others are used sparingly

In addition, the instructor will provide pdf files or problems from various sources.

OPTIONAL MATERIALS:

- Paper versions of the digital textbook (this would be in addition to the digital text, not instead of): Textbook Vol 1 & Textbook Vol 2 or you can buy used from Amazon: Used Vol 1 and Vol 2 Used

PARENT EXPECTATIONS IN ACTION

Parents expectations are simply to ensure that the student has all of the required materials needed for the course, a stable internet connection, a distraction free environment during class, and adequate time to study outside of class hours. Parent assistance with assignments is not expected and should not be required. If a student is struggling with an assignment, parents are asked to follow the provided Parental Math Assistance Guide. However, if your student is accustomed to having your assistance with math, there will likely be a transition period as they build their level of tolerance and confidence in working math independently.

STUDENT EXPECTATIONS IN ACTION

In this class, students will be expected to listen attentively and participate actively with their videos on. Students are expected to arrive to class on time and with all assigned material completed. The instructor will facilitate learning for the student, but the responsibility for staying up-to-date

with classwork and assignments ultimately falls to the student. If a student is struggling with content or an assignment, it is their responsibility to seek approved help. Students should not utilize technology to complete their assignments for them.

The course relies heavily on discussion as students are asked to think about and question what they are learning. During the discussion, students will present problems, review answers, pose questions, explain and justify their answers, and think out-loud. Students are encouraged to embrace their mistakes as opportunities to learn. A FAIL is a first attempt in learning.

Time Commitment – Algebra presents an increase in rigor which is often perceived as an increase in pace. It is recommended that students plan to spend 4-6 hours per week studying for math.

Students turning in late work will earn a 10% penalty for each day the assignment is late. Late work will not be accepted after the 3rd day. Students will submit their work by scanning their homework pages and uploading it into the Schoology assignment. **Assignments must be submitted as one pdf file. Photographs of completed assignments will not be accepted.**

STUDENT EXPECTATIONS: EXECUTIVE FUNCTION SKILLS

Students enrolling in Scholé Academy's Mathematics Program will be expected to show development of Executive Function Skills throughout the year. Executive Function Skills speaks to a set of qualities and skill sets students can develop and hone to better approach the courses, lectures, readings and teachers they will face in their future academic coursework.

Executively, students are expected to be:

- 1. An Engaged Student:** One who is not easily distracted by their surroundings and is willing to step into the arena of class discussion, ask questions, supply answers, generate the internal dialogue necessary to determine if what's being discussed is important and necessary to himself.
- 2. Note Takers:** A student who during and after being engaged with the class has been trained to note important and relevant content in an organized manner. His notes would then be consulted, independently, for application in assignments and assessments.
- 3. Attention to Detail & Preparedness:** These students are ones who consistently adhere to deadlines, submission requirements, assignment instructions, and confirm technology is working prior to the start of class. This student is responsible in determining how to proceed after an absence and adjusting as the class proceeds, etc.
- 4. Employ Critiques:** These students are ones who receive feedback to one of their submissions, and then are sure to apply that feedback to future assignments rather than repeating mistakes. These students also glean information from the live class critiques of fellow students and note mistakes to avoid by learning from others.
- 5. Initiative/Maturity:** During class this student will display a level of maturity that exhibits an ability to focus and engage in his learning and refrain from activities that cause him to become a distraction for others. The student exhibits the maturity to seek out appropriate sources of assistance when struggling with assignments or problems.

STUDENT EVALUATION: GRADING

Grades are a feedback mechanism from the teacher to the student as to their level of mastery. In line with a theme of restfulness, assignments will be communicated using a Mastery Scale as defined below. The purpose of this grading scale is to provide students with a clear, unambiguous message as to their level of mastery. Additionally, it provides the students with the opportunity to focus on mastery of the content rather than grades.

Inasmuch as you might be fully on board with this grading method in theory, there will undoubtedly be the need to complete a college transcript with either a numeric or traditional letter grade. Traditional percentage grades will be provided for transcript purposes upon request and at the end of the year.

The Mastery Grade Scale is as follows:

- Master: this grade will be rewarded to a student whose work shows mastery.
- Journeyman: this grade will be rewarded to students who are near mastery.
- Apprentice: this grade will be rewarded to students who require more review or practice.
- Novice – this grade indicates the student did not exhibit sufficient learning.

Passing the class, generally requires a grade of Journeyman.

STUDENT EVALUATION: ASSIGNMENTS, TYPES & WEIGHTS

Dr. Riley will communicate with students regarding assignment feedback and grading through the free online grading system, Schoology. Students' grades will be comprised of:

Foundation:	Independent Practice: 30%	Participation: 10%
Apply/Extend:	Problem Solving: 20%	Projects: 10%
Summation:	Assessments: 30%	

Late work will be penalized 10% each day late and will not be accepted after the 3rd day.

The grades reflect the levels of student learning. We first establish a **foundation** through class instruction, class participation, and independent practice. The retention of this foundation is monitored through ALEKS' Knowledge Checks. We then **apply and extend** what we have learned by solving problems of a higher-order and completing projects. Finally, we exhibit a **summation** of our learning via assessments.

STUDENT EVALUATION: ACADEMIC DISHONESTY

Students will often work assignments, including assessments, privately at home. Students are on their honor to abide by Scholé Academy's Learning Philosophy which assumes the personal cultivation of Student-Virtues described in the Student-Parent Handbook.

Additionally, plagiarism and the use of Math Solver websites or apps is a serious and punishable offense. Such assignments will result in a failing grade.

THE VIRTUAL CLASSROOM:

We will be using the free online “virtual classroom” software provided by Zoom, one of the leading companies that provides such software. The virtual classroom will provide students with interactive audio, and an interactive whiteboard in which texts, diagrams, video and other media can be displayed and analyzed. We will provide students with a link (via email) that will enable students to join the virtual classroom.

We will also utilize the learning management system, Schoology where communication and assignment submission will occur. Students will submit assignments using scanning technology/apps (like [ClearScan](#), [AdobeScan](#), [CamScanner](#)). Submissions must be single-file pdfs.

Specific information regarding the technology used by Scholé Academy (including required technology) can be found by visiting the [Technology in the Classroom](#) section of the Student Parent Handbook.

ABOUT THE INSTRUCTOR:

Dr. Fransell Riley spent 15-years working as a mathematician in the fields of aerospace engineering, electricity generation, and biostatistics. This work culminates in her co-authoring papers published in scientific journals and nonpublished white papers. Additionally, she has presented at Mathematic conferences. She earned her Ph.D. in Mathematics from the University of Texas at Arlington with every intention of remaining in Corporate America. Though she enjoyed her work, she ultimately responded to an internal call to pursue a passion for educating students, including her own children. Fransell has taught math and science to students of all ages from elementary school to college. While teaching, she noticed that her natural teaching style aligned almost perfectly with the concepts of Classical education. She takes a holistic approach to teaching and involves her students in discussions aimed at developing a deeper understanding of the concept being taught with the desire that student learning extend beyond memorizing algorithms. Fransell has a passion for mathematics and seeks to share that passion with the next generation.