Computer Science I

Midland High School
Semester: Fall, 2025
Academic Year: 2025–2026
Length of Course: 1 Year
Number of Credit Hours: 1
Prerequisite:

> Successful Completion of Algebra 1 with a strong foundation of basic linear functions, composition of functions, and problem solving strategies that require multiple approaches and collaborative efforts. In addition, students should be able to use a Cartesian (x, y) coordinate system to represent points on a plane.

Instructor: Staci Rogers
Email: staci.rogers@midlandisd.net
Conference Period: 10:35 - 11:50 AM

Course Description

Computer Science I will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of computer science through the study of technology operations, systems, and concepts.

Course Objectives

By the end of this course, students will be able to:

Intro to Programming with Turtle Graphics and Python Basics with Console Interaction	- What is a command? - Tracy the Turtle Command - Variables - User Input - Printing - Data Types - Arithmetic Expressions - String Operators

	• Comments
Conditional Statements	• If Statements • Boolean Values • Logical Operators • Comparison Operators • Floating Point Numbers and "Equality"
Looping	• While Loops • For Loops • Break and Continue • Nested Control Structures
Functions & Exceptions	• Functions • Namespaces (Scope) • Parameters • Return Values • Exceptions
Strings	• Indexing and Slicing • Math Operators on Strings • For Loops over Strings • String Methods
Creating & Altering Data Structures	• Tuples • Lists • For Loops and Lists • List Methods
Extending Data Structures	• Dictionaries • 2D Lists • List Comprehensions • Packing and Unpacking • Mutable vs. Immutable • Equivalence vs. Identity

Instructional Materials & Supplies

Programming Language & Environment:

Python 3	Project Stem
Off-Line IDE	Runestone Academy
Visual Studio	MineCraft MakeCode
www.CodeHS.com	TI Python

Supplies Needed

Spiral Notebook	Glue Sticks
Pens (multi-color)	

Course Outline

UNIT	TOPIC	APPROXIMATE TIME
Basic Python and Console Interaction	- Intro to Python with Tracy the Turtle - Printing in Python - Variables and Types - User Input - Comments - Mathematical Operators - String Operators - Programming Languages	5 Weeks
Conditional Statements	- Booleans - If Statements - Comparison Operators - If/Else Statements - Logical Operators - Floating Point Numbers & Rounding - Random Numbers	3 Weeks
Looping	- For Loops - Tracy the Turtle with Loops - Using i in For Loops - Extended Loop Controls - While Loops - Break and Continue	3 Weeks

	● Nested Control Structures ● Putting it all together	
Functions and Exceptions	● Functions ● Namespaces (Scope of Variables) ● Parameters ● Return Values ● Exceptions	3 Weeks
Strings	● Indexing and Slicing ● Math Operators on Strings ● For Loops over Strings ● String Methods	3 Weeks
Creating and Alternating Data Structures	● Tuples ● Lists ● For Loops over Lists ● List Methods	3 Weeks
Extending Data Structures	● Dictionaries ● 2D Lists ● List Comprehensions ● Packing and Unpacking ● Mutable vs. Immutable ● Equivalence vs. Identity	3 Weeks

Grading Breakdown

Major assignments are those that allow you to demonstrate mastery of the course objectives. Minor assignments include skill checks, quizzes, homework, and other short assessments that contribute to your overall understanding of the course material.

Category	Percentage
Major Assignments(Tests, Projects)	60%
Minor Assignments (Quizzes / Skills Checks)	40%
Semester Exam / Project	15%

Grade Scale: A = 90–100 | B = 80–89 | C = 70–79 | F = < 70

Semester grades include a grade for each of the three six-week periods and an exam or project that is weighted 15% of the overall semester grade.

Grading Policies

1. All assignments must be done during class time or in the computer lab!
2. Quizzes and tests are 60% of your overall grade.
3. Computer Science Students
    a. Each unit we will complete a minimum of 3 coding activities.
    b. All coding activities will be averaged as one assignment.
4. Daily warm up grades will be combined into a weekly grade every week.
5. There will be a minimum of 6 graded assignments each six weeks. Each unit will have a minimum of 4 graded assignments.

Classroom Expectations

- Stay engaged during class. Keep your phone put away during class.
- Be persistent about your assignments
- Take notes! Use your notes!
- Come to tutorials when you are struggling
- You may request to retest when your score on a test is below 75%.
    - It is mandatory that you complete at least one tutorial session to complete error analysis on the original assessment.
    - All retake assessments must be completed during tutorials.

Tutorial Times

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 to 8:30 AM	X		X	X	X
Lunch	X	X		X	X
4:15 to 5:00 PM	X				

Your full participation ON A WEEKLY BASIS is not only a requirement, it is also an essential aspect of the course process. The course content will build off of skills from previous instruction.

Attendance & Participation

Attendance

- All work must be completed regardless of being absent.
- Projects will have pre-determined due dates. If you are absent when a project is due, you will receive late penalties if it is not turned in prior to the absence!
- All tests and quizzes must be made-up during tutorial times - NOT during class time.
- Programs must be completed by the due date!

Tardiness

- The MHS Tardy policy will be enforced!
- You are expected to be logged into the computers by the time the tardy bell rings.
- A daily warm-up is expected to be completed within the first 5 minutes of class.

Late Work & Make-Up Policy

- Students are allowed one day of make-up time for each day of absence
- Late assignment penalties:
  - 1 School Day Late- Maximum Grade of 90
  - 2 School Days Late- Maximum grade of 80
  - 3-5 School Days Late- Maximum grade of 70
- Missed assessments must be rescheduled
- Late work will be assessed as follows:
  - 1 Day Late: - 10% deducted

- ○ 2 Days Late: - 20% deducted
- ○ 3 Days Late: - 30% deducted
- ○ 4 Days Late: - 40% deducted
- ○ 5 Days Late: - 50% deducted
- ● More than 5 Days Late: Not Accepted

Academic Integrity

Cheating or plagiarism is not tolerated. First offense may result in a zero and parent contact. Further violations follow district policy.

Use of AI Tools

School Policy

Academic Achievement Grading System, pg. 12

B. The use of Artificial Intelligence (AI) refers to computer systems and machines that mimic human processing and cognitive abilities. Student use of unapproved AI is considered academic dishonesty and will result in academic penalties. All work submitted by students should be original.

While some AI tools may be permitted, ALL submitted work will be subject to AI Detection tools. Should work be determined to be substantially AI generated, students will receive a score of no greater than a 1 with the option to redo the assignment under teacher supervision. Also, if it is suspected that AI tools were used to write coding assignments, students will be required to provide detailed explanations of how their code works.

Industry-Based Certifications

Required Testing

- TBA

Career & Technical Student Organization (CTSO) Involvement

Students are encouraged to participate in:

- **Academic UIL in Computer Science**
- **BPA**

Safety & Equipment Use

Equipment Use

- Students will be assigned seats.
- Any issues with the computer system must be reported IMMEDIATELY!
- Students are not to mark their assigned area with writing utensils
- Do not lean back in the chairs
- Do not unplug or plug anything into the outlets or powerstrips without permission first!
- Do not tamper with the cords, wires, plugs, etc. on the desktop computers!
- Do not move keyboards or mice around the room to different computers!
- Any damage to equipment may result in disciplinary action!

Parent/Guardian Communication

- Progress reports emailed every 3 weeks if grade is below 70.
- Grades available in Skyward
- Please email or call with questions or concerns
- Use of all school communication platforms

- ○ Class Dojo
- ○ Blackboard
- ○ Email

Acknowledgment of Understanding

Please return this signed page by September 2, 2025.

Student Name: _____ **Signature:** _____

Guardian Name: _____ **Signature:** _____

Preferred Contact (Email/Phone): _____