## Course Description

Have you ever wondered how your favorite software is created? In Introduction to Programming 1a, you will explore the software development life cycle from start to finish while developing your own programming skills with Python. Explore the power of data and algorithms along with their influence on the world. Launch yourself into the endless possibilities a career as a programmer can bring you!

In Introduction to Programming 1b, dig deeper and expand your knowledge as you discover how programming can solve a vast array of problems. Plan and develop a problem-solving program while performing testing, debugging, and quality assurance procedures. Design and plan your own app as part of your capstone project to give you a thorough introduction to the world of programming. This course serves as fantastic preparation for AP Computer Science.

This is a year-long course consisting of 16 units. Upon successful completion, students will receive 1 credit towards high school graduation.

## Course Overview

| Introduction to Programming 1a Units: | Introduction to Programming 1b Units: |
|---|---|
| 1. Software Development 101 | 1. Designing Programs |
| 2. Speaking the Language | 2. Plan for Success |
| 3. Problems and Solutions | 3. Abstraction |
| 4. A Deep Dive with Data | 4. Quality Assurance |
| 5. All About Algorithms | 5. Running the Tests |
| 6. The Data Files | 6. Legal and Ethical Computing |
| 7. Running the Numbers | 7. Safe and Secure |
| 8. Skill Spotlight: A World of Programming | 8. Skill Spotlight: Involved and Informed |

## Methods of Instruction

Online courses give students the opportunity to prepare for college through material and learning methods. Instruction comes through the Canvas course platform, one thirty-minute live class per week, and teacher grading and feedback on assessments. Strong executive function skills serve students well as they navigate the course. Forms of assessment include writing in varied forms, discussions, quizzes, and tests.

## Methods of Evaluation

Students will demonstrate mastery through the following formative and summative assessments:

- 40% Assignments
- 10% Participation
- 10% Quizzes
- 15% Tests
- 25% Final Assessment

## Additional Course Information

Detailed information regarding OC Online policies on late/missing assignment policy, weekly live classes, academic integrity, course expectations, technology requirements and tips, and additional school policies can be found in the course setup module.