

## **Troy High School Course Profile**

**Course Title: Cambridge International Computer Science A Level**

**Prerequisites:** PLEASE REFER TO ANNUAL REGISTRATION PRESENTATION

**Course Description:**

Cambridge International Computer Science A Level makes up the second half of the Cambridge International A Level course in Computer Science. This course will encourage learners to meet the needs of Higher Education courses in computer science as well as twenty-first century digital employers. It encourages learners to think creatively, through applying practical programming solutions, demonstrating that they are effective users of technology.

**Students entering this course should already have a mastery of the following concepts and possess the following skills:**

The assumed prerequisites for entering the Cambridge International Computer Science A Level course include knowledge of basic English and Algebra, as well as successful completion of Cambridge International Computer Science As Level and AP Computer Science A. Students in the Cambridge International Computer Science A Level course should be comfortable with functions and the concepts found in the uses of function notation, such as  $f(x) = x + 2$  and  $f(x) = g(h(x))$ . It is important that students and their advisers understand that any significant computer science course builds upon a foundation of mathematical reasoning that should be acquired before attempting such a course. In addition, students should be familiar with at least one high level programming language, and have experience in problem solving and algorithmic development. Students should have good self-discipline, as much of the work required for this course is assigned in advance and will require the student to work diligently on their own to complete the assignments in a timely manner.

**Workload Expectations for this course (list typical amount of homework, projects, presentations, papers, etc.):**

The workload expected varies by student. Much of the work can be completed during class time, however there are frequent nightly homework assignments that should not require more than 20 - 30 minutes to complete. In some cases, students may need to spend additional time outside of class to complete assignments.