



AP Computer Science A

2020-2021



Instructor Information

Name: Joshua J. Schoeneck, BS, MS

Office Location: 1121

Office Hours: Periods 1-6 & 8 (S1), Periods 1-4 & 6-8 (S2), and before or after school by appointment

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General Course Information

Title: AP Computer Science A (85317)

Department: Business Education / Computer

Credits: 1 credits

Length: 2 semesters

Elective or Required: elective

Grade Level: 10-12

Semester: 1 & 2

Meeting Schedule: Period 7 (S1) & Period 5 (S2)

Prerequisites:

For KMLHS - credit in *Computer Applications: Typing and Academic Skills* or *Computer Applications: Academic and Business Skills*

For ALHSO - an introductory programming course or permission of the instructor

Course Description: AP Computer Science A introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems.

Parent-Instructor Communication

The instructor will strive to contact the parents (for KMLHS) or course proctor (for ALHSO) when he observes tendencies including – but not limited to – the following: lack of academic effort, poor and failing grades, and classroom misconduct. Parents are urged to communicate with the instructor when they have questions and concerns. The best way to contact the instructor is via email. The instructor will make every effort to respond to phone calls and emails in a timely manner.

Course Details

Course Purpose: The AP Computer Science A course is intended to serve both as an introductory course for computer science majors and as a course for people who will major in other disciplines and want to be informed citizens in today's technological society

Course Goals:

This course will:

- provide a hands-on environment in which students can learn the basics of computer programming.
- allow students to glorify God by harnessing technology.

Course Outcomes:

The students will:

- use and implement commonly used algorithms.
- use standard data structures.
- develop and select appropriate algorithms and data structures to solve new problems.
- write solutions fluently in an object-oriented paradigm.
- write, run, test, and debug solutions in the Java programming language, utilizing standard Java library classes and interfaces from the AP Java subset.
- read and understand programs consisting of several classes and interacting objects.
- read and understand a description of the design and development process leading to such a program.
- understand the ethical and social implications of computer use.

Student Materials:

- access to the Internet

Instructional Strategies

This course will be taught in an independent study fashion. Students will be expected to complete readings and other activities online. Students who have questions, concerns or need additional help with their work in this course are strongly encouraged to discuss the situation with the teacher.

Assignments & Assessments**Unit Practice**

- Each unit has integrated practice assignments. They will be graded based on completion and will be worth about 25% of the overall grade

Unit Tests

- A test will be given at the conclusion of each unit. They will be worth about 50% of the overall grade.

Labs

- Students will be assigned labs in which they will demonstrate that they can apply the skills learned in several of the units. These labs may include writing programs, answering application questions, or other activities. They will be worth about 25% of the overall grade.

AP Exam

- It is expected that each student in this course will take the AP Computer Science A exam in May. This exam, however, is not a required part of the course and performance on the exam will not affect the course grade.

Grading

The primary purpose of grades is to communicate student achievement to students, parents, school personnel, post-secondary institutions*, and employers*.

*only if permission is granted by students and their parents

KML Standard Grading Scale:

95-100% = A	87-90% = B	79-82% = C	72-74% = D
93-94% = A-	85-86% = B-	77-78% = C-	70-71% = D-
91-92% = B+	83-84% = C+	75-76% = D+	0-69% = F

Grading Policy:

The final semester grades in this course are calculated based on the total number of points earned divided by the total number of points possible. The semester grade shown in Moodle (for ALHSO) or PowerSchool (for KMLHS) is a better indicator of student achievement during the course than the quarter grade.

Grading Procedures: Grades will be entered into Moodle (for ALHSO) and PowerSchool (for KMLHS). Feedback on assignments is provided through Google Classroom. If you have any questions about something you see in the grade book, please contact Mr. Schoeneck right away. All students are expected to keep track of their own progress using Moodle (for ALHSO) or PowerSchool (for KMLHS) on a regular basis.

Major Assignments: Failure to complete all major assignments in a course results in an automatic “F” for the course. This course has no assignments that are considered major assignments.

Late and Incomplete Work: Assignments that are not turned in by the due date will be marked as “missing” and will receive a grade of zero. Students may regain full credit for these late assignments if they are turned in before the end of the semester. Students are strongly encouraged to complete their work in a timely manner throughout the semester.

Makeup Work: Students should complete makeup work as quickly as possible in order to be able to complete all of the course work before the end of the course.

Extra Credit: There are no extra credit assignments in this course.

Classroom Procedures

Attendance: KMLHS students are expected to attend all scheduled classes in accordance with the attendance policy as outlined in the KML Student Handbook. In the event of an absence, it is the responsibility of the student to follow all necessary steps as outlined in the handbook. ALHSO students must follow the attendance policy of their own school.

Tardiness: KMLHS students are expected to be in the classroom when the class begins in accordance with the tardiness policy as outlined in the KML Student Handbook. The instructor will notify students if they have been marked tardy. ALHSO students must follow the tardy policy of their own school.

Academic Dishonesty: The instructor expects all students will honor the principles of honesty and truth as taught in God’s Word. This means that all academic work will be done by the student to whom it was assigned without unauthorized aid of any kind. Research sources must be cited fully and accurately. The instructor reserves the right to use academic screening methods to check the authenticity of student work. KMLHS students should refer to the KML Student Handbook for additional guidelines concerning penalties for cheating. ALHSO students should refer to the ALHSO Student Handbook for additional guidelines concerning penalties for cheating.

Behavior: In keeping with the distinct character of Kettle Moraine Lutheran High School and ALHSO, students will be expected to behave in the ways that our Lord asks Christians to act including showing love and respect to their fellow students and teacher. A lack of this love and respect will result in discipline by the teacher.

Daily Routine: Students are expected to spend an entire period during each school day working on the assignments for this course.

Academic Progress: It is the intent of KML and ALHSO that all students enrolled in this course should complete it successfully. The instructor will strive diligently to help students to succeed. For KMLHS students, when it becomes apparent to the instructor that a student has placed himself/herself in jeopardy of meeting the minimum requirements of the course, the instructor may begin the procedure outlined in the Academic Progress Policy of the KML Student Handbook in order to remedy the situation.

Course Help: Students are encouraged to ask for help from their fellow students during the class period and to provide help to students who ask them. Students can also ask the instructor for help during class. Students are encouraged to ask for help right away whenever they have a problem or question. Students needing help outside of class should contact the instructor to arrange a time during a study hall, before school, or after school.

Personal Electronic Devices: Students may use their own computers or the school computers during this course. Use of other devices, like cell phones, will be at the teacher's or course proctor's discretion.