

2016 ADVANCED PLACEMENT SUMMER INSTITUTE

JUNE 27 – JULY 1

COURSE DESCRIPTION

SUBJECT: AP COMPUTER SCIENCE A

TARGET AUDIENCE:

This course is designed to meet the needs of beginning and experienced teachers of Advanced Placement Computer Science A.

OVERVIEW:

It is new and exciting time in the AP Computer Science A course. College Board has added a 20-hour lab requirement for AP Computer Science students which can be satisfied by using the new AP Computer Science Labs. The Course Description has been updated and vastly improved to help us plan our curriculum. The 2015 AP Computer Science A Exam has been released and we will delve into it and discuss strategies for preparing our students for the AP Computer Science A Exam. Each session of this summer workshop will provide lessons using innovative techniques for teaching the AP Computer Science A topics. The new AP Computer Science A Labs and four new student programming projects covering one and two-dimensional arrays, Lists/ArrayLists, searching, and sorting will be integrated into these lessons throughout the week. The four student programming projects were piloted with the presenter's students and are complete with teacher solutions and are ready to use with students. Come and join us this summer and find out how much fun teaching and learning Computer Science can be!

COURSE OBJECTIVES:

1. To present the major topics of the AP Computer Science A course using a variety of student centered strategies to engage students. Special emphasis will be given to array and list processing, classes, and inheritance.
2. To review the 2015-2016 curriculum and exam revisions and cover the new AP Computer Science A Labs
3. To review the 2016 AP Computer Science Free Response Questions, student samples, and rubrics.
4. To review the 2015 Released AP Computer Exam.
4. To preview reference materials and texts appropriate for use in AP Computer Science A.
5. To provide a timeline for AP Computer Science A topic outline benchmarks.
6. To provide help in creating a syllabus for AP Computer Science A.
7. To provide strategies for enhancing student FR solutions.

FORMAT:

Curriculum topics will be introduced via lecture, modeling and hands-on activities including programming projects. Participants will be encouraged to share strategies for teaching AP CS topics and will be encouraged to present a lesson, strategy, or project with the group.

REQUIREMENTS, ASSIGNMENTS, ETC.:

Participants are encouraged to bring their laptops, textbook and any support materials they plan to use and/or have used and would like to share with the group. The instructor will present using her laptop and a data projector. Each participant will receive a notebook and a link to a DropBox folder that contains handouts and AP examination questions to be used each day in class. Teachers are encouraged to customize the materials given for use in their own settings.