

School Name: University High School Dept: Computer ScienceRequestor: David Herring Phone #: 232-5900

Leadership Office: (Check the appropriate office)

 ES MS HS JTEDTitle: Java Methods: Object-Oriented Programming and Data StructuresAuthor(s): Maria Litvin, Gary LitvinEdition (1st, 2nd, 3rd, etc.): 3rd AP Edition Copyright year: 2015ISBN (10 or 13 digits): 978-0-8824775-6-4 Price: \$80.00Subject: AP Computer Science A Grade(s): 10-12Publisher: Skylight PublishingVendor: Skylight Publishing (<http://www.skylit.com/>)

Type of Material: (Check the appropriate box)

- Educational Software
 Textbook – needs to be delivered to the Campbell Warehouse
 Supplemental Material – needs to be delivered to the Campbell Warehouse
 Occasional Use – Doesn't need Board Approval

Select the appropriate item:

 Student Edition Teacher's Edition Teacher Resource KitTitle: Karel J Robot: A Gentle Introduction to the Art of Object-Oriented Programming in JavaAuthor(s): Joseph Bergin, Mark Stehlik, Jim Roberts, Rich PattisEdition (1st, 2nd, 3rd, etc.): _____ Copyright year: 2008ISBN (10 or 13 digits): 0-97505795-1-9 Price: \$29.00Subject: AP Computer Science A Grade(s): 10-12Publisher: Dream Songs Press

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Use the additional pages sheet to add more titles.

Educational Rationale (Rationale needs to be done by requesting principal. Please X line if this statement is true.)

This request supports a Board adopted curriculum and the 2010 AZ Standards (aka Common Core).

Principal's name Amy Cislak/Marcia Volpe *[Signature]*

Office Use only

Literacy or Math Specialists Comments: *C. McCullough*

Re核准 9-29-15

Literacy or Math Specialist (Print name): _____

Approved by *[Signature]* _____

Assistant Superintendent or designee

9-9-15
Date

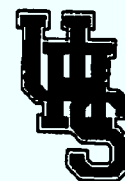
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Revised 9-29-15
Assistant Superintendent



UNIVERSITY HIGH SCHOOL

421 NORTH ARCADIA AVENUE
TUCSON, ARIZONA 85711
520.232.5900



Program Overview

Java Methods: Object Oriented Programming and Data Structures is a text book for the AP Computer Science A course.

The official course description from the College Board: "AP Computer Science A is equivalent to a first-semester, college level course in computer science. The course 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 using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science A course curriculum is compatible with many CS1 courses in colleges and universities."

Program of Study

According to the College Board, "students should be able to

- Design, implement, and analyze solutions to problems;
- Use and implement commonly used algorithms;
- 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; and
- Understand the ethical and social implications of computer use."

Assessment and Instruction

The AP Computer Science A class employs a variety of assessments throughout the year including in class exercises, regular quizzes and unit tests modeled on the AP exam, and a minimum of 20 hours of hands-on lab work. Students are expected to take the AP Computer Science A exam in May.

Community Support

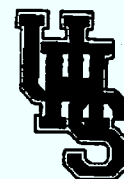
To meet the College Board's requirements, every student enrolled in an AP class must have a text book.

Java Methods: Object Oriented Programming and Data Structures, which is specifically designed for the AP course, appears multiple times on the sample AP Computer Science A syllabi provided on the AP Central website. This edition of the book was released in February of this year and reflects recent changes in the AP Computer Science A test.



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Karel J Robot: A Gentle Introduction to the Art of Object-Oriented Programming in Java is designed to introduce object-oriented programming concepts to learners new to computer science. It cannot be used as a stand-alone text, but when paired with a proper textbook, like *Java Methods*, it can serve as a valuable introduction to computer science and Java. This book is referenced multiple times on sample AP Computer Science A syllabi.