

This test prep prepares students well for the 2015 revised high school AP Computer Science Exam (10 weeks of 3hrs each): Each week includes 2 hours of concept teaching and 1 hour of test practice .

COURSE FEATURES:

- ◆ Top down and bottom up implementation techniques.
- ◆ Object oriented design concepts
- ◆ Methods of encapsulation and information binding
- ◆ Procedural Abstraction
- ◆ Programming Constructs
- ◆ Text Outputs
- ◆ Control methods including recursions, sequential and conditional execution and iterations
- ◆ Expression evaluations
- ◆ Program Analysis , Searching and Sorting
- ◆ Standard Data Structures

Books: Barron's AP Computer Science A, Be Prepared AP Computer Science Exam in Java

Course Schedule (subject to change):

| Spr | Sunday | Content |
|---------|--------------------|---|
| 1. | 1/31/16 | Introductory Java language Features: Includes the Java AP subsets and syntax |
| 2. | 2/7/16 | Introduction to object oriented concepts. Anatomy of classes, constructors, methods and declarations |
| Wntr Bk | 2/14/16 | NO class |
| 3. | 2/21/16 | Inheritance(Subclasses, overriding, hierarchies ,using class members) Polymorphism and class hierarchy design |
| 4. | 2/28/16 | Some standard classes |
| 5. | 3/6/16 | Program Design and Implementation techniques |
| 6. | 3/13/16 | Lists/ArrayLists: Creation, insertion, deletion , traversals, algorithms |
| 7. | 3/20/16 | Recursions: Recursive thinking and programming approach . Application of recursion in computational activities, search and sort methods |
| 8. | 3/27/16 | Searching and Sorting: Selection sort, insertion sort, merge sort, heap sort, quick sort. Sequential search , Binary Search , hashing |
| 9. | 4/3/16 | Implementation techniques |
| Sp Brk | 4/10/16 | NO class |
| 10. | 4/17/16 | Analysis of algorithms |

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