NNHS AP Computer Science Syllabus

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Mission
To educate students to be self-directed learners, collaborative workers, complex thinkers, quality producers, and community contributors

Course Description
This course explores the development and application of the Java Programming Language in preparation for taking the AP Computer Science A exam. This class emphasizes problem solving and algorithm development. Our curriculum for the AP Computer Science A course includes all topics and the course descriptions for AP Computer Science A as described in the AP Computer Science Course Description. This course concentrates on classes, objects, inheritance, polymorphism, and code reusability. All students taking AP courses are encouraged to take the AP exam.

Fall Semester Course Learning Standards
- Analyze, evaluate, and debate examples combining technology, society, and ethics (10%)
- Understand and construct simple computer programs (15%)
- Understand, create, and apply classes in programs (25%)
- Understand decision and looping structures and apply to programs (25%)
- Understand arrays and array lists and apply to programs (25%)

Spring Semester Course Learning Standards
- Analyze, evaluate, and debate examples combining technology, society, and ethics (10%)
- Synthesize decisions, loops, and arrays and apply to computational media projects (20%)
- Understand object-oriented design and design and implement programs (30%)
- Understand, analyze, and create recursive, sorting, and searching algorithms (20%)
- Synthesize computer science concepts and apply to large-scale existing software framework (20%)

Grading:
Your course grade will reflect what you have learned, not what you have completed!

Overall Semester grade:
- 85% Coursework
- 15% Final Exam

The final semester grade will be rounded to the nearest percentage point.

Course Grade

Fall Semester

Standard 1 - Analyze, evaluate, and debate examples combining technology, society, and ethics
- Essays
- Reflections

Standard 2 - Understand and construct simple computer programs
- Ch 1 – Introduction
- Ch 2 – Using Objects
- Lab: Turtle

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● Exam

Standard 3 – Understand, create, and apply classes in programs
  ● Ch 3 – Implementing Classes
  ● Ch 4 – Fundamental Data Types
  ● Lab: Cityscape
  ● Exam

Standard 4 - Understand decision and looping structures and apply to programs
  ● Ch 5 – Decisions
  ● Ch 6 – Loops
  ● Lab: Shepard Fairey Selfie
  ● Exam

Standard 5 - Understand arrays and array lists and apply to programs
  ● Ch 7 – Array and Array Lists
  ● Lab: Signals in Noise
  ● Exam

Spring Semester

Standard 1 - Analyze, evaluate, and debate examples combining technology, society, and ethics
  ● Essays

Standard 6 - Synthesize decisions, loops, and arrays and apply to computational media projects
  ● Media Computation
  ● Lab: Collage

Standard 7 - Understand object-oriented design and design and implement programs
  ● Ch 8 – Designing Classes
  ● Ch 9 – Inheritance
  ● Ch 10 – Interfaces
  ● Ch 12 – Object-Oriented Design
  ● Lab: Drawing Editor
  ● Exam

Standard 8 - Understand, analyze, and create recursive, sorting, and searching algorithms
  ● Ch 11 – Input / Output and Exception Handling
  ● Ch 13 – Recursion
  ● Ch 14 – Sorting and Searching
  ● Lab: Fractal Tree
  ● Exam

Standard 9 - Synthesize computer science concepts and apply to large-scale existing software framework
  ● GridWorld

Each unit/standard is assigned a particular percentage.

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Within each unit, summative and formative sections are weighted as follows:
65% Exams (if present); 35% Labs (if present)

Grading Disbursement:
A= 90-100 B= 80-89 C= 70-79 D=60-69 F= <59

Assessments are graded on a 1-5 scale in a manner consistent with the AP Computer Science exam:
5: Extremely well qualified
4: Well qualified
3: Qualified
2: Possibly qualified
1: No recommendation
A 5 corresponds to a 100%; a 4, 88%; a 3, 75%, a 2, 62%; a 1, 50% in the grade book.

Reassessment Policy

Summative Assignments (exams, labs): These assignments must be completed within two weeks of the due date or else they will receive no credit.

Formative Assignments (homework, discussions, activities): Formative assignments are for developing understanding.

Reassessment Policy (reassessments are only on selected summative work, excluding final exams):
1. Students are only allowed reassessments on assessments on which they receive a 3 or below.
2. The maximum score the student can get on the reassessment is a 4.
3. The higher of the two scores will be entered in Infinite Campus.
4. The reassessment times and locations are left up to the individual teacher.
5. Students are required to complete exam corrections and other prescribed practice in detail before any reassessment will be allowed.

Communication
- Teachers make every effort to respond to emails and phone calls within 48 hours during the work week.
- The best way to communicate with teachers is through email; however, if you haven’t received a response in 48 hours, please resend the email or call their voicemail. Your email may have gone into the spam folder.

Help
- Make an appointment with your teacher.
- Attend S.O.S (supervised open study) in the Literacy Center M, W & Th from 3:15 to 4:15.
- Drop in for peer tutor during lunch periods or before school through the Literacy Center.

Parents or Guardians
We need your help!
- Parents should actively check Infinite Campus for their student's grade.
  - The grades on Infinite Campus will be accurate only at Mid-Quarter and Quarter. Prior to those dates, the grade reflected is fluid.
  - Infinite Campus is a communication tool until final grade is posted.
- Please ask your student about their school work
- Check with your individual teacher for classroom procedures, schedules, and daily class news.

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