

AP Computer Science Principles

Summer Packet

Welcome to AP Computer Science Principles! This course is equivalent to a college-level “Computer Science for non-Computer Science Majors”, so no prior computer science knowledge or coding experience is expected. However, the course will move quickly as college classes tend to do. I am excited to work with you this year and to watch you grow as Computer Scientists.

The aim for the course is two-fold: 1) to introduce students to some of the exciting and interesting sub-fields of computer science and 2) to prepare students for the College Board AP CSP assessments. Where these two goals are in conflict, goal 2 will take precedence. To that end, the majority of our work will focus on learning how to write computer code, since it is the most heavily assessed “Big Idea” of the course (see below). However, I hope you take any and every opportunity to explore other areas of computer science. It is a field rich in experiences and careers that can appeal to students with diverse interests and skills.

Please complete the assignments in this summer packet so we can “hit the ground running” when the school year begins.. These assignments will help orient students to the content and objectives of the Computer Science Principles course and give insight into how College Board does its assessments (hint: it’s a bit different than other AP courses). The assignments will also help me organize our time together to give students the best opportunity for success on the assessments. *The information in the packet is high-level and not “content-heavy”, but please take these assignments seriously.* We have a lot to cover during the school year and therefore will spend a very short amount of time on the summer packet information on the first day of class. Please also remember this is my first impression of your work, so put your best foot forward to start off the year well.

Assignments:

1) Visit College Board's page for the AP Computer Science Principles course (<https://apcentral.collegeboard.org/courses/ap-computer-science-principles/course>) and answer the following questions.

Hint - most answers can be found in the "AP Computer Science Principles Overview" and "AP Computer Science Principles Course At A Glance" documents

- What are the two AP computer science courses offered by College Board? What is the difference between these two courses?
- What is the designated programming language for AP CSP?
- What are the 5 "Big Ideas" of the AP CSP course?

Writing concise, but clear answers will help students be successful on the College Board assessment, so let's practice.

Restate each "Big Idea" in your own words in 1 or 2 sentences. Feel free to google any words or concepts you do not know.

**The term "abstraction" may still be unclear even after looking it up - that's okay, just do the best you can with it right now. We will be looking at a lot of examples of abstraction throughout the course. By the end of the course it will become clearer to you.*

Big Idea: _____

What Does It Mean? _____

Big Idea: _____

What Does It Mean? _____

Big Idea: _____

What Does It Mean? _____

Big Idea: _____

What Does It Mean? _____

Big Idea: _____

What Does It Mean? _____

- How does College Board assess students taking the CSP course? (Hint: there are two assessments!!) What percentage of the final exam score is each assessment? When is each assessment administered?
- What three things are submitted to College Board for the Create Performance Task?
- What "Big Idea" is assessed in the Create Performance Task?

- What “Big Idea” has the most weight in the AP Exam Weighting?

**Hopefully your answers to the last two questions explains why we will spend so much time learning programming concepts!*

- Read through the sub-topics in each “Big Idea” column in the “Course At a Glance” document. Which topics sound the most interesting to you? Why? Which ones sound the hardest? Why? Remember, clear but concise and full answers!

2) Complete the “About Me” survey at <https://bit.ly/aboutMeAPCSP>

3) Read Class Syllabus and Pacing Guide: <https://bit.ly/syllabusAPCSP>

4) Set up code.org log in:

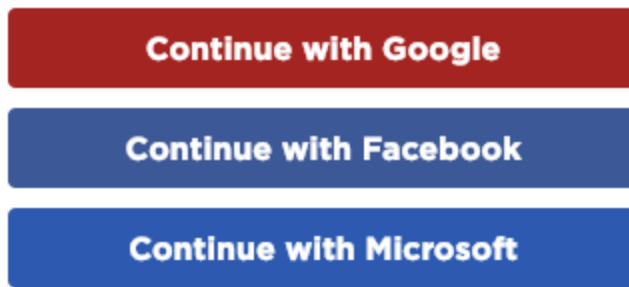
We will be using a CS education platform called code.org to learn many of our concepts. Please set up your account on the platform so we can start our lessons on the first day of class. If you have any issues creating your account, please contact me (guy@ndnj.org):

Joining Your Section (one-time only)

If a student has not yet joined your section, please ask them to perform the following steps. Note that they only need to do this once. By joining your section, students will be able to see the course assigned to them and you will be able to track the progress of the work they complete while they are signed in.

1. **Create a Code.org account if they haven’t already done so.** They can do this at https://studio.code.org/users/sign_up. Note that they can either sign up with an email address and

password, or sign up through Google, Facebook, or Microsoft by clicking on one of these buttons:



2. Sign in to their Code.org account.
3. Navigate to <https://studio.code.org/join> and type in their section code: **DDMBDZ**.
4. Once they press the "Go" button, they should be added to your section.

Signing in with Personal Logins

Have your students do the following to sign in with their personal logins:

1. Go to www.code.org and click the 'sign in' button.
2. Sign in using the email and password they created.