AP CSP Course Syllabus

Collegiate School of Medicine and Bioscience

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Course Description

AP Computer Science Principles (AP CSP) is a full-year, rigorous course that introduces students to the foundational concepts of computer science and explores the impact computing and technology have on our society. The course covers a broad range of foundational topics including: programming, algorithms, the Internet, big data, digital privacy and security, and the societal impacts of computing.

Big Ideas

The course material focuses on Seven Big Ideas. These ideas encompass concepts that are foundational to computer science.

- Creativity [Big Idea 1]
- Abstraction [Big Idea 2]
- Data and Information [Big Idea 3]
- Algorithms [Big Idea 4]
- Programming [Big Idea 5]
- The Internet [Big Idea 6]
- Global Impact [Big Idea 7]

Edhesive Curriculum

We will utilize a variety of resources, but our primary curriculum is Edhesive. Edhesive's course is approved by the College Board as an authorized AP® Computer Science Principles course.

Performance Tasks

A student's AP score is comprised of three assessed components: the *Explore Task* (16%), the *Create Task* (24%), and the *multiple-choice exam* (60%).

Explore Task: On the Explore Task, students will identify a computing innovation, learn how it works, and explore the impact it has on society. They will submit a digital artifact (video, art, etc.) and written response explaining their research findings. The explore task accounts for 16% of the overall AP score, and students will have a minimum of 8 hours in class to work on it.

Create Task: On the Create Task, students will create their own program. Students will submit a video of their program running and a written response describing how their program works. The Create Task accounts for 24% of the overall AP score, and students must be given a minimum of 12 hours in class to work on it.

Last Revised: 16 August, 2019

NMSI Saturday Study Sessions

The National Math & Science Initiative brings expert AP Computer Science teachers to St. Louis to provide additional instruction to students in preparation of the AP exam. Attendance at the following Saturday Sessions are an **expectation** of your participation in AP Computer Science.

- Saturday, December 14th, 9AM – 1PM
- Saturday, February 8th - 9AM – 1PM
- Saturday, April 18th - 9AM – 1PM

Students are required to submit both performance tasks via the College Board's online Digital Portfolio by **April 30, 2020 *Required**

Multiple-Choice Exam

The 74-question multiple choice exam will test students' understanding of computational logic, which they will learn over the course of the year. This section is programming language agnostic, meaning they don't have to know a formal coding language to complete this part of the exam. The multiple-choice exam will be on May 15, 2020, and accounts for 60% of a student's total AP score.

AP Exam: Noon, Friday, May 15, 2020 * Required

Recommended Materials

- Introduction to Programming Using Java. Hobart and Williams Smith Colleges (free)
- Barron's AP Computer Science A with Online Tests Eighth Edition

Course Units

Fall Semester

- Unit 1: Computational Thinking
- Unit 2: Programming
- Unit 3: Data Representation
- Create Task

Spring Semester

- Explore Task
- Unit 4: Digital Media Processing
- Unit 5: Big Data Unit
- Unit 6: Innovative Technologies
- AP Prep

Grading Formula

Assessments – 40%
Projects, In-Class Work – 40%
Cumulative Semester Final – 20%

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	Less than 60%

Edhesive (Primary)
https://edhesive.com/students/sign_up

- Your AP Computer Science A Section Token: 7d5bba

My AP (CollegeBoard)
https://myap.collegeboard.org

- Code: KZQR47

Google Classroom

- Code: k9cm4bf

Remind

- Text @csp20192 to 81010

Expectations

Be Respectful. This applies to the teacher and to your fellow students. Being respectful means that you follow directions, stay awake and on task, pay attention, use appropriate language, and respect the classroom and supplies. This includes never having food or drink at any desk area in the computer lab area.

Be Prepared. You must come to class on time everyday with your required supplies. Your homework should be completed when you come to class, ready to be collected. Take careful notes and keep track of the class calendar so that you are prepared for upcoming assignments and exams.

Be Responsible. If you feel that you do not understand a new topic, reach out to me for help. Take care of the items you are using in your classroom. Ask for help when you need it, and seek out resources. Take ownership of your learning.

Participate. The best way to learn is to **try**! It is **OK** to be wrong, that is why we are in class. Please be willing to ask questions when you need clarification, and be proactive in class by doing your best to answer questions.

Practice Integrity. Always turn in your own work. Don't tell people the answers; explain the process to them so they can learn how to find the answers themselves.

Procedures

Homework Policy: You will be assigned projects that require work over several class periods. You will be provided sufficient time in-class to complete assignments. Students who need access to technology outside of class time to complete work can make arrangements to visit the Computer Science Lab outside of class time (after-school, study hall).

If Absent: If you miss class, you can find your missed homework assignments on Google Classroom. All work will be posted and available on Edhesive. **It is your responsibility to find out if there is any in-class work you need to make up.** You will be able to turn in missed assignments within one week of your absence at no penalty.

Tutoring: If you are having trouble and need extra help, please let me know, and we can make arrangements. Visit my classroom and/or send me an e-mail.

Late Work: Unless the student is absent or there are extenuating circumstances, any late work will carry a **20%** penalty if submitted within a week from its due date. Any work that is over a week late will **not** be accepted for any credit. If you are having issues, please make arrangements with me **ahead** of time.

Reassessment & Make-up Policy: Students who need to make-up an exam will need to do so according to the arranged make-up assessment time established by school guidelines.

Cell Phone/Electronic Device Policy: The use of cell phones is not permitted in class at any time without permission. Phones may be taken and stored for the remainder of the hour if they are being used during class.

Academic Dishonesty: All of a student's work is expected to be his or her own. Cheating, in any form, will not be tolerated. If a student is caught cheating, he or she will receive a zero on the assignments and parents/guardians will be contacted.

Core Values

Strong Academic Habits

Collegiate School of Medicine and Bioscience is dedicated to teaching academic habits, which will sustain lifelong learning in students. Student learn how to learn -- whether it be taking notes, studying, or writing -- prepares students for success in college and in life. Our teachers nurture confident and critical thinkers who have mastered academic skills and competencies across a variety of academic disciplines.

Respect

Collegiate School of Medicine and Bioscience offers a safe and inclusive school community where individuals are expected to respect themselves, one another, and our environment. Through personal relationships with diverse groups and individuals, we learn to understand others and ourselves and work effectively as part of a team.

Compassion & Ethics

Collegiate School of Medicine and Bioscience believes that the development of compassion and being of ethical mind –- and the desire to make a positive difference in the lives of others – is essential to being a productive member of a community. Through the study of multiple viewpoints and the act of service, students develop empathy for those around them.

Integrity

Collegiate School of Medicine and Bioscience encourages all members of its community to hold themselves to the highest code of conduct, which includes academic honesty. Led by a commitment to the common good, we strive to do what is right -- even when nobody is looking.

Self-Discipline

Hard work and self-discipline are essential components for success. CSMB challenge students to develop a strong work ethic and the internal motivation to persevere through times of challenge.

Intellectual Curiosity

Collegiate School of Medicine and Bioscience encourages students' natural inquisitiveness and wonder about the world. Asking questions and taking risks is as important as searching for the right answer. With the desire and courage to move confidently into the future, students can adapt to an ever-changing future in pursuit of their dreams.