

CENTER FOR GRADUATE AND PROFESSIONAL STUDIES
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SYLLABUS

AP 595.300.18SU: Preparing Students for Advanced Placement Computer Science Principles

Advanced Placement Computer Science Principles (AP CSP) provides students with the opportunity to use programming, computational thinking, and data analytics to create digital artifacts and documents representing design and analysis in areas including the Internet, algorithms, and the impact that these have on science, business, and society. The AP CSP course teaches students to use computational tools and techniques including abstraction, modeling, and simulation to collaborate in solving real-world problems and build relevant solutions that connect computation to their lives. Together, these aspects of the course make up a rigorous and rich curriculum that aims to broaden participation in computer science.

The [AP Computer Science Principles Course and Exam Description](#) focuses on innovative aspects of computing as well as the computational thinking practices that help students see how computing is relevant to many areas of their everyday lives.

Dates and times

This week-long program will run from 8:30am to 4:00pm Monday (7/8) through Thursday (7/11), and from 8:30am to 1:00pm on Friday (7/12).

The lab will be open from 7:00pm – 10:00pm Monday through Thursday evening. We will meet in Julia Rogers (Room 128).

Course Overview

This course will include the integration of 7 Big Ideas designed around 6 Computational Thinking Practices listed:

- ✓ Connecting Computing
- ✓ Creating Computational Artifacts
- ✓ Abstracting
- ✓ Analyzing Problems and Artifacts
- ✓ Communication
- ✓ Collaborating

Course Breakdown

Day 1

- ✓ Warm Up
 - Meet and Greet - Group problem solving
 - Welcome to SET

- ✓ Understanding the course
 - Engaging all students
 - Computational Thinking Practices and Performance Tasks
 - Analyzing Performance Task Rubrics
 - Understanding the Learning Objectives
 - Understanding the Big Ideas and Enduring Understandings

December 22, 2018

- ✓ Computational Thinking Practices
 - Connecting Computing
 - Creating Computational Artifacts
 - Communicating

Day 2

- ✓ Warm Up
 - Team problem solving task. Pass the Answer.
- ✓ Explore Performance Task Grading
- ✓ Computational Thinking Practices (cont)
 - Abstracting
 - Analyzing Problems and Artifacts
 - Collaborating

Day 3

- ✓ Field Trip
 - Bus leaves at 8:00am – more info to follow
- ✓ Explore Performance Task Grading
- ✓ Best Practice Reminder

Day 4

- ✓ Warm Up
 - Gallery Walk
- ✓ Create Performance Task Grading
- ✓ Planning Your Course
- ✓ Teaching the AP CSP Course
 - Sequencing Your Course
 - Selecting Resources

Day 5

- ✓ Warm Up
 - Discussion Board
 - Albert
- ✓ Your Best Practice
- ✓ Teaching the AP CSP Course (cont)
 - Strategies for Teaching
 - Unit Development

December 22, 2018

Contact Information

- Reg Hahne – rhahne@hcpss.org

Description of Requirements for Graduate Credit

To receive graduate credit students MUST:

- Participate in group learning opportunities to the best of their ability
- Complete a class presentation on “Best Practices”
- Attend class 100% of the time.