

**ROBERT S. WELCH CENTER FOR GRADUATE AND PROFESSIONAL STUDIES  
GOUCHER COLLEGE  
TEACHERS' INSTITUTE  
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**SYLLABUS**

AP 595.300.17SU: 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.

### **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**

#### Monday

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

#### Tuesday

- ✓ Warm Up
  - Team problem solving task
- ✓ Explore Performance Task

### Wednesday

- ✓ Field Trip
  - Bus leaves at 8:00am – more info to follow
- ✓ Computational Thinking Practices (cont)
  - Abstracting
  - Analyzing Problems and Artifacts
  - Collaborating
- ✓ Best Practice Review

### Thursday

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

### Friday

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

### Contact Information

Reg Hahne – [rhahne@hcpss.org](mailto: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.

**Accessing Grades and Transcripts:**

Goucher College does not issue grade reports. You can obtain your grade approximately 3 weeks after concluding the course by going to the Goucher website (mygoucher) and follow the prompts to receive your grade.

If you need a paper copy of grades for tuition reimbursement, you will need to request a transcript in writing. You can fax to Student Administrative Services, or call SAS (410)-337-6504 or mail to SAS at:

Goucher College, SAS  
1021 Dulaney Valley Road  
Baltimore, MD 21204

There is no charge for this request. Please allow 3-5 working days to process.  
To access the transcript request form, please go to <http://www.goucher.edu/x1891.xml>

Questions? Please call 410-337-6200.