

# Recruiting Teachers for a new AP CSP PD Program in Hawaii SIGCSE 2018 - CSP Forum

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CSP4HI Project: <http://maui.Hawaii.edu/csp4hi>

# State of CSP in Hawaii

- Centralized Department of Education (DoE) covers all state schools
  - 15 Complex Areas -> cover 41 or so high schools
  - Distributed across islands – Oahu, Maui, Hawaii, Kauai, Lanai, Molokai
- AP CSP in Hawaii DoE (HI DoE)
  - SY 2016 - 17 – 7 Schools, 7 trained teachers
  - SY 2017 - 18 – 10 schools, 13 trained teachers
- AP CSP Scores – HI DoE Summer 2017 (n=139, 7 schools, Avg. = 3.0)
  - # Scored 5 – 6 (4.3%)
  - # Scored 4 - 15 (10.8%)
  - # Scored 3 – 45 (32.4%)
  - **# Scored 2 or 1 – 73 (52.5%)**

# More AP CS statistics – Summer 2017

- AP CS A Scores – HI DoE Summer 2017 (n=29, 2 schools, Avg. = 2)
  - # Scored 5 – 1 (3.5%)
  - # Scored 4 - 0
  - # Scored 3 – 10 (34.5%)
  - **# Scored 2 or 1 – 18 (62.0%)**
- AP CSP and CS A scores across HI, including private schools
  - CSP - # took exam – 202, average score – 3.34
  - AP CSP Score (# students) – 5 (41), 4 (47), 3 (65), **2 (37), 1 (12)**
  - CS A - # took exam – 88, average score – 2.00
  - AP CSA Score (# of students) – 5 (8), 4 (4), 3 (16), **2 (12), 1 (48)**

# CSP4HI Project

- NSF Award # 1738824 – October 7, 2017 to September 30, 2020
- NSF STEM+C program under program manager Jan Cuny
- Diversify computer science education across the state
- Research Practitioner Project (RPP)
- Focus on underrepresented groups, equity, distance education
- Networked Improvement Communities (NIC)
- AP CSP Curriculum from UTeach
- Target 30 schools across the state, train 60 teachers in AP CSP
- Project details at <http://maui.hawaii.edu/csp4hi>

# Recruiting Teachers for CSP4HI

- Current State in HI DoE in SY 2017-18
  - 13 teachers trained in CSP across 10 public high schools
  - Various AP CSP curriculum – PLTW (3), Code.org (3), Mobile CSP (1), UTeach (3)
- Targets for Recruitment – 60 teachers across 30 schools
  - 2 teachers per school, 1 lead + buddy/mentor/tutor, any AP CSP curriculum!
  - Cohort 1 – UTeach Workshop Summer 2018 + teach in SY 18-19 or 19-20
    - 15 teachers, many have been already trained in CSP or CSA, some teaching AP CSP
  - Cohort 2 – UTeach Workshop Summer 2019 + teach in SY 19-20 or 20-21
    - 20 teachers, many teachers will be from same school as Cohort 1, many new teachers
  - Cohort 3 – UTeach Workshop Summer 2020 + teach in SY 20-21
    - 30 teachers, many will be new to computing, partners from Cohort 2, smaller schools

# Recruiting Teachers for CSP4HI - Challenges

- Teacher Awareness, Interest, Readiness and Preparation
  - Few teachers have backgrounds in computing or math
  - Few teachers have taken workshops or PD in computing
  - Many teachers are inhibited by computing and/or have few incentives to learn
- Student Awareness and/or Interest
  - Few students are aware, or interested in computing courses
  - Students are inhibited by CS A; especially women, minority and in smaller schools
  - Leads to smaller classes and low demand for AP CSP in many schools
- Geographical Distribution of Schools
  - Many public schools in remote areas are small, K-12, few teachers and students
  - E-School teachers need to be trained in distance education for AP CSP

# Recruiting Teachers for CSP4HI - Approach

- Teacher Awareness, Interest, Readiness and Preparation
  - AP CSP Professional Development and Support
    - Summer PD – CSP4HI and UTeach will host AP CSP workshops in Hawaii – June 2018-19-20
    - School Year Support – CSP4HI will provide school year support for teachers using UTeach
    - Teacher Stipends – CSP4HI will offer teachers \$1000 (workshop) + \$1500 (SY teaching/support)
    - Other AP CSP PD opportunities - Pathfinders Summer Institute, Code.org, BJC and UTeach PD
  - AP Summer Institute – HI DoE provides free travel and registration for many HS teachers
  - CSTA Hawaii Chapter – founded in Fall 2017, provides networking and support
  - University of Hawaii Mentoring – Pair up UH CS Faculty with local high school CSP teacher
- Student Awareness and/or Interest
  - Increase awareness through school presentations, career fairs, STEM conferences etc.
- Increase training of e-school teachers in AP CSP, pair up with HS teacher/tutor
- Ongoing support from Principals, Administrators, Community, Parents, Industry!