

CS 10K: IDoCode: A Sustainable Model for Computer Science in Idaho High Schools



IDoCode is a rigorous *Computer Science secondary teacher preparation program at Boise State University*. The program attracts pre- and in-service teachers seeking a high quality state certified CS teacher preparation program that prepares them to instill problem solving, collaboration, and technology skills essential for nearly every occupation in our modern economy.



Student Impact (3 year results)

Goals

- Significantly *increase highly trained CS teachers*
- Provide free *nationally recognized CS curriculums*
- Provide *quality CS teacher preparation* – first approved CS endorsement program in state
- Reach more – *and more kinds of* – students

Programs

- **GC – CS Teacher Endorsement** (20 credits)
- **MS in STEM Ed. CS Emphasis** (35 credits)
- **BS in CS Secondary Education Emphasis**
- **Recruiting a fifth cohort - summer 2018**

Teacher Outcomes

- Four cohorts with a total of 64 teachers have started representing 38 schools in 20 districts
- 37 teachers achieved training sufficient to teach ECS, CSP, and CS A – 7 more ready Sp'18
- 4 teachers received the Graduate Certificate – 4 more have completed the course work
- 3 teachers received the Master's degree – 4 more are ready to graduate summer 2018
- 2 teachers have completed the CS Endorsement
- *Partnership with Idaho Digital Learning Academy allows teachers to teach across the state in an online format*

- Growth from 3 schools offering CS to nearly every high school in the Treasure Valley
- Treasure Valley high school CS student enrollment up from 44 students to over 1400
- *Concurrent enrollment*: 245 students in 2 years
- *Advanced Placement*: State-wide doubling of AP CS A tests taken in 2017 to 123; and 192 AP CSP tests taken (new in 2017)
- Female participation nearly doubled to 24% for existing curriculum and 33% using the new curriculum
- Hispanic participation grew from 0 to 16%

Success through Partnerships

- *Local districts* to support and promote initiatives
- *Support teachers and increase student interest* through workshops, mentoring, support from industry, forums, and other community events
- *Promote student diversity* with NCWIT programs
- Participated in the creation and adoption of the *Idaho K-12 Content Standards for Computer Science, and national Praxis exam update*
- *Partnerships with IDLA, ITC, and the Idaho STEM action center to extend CS opportunities*
- *Industry representatives* to build support

For more information: contact Dr. Amit Jain at ajain@boisestate.edu and visit <https://IDoCode.boisestate.edu>

This material is based upon work supported by the *National Science Foundation* under Grant No.1339403.