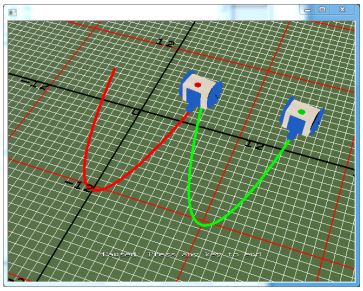
UC Davis Center for Integrated Computing and STEM Education (C-STEM)

C-STEM is a UC Approved Educational Preparation Program for Undergraduate Admission for all UC campuses. C-STEM joins a distinguished group of programs with UC A-G Program Status. Schools can easily add the A-G approved rigorous C-STEM curriculum to their own school's A-G course lists to satisfy the UC/CSU admission requirements. The mission of the C-STEM Center is to improve computing, science, technology, engineering, and mathematics in both formal and informal K-14 education. The C-STEM Center also studies how to streamline the curriculum on computing education in the context of STEM subjects in elementary schools, middle schools, high schools, and the first two years of college to increase student interest in pursuing computing and STEM related careers, and post-secondary study.

What We Do:

Researching and Developing Teaching Resources for Computing and STEM Education



- Conduct research on Integrated Computing and STEM Education in K-14
- Develop pedagogy and strategies to integrate computing and robotics into STEM education
- Develop courseware and teaching materials for K-14 computing and STEM education

Professional Development for K-14 STEM Teachers

- Offer workshops, 2-Day Academy, on-site training, train-the-trainer program, and summer institute for professional development for STEM teachers on robotics, computing and programming in C/C++, pedagogy on teaching computing and robotics in K-14, and its integration in STEM curriculum.
- Provide teachers with teaching materials including textbooks, get course syllabus, homework assignments, solutions, pre and post

C-STEM Curricula

- **Elementary School Curriculum**: *Exploring Mathematics with Computing and Robotics*
- **Middle School Curriculum**: *Math 7 with Computing, Math 8 with Computing, Computer Programming with Ch, Robotics and Film Production*
- **High School Curriculum**: *Algebra I with Computing, Algebra I with Computing & Robotics, Integrated Mathematics I with Computing, Integrated Mathematics I with Computing & Robotics, Computer Programming with C, Computing with Robotics*
- **College Curriculum**: *Algebra I with Computing, Algebra I with Computing & Robotics, Integrated Math I with Computing, Integrated Math I with Computing & Robotics*
- **Youth Summer Camps**: *Exploring Mathematics with Robotics, Computer Programming with STEM Applications, Robotics and Digital Media, Computer Programming with Robotics, GIRL Camp*

C-STEM Day and C-STEM Conference for Advocating C-STEM Education

- RoboPlay Competition (Video and Challenge)
- Conference on Integrated Computing and STEM Education
- C-STEM Awards for K-12 administrators, teachers, students, and volunteers

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