

C-STEM CENTER AGREEMENT PROGRAM REQUIREMENTS

*This document and the **C-STEM** Agreement each contain legally binding obligations for participating entities. In order for a full understanding of the C-STEM program requirements, the two documents must be reviewed together.*

Entities are required to consult with their state education departments and **C-STEM** state teams to ensure that they understand and follow important factors and implications in their states, which include funding requirements and opportunities, and state department of education guidelines.

I. DEFINITIONS

Entity: There are various types of organizations that implement the **C-STEM** Program. In order to encompass all of these various types, we are using the term “Entity or entity,” which includes districts, participating schools, or other organizations that are authorized to enter into the C-STEM Agreement with the C-STEM Center.

Requirement: A Requirement must be followed when implementing the **C-STEM** Program. Unless an entity is provided with a waiver from a Requirement, the Entity is responsible for implementing the Requirement into its **C-STEM** Program.

C-STEM Curricular Programs:

- C-STEM Middle School
- C-STEM High School
- Supplementary Implementation

II. C-STEM MIDDLE SCHOOL

C-STEM Middle Schools implement C-STEM Common Core State Standards aligned mathematics and CTE courses that prepare students for college STEM majors, or post-secondary STEM experiences. The following are the minimum implementation requirements:

The Entity must offer its students a minimum of one **C-STEM** course from the date that it commences the curricular program. In subsequent years, schools should develop a plan to offer both mathematics courses and one or more of the CTE courses. These courses are:

Mathematics Courses:

- Math 7 with Computing (M7C)
- Math 8 with Computing (M8C)

CTE Courses:

- Computer Programming with Ch (CPCH)
- Robotics and Film Production (RFP)

Among other factors, it is particularly important that Entities check with their state education departments to determine state-level minimum course requirements which may be higher.

All **C-STEM Middle School** courses require satisfactory prior completion of appropriate grade level math courses. Grade level courses should be those that support a student's requirements towards matriculation.

The most recent version of the curricula for each **C-STEM** course must be used.

All **C-STEM Middle School** courses are designed as year-long courses on a standard 45-50 minute schedule. Schools may use alternative schedules, such as alternating block, as long as the course is implemented in its entirety.

The Entity will determine the sequence of **C-STEM** courses for implementation.

III. C-STEM HIGH SCHOOL

C-STEM High Schools implement C-STEM Common Core State Standards aligned mathematics and CTE courses that prepare students for college STEM majors, or post-secondary STEM experiences. The following are the minimum implementation requirements:

The Entity must offer its students a minimum of one **C-STEM** course from the date that it commences the curricular program. In subsequent years, schools should develop a plan to offer both mathematics courses and one or more of the CTE courses. These courses are:

Mathematics Courses:

- Integrated Mathematics 1 with Computing (IM1C)*
- Integrated Mathematics I with Computing and Robotics(IM1CR)*
- Algebra 1 with Computing (Alg1C)*
- Algebra 1 with Computing and Robotics(Alg1CR)*
- Integrated Mathematics 2 with Computing (IM2C)**
- Integrated Mathematics 2 with Computing and Robotics (IM2CR)**
- Algebra 2 with Computing(Alg2C)**
- Algebra 2 with Computing and Robotics (Alg2CR)**

CTE Courses:

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- Introduction to Computer Programming with C (ICPC)*
- Computing with Robotics (CR) *
- AP Computer Science Principles (APCSP)**
- Principals and Design of Cyber Physical Systems (PDCPS)**

*A-G Approved for UC/CSU undergraduate admission

** will be available starting 2016-17. More details will be made available as the program evolves.

Among other factors, it is particularly important that Entities check with their state education departments to determine state-level minimum course requirements which may be higher.

All **C-STEM** courses require concurrent enrollment in (or satisfactory prior completion of) appropriate grade level math courses. Grade level courses should be those that support a student's requirements towards matriculation.

The most recent version of the curricula for each **C-STEM** course must be used.

All **C-STEM** courses are designed as year-long or semester courses on a standard 45-50 minute schedule. For schools using alternative scheduling formats, for example, double period or block scheduling, these courses can be completed in an abbreviated time period as long as the course is completed in its entirety.

The Entity will determine the sequence of **C-STEM** courses for implementation.

IV. Supplementary Implementation

C-STEM Supplementary Implementation allows schools the flexibility of implementing C-STEM Mathematics or CTE curriculum in precise modules rather than its entirety. This includes, but is not limited to, implementing the C-STEM Mathematics curriculum in a supplemental math course that is meant to support students' current math content goals by offering an alternative presentation and viewpoint of identical material, or implementing the C-STEM CTE curriculum in a supplemental elective course or in an after school setting.

While this type of implementation allows schools a greater flexibility to address their specific student population needs, schools implementing this may not apply A-G status to these courses as their implementation does not align with UC A-G requirements. Schools that fall under this category may not use the classification or advertise themselves as a "**C-STEM School**", as that is reserved for **C-STEM Middle Schools** or **C-STEM High Schools**, as defined in section II and III of this document.

V. C-STEM PROGRAM QUALITY

C-STEM Program Quality is an important part of any implementation. Following Program Quality guidelines not only ensures that the program has demonstrated fidelity of implementation, but also fosters an environment of continuous improvement in student outcomes. The Entity must follow Program Quality guidelines, and complete the **C-STEM** Program Certification process individually for each school curricular program. To achieve **C-STEM** Program Certification, entities must execute all required elements of the **C-STEM** Agreement and Program Requirements, in accordance with the C-STEM Program Certification Process.

The C-STEM Center encourages collaboration and networking. The Entity will make its participating schools or sites available for observation by other participating entities and exchange information concerning the **C-STEM** Program with other participating entities.

VI. PARTICIPATION FEES

As stated in the **C-STEM** Agreement with additional detail, an annual participation fee is

assessed for each school or site participating in a **C-STEM** Curricular Program. The fees per school or site, or division in a college are as follows:

Elementary Schools (K-6)	\$600
Middle Schools (K-8, 6-8)	\$800
High Schools (k-12, 6-12, 9-12)	\$1,000
Division in a College	\$1,000

The participation fee covers program support features including; but not limited to:

- School and technical support
- Student recognition and scholarship opportunities
- Networking opportunities through the **C-STEM** network
- Post-secondary opportunities, such as preferential admissions
- Opportunities to interact with **C-STEM** corporate partners
- Best practice sharing
- Expanded teacher pipeline

Single sign-on access to a suite of support applications, including but not limited to:

- End of Course Assessments
- Teacher Professional Learning Communities
- Reporting tools
- Registration and rostering system
- Score reporting tool

Participation fees are due no later than August 31 of each year. If an Entity does not pay the participation fees by the due date, it may have interrupted access to the program support features or support applications made available by the C-STEM Center.

VII. TEACHER TRAINING

C-STEM Teacher Training is designed to provide educators with the opportunity to increase their depth of content knowledge, skills, and pedagogy related to specific **C-STEM** course, unit, or module instruction. The professional development model is structured to empower teachers by focusing on proper preparation, in- depth training, and continuing education.

Training Schema:

- For C-STEM courses, a Master Teacher who is trained by the C-STEM Center will provide training to teachers.
- Districts who are implementing C-STEM courses are encouraged to ensure that there are multiple Master teachers in their district who can provide training.

Teacher Selection:

Teachers instructing a **C-STEM** course, unit, or module should have as a minimum a Bachelor's Degree, and be in compliance with applicable state teacher licensure or certification requirements. Teachers of C-STEM CTE curriculum will benefit from prior experience teaching STEM courses or

working experience in a STEM field. Prior knowledge of computer programming or robotics is helpful but not required. The C-STEM Center reserves the right to accept or reject teacher candidates for training, and has the ultimate discretion to determine a teacher's successful completion of training.

***C-STEM** teacher training is one qualification for eligibility to teach **C-STEM** courses, units or modules. Individuals seeking to teach **C-STEM** Curricular Programs are advised to understand state requirements for teaching these programs.

Training:

- The Entity must require all teachers to successfully complete course, unit, or module specific training prior to teaching that **C-STEM** course, unit, or module to their students.
- The Entity shall be responsible for all fees and expenses associated with training, including costs as determined by the agreement governing such teacher.
- The Entity shall register teachers through the C-STEM Center systems for training. In the event the training is not offered (or is full), or a scheduling conflict exists, the Entity will contact the C-STEM Center.
- In the event a participating school or site of the Entity loses a teacher during the academic year, the Entity should contact the C-STEM Center. The C-STEM Center will work with the Entity to create a Professional Development Plan to support the teacher until the next available training session.

Ongoing Training:

- All trained teachers must be properly trained in and teaching the latest version of the
- **C-STEM** course, unit or module.
- All **C-STEM** Program revisions will be released with ongoing training focused on updates for that **C-STEM** course, unit or module. All trained teachers must complete ongoing training for **C-STEM** Program updates through one of the following options:
- Refresher course: the C-STEM Center will provide reduced training for previously trained teachers to update them on new or modified curricula. The Entity shall be responsible for all fees and expenses associated with training.
- Repeat of training: the C-STEM Center permits previously trained teachers to repeat training. The Entity shall be responsible for all fees and expenses associated with training.

Update Training:

- The C-STEM Center encourages all trained teachers to participate in update training: on-site professional development opportunities offered through the **C-STEM** Affiliate network.
- **C-STEM** Affiliates, as deemed appropriate and necessary, will provide on-site, update training. The Entity will be responsible for all fees and expenses associated with on-site training.

VIII. OTHER SCHOOL SUPPORT

The annual **C-STEM** Conference is a professional development conference for school counselors, post-secondary advisers, principals, teachers and school/district/county administration to learn more about the **C-STEM** Program as well as why and how they should encourage students to enroll in the **C-STEM** Program.

C-STEM Conference:

- **C-STEM Center** and its Affiliates provide **C-STEM Teacher/Counselor/Administrator Training** annually, in the form of the annual C-STEM Conference.
- Although it is suggested to have all advisers/counselors/administrators attend a **C-STEM Conference** at least once, each participating school or site of the Entity will send a minimum of one adviser/counselor/administrator per annual conference.
- The Entity will permit the attendance of appropriate teachers/advisers/counselors and shall pay all fees and expenses in conjunction with this **C-STEM Conference**.

IX. SOFTWARE AND EQUIPMENT

Teacher Equipment:

The Entity shall provide each teacher selected to participate in the **C-STEM Teacher Training** program with a laptop computer and software (each meeting the specifications established by the C-STEM Center), to be delivered to the teacher prior to attending training. The laptop must be able to support the software required by the curricular program over time. The laptop computer and software will be used in the **C-STEM Teacher Training** program as well as throughout the instruction of the **C-STEM Program** at each participating school or site of the Entity. The laptop computer and software shall remain in the possession of and be for the sole use of the teacher as long as the teacher is teaching **C-STEM** courses, units or modules.

Prioritization of Use:

The use of the equipment and software by students participating in the **C-STEM Program** shall take precedence over all other use. No other program or activity or student internships will interfere, substitute for or reduce student contact time in connection with the **C-STEM Program**.

Classroom Equipment and Software:

As stated in the **C-STEM Agreement**, there are requirements with respect to equipment and software for use with the **C-STEM Curricular Programs**. The **C-STEM Agreement** should be reviewed closely for guidance on the requirements of all equipment to meet or exceed state specifications.

Annual software rights are subject to limitations established by the owner of the software. These should be reviewed by the Entity, and can be found within each of the software applications.

XIV. SAFETY

The C-STEM Center does not control the day-to-day implementation of the **C-STEM Program** by the entities; safety in the delivery of the **C-STEM Program** is the sole responsibility of the entities. It is therefore important for each Entity to implement appropriate safety protocols for the implementation of the **C-STEM Program** at its participating schools and sites, including any required, recommended or appropriate training for faculty/staff, and adherence to required, recommended or appropriate safety measures and appropriate supervision of students.

XV. ASSESSMENT AND EXAMINATIONS

Each entity must administer the most current version of the End-of-Course (EoC) Assessment provided by the C-STEM Center to its students at the end of each C-STEM Mathematics and CTE

Curricular Program course. The Entity shall administer such assessments in a computer-based format in accordance with the online systematic evaluation process, as determined by the C-STEM Center in its sole discretion. The Entity must administer the EoC Assessments in accordance with guidelines specified by the C-STEM Center, and any deviation from those guidelines must be preapproved and documented. The C-STEM Center shall take reasonable measures to ensure that protected student information is safeguarded and kept private in accordance with applicable law.

This requirement only applies to C-STEM Middle Schools and C-STEM High Schools. This requirement does not apply to Supplementary Implementation schools.

XVI. DATA PRIVACY AND SECURITY

The C-STEM Center works to ensure that data and other records are protected in keeping with the letter and spirit of applicable law. Education records are administered consistent with the Family Educational Records and Privacy Act (“FERPA”) and other applicable laws. The C-STEM Center may also have access to other information which is not subject to these laws. The C-STEM Center implements reasonable safeguards and precautions to secure data and protect against unauthorized access to its systems and data, and generally will only share information that it collects or receives as required for administrative purposes, to further its charitable mission, or as permitted by law.

The C-STEM Center assists and supports participating entities and the quality of the **C-STEM** Program through studying and evaluating the effectiveness of the **C-STEM** Program on an ongoing basis in order to update instructional, curricular and assessment materials and otherwise improve the instruction that **C-STEM** participating entities provide to students. These efforts include the development, validation, and administration of assessments, examinations, surveys and/or other measurement tools on behalf of entities during their participation in the **C-STEM** Program. The C-STEM Center retains data for four to six academic years after a student’s estimated matriculation date, after which time the data is destroyed; at the request of the Entity, a copy of the data will be returned to the Entity prior to destruction. (De-identified data may be retained in a secure area and used for historical purposes relating to the continued support of the **C-STEM** Program.) The Entity will annually participate in the **C-STEM** online systematic assessment and evaluation process conducted by the C-STEM Center and/or its designated representatives, which includes online teacher registration, online student rostering/registration, and full participation in various assessments, examinations, surveys and/or other measurement tools using technology and other support services provided by the C-STEM Center. The Entity and the C-STEM Center acknowledge and agree that the personally identifiable data is confidential, and shall be used, shared and maintained for the purposes set forth above and only in accordance with reasonable privacy/security measures, proper professional practices, student confidentiality and applicable laws, including FERPA. Use or access to any protected data obtained as a result of these studies will be limited to representatives with a legitimate interest (for example, state departments of education) in accessing this data and re-disclosure of any personally identifiable information will be done in limited instances only, and only as allowed by, and consistent with, applicable laws. The Entity shall be responsible for implementing annual notifications, record-keeping and other such privacy requirements relating to these services.

XVII. LICENSE TO C-STEM MATERIALS

Any use or distribution of **C-STEM** materials (which includes the marks, curricula, framework, methodologies, processes, information, materials and other intellectual property owned by the C-STEM Center) is subject to the terms and limitations of the license provided to each entity in its

agreement with the C-STEM Center. No participating entities may post or otherwise distribute **C-STEM** curricular and assessment materials on the internet or any extranet. The C-STEM Center has made a significant investment in curricular and assessment materials (which includes items such as the curriculum, teacher training materials, assessments, answer keys and all other such materials), as well as its framework, methodologies and processes, in order to achieve its charitable mission, and has developed these materials in accordance with rigorous standards. If **C-STEM** materials are not appropriately protected, this would compromise the integrity of these materials, increase program costs and impair the viability of the **C-STEM** Program and the C-STEM Center's charitable mission.

XVIII. MARKETING AND PUBLIC RELATIONS

The C-STEM Center recommends entities to market the **C-STEM** Program in the following ways:

- Advertise the **C-STEM** Program's existence in the school via a banner or display near the entrance of the school – this may be done through a certification banner, **C-STEM** Program general banner, or flag, which can be purchased through the C-STEM Center.
- Use the official and current logo and boiler plate language in marketing materials and press releases that include information about the **C-STEM** Program.
- Mention the school's participation in the **C-STEM** Program, along with the **C-STEM** logo, on the school or district's website.

Approved logo files and boiler plate language are available on the C-STEM web site at <http://c-stem.ucdavis.edu/about-us/>. Past (obsolete) **C-STEM** logos should not be used in a school or on program materials. The C-STEM Center recommends the use of C-STEM standard marketing materials that the Entity may customize for their usage. The C-STEM Center requires that any marketing or communications materials created by the Entity that include information about the C-STEM Center be submitted for prior approval. The C-STEM Center encourages entities to work with the organization to promote the **C-STEM** Program in a manner that is consistent with the national branding of the organization.

XIX. INTERNET TECHNOLOGIES AND ELECTRONIC COMMUNICATIONS

The C-STEM Center will leverage a variety of internet applications and systems to facilitate the delivery of content and curriculum to teachers and students across the entire network. The C-STEM Center shall determine these systems at its sole discretion and will ensure that proper security is provided to safeguard sensitive data. The C-STEM Center will use these systems from time to time to communicate with members of the **C-STEM** network. The Entity shall ensure that it has employed sufficiently current web browser technology to allow teachers and students to access the C-STEM Center systems. This could include emails sent from the C-STEM Center to **C-STEM** network members, notifications in various systems such as online assessment platforms or other internet based systems. **In order to facilitate these various types of communications including email communication with schools and teachers, the Entity shall add the c-stem.ucdavis.edu domain name to safe sender or white list registers at the district, school and individual user levels.** In the case of organizations with firewalls or other filtering technology in place to support their security needs, the Entity shall make accommodations to its infrastructure to ensure that the C-STEM Center's electronic communications are received by recipients within the Entity's network. In cases where the C-STEM Center uses specific internet based systems for delivery of curriculum, assessments or other relevant content to schools, teachers and students, the Entity shall ensure annually that all programs and users are properly registered and rostered into these systems in keeping with the policies and procedures the C-STEM Center puts in place

to ensure secure access to relevant information.

XX. IMPORTANT ADDITIONAL REQUIREMENTS

In the event that the Entity does not implement the **C-STEM** Program for the fall or spring semester of the academic year immediately following the date of this Agreement (for any of Entity's sites or schools registered as of the date of the agreement), or for the fall or spring semester following registration, as applicable (for any of Entity's sites or schools registered after the date of this agreement), then the Entity must notify the C-STEM Center within ten days of the commencement of the then academic year to determine a mutually agreeable new implementation schedule.

Entity agrees to support the program administratively. Currently, a key role in the process is the District Administrator (or their delegate) who at a minimum must manage the related Agreement processes and also keep contact information updated.

Thank you for your close review of these important Program Requirements, which are legally binding as part of the **C-STEM AGREEMENT**. If you have any questions, please contact the **C-STEM** Center.