California Mathematics and Science Teacher Initiative (CMST) Handbook

2007-08

Alpha Center
University of California, Riverside
www.alphacenter.ucr.edu
<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Goals</td>
<td>3</td>
</tr>
<tr>
<td>Program Overview</td>
<td>4</td>
</tr>
<tr>
<td>Apprentice Requirements</td>
<td>5</td>
</tr>
<tr>
<td>Cooperating Teacher Requirements</td>
<td>8</td>
</tr>
<tr>
<td>Program Coordinator Responsibilities</td>
<td>10</td>
</tr>
<tr>
<td>Helping the Apprentice</td>
<td>11</td>
</tr>
<tr>
<td>Program Forms</td>
<td></td>
</tr>
<tr>
<td>Related Organizations and Websites</td>
<td></td>
</tr>
</tbody>
</table>
California Mathematics and Science Teacher Initiative (CMST)

The GOAL

As a CMST apprentice you are provided an opportunity to learn contemporary mathematics and science content with the pedagogy for teaching that content through a variety of courses, seminars and joint adventures involving existing projects. The goal is to provide assistance and guidance resulting in each CMST apprentice securing a teaching credential, an intern position in the public school, admission to a teacher credential education program or an advanced degree in mathematics/science education.

This document was compiled to explain the expectations of you as a CMST Apprentice. We have included some general information, (i.e., timesheets, paydays etc.), that will be helpful in making this academic year successful, exciting, and rewarding. Our staff members listed below are available to answer any additional questions or concerns you may have.

Staff

Dr. Pamela S. Clute
Alpha Center Executive Director
(951) 827-5425
pamela.clute@ucr.edu

Cheryl Samples
CMST Program Coordinator
(951) 827-4897
cheryl.samples@ucr.edu
California Mathematics and Science Teacher Initiative
Overview

The California Mathematics and Science Teacher (CMST) Initiative Program is an opportunity for selected undergraduate students to learn about contemporary mathematics and science content plus the pedagogy for teaching that content through a variety of courses, seminars and joint adventures with existing projects. Apprentices are given teaching experiences under direct supervision from UCR faculty members and public school teachers. The ultimate goal is to create academic assistance, financial support and mentoring, resulting in each CMST participant securing: a teaching credential, an intern position in the public schools, admission to a teacher credential education program or an advanced degree in mathematics/science education.

The CMST program is part of an overall master plan to improve mathematics and science education in the Inland Empire. CMST partners with the UCR College of Natural and Agricultural Science, UCR Graduate School of Education, Riverside County Office of Education, and San Bernardino County Superintendent of Schools Office. As a result of the CMST program and its partnering efforts public school students in the Inland Area improve their interest and their abilities in mathematics and science.

The main goal of the CMST program is to provide professional development and a mentoring setting for college mathematics/science majors who want to become teachers. This program also addresses the need to improve student achievement on tests involving mathematics and science while enriching mathematics/science content knowledge and pedagogical content knowledge of existing teachers.

Apprentices will each provide 3 - 5 hours per week of service at an assigned school site. This could include mathematics or science instruction, tutoring or other related activities. Included in the program is an orientation for apprentices and mentor teachers, quarterly planned meetings, opportunities to presentations and professional development seminars, and an end of year celebration.
California Mathematics and Science Teacher Initiative

CMST Apprenticeship Requirements

CMST Apprentices must:

- Attend a week long CMST Professional Development summer training program.
- Attend one CMST meeting per quarter at the Alpha Center. Agendas, dates and times will be announced at the beginning of each quarter, once CMSTers schedules are finalized. **Attendance to these meetings is mandatory.**
- Spend 35 - 50 hours per quarter involved in CMST activities. Hours may include:
  - Lesson preparation at school site
  - Administrative assistance (grading, observing cooperating teacher, assisting teacher, etc.)
  - Tutoring (one-on-one in class tutoring or small group)
  - Cooperating teacher feedback meetings
  - Attendance at conferences or workshops that are mathematics or science education related
  - Participation in parent conferences
- Complete a portfolio reflecting the CMST experience.
- Attend orientation meeting and end of year celebration (dates will be provided).
- Keep **email** address, mailing address and phone number current with Cheryl Samples at the Alpha Center.
- Be enrolled as a full time student.

**Suggested Courses**

- Education 100 – Math Tutorial
- Education /Mathematics 104
- Mathematics 15
- Mathematics 192

**NOTE:** In addition CMST Apprentices are responsible for fulfilling the requirements of their major and must maintain a suitable grade-point average.

- **You may not continue participating if you are on academic probation**
- **Remember** – a 3.0 GPA is required to enter the credentialing program at the University of California and a 2.5 GPA is required at California State University.
Professionalism

All CMST apprentices are expected to dress in professional attire when working at their school site. Students should address you as Mr., Mrs., Ms., or Miss. Punctuality and preparation are expected. If you are unable to attend class on a specific day, notify your cooperating teacher immediately as well as Cheryl Samples at the Alpha Center.

Portfolios

Apprentices are expected to keep information about CMST activities in order to compile a portfolio reflecting the CMST experience. Guidelines will be provided on portfolio requirements and submission at one of the quarterly mandatory meetings.

Conferences

The Alpha Center will keep you informed of any conferences, workshops or educational related programs. If you are interested in attending any of these programs it will be your responsibility to contact our office for details. If possible, the Alpha Center will subsume the cost of registration and mileage to those events, which have been pre-approved.

CMST Observation

Each apprentice will be observed in his or her school site setting during the year. This will be prearranged between the CMST apprentice, the cooperating teacher and Cheryl Samples. Apprentices will receive a written review of the observation.

The cooperating teacher will also provide a written assessment of the CMST apprentice at the end of the academic year.

Timesheets

Signed timesheets and CMST documentation of hours sheets are due on the 15th of each month. If you fail to submit your documentation of hours sheet or to sign your time sheet a written warning will be placed in your personnel file. Three warnings will result in your termination from the program.

Mileage Forms

Mileage forms must be submitted on the 15th of each month with your documentation of hours sheet. You must list your beginning and ending odometer reading for each trip as well as the total number of miles accumulated. Mileage is approved from UCR to school site and return only. You must have computer access to certify your mileage reimbursement request for approval by Alpha Center staff. Please refer to authorized mileage reference letter included with form examples on page 14.
Program Evaluation for Apprentices

Evaluation of the CMST program is essential to ensuring its success and continued funding. Apprentices will be required to complete a CMST Program Participant Survey. You are strongly encouraged to complete this survey provided to you in a professional and timely manner. Your identity will be kept strictly confidential and your answers only used for program evaluation purposes (unless you give us permission to do otherwise). The answers you provide on the surveys will not in any way affect your status as a CMST apprentice.

TB Testing

In accordance with the California health and safety code as an employee or volunteer in an elementary or secondary school you must be given a TB test or have on file a certificate showing that within the last four years you have been examined and found to be free of communicable TB. The TB skin test is a two-part process: first part – skin test administered; second part -- 48 hrs afterwards – reading of the test. You must attend both days for the test to be valid. The Alpha Center can arrange the TB testing through Student Health Services at no cost to you. If additional testing is required please contact the Alpha Center for approval. Test results must be returned to the Alpha Center. You will be given two copies of your results -- one for your assigned school site and one as your personal copy.

Fingerprinting

In accordance with the Riverside County Office of Education (RCOE) regulations as an employee or volunteer in an elementary or secondary school you must be fingerprinted. All apprentices will be contacted by Cheryl Samples as to procedures and locations for fingerprinting.
CMST Cooperating Teachers Responsibilities

CMST Cooperating Teachers are asked to:

- Work with CMST Apprentices in establishing a schedule which will allow them to fulfill 35 - 50 hours per quarter in mathematics/science education activity.

- Fifty percent of the time must be spent on:
  
  Teaching and/or lesson preparation at the assigned school site

- The other fifty percent can be comprised of the following activities during and/or after school:
  
  Tutoring (one-on-one or small group setting)
  Administrative assistance (grading, observing cooperating teacher, assisting teacher, etc.)
  Cooperating teacher feedback meetings in support of apprentice development in the classroom
  Participation in county, community or school mathematics educational activities such as “Parent Nights”, “Math Field Day”, etc.
  Attendance at conferences or workshops that are mathematics or science education related
  Parent Conferences

- Inform the Alpha Center staff immediately of problems related to CMST placements.

- Attend the CMST Orientation in September and the CMST Celebration in May at the UC Riverside campus. Teachers are asked to invite an administrator as their guest to those programs.

- Keep email address, mailing address and phone number current with the Alpha Center staff.

- Communicate monthly with Alpha Center staff about the performance of assigned apprentice to include attendance and behavior in the classroom.

- Include CMST Apprentices in school activities that will develop them as professionals.

- Provide CMST Apprentices with written feedback of CMST services. Forms will be provided but Cooperating Teachers are asked to elaborate on as many aspects of the program as possible.
Cooperating Teacher Compensation

- $1,000 Stipend
- Classroom assistance with the teaching of Mathematics and/or Science
- Access to UCR guest speakers
- Access to UCR campus tours
- Opportunities to be included in Alpha Center sponsored mathematics and science professional development activities

Program Evaluation

Evaluation of the CMST program is essential to ensuring its success and continued funding. As a cooperating teacher you will be required to complete an evaluation form on the progress and involvement of the apprentice at the end of the program. This form must be completed in order to receive your final stipend payment. The evaluation and completion/submission instructions will be provided by Alpha Center Staff. This information will help us in improving apprentice training and our program.
Responsibilities of the CMST/ISIS Coordinators

“If I am walking with two other men, each of them will serve as my teacher. I will pick out the good points of the one and imitate them and the bad points of the other and correct them in myself.” (Confucius)

The CMST/ISIS Coordinators are full-time staff members of the Alpha Center at the University of California – Riverside. The program coordinators have extensive experience at the level they supervise and are accomplished professionals in their areas of expertise. The coordinators are the catalysts for helping the apprentice formulate a broader perspective on teaching through reflection of the current experience.

Specific responsibilities of the coordinators include:

- Serve as a liaison between the apprentice, cooperating teachers, school administrators, and the Alpha Center Director at the University of California – Riverside.
- Provide pertinent instructional materials from the university, as needed, to the apprentices, cooperating teachers, and administrators.
- Complete all necessary documentation for payment to apprentices and cooperating teachers.
- Complete one observation per year in each placement with the apprentice and hold post-observation conferences with the apprentice and cooperating teacher as soon as possible after each observation.
- Confer with the cooperating teacher concerning the progress of the apprentice.
- Create and maintain careful documentation to support satisfactory progress of the apprentice.
- Report immediately to the Director of the Alpha Center any changes in the status of the apprentice.
- Assist the apprentice in the process of reflection of their experience. Provide seminar activities that stimulate and maintain the professional growth of the apprentice. These may include but are not limited to a review of lesson and unit planning, a discussion of classroom management techniques and discipline, a review of effective instruction, assistance with the development of their professional portfolio, how to write a resume and cover letter, and interview strategies.
- Help apprentices, cooperating teachers, and school administrators develop an understanding of the Graduate School of Education student teaching program and expectations.
- Continue to work with the California Teach-Science Mathematics Initiative (CaTEACH-SMI) program at UCR in offering apprentices a pathway to obtaining an intern credential and maintaining the relationship of SMI offering personal advising for STEM students interested in teaching careers.
Helping the CMST/ISIS Apprentice

**Communication**
Establishing rapport with the apprentice will allow the initial teaching experiences to take place in an atmosphere of sympathetic understanding. It is important that you model the types of lessons/activities you expect the apprentice to prepare, and share your long-range plans, in order to help the apprentice develop effective individual lesson plans. Praise and encouragement (when appropriate) can go a long way, for this is an anxious time for the apprentice. Specific constructive criticism can clearly identify ways of improving. Although too much responsibility too soon might inhibit the apprentice’s growth, too little responsibility detracts from growth as well.

**Acquainting the student teacher with your school and class(es)**
You may want to arrange for the student teacher to tour the school building, including the staff lounge, cafeteria, art, music, physical education rooms, library, special education facilities, and any other facilities unique to the school. It is also helpful to direct the apprentice to other resources in your classroom or in the school which may be useful in lesson preparation (e.g., library and AV materials), in addition to the copies of textbooks, workbooks, and curriculum guides available in your classroom. Inform the student teacher of any individuals in the classroom with special needs and share ways you have found to meet those needs successfully.

**Helping the apprentice better observe teaching**
Sharing your lesson plans will both guide your apprentice's observations and reveal the preparation needed for successful teaching. You might suggest specific areas for the student to focus upon while observing and share your own reactions about the lesson you just taught, noting any changes you might make if you were to do the lesson again.
It is helpful if you demonstrate varied teaching methods and materials. Please provide time and encouragement for the apprentice to observe other staff members as well.

**Involving the apprentice in all capacities**
Please suggest ways for the apprentice to become actively involved in your classroom right away (tutoring, small group work, developing bulletin boards, etc.). You can aid the apprentice's professional growth by encouraging participation in parent-teacher conferences, teacher in-service meetings, extra-curricular activities, and professional organizations whenever it is appropriate and feasible.
Additional Forms

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</thead>
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<tr>
<td>Documentation of Hours</td>
<td>13</td>
</tr>
<tr>
<td>Mileage Report</td>
<td>14</td>
</tr>
<tr>
<td>CMST School Partners Contact and Mileage Reimbursement Reference Information</td>
<td>15</td>
</tr>
<tr>
<td>Daily Lesson Plan Format</td>
<td>16</td>
</tr>
<tr>
<td>Teaching Lesson Plan Format</td>
<td>17</td>
</tr>
<tr>
<td>Classroom Observation Reflections</td>
<td>19</td>
</tr>
<tr>
<td>Example Teaching Philosophy</td>
<td>20</td>
</tr>
</tbody>
</table>
CMST Apprentice:______________________________________________

Cooperating Teacher:______________________________________________

School:__________________________________________________________

Type of Instructional Support:  [ ] Mathematics  [ ] Science

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### MILEAGE REPORT

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<th>Ending Odometer</th>
<th>Total Miles Traveled This Trip</th>
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Total Miles

_____________________________  _____________
Student’s Signature    Date
The University of California – Riverside is now going to be processing travel vouchers using an online system. This change will affect the procedures for processing your mileage checks. We will begin to use this new system on March 1, 2007. Mileage is calculated from UCR to the school and returning to UCR. Due to excessive variations in the submission of mileage requests we are now going to use standard roundtrip mileage allowances for your reimbursements. We understand that you do not always leave from the university to travel to the school location but your mileage request cannot be more than what we are listing in this letter. Please see your school listed below:

**Arlington High School**  
2951 Jackson St  
Riverside, CA 92503  
951-352-8316  
Roundtrip: 24 miles

**Sierra Middle School**  
4950 Central Ave  
Riverside, CA 92504  
951-788-7501  
Roundtrip: 18 miles

**Jurupa Valley High School**  
10551 Bellgrave Ave  
Mira Loma, CA 91752  
951-360-2600  
Roundtrip: 30 miles

**Granite Hill Elementary**  
9371 Granite Hill Dr  
Riverside, CA 92509  
951-360-2725  
Roundtrip: 22 miles

**Patriot High School**  
4355 Camino Real  
Riverside, CA 92509  
951-361-6500  
Roundtrip: 20 miles

**San Gorgonio High School**  
2299 Pacific St  
San Bernardino, CA 92404  
909-388-6092  
Roundtrip: 40 miles

**El Cerrito Middle School**  
7610 El Cerrito Rd  
Corona, CA 92881  
909-736-3221  
Roundtrip: 25 miles

**Raney Intermediate School**  
1010 West Citron St  
Corona, CA 92882  
909-736-3221  
Roundtrip: 22 miles

**River Heights Intermediate School**  
7227 Cleveland Ave  
Corona, CA 92880  
909-738-2155  
Roundtrip: 23 miles
Daily Lesson Plan

Name: __________________________ Date: __________ School: ________________

Classroom Teacher: __________________________ Time of Contact: __________

Type of Instructional Support:  □ Mathematics  □ Science

Where was Support Provided:  □ Classroom  □ Library  □ Laboratory  □ Other

How Was Support Delivered:  □ Total Classroom  □ Small Group  □ Individual

What Content Areas Were the Focus of the Support?

- Probability & Statistics  - Logic/Set Theory/Paradoxes  - Meteorology
- Functions & Graphs  - Number Theory/Algebra  - Measurements/Scale/Patterns
- Number Bases  - History of Math & Science  - Evolution/Genetics/Ecology
- Tessellations/Geometry  - Chemistry  - Electricity
- Themes Integrating Math & Science  - Geology  - Other: ________________
- Computer/Robotics  - Astronomy  - Paleontology
- Combinatorics/Counting

Description of Instruction:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

16
## Teaching Lesson Plan

**Teacher:**

**Subject Area:**

<table>
<thead>
<tr>
<th>Desired Results</th>
<th>Formal Assessment</th>
<th>Objective/Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use state/district standards to develop the learning target(s).</td>
<td>Develop assessment criteria and assessments based on the learning target.</td>
<td>Help students understand the lesson’s target and its purpose.</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Anticipatory Set</th>
<th>Checking for Understanding</th>
</tr>
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<tbody>
<tr>
<td>Engage students by focusing their attention and accessing their prior knowledge of the learning target.</td>
<td>Check to see if students have the skills they need to achieve the target and provide support as necessary.</td>
</tr>
<tr>
<td>Instructional Input: Provide access to the information students need to reach the target.</td>
<td>✓ Constantly walk around room and monitor student’s work to ensure that it is being done accurately and strategies are being followed.</td>
</tr>
<tr>
<td>Modeling: Give examples of acceptable products or processes students are expected to learn or produce.</td>
<td>✓ Frequently check for understanding by using short quizzes.</td>
</tr>
<tr>
<td>Guided Practice: Work collaboratively to achieve the target under the direct supervision and guidance of the teacher.</td>
<td>✓ Frequently ask higher order thinking questions.</td>
</tr>
<tr>
<td>Independent Practice: Provide opportunities to work independently of the teacher to extend new learning and to develop fluency.</td>
<td>✓ Have students demonstrate understanding by solving problems on white boards.</td>
</tr>
<tr>
<td>Closure: Revisit new learning and connect it to what students will learn in the future.</td>
<td>✓ Use the Thumbs up/Thumbs down method.</td>
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<tr>
<td></td>
<td>✓ Close lesson by having students tell you what they have learned.</td>
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</tbody>
</table>
Classroom Observation Reflections

1. The teacher made his/her instruction clear and easy for students to follow by:

2. The teacher used a variety of teaching strategies (examples: technology, games, visuals, etc.). List them below:

3. The teacher managed the classroom by:

4. If a student was disruptive, the teacher handled this by:

5. Describe how the teacher checked for understanding throughout the lesson:

6. Describe the relationship the teacher has with his/her students:
Example Philosophy Statement

I believe that my job as a teacher is to provide my students with the core building blocks of self-discipline, strong character, confidence, responsibility, and problem solving capabilities. It is my intent for the students to be able to leave the classroom with these blocks firmly established, so that they might use them to build a bridge over any future obstacles that they may encounter.

I believe that, when time permits, discovery learning is always the best way to teach content. However because time seldom permits I believe in teaching content through whole group instruction with small group instruction used frequently to reinforce difficult concepts.

I believe that children learn better when they feel safe, when they are comfortable making mistakes; this is best accomplished by establishing a positive classroom environment. I will establish this environment in my classroom by fostering an attitude of teamwork among the students. I will lead by example and I will encourage the students to develop an atmosphere where they feel that they are able to share their ideas and feelings openly. I will encourage this by having the class develop a set of guidelines concerning the year’s classroom conditions; I will encourage them to come up with a policy for settling disagreements. I will keep these guidelines posted in my room at all times in order to remind students that every person, not just the teacher, is responsible for seeing that the ground rules are adhered to. Finally, I will reinforce the guidelines throughout the year with mini-lessons on teamwork, manners, and the importance of supporting fellow classmates.

By the end of the school year I want my students to be confident and able to establish connections between my lessons and the outside world. Second, I want my students to be able to work cooperatively in groups. Finally, I want for them to enjoy math and to possess strong number sense.

In conclusion, my primary goal as a teacher is to pass on the best of our cultural
heritage and to help my students adjust to society, because of this I would primarily classify myself as an Essentialist. However, I would also say that I have a little bit of the progressivist in me because I have faith in a child centered learning environment where the child actively experiences his or her world.
## Related Organizations and Websites

<table>
<thead>
<tr>
<th>Organization/Website</th>
<th>Page Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha Center</td>
<td>23</td>
</tr>
<tr>
<td><a href="http://www.alphacenter.ucr.edu">www.alphacenter.ucr.edu</a></td>
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<td>CMST Brochure</td>
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</tr>
<tr>
<td>Jurupa Unified School District 2007-2008 Calendar</td>
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<tr>
<td>Riverside Unified School District 2007-2008 Calendar</td>
<td>36</td>
</tr>
<tr>
<td><a href="http://www.rusd.k12.ca.us/ourdistrict/Calendars/">http://www.rusd.k12.ca.us/ourdistrict/Calendars/</a></td>
<td></td>
</tr>
<tr>
<td>San Bernardino Unified School District 2007-2008 Calendar</td>
<td>37</td>
</tr>
<tr>
<td>New Teacher Support for Teaching Mathematics</td>
<td>38</td>
</tr>
<tr>
<td>(see page for multiple websites)</td>
<td></td>
</tr>
</tbody>
</table>
ACADEMY OF LEARNING THROUGH PARTNERSHIPS FOR HIGHER ACHIEVEMENT

ALPHA ENTERPRISES

* UCR Educational Engagement Programs
* CMST (CA Mathematics and Science Teachers Initiative)
* MATE (Mathematics Academy for Teaching Excellence)
* Project ISIS (I Strive I Succeed)
* P-20 Regional Alliance
* NSF Mathematical ACTS
* NSF Connect
* MAP (California Mathematics Project)
* UCR Science and Mathematics Initiative Partnership (CA Teach)

ALPHA offers an outreach infrastructure for the University of California, Riverside (UCR) with three fundamental activities:

COORDINATION
ALPHA coordinates UCR's activities under educational partnership funding.

CLEARINGHOUSE
ALPHA acts as a clearinghouse for information about current projects.

CATALYST
ALPHA acts as a catalyst for future activities.

Activities

* Summer 2007 ALPHA Programs
* ALPHA Photo Gallery

About ALPHA

* ALPHA Mission Statement
* Contact Information/Directory/Maps
* Newsletters and Brochures
* Visit the UCR Website
* Related Websites

What's New

- Project ISIS applications for Apprentices available here.
- ALPHA receives US Dept. of Education WSEA grant. Read the press release here.
- Read Press-Enterprise articles about NSF Mathematical ACTS Family Mathematics Nights for Granite Hill Elementary and Rustic Lane Elementary.
- Alpha Center has a photo gallery! Visit it under activities or click here.

Last updated: February 13, 2007

http://www.alphacenter.ucr.edu/
8/16/2007
OUR GOAL

The CMST program is part of an overall master plan to improve mathematics and science education in the Inland Empire. CMST partners with the UCR College of Natural and Agricultural Science, UCR Graduate School of Education, Riverside County Office of Education, San Bernardino County Superintendent of Schools Office.

As a result of the CMST program and its partnering efforts, public school students in the Inland Area improve their interest and their abilities in mathematics and science.

The goals of CMST are:

- To provide professional development and a mentoring setting for college mathematics/science majors who want to become teachers.
- To improve student achievement on tests of mathematics/science.
- To enrich the mathematics/science content knowledge and pedagogical content knowledge of existing teachers.

"When I first started the program, I expected it to provide me with a unique experience that was not offered through college classes. I wanted to get the full experience of being a teacher...CMST provided me with the experience I was looking to gain."

-Miguel Carillo

FOR MORE INFORMATION CONTACT:

Cheryl Samples
CMST Program Coordinator
951-827-4897
cheryl.samples@ucr.edu

Dr. Pamela Clute
Assistant Vice Provost
Executive Director Alpha Center
University of California, Riverside
College Building South
Riverside, CA 92521
951-827-5425
www.alphacenter.ucr.edu

Additional information about CMST is available on the Alpha Center website at www.alphacenter.ucr.edu newsletter The Alpha Connection.

CMST
California Mathematics and Science Teachers Initiative

Alpha Center
University of California, Riverside
California Mathematics and Science Teachers Initiative

PARTICIPANTS

CMST participants are provided an opportunity to learn about contemporary mathematics and science content, and the pedagogy for teaching that content through a variety of courses, seminars and joint adventures with existing projects. They are given teaching experiences under direct supervision from UCR faculty members and public school teachers. The ultimate goal is to create academic assistance, financial support and mentoring, resulting in each CMST participant securing: a teaching credential, an intern position in the public schools, admission to a teacher credential education program or an advanced degree in mathematics/science education.

SCHOLARSHIPS

Interested undergraduates or graduates apply to be CMST participants. Selected participants receive a scholarship to work in local schools with teachers and students under direct supervision of university and district personnel. CMST participants also receive books, materials and supplies suitable for a career in teaching.

In addition to financial assistance, CMST participants receive books and materials to use as resources for teaching.

PARTICIPANT RESPONSIBILITIES

CMST participants will:
- Teach in the public schools.
- Prepare lessons and coordinate with school teachers and/or principals.
- Attend summer training activities prior to placement in the schools.
- Participate in events such as “Parent Nights,” “Saturday Academy,” etc., making presentations and assisting with the organization.
- Enroll in and pass specified courses, along with responsibly attending appropriate seminars.

PATHWAYS

The CMST program begins with the identification of undergraduates who want to pursue a career in teaching mathematics or science at the K-12 level. In cooperation with various departments and colleges on campus, CMST establishes a networking structure among these interested students providing them information about teacher related events, seminars, financial opportunities, scholarships, mentoring activities, tutoring and teaching experiences as well as suggested coursework. The goal of PATHWAYS is to create a pipeline of activity which will prepare interested students to become teachers and mentors and encourage their decision while assisting them in finding financial opportunities that will help with the cost of their decision.
OUR GOAL

Project ISIS is designed to cultivate the mathematical talents and interests of women at two critical points in their academic careers—middle school and college. ISIS focuses on middle school girls to motivate interest, strengthen academic preparation and increase informational resources for parents/guardians so that they can support their daughters in pursuing college preparatory courses and experiences. Female undergraduates who demonstrate interest in mathematics are guided on a pathway to careers in mathematics and teaching. In this vein, the goals of Project ISIS are to:

1. Provide educational opportunities and support for middle school girls to improve their mathematics academic performance and encourage them to pursue higher education and careers in mathematics related fields;

2. Establish an academic, financial, and mentoring support structure for female undergraduates who are considering teaching as a career, or who are pursuing advanced degrees in mathematics related professions; and

3. Implement evaluation and dissemination strategies to maximize project impact, support replication, and advance the knowledge of the mathematics community.

FOR MORE INFORMATION CONTACT:

Mary Simons
Student Affairs Officer
951-827-7034
maryes@citrus.ucr.edu

Linda Braatz-Brown
Director, ISIS
951-827-2963
lindabb@ucr.edu

Dr. Pamela Clute,
Assistant Vice Provost
Executive Director Alpha Center
University of California, Riverside
College Building South
Riverside, CA 92521
951-827-5425

Alpha Center
University of California, Riverside
WOMEN HELPING WOMEN

Project ISIS is a collaborative project of women helping women in pursuing educational opportunities and careers in mathematics. ISIS provides an educational foundation and establishes a support structure that motivates, encourages, and develops mathematics education for middle school girls along with professional development opportunities for female undergraduates who are interested in teaching as a career or pursuing advanced degrees in mathematics related fields. ISIS establishes mentorships and academic preparation programs between middle school girls, female undergraduates, and college faculty.

Middle School Girls and their Parents
Project ISIS involves middle school girls in a series of activities that will enhance their understanding of mathematics and encourage them to develop their education outside of the middle school setting. Levels of involvement include:

Middle School Girls
- Classroom time with an ISIS apprentice
- After School Tutoring
- Community Events
- GEMS Summer Academy
- Parent Outreach
- Field trips to local Colleges/Universities
- E-Stellar Newsletter

ISIS Apprentices
- Teaching & Tutoring
- Saturday Academies
- GEMS Academies
- Parent Outreach
- Participation in out of school events
- Opportunity of additional training
- Exposure to teaching as a career
- E-Stellar Newsletter

ISIS Cooperating Teachers
- Classroom Informational Presentations
- Parent Outreach
- Attendance at MATE Summer Training
- E-STE..AR Newsletter
- Inclusion at all events
- UCR Apprentice in the classroom
- Staff development opportunities
- Networking

Parents
- Invitations to all ISIS events
- Information on College and A-G requirements
- Support in helping your daughter succeed

Classroom Support
A critical part of the project is the use of female undergraduates to support and deliver instruction and tutorial services to middle school girls. Big Sister relationships between female undergraduates and middle school girls are encouraged and fostered through instruction and tutorial assistance at the school site.

Out of School Events
Out of school events supported and taught by college mathematics faculty, teachers, ISIS apprentices, and community/business support are designed for middle school girls, their parents/guardians and female undergraduates. The events cover topics in mathematics, mathematics teaching pedagogy, real world projects and career awareness.

GEMS
GEMS (Girls Excelling in Mathematics with Success) is an academy for middle school girls in mathematics especially mathematics as it relates to college and to science, technology, and engineering. Positive attitudes are nurtured as girls learn about community service and work with successful women role models.

Parent/Guardian Outreach
Part of building the support structure for middle school girls involves acquiring the support and encouragement from their parents/guardians. Project ISIS creates a mechanism for increasing parental awareness and establishing a parent/guardian support structure for middle school girls that builds a deeper understanding and value of mathematics.
OUR GOAL

MATE is a summer intensive program for 5–12th grade teachers designed to provide participants with contemporary mathematics content, pedagogy for teaching and research issues related to student achievement. Algebra, geometry and analysis form the core of the program as these topics are key to higher mathematics and college entrance. They also form the mathematical foundation of understanding for many career choices. Mathematics is presented as a relevant, interesting topic related to life. Teachers are exposed to useful, content rich interactive classroom ideas; they are given a stipend along with a professional library of resource materials to be used in the implementation of new ideas in the classroom. Participants are expected to share the information learned in this academy with interested people (parents, other teachers, community leaders, administrators and students).

The MATE program has empowered me to become a better teacher in so many ways! I’ve felt a renewed commitment to my career filled with new enthusiasm for...math...I feel so fortunate to have had the opportunity to become a student again.”
—Elementary School Teacher

[MATE has] given me a stronger background in math which helps me explain math better to my students.”
—Middle School Teacher

[MATE is the]...only class I have taken which models actual teaching methods for math. Examples of lesson plans that are student centered are invaluable.”
—High School Teacher

FOR MORE INFORMATION CONTACT:

Kathy Mattson
Student Affairs Officer
951-627-2961
kathleen.mattson@ucr.edu

Linda Rankin
Executive Assistant
951-827-5425
linda.rankin@ucr.edu

Dr. Pamela Clute
Assistant Vice Provost
Executive Director Alpha Center
College Building South
Riverside, CA 92521
951-827-5425

Additional information about MATE is available on the Alpha Center website at www.alphacenter.ucr.edu

Alpha Center
University of California, Riverside
Mathematics Academy for Teaching Excellence

TEACHER DEVELOPMENT
- Opportunities to increase mathematics content knowledge.
- The interface of academic content with pedagogy for diverse students of varying abilities.
- Support systems necessary for best practices in teaching.
- Links with ongoing research for teachers as researchers.
- Network opportunities with local, state and national mathematics leadership organizations.

OPPORTUNITIES
- College credits, stipend and professional library available to participating teachers.
- A year long, summer intensive program for 5th-12th grade teachers.
- Emphasis on quantitative literacy, algebra with geometry and its integration across the mathematics curriculum.
- Chance to evaluate innovative teaching strategies and research their effectiveness.

MATHEMATICS ACCORDING TO TEACHERS 
MATHEMATICS DEVELOPMENT
- A forum for teachers to discuss student access to and successful completion of UC A-G requirements and honors courses.
- Goals for increasing academic rigor and vertical articulation of courses in mathematics.
- Content alignment with state and national standards.

SPONSORS
- P-20 Regional Alliance
- NSF Mathematical ACTS
- Irvine Foundation
Welcome to California Teach-Science Mathematics Initiative

Why is NOW the time to prepare for a career in teaching science and mathematics?

There is currently a critical shortfall of qualified science and mathematics teachers in California classrooms. Because of this shortage, prospective science and mathematics teachers are extremely competitive in securing positions soon after graduation. They are able to:

- find internship jobs immediately upon graduation at salaries comparable to entry-level credentialed teachers; these intern opportunities often lead to permanent teaching positions
- find job openings in the school district of their desire

- gain negotiating power in determining their starting permanent salaries
- become emerging leaders in the school districts and communities
- benefit from the financial incentives, including loan-forgiveness programs, offered through the government

...LET CATEACH-SMI HELP YOU TO BECOME A TEACHER IN SCIENCE OR MATHEMATICS.

http://smi.ucr.edu/
After every visit to your school classroom, you need to report your hours as well as a description and reflection of your field experience using the SMI online information system. This information will be used by your instructors to monitor your experiences and is required for stipend payment.

Logging in to the SMI Portal for the first time:
Step 1: Go to https://tepd.ucop.edu/smi/.
Step 2: Under “Other Options” (below the “sign on” box) select <Try other sign in options>.
Step 3: Under “Login Options for Individuals” (below the login area) select <Login with ParticipantID & Last Name>.
Step 4: Enter your Participant ID (__________________) and your Last Name. Then click <Login to SMI Portal>.
Step 5: Follow the prompts to create a Username and Password. When you are finished, go to https://tepd.ucop.edu/smi/ and log in with your new Username and Password.
Step 6: Click on <My Personal Info>. At the top of the screen, use the pull-down menu to view the page as a "Post-Secondary Student". Use the "edit this information" link to complete all of the Participant Information fields. This information will be used to mail your stipend to you and is required for stipend payment. Please make sure that it is filled out completely and correctly. Then click <I Certify the Changes I Have Made>. NOTE: If you do not fill out all the information fields you will not be given access to the field placement portal.

Documenting your field experiences:
Step 1: Go to https://tepd.ucop.edu/smi/ and log in using your username and password.
Step 2: Click <My Field Experience>.
Step 3: If this is the first time for a particular school then click <Add a New School Placement>, otherwise skip to Step 6.
Step 4: Enter the requested school placement information as follows:
   School: select from menu the school you visited
   Dates: select first day of quarter or semester and last day of quarter or semester
   Role: select from menu California Teach Student
   Placed By: select from menu SMI-<your campus>
Step 5: Click <Submit>.
Step 6: After you have entered your school placement information and are ready to report your hours and information for the week, select <Add Field Experience Documentation>. When you login later, this link can be found by selecting <My Field Experience>.
Step 7: To document the field experience fill out the following:

Teacher:  Select from menu the teacher you worked with

Grade(s): Check the boxes of the grade level of the students in the class. Only check a grade level if there are more than 2 students of that level.

Dates: Enter the DATE YOU WENT TO THE CLASS.

Time: Enter the START time of the class (do not include travel time) and the END time of the class

Primary Action: select from menu what best describes what you did MOST of the time during this class.

Primary Topic: select from menu what best describes what topic or subject on which MOST of the time during this class was spent. “Math and Science” indicates a roughly equal mix. “Other” indicates that most of the time was spent on neither math nor science.

Description: <your instructor will give instructions for this text box>.

Reflection: <your instructor will give instructions for this text box>.

Step 8: Click <Submit>.

NOTE: If you visit multiple classes in the same day, then each class needs to be documented as a separate field experience.
Welcome to the University of California, Riverside, Teacher Education website. The Graduate School of Education's teaching credential programs are full-time programs that are generally completed in one year. Our programs are characterized by small cohort groups under the supervision of one supervisor for the length of your program. Research indicates that small cohort groups offer the opportunity for students to freely share information, to begin the development of a professional network, and encourage professional growth. Personal, individualized instruction and supervision distinguish UCR's teacher education programs. The following teaching credentials are offered at UCR:

- Program Options (Please select at left):
  - **Multiple Subjects Credential** - for candidates interested in teaching at the elementary level or in a self-contained classroom.
  - **Single Subject Credential** - for candidates interested in teaching at the middle school or high school level or a departmentalized classroom.
  - **Education Specialist Credential (Special Education)** - "Level I" and "Level II" - for candidates interested in teaching students in either of the following specializations: mild/moderate or moderate/severe.
  - **Dual Multiple Subjects/Education Specialist Credentials** - for candidates interested in earning these two credentials simultaneously.

**M.Ed.** - Master of Education degree is an option for outstanding Multiple Subjects and Single Subject Credential applicants.

http://www.education.ucr.edu/teacher_education/teacher_education.htm

8/16/2007
Teacher Education: Information Flyers

- Credential Information Seminar Dates
- Important Credential Application Dates
- Prepare to Teach Flyer

Look here for more information handouts in the near future.

University of California, Riverside
Graduate School of Education
Teacher Education
3124 Sprout Hall
Riverside, CA 92521
Teacher Education Office: (951) 827-5225
Fax: (951) 827-1942

## LEGAL & LOCAL HOLIDAYS

<table>
<thead>
<tr>
<th>JULY 4</th>
<th>Independence Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFP 4</td>
<td>Labor Day</td>
</tr>
<tr>
<td>NOV 10</td>
<td>Veterans Day</td>
</tr>
<tr>
<td>23</td>
<td>Thanksgiving Day</td>
</tr>
<tr>
<td>24</td>
<td>All Facilities Closed</td>
</tr>
<tr>
<td>DEC 22</td>
<td>Christmas Day</td>
</tr>
<tr>
<td>29</td>
<td>(In Lieu Admissions Day)</td>
</tr>
<tr>
<td>JAN 1</td>
<td>New Year's Holiday</td>
</tr>
<tr>
<td>15</td>
<td>Martin Luther King's Day</td>
</tr>
<tr>
<td>FEB 16</td>
<td>Lincoln's Day</td>
</tr>
<tr>
<td>19</td>
<td>Presidents' Day</td>
</tr>
<tr>
<td>MAY 28</td>
<td>Memorial Day</td>
</tr>
</tbody>
</table>

## IMPORTANT DATES

<table>
<thead>
<tr>
<th>AUG 23</th>
<th>New Employee Welcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 &amp; 25</td>
<td>All Teachers on Duty</td>
</tr>
<tr>
<td>28</td>
<td>Classes Begin</td>
</tr>
<tr>
<td>OCT 27</td>
<td>End of First HS Quarter</td>
</tr>
<tr>
<td>NOV 16 &amp; 17</td>
<td>Parent/Teacher Conferences</td>
</tr>
<tr>
<td>DEC 18 - JAN 1</td>
<td>Winter Recess</td>
</tr>
<tr>
<td>JAN 2</td>
<td>Classes Resume</td>
</tr>
<tr>
<td>26</td>
<td>End of First HS Semester</td>
</tr>
<tr>
<td>17</td>
<td>(HS Not in Session)</td>
</tr>
<tr>
<td>20 - 24</td>
<td>Thanksgiving Recess</td>
</tr>
<tr>
<td>27</td>
<td>President's Week</td>
</tr>
<tr>
<td>16</td>
<td>End of Second Trimester</td>
</tr>
<tr>
<td>26</td>
<td>(MS Not in Session)</td>
</tr>
<tr>
<td>6</td>
<td>End of Third HS Quarter</td>
</tr>
<tr>
<td>9 - 13</td>
<td>Spring Recess</td>
</tr>
<tr>
<td>20</td>
<td>End of Middle/High School</td>
</tr>
<tr>
<td>21</td>
<td>End of Elementary School</td>
</tr>
<tr>
<td>21</td>
<td>Last day for HS/MS &amp; Trad. Teachers</td>
</tr>
</tbody>
</table>
New Teacher Support for Teaching Mathematics

http://mathforum.org/escot/mosaic.html
Math standards, activities, lesson ideas, and more…

www.huntington.edu/education/lessonplanning/Bruner.html
A variety of lesson plan formats, suggestions for arranging the classroom, suggestions for teacher behaviors…

http://teacher.scholastic.com/index.htm
A rich collection of lesson ideas and support materials

www.mastep.sjsu.edu/support.htm
Sample lessons and games for math and science

http://nlvm.usu.edu/en/nav/vlibrary.html
A virtual library of math manipulative for grades K-12

http://www.edhelper.com
An online bank of printable units and worksheets (free or paid subscription available)

http://www.nctm.org
National Council of Teachers of Mathematics

http://www.sbcalliance.org
San Bernardino County Alliance for Education

http://www.geocities.com/rsbcmta/1
Riverside – San Bernardino County Math Teacher’s Association

http://wwwcmc.math.org
California Mathematics Council