

## Instructions for Registering (Ed593)

Updated 8/21/09

- 1) Complete the attached **UAF Registration**
- 2) Fill out a check for **\$90.00** payable to the **University of Alaska Fairbanks**

Please do **not** enclose cash for your payment.

Checks or Cashier's Checks are required or credit card information.

- 3) Send registration materials (form and check) via one of the following options
  - a. Mail the registration form and check to  
**Math in a Cultural Context**  
**2175 University Ave. South Suite 101**  
**Fairbanks, AK 99709**
  - b. Fax it to 907-474-7270 with credit card information

Please disregard the payment instructions and address located inside the registration form.

Registration forms and checks sent to the Registrar's office instead of MCC will **not** be processed by the University or forwarded on to us.

Only mail documents and checks to the MCC address.

Thanks

## **ED 593: Implementing MCC Modules (1-2 credits)**

### **Fall Semester 2009**

Meeting Dates/Times:	Fall 2009
Location:	University of Alaska Fairbanks MCC 2175 University Ave. South, St. 101 Fairbanks, AK 99709
Instructors:	Jerry Lipka
Contact Information:	Jerry Lipka: <a href="mailto:rfjml@uaf.edu">rfjml@uaf.edu</a> , (907) 474-6439
MCC Project Manager:	Flor Banks: <a href="mailto:fnfmb@uaf.edu">fnfmb@uaf.edu</a> , (907) 474-6996
Required Reading:	<i>A Guide to Effectively Using Math in a Cultural Context, Teachers' Guide</i> , (working draft); Selected MCC modules (by grade level); Selected MCC case studies (hardcopy and/or with DVD); MCC Yup'ik Glossary (interactive DVD) MCC Guide Feedback Survey, (working draft)

### Purpose and Overview of Course

The purpose of this course is to strengthen teachers' mathematical content and pedagogical/cultural content knowledge. Teachers will learn some of the curricular and pedagogical principles behind MCC's successful math program. The course is presented in a variety of formats depending upon the specific resources and professional development opportunities available to teachers and those opportunities that teachers choose. For example, there are various workshops from half-day to a weekend-long as well as "elucidate" audioconference sections. Each format highlights different learning opportunities for teachers. The workshops demonstrate and engage teachers in the key principles of MCC. For example, through various constructions such as how to make a square from uneven materials to how to make a sphere from uneven 2-D material; using body measures and proportional thinking in the construction process. "Deconstructing" the processes used in making a square—understanding that Transformational Geometry—symmetry and congruence were essential to these constructions. Transferring and generalizing knowledge learned from these activities to other related math topics. Some workshops will be more module specific but inherent in all of MCC's approach to teaching math are notions of constructing and developing an understanding of the mathematical concept through peer/expert-apprentice modeling, and teachers' implementing the lessons learned in their classroom.

A second key aspect of the course is the connection between assessment and instruction. Teachers implementing MCC modules will give their students project pre and posttests. The tests will be used to guide instruction. MCC's staff will analyze pretests and provide a brief report to teachers identifying students' mathematical strengths and areas requiring attention. MCC will through the "elucidate" conference provide insights to which mathematical concepts were difficult for students and all participants will provide suggestions for improving instruction. Through the MCC assessment/instructional report and the "elucidate" conference teachers will implement some of these strategies in their classroom.

### Structure of Course

As noted above the course structure consists of multiple opportunities for teachers. If a teacher attends a workshop then attendance is required at all sessions to earn course credit. If a teacher participates in the "elucidate" three two hour sessions then participation in all three sessions is required to earn full credit.

The theoretical framework that serves as a foundation for MCC consists of the overlapping areas of mathematics, pedagogy, and culture. We will integrate mathematics, pedagogy, and culture and relate them to the particular context of rural and urban Alaska classrooms. Thus, we will model both from the perspective of Alaska Native culture and from the reform efforts spearheaded by professional organizations (e.g., the National Council of Teachers of Mathematics). For example, we will model joint activity, expert-apprentice modeling, and student-to-student dialogue as we demonstrate, discuss, and mathematically refute each other's claims. Our pedagogical, math, and literacy content knowledge will also be supported by material and activities that foster student autonomy as they will "discover" and check the validity of their solutions. We will develop a deeper understanding of mathematics and make connections to everyday and cultural knowledge. In addition, we will connect the MCC modules to the Alaska mathematics GLEs and standards

During this course, activities and assignments will address the following:

- Identify community and cultural knowledge and practice and adapt it to schooling;
- Demonstrate and study expert-apprentice modeling and joint activity and connect both to the work of Vygotsky;
- Explore challenging problems in math and literacy;
- Model and study inquiry-oriented classrooms;
- Investigate problem solving and group processes;
- Study and model peer collaboration, feedback, and support to improve instruction and support teachers;
- Improving pedagogical strategies and decision-making through viewing and analyzing videotapes and studying cases of teachers using the MCC curriculum.

Activities addressing the above aspects of the MCC theoretical framework will also address the mathematical concepts of unit, patterns, numeration, representation,

measurement, part-whole relationships (e.g., fractions), geometry. Connecting mathematics and culture will also be accomplished by studying cultural math tools used in MCC modules (e.g., Yup'ik abacus) and embedded in classroom pedagogy through demonstration activities, lessons, and case studies.

### Course Requirements

Students/teachers in ED 593 will be required to attend all audio conference meetings and complete all assignments in order to pass the course. The final grade for ED 593 is determined on a pass/fail basis. Formal assignments for ED 593 will include the following:

- Pre and post test students with exam instruments provided by MCC; student scores will be utilized to remediate or extend specific activities, as well as to monitor growth of student math knowledge;
- Evidence of implementing modules and using assessment to improve instruction—evidence can include Teacher Log or an Observation from an MCC coach/mentor
- Complete and turn in two or more MCC Teacher Logs, documenting and reflecting about the modular lessons, student and community impact, and other factors observed during the implementation process;
- Be an active participant in all activities, including cultural activities led by elders and/or experts, and breakout sessions with teachers from respective districts.
- Teach and complete the implementation of one of a variety of MCC math modules offered at this time;
- Participate in all three statewide audio conferences.
- Pre and post test students with exam instruments provided by MCC; student scores will be utilized to remediate or extend specific activities, as well as to monitor growth of student math knowledge.

Each of the above course requirements will be discussed in detail , including specific expectations for content, length, and due dates. Readings, case studies, DVDs, and other materials to support completing the course requirements will be drawn from the required reading list and will be provided to all participants.

<i>(LAST)</i>	<i>(FIRST)</i>	<i>(MIDDLE)</i>	
<b>NAME</b>			<b>SEMESTER OF ENROLLMENT:</b> <input type="checkbox"/> Fall <input type="checkbox"/> Spring <input type="checkbox"/> Summer <b>Year 20</b> ____
<b>UA ID #</b> _____ <i>(New students should provide their SSN)</i>			<b>DATE OF BIRTH (Month/Day/Year):</b> ( ____ / ____ / ____ )

<b>CURRENT MAILING ADDRESS</b> _____ _____ (City) _____ (State) _____ (Zip) _____	Day Phone: _____ Evening Phone: _____ Email Address: _____
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**Residency:** Students seeking Alaskan residency or a waiver of non-resident surcharge must complete an "Application for Resident Tuition" or "Waiver of Non-Resident Surcharge" and provide required documentation to the Office of Admissions prior to the published first day of instruction (UA Board of Regents Regulation R05.10.05). See reverse side for information.

**DEMOGRAPHIC INFORMATION** \* See reverse side for information and codes

**Sex:**  Male  Female    **<sup>1</sup> Ethnicity:** \_\_\_\_\_    **<sup>2</sup> Vet/Military Status:** \_\_\_\_\_    **<sup>3</sup> For instructions on withholding directory information, please see reverse side.**

**US Citizen?**  Yes  No    **If no, Nation of birth:** \_\_\_\_\_    **Nation of citizenship:** \_\_\_\_\_    **Visa Type:** \_\_\_\_\_

**PRIOR EDUCATION INFORMATION**

Did you graduate from high school?  Yes  No    If NO, did you complete the GED?  Yes  No    Date completed? (MM/DD/Year) \_\_\_\_\_    Location of GED (state) \_\_\_\_\_

Graduation date? (MM/DD/Year) \_\_\_\_\_    Name of high school you attended: \_\_\_\_\_    High School location: (city/state) \_\_\_\_\_

If you attended UAF before 1983, state where and dates of attendance: \_\_\_\_\_

If you ever attended any UA branch under another name, state name used: \_\_\_\_\_

**COURSE INFORMATION** (Complete all information requested below. Refer to the Class Schedule for course information)

CRN	Dept.	Course Number	Section	Course Title	# of Credits	"Yes" if Audit	Instructor Signature (required after last day of late registration)

**I understand I am responsible for all applicable UAF academic regulations, tuition and fees whether or not I successfully complete the course or courses in which I am enrolling.**

**Student's Signature X** \_\_\_\_\_ **Date:** \_\_\_\_\_

*Revised 3/08*

## 1 ETHNICITY

<u>Code</u>	<u>Description</u>
AA	Alaska Aleut
AE	Alaska Eskimo, other
AH	Alaska Indian, Haida
AI	Alaska Indian, Other
AK	Alaska Indian, Tlingit
AM	Alaska Indian, Tsimpshian
AN	Alaska Native, Other
AQ	Alaska Eskimo, Inupiaq
AS	Alaska Native, Southeast
AT	Alaska Indian, Athabascan
AY	Alaska Eskimo, Yup'ik
BL	Black, Non-Hispanic
HI	Hispanic
IN	American Indian (Not Alaska Native)
OT	Other
PI	Asian, Pacific Islander
WH	White
XX	American Indian or Alaska Native

\* Requested for compliance with Title IV of the Civil Rights Act of 1964

## 2 VETERAN/MILITARY STATUS

<u>Code</u>	<u>Description</u>
Blank	Non-veteran
AA	Active Duty – Army
AC	Active Duty – Coast Guard
AF	Active Duty – Air Force
AN	Active Duty – Navy/Marines
AO	Active Duty – Other
DC	Dependent Child
DS	Dependent Spouse
VR	Veteran – Discharged/Retired (Eligible)
WW	Widow/Widower

## 3 INFORMATION RELEASE

The university may release certain directory information to the public on a routine basis unless a student requests, in writing, that the university not release it. Forms to request that directory information not be released are available in the Registrar's Office. No directory information will be released until the last day of late registration. Any request to withhold directory information will continue until a student provides permission, in writing, for the university to release such. After that, information will be released when appropriate. Students withholding directory information will not appear in the published university chancellor's and dean's lists and will have directory information withheld from all University of Alaska campuses. Photo ID will be required to discuss your account.

The following is considered **directory information**:

1. name;
2. electronic mail addresses;
3. hometown: city, state;
4. weight and height of students on athletic teams;
5. dates of attendance at UAF;
6. program/major field(s) of study;
7. degrees and certificates received, including dates;
8. participation in officially recognized university activities; and
9. academic and co-curricular honors, awards and scholarships, including dates received.

No one outside the institution shall have access to, nor will the institution disclose any other information from a student's education record, without the written consent of the student, except to personnel within the institution on a need to know basis, to officials of other institutions in which a student seeks to enroll, to persons in compliance with a judicial order, and to persons in an emergency in order to protect the health or safety of the student or other persons, or as otherwise permitted under the Family Educational Rights and Privacy Act.

## RESIDENT AND NON-RESIDENT TUITION

First-time non-degree seeking students or students returning to enrollment after more than a two-year absence will automatically be considered non-residents unless they have graduated from an Alaskan High School or submit an "Application for Resident Tuition" with this registration form prior to the first published day of instruction, meet the criteria for the purposes of residency pursuant to UA Board of Regents Regulation R05.10.05 and are approved as a resident of Alaska.

A "resident" is any person who, prior to the published first day of instruction at his or her home campus declares the intention to remain in Alaska indefinitely and can prove one of the following to be true:

- has been physically present in Alaska for two years (apart from documented absences due to illness, vacations, attending another educational institution while maintaining Alaska residency, or other absences not exceeding a total of 120 days in the two-year period)
- has received or been qualified to receive an Alaska Permanent Fund Dividend within the past 12 months
- is a dependent child of an Alaska resident

For more specific criteria, please refer to the "Application for Resident Tuition."

**LATE PAYMENT/REINSTATEMENT FEES** - Students who miss the scheduled deadline for fee payment are charged a late payment fee of \$50. Students who are dropped from classes due to non-payment and who are permitted to pay fees late will be charged \$100 to have classes reinstated. Contact the Business Office (474-7384)