Discrete Mathematics Professional Development

Two years ago the Alabama Department of Education introduced a Discrete Mathematics course as part of the Alabama College and Career Ready Standards (AL CCRS). Discrete Mathematics has blossomed into a critical part of the mathematical world over the past forty years, coinciding with the everyday use of computers in today’s society. This area of mathematics has many important applications in today’s society and business communities, and is full of deep mathematics that encourages problem solving and critical thinking in natural ways. As such, the new CCRS Discrete Mathematics course has the potential to be stimulating and accessible to a wide variety of students.

For this reason, the University of South Alabama College of Education through the Alabama Math, Science, and Technology Initiative (AMSTI) Mathematics and Science Partnership Grant is pleased to announce a professional development program focused in Discrete Mathematics through our USA SARIC office. We are offering a two-day professional development session **to be held at the USA College of Education on March 19-20 followed by a five-day session on June 22-26 for up to 30 mathematics teachers.** Dr. Chris Rodger, mathematics professor, from Auburn University and his team will lead this effort.

The aim of the sessions is both to give a rich mathematical environment focused on much of the material in the Alabama Discrete Math content requirements, and to exemplify investigative approaches to learning the material, as described in the Alabama CCRS, developing both student skills and understanding. In March, the focus will be on some graph theory (including vertex colorings), some patterns and sequences, and on voting issues. In June, we will cover most of the graph theory (including Hamilton cycles and Euler tours, spanning trees, shortest paths, etc.), and we will provide new ways of considering the counting and logic aspects in the course.

Teachers will leave with materials that are ready to use in their classes and a deeper understanding of the mathematics surrounding the activities. One of the presenters will be a teacher who has used these materials in her own classroom, so participants will have the opportunity to discuss classroom implementation after each content session.

**Teachers must agree to participate in both the March and June sessions.**

For the **March 19-20 sessions,** we will provide for two days of the cost (up to $85 per day) for substitute teachers for the participating teachers.

All teachers of discrete mathematics in Alabama who did not participate in the 2014 professional development sessions are welcome to attend.

Standard mileage rates ($0.575 per mile) will apply for all teachers who participate from their home school to the campus of USA. Teachers who are not in the service area of the
University of South Alabama will also be reimbursed at the state's travel rate of $75.00 per day if overnight stay is involved.

Teachers outside of the USA service area may arrive on Wednesday March 18th for an 8:30am session starting on Thursday March 19th and depart on Friday March 20th at the 4:00pm conclusion of the workshop.

**During the Summer Professional Development Session (June 22-26)** the same travel guidelines will apply as above. In addition, ALL teachers will receive $100 per day for attendance and participation ($500 total).

Teachers outside of the USA service area may arrive on Sunday June 21st for an 8:30am session starting on Monday June 22nd and depart on Friday June 26th at the 4:00pm conclusion of the workshop.

Teachers who wish to participate in this Discrete Mathematics Professional Development Session MUST obtain permission from their respective principals and appropriate district personnel. Please see the attached Registration Form. Teachers will be accepted on a first come first serve basis.

Fax registration forms to the USA SARIC office at 251-380-2707. Registration forms must be received by Monday March 9, 2015.

Participants must also register in STI-PD.

**STI-PD Title:** **SARIC Discrete Mathematics #2**

**STI-PD Title #:** **SARIC DM02**

Please contact Dr. André M. Green at green@southalabama.edu if you have further questions.
Discrete Mathematics Professional Development
Participation and Approval Form

Teacher Name: ________________________________

School: ______________________________________

School District: ______________________________

E-Mail Address: _______________________________

Contact Phone Number: ________________________

Last four digits of social security number: __________

STI-PD Registration Information:

STI-PD Title: **SARIC Discrete Mathematics #2**

STI-PD Title #: **SARIC DM02**

I agree to attend the Discrete Mathematics Professional Development Program to be conducted on March 19th – March 20th; and on June 22nd – June 26th.

_____________________________
Teacher Signature and Date

Approvals

_____________________________
Principal Signature and Date

_____________________________
District Signature and Date