



2007
Summer
Professional
Development
Institutes

As of May 4, 2007

(An expansion of the Content Institutes)

*Participants receive PDPs
Institutes are at no cost to participants*



This document was prepared by the
Massachusetts Department of Education
Dr. David P. Driscoll
Commissioner of Education

Board of Education Members

Mr. Christopher Anderson, Chairman, Westford
Ms. Ann Reale, Vice-Chair, Commissioner, Early Education and Care, Boston
Ms. Harneen Chernow, Jamaica Plain
Dr. Thomas Fortmann, Lexington
Mr. Trevor Frederick, Chair, Student Advisory Council, Ipswich
Dr. Patricia Plummer, Chancellor, Higher Education, Boston
Dr. Roberta R. Schaefer, Worcester
Dr. Sandra L. Stotsky, Brookline
Mr. Henry M. Thomas, III, Springfield
Dr. David P. Driscoll, Commissioner
and Secretary to the Board

The Massachusetts Department of Education, an affirmative action employer, is committed to ensuring that all of its programs and facilities are accessible to all members of the public. We do not discriminate on the basis of age, color, disability, national origin, race, religion, sex or sexual orientation. Inquiries regarding the Department's compliance with Title IX and other civil rights laws may be directed to the Human Resources Director, 350 Main St., Malden, MA 02148 781-338-6105.

© 2007 Massachusetts Department of Education
Permission is hereby granted to copy any or all parts of this document for non-commercial educational purposes. Please credit the "Massachusetts Department of Education."

This document printed on recycled paper

Massachusetts Department of Education
350 Main Street, Malden, MA 02148-5023
Phone 781-338-3000 TTY: N.E.T. Relay 800-439-2370
www.doe.mass.edu



LETTER FROM THE COMMISSIONER

April, 2007

Dear Educators:

We are pleased to announce the twelfth year of our statewide program of free graduate-level institutes designed to increase the content and pedagogical knowledge of Massachusetts educators. Taking an institute is a great way to increase your subject knowledge, brush up your skills, learn about new teaching strategies, and meet other dedicated teachers.

This year's Professional Development Institutes expand upon the Content Institute Program of prior years. Content learning continues to be a major element of the institutes, and now has expanded to focus on the pedagogical skills necessary to effectively engage students in standards-based learning. You will note a new structure that organizes institutes into four "levels." These levels reflect the diverse professional development needs of teachers across the state. Please review the institute options carefully to identify the options most beneficial to you.

Sponsored by the Massachusetts Department of Education in partnership with many institutions and organizations, the Professional Development Institutes all offer professional development points (PDPs) and optional graduate credit. The Professional Development Institutes are made possible in great part through a special appropriation of the Massachusetts Legislature for math and science professional development. Additional funding has been provided by the United States Department of Education.

We also offer a range of other professional development opportunities, including Advanced Placement Teacher Institutes (in partnership with the College Board and Fitchburg State College), Arts Institutes (in partnership with the Massachusetts Cultural Council), a Gifted and Talented Institute (in partnership with University of Massachusetts Amherst), and Special Education Summer Institutes.

I am proud of the commitment to professional learning Massachusetts teachers exhibit each year through involvement in these institutes. Enjoy reading this brochure and please consider taking one of these courses this summer.

Sincerely,

David P. Driscoll
Commissioner of Education

PROGRAM INFORMATION

REGISTRATION PRIORITIES

All of the professional development institutes listed in this catalogue are offered at no charge to Massachusetts educators. Current public school educators, especially those who are employed in school districts that have been identified as a “high-need” district and teachers who are not licensed for the subject area they teach, will be given first priority for registration. Advanced Placement Institutes are offered only to teachers in high schools where 40% of students qualify for free or reduced price lunch. All current educators from publicly-funded programs covered by the Massachusetts Education Reform Act (school districts, public charter schools, adult basic education programs, preschools, and private day and residential schools that provide publicly-funded special education) may attend the institutes. If space is available, licensed educators who are not currently employed as public school teachers may register. Institutes are also available for the equitable participation of teachers from grades PreK–12 private schools within the geographic area served by the institute.

REGISTRATION/APPLICATION PROCEDURES

Registration by teams from schools and districts is encouraged. To register and obtain detailed information, please contact the person listed for the institute of your choice. Since spaces are limited, you should register as early as possible. All institutes are open to educators from schools and districts across the state. Beyond the priorities listed above, participants will be accepted on a first-come, first-served basis. Participants must attend the entire program of the selected institute, including fall follow up sessions.

PARTICIPATION REQUIREMENTS

Each institute will provide approximately 45 hours of instruction between June and August, 2007 as well as approximately 15 additional hours from September, 2007 to January, 2008. Participants are required to attend all sessions, take part in pre-and post-assessments of course content, and complete projects outside of class that demonstrate their learning. Teachers’ institute-related work should be included in their personal professional development plans and should be linked to school and district priorities.

PROFESSIONAL DEVELOPMENT POINTS AND GRADUATE CREDIT

Participants in institutes described on pages 4 to 19 may earn up to 67.5 PDPs for attending all sessions, taking the pre-and post-assessments and completing a project that documents their learning. No PDPs will be awarded for partial completion. Most institutes offer optional graduate credit for which participants may register at their own expense. “Other professional development opportunities” described on pages 20 to 23 may offer different amounts of PDPs.

CANCELLATION POLICY

The Department reserves the right to cancel any institute that does not have sufficient registration. In case of cancellation, teachers who have registered for the institute will be notified by the institute provider prior to the planned opening day of the institute.

DEPARTMENT OF EDUCATION CONTACT INFORMATION

The Professional Development Institute program is coordinated by the Office for Mathematics, Science and Technology/Engineering. For information about the program, please contact Joyce Bowen at the Massachusetts Department of Education: jbowen@doe.mass.edu; 781–338–3540.

A NOTE ABOUT COURSE LEVELS

The Institute courses are designed to support teacher learning at four general stages of content knowledge and development of skills for standards-based instruction. Teachers should select Institutes that best meet their needs.

Level I: Foundations. For teachers seeking to develop a working knowledge of a content topic and standards-based teaching practices. These courses address the foundational content knowledge of the discipline and key instructional strategies.

Level II: Applications. For teachers who have a working knowledge of the content area to be studied and possess skills in articulating standards-based objectives and lesson plans. These courses emphasize in-depth content and instructional knowledge to implement effective standards-based instruction.

Level III: Advanced Study. For teachers with expertise in the content area and experience implementing standards-based instruction. These courses provide opportunities to engage with in-depth exploration of student learning, specific instructional strategies, and advanced study of a content topic.

Level IV: Coaching. For expert teachers and administrators. These courses provide a framework and strategies to guide content-focused coaching and instructional leadership.

INSTITUTES BY CONTENT AREA AND LEVEL

Science and Technology/Engineering	4
Level I, Foundations	6 Institutes
Level II, Applications	4 Institutes
Mathematics	9
Level I, Foundations	2 Institutes
Level II, Applications	11 Institutes
Level III, Advanced Study	1 Institute
Level IV, Coaching	2 Institutes
STEM and the Arts	17
Level I, Foundations	1 Institute
Reading & Writing	18
Level I, Foundations	4 Institutes
Other Professional Development Opportunities	20
Advanced Placement Institutes	
Arts Institute	
Elementary (K–3) Reading Courses	
Gifted and Talented Institute	
MADOE/Intel Mathematics Initiative	
Sheltered English Immersion Professional Development	
Special Education Summer Institutes	
Upcoming STEM Scholarship Opportunity	24

SCIENCE AND TECHNOLOGY/ENGINEERING

LEVEL I, FOUNDATIONS

For teachers seeking to develop a working knowledge of a content topic and standards-based teaching practices. These courses address the foundational content knowledge of the discipline and key instructional strategies.

ELEMENTARY

Teaching Elementary Physical Science and Technology/Engineering through Guided Inquiry **1** (GR 3–5)

This Institute will address the dual needs of teachers in Grades 3–5 for foundational content and experimental work in **physical science** and **technology/engineering**, along with pedagogical strategies for successful classroom implementation. The summer session will provide content through **guided inquiry** in topics found in the MA Framework, including forces and motion, simple machines, chemical and physical processes, and energy. Follow-up will include both implementation of an experiment in the participant's classroom with supported classroom coaching and one-on-one mentoring by an Institute instructor. Participants will implement an experiment in their classroom, supported by Institute instructor classroom coaching. Participants completing course requirements will have two finished guided-inquiry units, a foundation for development of additional units in the future, and shared access to fellow participants' units.

Summer session: August 6–9, August 13–16

Follow up: TBD in September–December;
January 16, 2008

Location: *Worcester State College*

25 Spaces Available

CONTACT for registration

Mary Garniewicz

508–753–0638

Mary.Garniewicz@Step-Inc.net

Optional 4 graduate credits available from
Worcester State College (\$100/credit)

Offered By: Science Through Experiments
Program, Inc. (STEP)

MIDDLE SCHOOL

On The Lynn Waterfront: Integrating Science Standards through Classroom and Field Investigations **2** (GR 6–8)

Participants will learn about the **physical environment** of the Lynn waterfront, the **living organisms** and the **human activity** in and around the waterfront, and the relationship among the three. Participants will work with educators and faculty from the New England Aquarium, Northeastern University, Boston Harbor Islands National Park, and Massachusetts Marine Educators, conducting field and hands-on classroom investigations at sites along the waterfront. Faculty will present a rich array of curricula, practical skills and content knowledge for conducting standards-based investigations and analysis. Based primarily on the science Framework, the Institute integrates other content areas, especially **language arts** (linking science observation to literacy through journaling), and **mathematics** (measuring, graphing). The Institute utilizes on-line research, collegial forums and sharing of activities and assessments using MassOne, the Commonwealth's on-line network for education.

Summer session: August 6–17

Follow up: October 27 and November 17

Location: *Northeastern University Marine Science Center, Nahant (1 follow up session at New England Aquarium)*

30 Spaces Available

CONTACT for registration

Jessica Soule, New England Aquarium

617–973–6590

trc@neaq.org

Optional 3 graduate credits available from
Cambridge College (\$67/credit) or
Salem State College (\$100/credit)

Offered By: New England Aquarium

SCIENCE AND TECHNOLOGY/ENGINEERING

LEVEL I, FOUNDATIONS

For teachers seeking to develop a working knowledge of a content topic and standards-based teaching practices. These courses address the foundational content knowledge of the discipline and key instructional strategies.

MIDDLE & HIGH SCHOOL

Laboratory-Based Chemistry

3

(GR 6–10)

This hands-on **laboratory-based chemistry** course is especially relevant to teachers in grades 6–10. This chemistry course will provide participants with classroom activities, help teachers develop more competencies in chemistry, and increase participant’s comfort in teaching ideas related to the MA state Framework standards in high school chemistry and middle school **physical science**.

Investigations will involve the study of physical/chemical properties (e.g. density, viscosity, solubility, etc.), physical/chemical changes, solutions, acids and bases, the atomic model and chemical formulas and nomenclature. We will use a mix of computer probe-ware and traditional equipment to gather and analyze data. Teachers will leave this program with an assortment of instructional materials, classroom activities, written resources, and most importantly with newly found confidence in teaching and doing physical science.

Summer session: July 9–12, July 16–19

Follow up: TBD

Location: *Lowell*

24 Spaces Available

CONTACT for registration

Mark D. Greenman

781–248–4952

mgreenman@marblehead.com

Optional 3 graduate credits available from Endicott College (\$50/credit)

Offered By: Mark D. Greenman

Alternative Energy

4

(GR 6–12)

This Institute will help participating teachers develop an in-depth understanding of Alternative Energy and how it is related to **Physical Science** and **Technology/Engineering** standards. This course will address topics such as: electricity and circuits, construction technology, wind power, and water power. While learning each concept, the **mathematics** associated with the concept and a hands-on **engineering design project** based on the concept will also be introduced. Participants will visit a small hydroelectric plant and a Green Home. Participating teachers will learn pedagogical strategies to enable them to provide assessment, instruction, reinforcement and differentiated instruction appropriate for all students in the classroom.

Summer session: July 30–August 3,
August 6–10

Follow up: TBD

Location: *Technology Center at Northern Essex Community College, Haverhill*

30 Spaces Available

CONTACT for registration

Michael E. Pelletier

978–556–3878

mpelletier@necc.mass.edu

Optional 3 graduate credits available from Endicott College (\$50/credit)

Offered By: Northern Essex Community College

SCIENCE AND TECHNOLOGY/ENGINEERING

LEVEL I, FOUNDATIONS

For teachers seeking to develop a working knowledge of a content topic and standards-based teaching practices. These courses address the foundational content knowledge of the discipline and key instructional strategies.

MIDDLE & HIGH SCHOOL

Laboratory-Based Physics

5

(GR 7–12)

This hands-on **laboratory-based physics** course is especially relevant to teachers in grades 7–12. This physics course will provide participants with classroom activities, help develop competencies in physics, and increase participant’s comfort in teaching ideas related to the MA state Framework standards in high school physics and middle school **physical science**. The academic content in physics is centered on concepts of motion, changes in motion, forces, work, energy and power. Participants will learn to connect an object’s motion to Newton’s force laws and relate and interpret graphs of distance-time, velocity-time, acceleration-time, and force-time. Participants will learn how work done by a force is measured and how power is the rate at which work is done. Participants will learn about kinetic energy, potential energy, and the conditions under which mechanical energy is conserved. Teachers will leave this program with an assortment of instructional materials, classroom activities, written resources, new strategies for teaching science, and most importantly with newly found confidence in teaching and doing physics.

Summer session: July 23–26, July 30–August 2

Follow up: TBD

Location: *Lowell*

24 Spaces Available

CONTACT for registration

Mark D. Greenman

781–248–4952

mgreenman@marblehead.com

Optional 3 graduate credits available from
Endicott College (\$50/credit)

Offered By: Mark D. Greenman

HIGH SCHOOL

Advanced Placement Biology for Teachers in Urban Districts

6

(GR 9–12)

This course is designed for current and future Advanced Placement (AP) Biology teachers and pre-AP high school **biology** teachers. All course activities will be oriented to the unique challenges of teaching AP Biology in an urban context. Course participants will learn content, including cellular respiration, molecular genetics, plant anatomy and physiology, and evolution, and process skills key to student success in AP Biology. The course will provide an in-depth focus on the specific content students find most challenging and proven pedagogical strategies to help students master this difficult material. Participants are actively engaged throughout the course through hands-on experimentation in the laboratory as well as reflective tasks and complementary class discussions.

Summer session: June 25–29, August 27

Follow up: TBD—one Saturday in September
and one Saturday in November

Location: *Harvard Medical School Longwood
Campus, Boston*

25 Spaces Available

CONTACT for registration

Anthea Gabriel

617–287–7587

Anthea.gabriel@umb.edu

Optional 3 graduate credits available from
University of Massachusetts, Boston (\$295
total for 3 credits)

Offered By: University of Massachusetts, Boston

SCIENCE AND TECHNOLOGY/ENGINEERING

LEVEL II, APPLICATIONS

For teachers who have a working knowledge of the content area to be studied and possess skills in articulating standards-based objectives and lesson plans. These courses emphasize in-depth content and instructional knowledge to implement effective standards-based instruction.

ELEMENTARY, MIDDLE & HIGH SCHOOL

How to Effectively Engage Students in Standards-Based Biology Learning K-12 **7** (GR K-12)

This course will provide participants with an in-depth knowledge of how to effectively engage students in standards-based **biology** learning. Teachers will learn how to develop a content-focused approach to instruction that relates multiple elements of effective standards-based instruction to further develop their skills and knowledge. Participants will examine their own classroom pedagogies as well as enhance their own instructional repertoires to provide successful learning experiences for students in a standards-based classroom learning environment. Topics will include the following: understanding the MA STE Curriculum Framework; **how students learn**; **checking for understanding**; formative and summative **assessment strategies**; science teaching and **safety** in the classroom; **lesson planning** in a standards-based science classroom; and student presentations.

Summer session: July 9-12, July 16-19

Follow up: TBD

Location: *Brockton*

25 Spaces Available

CONTACT for registration

Dr. Ann M. Papagiotas

978-317-4959

drpapagiotas@yahoo.com

Optional graduate credits TBD

Offered By: Mass Insight Education

MIDDLE & HIGH SCHOOL

Teaching About Climate Change: A Coastal Perspective **8**

(GR 6-12)

This Institute provides content instruction in **climate change**, focusing on the impact on coastal communities. Concepts such as the **physical science** of climate change, the carbon cycle, local indicators of climate change, and the technological aspects of responding to climate change will be addressed. Analysis of global and local climate and **ecology** data will be an impetus for developing an understanding of the complex interactions associated with climate change and how its impact is monitored. This inquiry-based approach integrates **mathematics** and **technology** in investigations of coastal ecosystems. Participating teachers will learn pedagogical approaches to effectively engage students in content learning, including **integrating laboratory experiences into instruction**, using **probing questions** and other **formative assessments** to inform instructional decisions, and **designing standards-based lessons**.

Summer session: July 25-27; August 13-17

Follow up: September 26, November 7,
December 12

Location: *Gloucester High School and Mass
Audubon's Endicott Sanctuary*

25 Spaces Available

CONTACT for registration

Elizabeth Duff

978-927-1122 ext. 2701

lduff@massaudubon.org

Optional 3 graduate credits available from
Salem State College (\$100/credit)

Offered By: Mass Audubon

SCIENCE AND TECHNOLOGY/ENGINEERING

LEVEL II, APPLICATIONS

For teachers who have a working knowledge of the content area to be studied and possess skills in articulating standards-based objectives and lesson plans. These courses emphasize in-depth content and instructional knowledge to implement effective standards-based instruction.

MIDDLE & HIGH SCHOOL

Engineering First! A New Approach to Science

9

(GR 6–10)

This course will provide teachers understanding of **technology/engineering** principles and standards-based pedagogical skills necessary to successfully engage students in learning the content of the Technology/Engineering standards. The course engages teachers in learning technology/engineering concepts to support specific standards-based classroom projects, using a 9th-10th grade curriculum exemplar (*Engineering the Future*). All lessons model learning in an **engineering design** context. Technology/engineering content topics addressed in this course include **construction, manufacturing, electrical, and communications technologies**. Course participants will learn a variety of standards-based pedagogical strategies including **designing lesson plans** that support students' prior knowledge, using **probing questions** and other **formative assessments**, and establishing a **safe classroom**. Candidates will have multiple opportunities to adapt and implement lessons learned in their classrooms.

Summer session: June 25–29 plus 10 hrs online participation in August

Follow up: TBD

Location: Watertown

30 Spaces Available

CONTACT for registration

Katy Capo
617–589–4439

kcapo@mos.org

Optional 3 graduate credits available from Salem State College (\$100/credit)

Offered By: Museum of Science, Boston

A Multisensory Approach to Teaching Introductory Physics

10

(GR 6–10)

In this course, teachers will learn in-depth content knowledge and how to effectively engage all learners in an **introductory physics** course, or a **physical science** course. Content topics include, motion and forces, energy, momentum, electricity and magnetism, and waves. Teachers will be introduced to samples of content-focused curriculum that address a wide variety of learning types and will learn how to develop curriculum that is content-driven, standards-based, and **addresses many learning types** (including English Language Learners and Special Needs Students). Teachers will learn physics concepts, relevant **laboratory activities, instructional methods, and assessment strategies** to effectively support student learning of the concepts. Upon completion of the course teachers will receive three completed standards-based units for use in the classroom, useful classroom physics materials for hands-on activities, and student and teacher text resources.

Summer session: TBD, Mid August

Follow up: TBD, September & October

Location: Fairhaven High School

30 Spaces Available

CONTACT for registration

Meredith Emery
508–291–2897
memery@fairhavenps.org

Optional graduate credits TBD

Offered By: M & E Professional Teacher Consultants

MATHEMATICS

LEVEL I, FOUNDATIONS

For teachers seeking to develop a working knowledge of a content topic and standards-based teaching practices. These courses address the foundational content knowledge of the discipline and key instructional strategies.

ELEMENTARY

Math as a Second Language

11

(GR K–8)

This Institute focuses on conceptual understanding of the **number sense and operations** strand with a primary focus on grades K-6. Heavy emphasis is placed on central topics such as place value, fractions, decimals, percents, estimation, the number line, models of subtraction, the area model of multiplication, the inverse relationship between addition and subtraction and between multiplication and division, exponents, and signed numbers. The instructor and facilitators will provide a supportive environment and topics will be explored in depth by working in groups and reporting out. Special emphasis will be placed on how the content learned will be used to strengthen teaching in the classroom. Manipulatives will be utilized to provide a concrete foundation for concepts and to help facilitate movement to the abstract.

Summer session: July 17–20, 24–27

Follow up: TBD

Location: *Pittsfield*

25 Spaces Available

CONTACT for registration

Michael Klugerman

617-407-8139

klug@alum.mit.edu

Optional 3 graduate credits available from
Worcester State College (cost TBD)

Offered By: Mass Insight Education

MIDDLE SCHOOL

Patterns, Polygons, Proportionality, and Probability: Middle School Math Foundations for Special Populations

12

(GR 6–8)

This course focuses on content and effective teaching for mathematics students in grades 6–8. The course syllabus draws from the Annenberg Missing Link professional development curriculum and best practice in teaching English Language Learners. Math topics—**patterns and functions, proportional reasoning, and sampling and probability**—will be presented in a classroom context. Course instructors will guide participants in teaching standards-based concepts and skills, with particular attention to instructing English Language Learners.

Summer session: July 30–August 3

Follow up: TBD

Location: *Northampton*

25 Spaces Available

CONTACT for registration

Diana Wilson

413-586-4900 ext. 130

dwilson@collaborative.org

Optional 3 graduate credits available from
Fitchburg State College (\$75/credit)

Offered By: Hampshire Educational
Collaborative

MATHEMATICS

LEVEL II, APPLICATIONS

For teachers who have a working knowledge of the content area to be studied and possess skills in articulating standards-based objectives and lesson plans. These courses emphasize in-depth content and instructional knowledge to implement effective standards-based instruction.

ELEMENTARY

Counting and Number Sense **13**

(GR PreK–2)

The course will focus on the scope and sequence of **number sense, operations, and arithmetic** ideas throughout the PreK–2 curriculum.

Participants will explore number sense concepts; make connections with other mathematical strands; engage in problem solving; investigate **international teaching and learning** in math; **learn to teach mathematical functions** as inverse operations; and **explore teaching algebra** as generalized arithmetic.

Summer session: July 16–19, 23–25

Follow up: October 13, November 3

Location: *Ferryway School, Malden*

30 Spaces Available

CONTACT for registration

Nancy Kassabian, Assistant Superintendent,
Malden Public Schools
781–397–7214

nkassabian@malden.mec.edu

Optional 4 graduate credits are available from
Simmons College (\$60/credit)

Offered By: Teachers²¹

ELEMENTARY & MIDDLE SCHOOL

Understanding Rational Numbers: Fractions, Decimals, Percents and Proportional Reasoning **14**

(GR 3–8)

This Institute is designed to review, strengthen and extend teachers' understanding in knowing and teaching mathematics in grades 3–8. The course will help teachers **apply developmental theory** to the learning of mathematics with emphasis on the **mathematical thinking** of children in the areas of **rational numbers**: fractions, decimals, percents and proportional reasoning. The institute is highly practical and reflective. The participants will utilize **manipulatives**; explore ideas for **conceptual understanding** of algorithms of operations with rational numbers, learn about current **learning theories** and related research.

Summer session: June 28, July 9–12, 16–17

Follow up: September 19, October 13,
November 14

Location: *Somerset Middle School*

30 Spaces Available

CONTACT for registration

Susan Looney
508–230–9388
looneyconsulting@comcast.net

Optional 3 graduate credits are available from
Fitchburg State College (\$75/credit)

Offered By: Looney Consulting

MATHEMATICS

LEVEL II, APPLICATIONS

For teachers who have a working knowledge of the content area to be studied and possess skills in articulating standards-based objectives and lesson plans. These courses emphasize in-depth content and instructional knowledge to implement effective standards-based instruction.

ELEMENTARY & MIDDLE SCHOOL

Geometry & Measurement– Area, Perimeter and Transformations

15

(GR 4–6)

This **geometry** course will be a hands-on, inquiry-based study of 2D and 3D geometry including polygons, polyhedra, congruence, similarity, area, perimeter, surface area, volume, transformations, and proportional reasoning. The course will also address connections to other mathematical strands as appropriate. Participants will learn and practice **standards-based instructional strategies**, engage in a review of current research, and incorporate findings into a curriculum project. A technology component will facilitate on-line collaboration among participants.

Summer session: July 30–31, August 1–3, 6–7

Follow up: September 29, November 3

Location: *Southbridge High School*

30 Spaces Available

CONTACT for registration

Beth Chamberland, Director of Math,
Southbridge Public Schools

508–764–6252

bchamberland@southbridge.k12.ma.us

Optional 4 graduate credits are available from
Simmons College (\$60/credit)

Offered By: Teachers²¹

MIDDLE SCHOOL

Sheltering Instruction in Middle School Mathematics

16

(GR 5–8)

This course will help middle school math teachers to understand the specific **linguistic and conceptual challenges** that English language learners may encounter in **math** classes. Teachers will develop specific awareness, knowledge and skills to make mathematics instruction more comprehensible for English language learners and learn to promote the acquisition of academic language proficiency in math class. This active and inquiry-based training is organized around essential questions, and engages teachers in experiences which **model student learning** and draw upon teachers' own experiences in the classroom. SIT utilizes this approach in order to help teachers:

- recognize existing strategies they already use which promote math learning and language acquisition for ELLs, and
- learn new strategies for extending math learning and language acquisition which they can incorporate into their teaching.

The SIT ACCESS Graduate Certificate is approved by the MADOE for Category 2 in Massachusetts SEI professional development.

Summer session: August 14–17

Follow up: TBD, September 10–December 14

Location: *Worcester*

16 Spaces Available

CONTACT for registration

Karen Hippert

508–799–3098

hippert@worc.k12.ma.us

Optional 3 graduate credits available from School
for International Training (\$150/credit)

Offered By: School for International Training

MATHEMATICS

LEVEL II, APPLICATIONS

For teachers who have a working knowledge of the content area to be studied and possess skills in articulating standards-based objectives and lesson plans. These courses emphasize in-depth content and instructional knowledge to implement effective standards-based instruction.

MIDDLE SCHOOL

Sheltering Instruction in Middle School Mathematics

17

(GR 5–8)

This course will help middle school math teachers to understand the specific **linguistic and conceptual challenges** that English language learners may encounter in **math** classes. Teachers will develop specific awareness, knowledge and skills to make mathematics instruction more comprehensible for English language learners and learn to promote the acquisition of academic language proficiency in math class. This active and inquiry-based training is organized around essential questions, and engages teachers in experiences which **model student learning** and draw upon teachers' own experiences in the classroom. SIT utilizes this approach in order to help teachers:

- recognize existing strategies they already use which promote math learning and language acquisition for ELLs, and
- learn new strategies for extending math learning and language acquisition which they can incorporate into their teaching.

The SIT ACCESS Graduate Certificate is approved by the MADOE for Category 2 in Massachusetts SEI professional development.

Summer session: August 7–10

Follow up: TBD, September 10–December 14

Location: *Revere*

16 Spaces Available

CONTACT for registration

Albert Mogavero

781–286–8303

amogavero@revere.mec.edu

Optional 3 graduate credits available from School for International Training (\$150/credit)

Offered By: School for International Training

Conceptually Challenging Topics in Middle School Mathematics Using Case Studies

18

(GR 6–8)

This course addresses the challenges of teaching mathematics in a standards-based era of assessment. Participants will explore mathematical topics and learn how to **use case-based mathematical discussions** with colleagues to examine student thinking. The following concepts will be investigated: representations of data, exponential functions, linear representations, fractions, decimals and percents, integers, equations, variables and concepts from functions to calculus. **Technology connections** and the **history of math** will be included. Teachers will be able to use this knowledge to effectively **scaffold student learning** of the concepts.

Summer session: July 9–13, 16–20

Follow up: TBD, September

Location: *Lilla G. Frederick Pilot Middle School, Boston*

30 Spaces Available

CONTACT for registration

Stephanie Sibley

617–227–8055

Fax 617–227–8446

ssibley@bpe.org

Optional 3 graduate credits available from Worcester State College (\$100/credit)

Offered By: Boston Plan for Excellence

MATHEMATICS

LEVEL II, APPLICATIONS

For teachers who have a working knowledge of the content area to be studied and possess skills in articulating standards-based objectives and lesson plans. These courses emphasize in-depth content and instructional knowledge to implement effective standards-based instruction.

MIDDLE SCHOOL

Increasing Accessibility to Algebra and Geometry for Special Education Students

19

(GR 5–9)

This course is designed for teachers who provide math instruction to **Special Education** students. It will address the standards from the **algebra** and **geometry** strands of the MA Math Curriculum Framework, with a focus on making connections between the strands. **Instructional strategies** modeled for supporting all students will include the use of multiple forms of representations, math centers and learning stations, math labs, graphic organizers, and technology. Using **informal and formal assessments** to encourage students to demonstrate what they know and can do will also be addressed. Graphing calculators, geometry software, and the Internet will be used where appropriate.

Summer session: July 30–31, August 1–2, 6–8
Follow up: September 20, October 20, Electronic follow up August–October

Location: *Roosevelt School, Worcester*

25 Spaces Available

CONTACT for registration

Chris Mullaney

508–856–1562

Fax 508–856–5360

Christine.Mullaney@umassmed.edu

Optional 3 graduate credits are available from Fitchburg State College (\$75/credit)

Offered By: UMASS Medical School Regional Science Resource Center

Unlocking Linear Equations and Exploring Their Foundations

20

(GR 6–8)

This middle school mathematics Institute provides a unique intense immersion experience for teachers. It will cover three major topics: **linear equations** in two variables, systems of linear equations, and preceding them, a connected sequence of **foundational topics**: rational numbers and operations, rate and speed, ratio, direct and inverse proportion, and measurement. By means of multi-topic **concept mapping** with an emphasis on visual explanations, and solution of challenging problems at their level, participants will develop deep understanding of the topics and their interrelationships. In addition, they will explore likely **student misunderstandings** and their remediation. CLEAR Math and graphing calculators will be used to enhance learning efficiency and to demonstrate ways of **using technology** to teach math in the classroom. Participants will also learn, through modeling and direct treatment, important instructional strategies such as grouping, **formative assessment**, and **differentiated instruction**.

Summer session: June 4 (3–6 pm), July 16–20, 23
Follow up: September 24, October 22, November 19

Location: *Leominster Public Schools*

30 Spaces Available

CONTACT for registration

Kai C. Liu

781–729–8696

KCLBA7M@EduTron.com

Optional 3 graduate credits are available from Fitchburg State College (\$75/credit)

Offered By: EduTron Corporation

MATHEMATICS

LEVEL II, APPLICATIONS

For teachers who have a working knowledge of the content area to be studied and possess skills in articulating standards-based objectives and lesson plans. These courses emphasize in-depth content and instructional knowledge to implement effective standards-based instruction.

MIDDLE SCHOOL

Exploring, Learning, and Teaching Geometry: Learning by Doing

21

(GR 5–8)

In this Institute, teachers will investigate a variety of problem contexts—**making, testing, and proving (or disproving) conjectures**—and create activities that will allow their students to be mathematical explorers themselves (focusing on **geometry**). The underlying philosophy of this institute is that students (and teachers) **learn mathematics by doing mathematics**. For that reason, most time will be spent investigating various mathematical problems and contexts. We will use a variety of manipulatives for this work (paper folding and Miras, for example), but we will also make use of Geometer’s Sketchpad dynamic geometry software. Dynamic geometry applications are ideal tools with which to explore mathematical ideas and to give students (and teachers) experience with deep mathematical investigations.

Summer session: August 20–24

Follow up: TBD

Location: *South Lawrence East Complex,
Lawrence*

30 Spaces Available

CONTACT for registration

Steve Benson

617–618–2544

sbenson@edc.org

Optional graduate credits TBD

Offered By: Education Development Center, Inc.

ELEMENTARY, MIDDLE, & HIGH SCHOOL

Developing Algebraic Thinking in Grades 4–10

22

(GR 4–10)

This course will address the **patterns, relations, and algebra** strand of the MA Mathematics Curriculum Framework, placing particular emphasis on variables, equations and non-linear functions. Participants will gain an understanding of how these important mathematics concepts are developed in **standards-based programs** across grades 4–10, as well as how the development of algebraic thinking habits of mind can contribute to student **conceptual understanding** and **problem solving** in this strand. Throughout the course participants will do and discuss mathematics; **analyze classroom artifacts** and discuss subsequent actions; **develop questioning strategies** that focus, assess and advance students’ algebraic thinking; **design an algebra pre-assessment**; and **develop high cognitive demand lessons** that support students’ prior knowledge and level of understanding relative to articulated **standards-based objectives**.

Summer session: July 9–13

Follow up: TBD

Location: *Winchendon Public Schools*

25 Spaces Available

CONTACT for registration

Valorie Miller, Winchendon Public Schools

978–297–0261

vmiller@winchendonk12.org

Optional 3 graduate credits are available from Regis College (\$100/credit)

Offered By: Education Development Center, Inc.

MATHEMATICS

LEVEL II, APPLICATIONS

HIGH SCHOOL

Towards A Unifying View of Common Equations, Functions, Inequalities, and Systems **23** (GR 9–12)

This high school mathematics Institute provides a unique intense immersion experience for teachers. It has two primary foci: **linear equations** in two variables, and other **nonlinear functions** (including quadratic, exponential, logarithmic, trigonometric, etc.). Participants will: analyze linear equations; explore solution space of systems of linear equations and inequalities. They will engage in understanding quadratic equations through factoring, completing the square and deriving/using the quadratic formula. Higher order, exponential, logarithmic, sinusoidal functions will be explored. They will make connections between geometrical/algebraic interpretations and engage in the formulation, exploration and solution of challenging application problems. CLEAR Math and graphing calculators will be used to enhance learning efficiency and to demonstrate ways of **using technology** to teach math in the classroom. Participants will also learn, through modeling and direct treatment, important instructional strategies such as grouping, **formative assessment**, and **differentiated instruction**.

Summer session: June 5 (3–6 pm),
July 24–27, 30–31
Follow up: September 25, October 23,
November 20

Location: Lowell Public Schools

30 Spaces Available

CONTACT for registration

Kai C. Liu
781–729–8696
KCLBA7H@EduTron.com

Optional 3 graduate credits are available from
Fitchburg State College (\$75/credit)

Offered By: EduTron Corporation

LEVEL III, ADVANCED STUDY

For teachers with expertise in the content area and experience implementing standards-based instruction. These courses provide opportunities to engage with in-depth exploration of student learning, specific instructional strategies, and advanced study of a content topic.

ELEMENTARY

First Steps in Mathematics: Number **24** (GR PreK–6)

This Institute will explore critical concepts in mathematics that pertain to **number sense**. Significant emphasis will be placed on research and on a Diagnostic Map that describes characteristic **phases in the development of students' thinking** about major mathematical concepts. Participants will

- investigate Key Understandings that underpin student outcomes
- use Diagnostic Tasks that reveal students' misconceptions about mathematics
- identify purposeful and practical learning activities that correct those misconceptions
- engage in collaborative planning processes that support their professional judgments about teaching pathways.

Summer session: June 25, August 6–9, 13–15
Follow up: September 29, October 3

Location: Greater Boston Area

30 Spaces Available

CONTACT for registration

Wendy Ward
866–505–3001
wendy_ward@stepspd.org

Optional 3 graduate credits are available from
Lesley University (\$125/credit)

Offered By: STEPS Professional Development

MATHEMATICS

LEVEL IV, COACHING

For expert teachers and administrators. These courses provide a framework and strategies to guide content-focused coaching and instructional leadership.

ELEMENTARY & MIDDLE SCHOOL COACHES & INSTRUCTIONAL LEADERS

Lenses on Learning for K–8 Teacher Leaders, Coaches and Instructional Leaders **25**

This course intends to build skills and content knowledge to support effective mathematics coaching. To build the capacity to recognize and cultivate high-quality mathematics teaching, participants will use *Lenses on Learning* materials and the DOE’s *Characteristics of a Standards-Based Mathematics Classroom* document to observe and analyze videos of mathematics classroom teaching. Participants will explore each session’s content focus (whole number operations, multiplicative thinking, rational numbers and proportional reasoning, geometric measurement, data analysis) in order to understand the underlying mathematical concepts in the rich way necessary for coaching and instructional leadership.

Summer session: June 25–29

Follow up: TBD

Location: *Katherine Stoklosa Middle School,
Lowell*

30 Spaces Available

CONTACT for registration

Loretta Heuer
617–618–2559
lheuer@edc.org

Optional 3 graduate credits are available from
Fitchburg State College (\$75/credit)

Offered By: Education Development Center, Inc.

Introduction to Math Coaching for K–8 Teacher Leaders and Math Coaches **26**

This course will provide a foundation for potential math coaches. Participants will learn how to assist teachers in improving content knowledge and pedagogy as well as the use of assessment to understand what students know. Various aspects of coaching models will be examined: collaborative coaching and learning, reflective coaching, grade level planning, group data analysis, protocols for looking at student work, lesson planning, demonstrating and modeling lessons, professional development delivery, and direct coaching.

Summer session: July 30-31, Aug 1-3

Follow up: TBD

Location: *Van Sickle Middle School, Springfield*

25 Spaces Available

CONTACT for registration

Kathleen Gadsby
781–481–1103
kgadsby@wested.org

Optional graduate credits TBD

Offered By: Learning Innovations at WestEd

STEM AND THE ARTS

LEVEL I, FOUNDATIONS

For teachers seeking to develop a working knowledge of a content topic and standards-based teaching practices. These courses address the foundational content knowledge of the discipline and key instructional strategies.

MIDDLE & HIGH SCHOOL

Kinetic Sculpture and the Art of Wind Dynamics **27**

(GR 6–12)

The DeCordova Museum's Kinetic Sculpture and the Art of Wind Dynamics Institute will provide grade 6–12 educators the opportunity to immerse themselves in intensive study of kinetic (moving) sculpture, and explore how it intersects with the world of science. Open to all educators, including visual art educators, ELA, science, math, technology, and engineering instructors. Held on the grounds of the DeCordova Museum and Sculpture Park, the Institute will focus on the artistic, historical, social, and scientific significance of the outdoor kinetic sculpture, *Three Lines*, by renowned American artist George Rickey. Teachers will come away from this in-depth exploration with new ideas for the classroom: tools for integrating art and science, hands-on sculpture activities, lessons in wind energy, and a greater understanding of the social and historical contributions of kinetic art. The Institute will be led by experts in the fields of kinetic art, wind engineering, public sculpture, and arts education.

Summer session: August 6–10

Follow up: TBD

Location: *DeCordova Museum and Sculpture
Park, Lincoln*

20 Spaces Available

CONTACT for registration

Donna Berube

781–259–0505

www.decordova.org

Optional 3 graduate credits are available from
Plymouth State College (\$125/credit)

Offered By: DeCordova Museum

READING AND WRITING

LEVEL I, FOUNDATIONS

For teachers seeking to develop a working knowledge of a content topic and standards-based teaching practices. These courses address the foundational content knowledge of the discipline and key instructional strategies.

ELEMENTARY

Early Steps in Writing to Support Reading Comprehension

28

(GR K–3)

Young children learn best within a literacy program that provides balanced instruction in phonemic awareness, phonics, fluency, vocabulary, and text comprehension through scientifically research-based methods. Writing is an essential but often isolated component of this instruction. This course will focus on the integration of writing during the literacy block, including how to write (and read) in a range of genres (narrative, poetry, and expository texts) and how writing can be used throughout the “reading” curriculum to enhance student learning and comprehension. Attention to MA ELA comprehension standards and components of the MA PK–12 Literacy Plan will frame the focus.

Summer session: July 23–25, 30–31;
August 1–2

Follow up: September 29, October 20

Location: *Randolph High School*

30 Spaces Available

CONTACT for registration

Melissa McGrath

781–961–6206

mmcgrath@randolph.mec.edu

Optional 4 graduate credits available from
Simmons College (\$60/credit)

Offered By: Teachers²¹

Early Steps in Writing to Support Reading Comprehension

29

(GR K–3)

This Early Steps course focuses on the theory and practice of creating, teaching, and refining standards-based units of instruction based on the K–3 composition standards of the Massachusetts English Language Arts Curriculum Framework. Teachers will apply these standards to their own writing of personal narratives, letters, poems, fiction, and nonfiction. They will learn, practice and apply the pedagogical skills to teach writing in multiple genres and develop their understanding of how writing reinforces reading comprehension and stimulates children’s facility with language, thinking, and inquiry. Every instructional block will include a writing session using the five-step writing process. Participants will learn such editing practices as one-to-one conferencing, peer response group processing, and content coaching as a means of introducing them to and providing practice with the array of strategies they may use with their own students.

Summer session: TBD, late August

Follow up: TBD

Location: *Kasparian Professional Development Center, Springfield*

30 Spaces Available

CONTACT for registration

Beverly Eisenman

800–392–6175

Fax 617–878–8150

beisenman@massteacher.org

Optional 3 graduate credits available from
Fitchburg State College (\$60/credit)

Offered By: Massachusetts Teachers Association
Center for Educational Quality &
Professional Development

READING AND WRITING

LEVEL I, FOUNDATIONS

For teachers seeking to develop a working knowledge of a content topic and standards-based teaching practices. These courses address the foundational content knowledge of the discipline and key instructional strategies.

ELEMENTARY

Revitalizing Writing: Writing to Learn in the Upper Elementary Grades **30** (GR 4–6)

Revitalizing Writing will provide teachers an opportunity to explore current practices in the teaching of writing to learn while engaging in these practices themselves. To experience the ways writing can improve learning, participants will work on their own writing in multiple genres. They will have the opportunity to inquire into composition standards of the Massachusetts ELA curriculum framework and to reflect on the application of these standards to their own writing and classroom practice. This inquiry into their own writing, current researched-based practice and theory, and composition standards will provide participants the skills to teach writing effectively in multiple genres and develop their understanding of how students' writing can increase reading comprehension, critical thinking skills, and understanding of subject matter across the curriculum. Activities will include workshop presentations by Massachusetts Writing Project teacher-leaders, discussions of readings, individual writing and peer response, and guided inquiry in educational literature.

Summer session: July 23–August 3

Follow up: TBD

Location: *Narragansett Middle School,
Baldwinville*

25 Spaces Available

CONTACT for registration

Amber Engelson, Office Manager

413–545–5466

wmwp@english.umass.edu

Optional 3 graduate credits available from
University of Massachusetts, Amherst (\$415
total for 3 credits)

Offered By: Massachusetts Writing Project

Writing to Learn in Upper Elementary Grades **31** (GR 4–6)

This hands-on course will have educators experience and internalize, for the benefit of themselves and thereby their students, the vital importance of literacy across all content areas. Participants will examine writing for content learning, the writing process, the reading/writing connection, collaborative writing, and report and summary writing. In addition, all participants will find ways to connect to the composition standards for grades 4–6 from the Massachusetts English Language Arts Curriculum Frameworks, clarifying ways to add reading/writing grade level examples/prompts for both ELA and content frameworks. By focusing on readers as writers and writers as readers, teachers will learn to enhance students' ability to understand and use language as they creatively think, critically inquire, and effectively communicate with others. Both formative and summative assessment practices will be utilized; rubrics will be explored and created; and standards-based learning highlighted. Participation will ensure that literacy becomes a natural and essential part of everyday classroom activities.

Summer session: July 10–13, 17–19

Follow up: September 29, October 27

Location: *Randolph High School*

30 Spaces Available

CONTACT for registration

Melissa McGrath

781–961–6206

mmcgrath@randolph.mec.edu

Optional 4 graduate credits available from
Simmons College (\$60/credit)

Offered By: Teachers²¹

Other Professional Development Opportunities

ADVANCED PLACEMENT INSTITUTES

Location: *Fitchburg State College*

Institute Session I: July 9–13

Chemistry
Economics - Macro & Micro
English Language & Composition
English Literature & Composition
European History
Spanish Language
Studio Art

Institute Session II: July 16–20

Biology
Calculus
French Language
Government & Politics - U.S.
Italian Language & Culture
Psychology
Spanish Language
Statistics
U.S. History
World History

Scholarships: The MA Department of Education (DOE), through the federal Advanced Placement Incentive grant program, will provide scholarships for **70** current or prospective Advanced Placement teachers to attend the Fitchburg State College AP Institutes. Teachers from public high schools in which 40% or more of the students are identified as low-income are eligible for these scholarships. Please visit www.fsc.edu/cps for a list of DOE-approved high schools. Scholarships will cover course and lab fees and may cover on-campus housing for teachers traveling 60 or more miles from home to the FSC Campus. Participating teachers must pay the cost of graduate credits attempted. Please visit the FSC Center for Professional Studies website for more information: www.fsc.edu/cps or 978–665–3636.

ARTS INSTITUTE

Boston Public Library: Art, Architecture and the Public Square

The Massachusetts Cultural Council, in partnership with the Boston Public Library Foundation and the Massachusetts Studies Project at UMass-Boston, presents the Library's McKim, Mead, and White building as a model of how public buildings function as constantly evolving works of art. Teachers will learn from the institute how to use the Library building and cultural buildings in their own towns to enliven curriculum for grades 5–12. As part of the institute, each participant will develop a curriculum unit to implement during the fall. Participants will:

- Gain in-depth understanding of the Boston Public Library as a masterpiece
- Develop curriculum units and student assessments to implement in the classroom
- Acquire skills necessary to teach students the cultural, historical, and material context of artistic masterpieces
- Learn how to integrate related disciplines into arts curriculum, such as history, geography, science, and literature
- Learn strategies to stimulate student excitement, understanding, and enjoyment of significant works of art as well as local works of art
- Network with fellow teachers and art experts

Dates: July 16–19, July 26, and December 1

Location: *Boston Public Library, Boston*

Cost: Free. Participants will receive a \$150 stipend following Fall implementation of their curriculum unit.

20 spaces available

To register please contact the Massachusetts Studies Project at 617–287–7654 or k12.msp@umb.edu

ELEMENTARY (K-3) READING COURSES

The three reading courses listed below will be offered to select high need schools and districts by the Massachusetts Department of Education. Starting in August 2007, training will continue through the 2007–2008 school year. Please contact Amy Carithers (781–338–3508, acarithers@doe.mass.edu) with any questions. Further information will be available in May 2007 at <http://www.doe.mass.edu/read>.

On-line Foundations of Reading Courses (K-3)

VoyagerU

VoyagerU's professional development programs combine group interaction and online technology to produce an effective and convenient training model. VoyagerU has found that teachers learn best when they are involved in activity-based programs that take place over an extended period of time, supported by peer interaction and local coaches. This course includes a series of modules delivered over the course of a school year.

Intended Audience: a team of 9–10 teachers, including involvement of the literacy coach and principal

Scholastic Red Online Reading Course (K-3)

Participants will participate in high-quality, research-based professional development in reading. The course has proven to improve the quality of reading instruction, which leads to higher achievement in reading for all students. This course includes a series of modules delivered over the course of a school year.

Intended Audience: a team of 9–10 teachers, including involvement of the literacy coach and principal

Advanced Training for Literacy Coaches

Language Essentials for Teachers of Reading and Spelling (LETRS) Training (K-3)

Teaching reading? Look to LETRS, a proven way to build reading coaches' expertise in reading! Beyond the routines and lesson plans of their adopted reading programs, it's important that educators understand the language structures they're teaching, how students learn to read and write, and the reasons that some children fail to learn. This information and the best instructional strategies are embodied in 12, stand-alone sequential modules. Each component of reading instruction - phonemic awareness, phonics and word study, oral language, vocabulary, reading fluency, comprehension, assessment, and writing - is addressed. Through LETRS, reading coaches will gain a deeper understanding of language structure and how to help students who struggle with reading.

Intended Audience: Literacy Coaches

GIFTED AND TALENTED INSTITUTE

An Introduction to the Education of Advanced, Talented and Creative Learners

This course, which is designed for teachers at all grade levels, addresses significant aspects of the role, attitudes, perceptions, knowledge base and understandings required of an educator whose goal is to serve the needs of advanced, talented and creative learners. A holistic approach, rooted in constructivism, which takes into account students' strengths, needs, and preferred learning styles will be emphasized throughout the course. The major topics to be covered are as follows: definition(s) of and perceptions concerning intelligence; characteristics of this population; issues relating to identification; models of service delivery; essentials of curriculum design and pedagogy, with a particular focus on inclusive teaching strategies and differentiated instruction within the regular classroom; and factors that must be considered when implementing specific teaching strategies, methodologies and activities to address the learning needs of advanced, talented and creative learners. The roles and responsibilities of various stakeholders, including educators, other professionals, parents, governmental agencies, professional and parent associations, the business community and other invested individuals and groups in society in supporting, mentoring and advocating for this population of students as well as issues concerning educational equity and strategies for implementing school change will also be addressed.

Dates: August 13–17 (9 am–3 pm) plus 3 Saturdays in the Fall (Sept 29, Oct 27, Dec 1)

Location: *University of Massachusetts, Amherst*

Fees: Tuition and fees are covered by the Massachusetts Department of Education. A Registration fee of \$40 and materials costs (approximately \$100) are to be paid by participants.

Registration: 30 spaces available—enrollment by permission of instructor

3 graduate credits and 67.5 PDPs are available from the University of Massachusetts, Amherst

Contact: Nola Stephen
413–545–1186
nola@educ.umass.edu

Deadline: Applications should be received by Friday, June 15. Applicants are encouraged to apply as soon as possible. Last year there were many more applicants than spaces available in the course. (Students will be selected for admission to the course from the pool of applicants. Those who apply will be emailed a questionnaire to be completed and submitted to the selection committee.)

Partner: University of Massachusetts, Amherst. This course is supported by a Jacob K. Javits Gifted and Talented Education grant from the United States Department of Education.

MADDOE/INTEL MATHEMATICS INITIATIVE

This course focuses on building a solid conceptual understanding of arithmetical operations (and fractions) for the first half of the course and foundational algebra (linear functions) for the second half, with the relationship of arithmetic, geometry, and algebra highlighted throughout the course. All topics are taught using a variety of problem solving strategies that relate directly to the K-8 mathematics classroom. The 80-hour (10-day) concentrated course will be co-facilitated by a mathematics content master teacher and a pedagogical master teacher. All course participants will also contribute to a school-based mathematical learning community.

PLEASE NOTE: This course will be piloted in 2007 at 7 selected sites and is included here for informational purposes only. This foundational course will be scaled up over time and offered as a Professional Development Institute in future years.

SHELTERED ENGLISH IMMERSION PROFESSIONAL DEVELOPMENT

The Department of Education will be conducting a number of Training of Trainers opportunities for Sheltered English Immersion Professional Development. Applications will be accepted from district teams. The purpose of these trainings is to help your district build capacity for providing ongoing SEI Professional Development in order to qualify your teachers to shelter content for English Language Learners. Any questions regarding the training sessions or the application should be referred to Dr. Judy Barcelo at 781-338-3557, or at jbarcelo@doe.mass.edu. More information can be found at <http://www.doe.mass.edu/ell/profdev/sheltered.html>.

Training of Trainers Course for Category I SEI PD: Introduction to Second Language Learning and Teaching

To Train Trainers of Teachers of English Language Learners in Grades K-12 (3 days)

This course will train trainers to provide teachers with basic knowledge regarding key factors affecting second language acquisition, and implications of these factors on classroom organization and instruction, as well as the implications of cultural difference for classroom organization and instruction. Trainers will learn how to introduce teachers to the organization, content and performance levels in the Massachusetts English Language Proficiency Benchmarks and Outcomes (ELPBO) document, which is the English Language Arts Framework for English Language Learners until they reach the transitioning level of proficiency. Prospective trainers will learn about effective training strategies, the importance of pacing, suggestions on how to lead discussions on Category 1 topics, and how to deal with difficult participants.

Training of Trainers Course for Category II of SEI PD: Sheltering Content Instruction at the Secondary Level

To Train Trainers of Content Teachers of English Language Learners in Grades 7-12 (5 days)

This course will train trainers to assist teachers in gaining skills and knowledge regarding how to make secondary-level content instruction more accessible to English Language Learners. Trainers will learn how to help teachers adapt curriculum and lesson planning, utilize more effective instructional strategies, assign appropriate student tasks for varied levels of language proficiency, and modify instructional delivery to assure that secondary-level students in content-area classes are comprehending core subject matter and are productively engaged throughout the lesson.

Training of Trainers Course for Category IV of SEI PD: Reading and Writing in Secondary-Level Sheltered Content Classrooms

To Train Trainers of Content Teachers of English Language Learners in Grades 7-12 (4 days)

This course will train trainers to provide teachers with knowledge regarding approaches and practices for developing reading skills and reading comprehension in English for English Language Learners. Prospective trainers will also learn how to help teachers utilize effective strategies for building vocabulary, and plan appropriate writing activities to utilize with English Language Learners at different levels of language proficiency in secondary sheltered content-area classrooms.

SPECIAL EDUCATION SUMMER INSTITUTES

Special education institutes will be offered by the Massachusetts Department of Education this summer. Please contact Linda Tarmy at 781-338-3384 or ltarmy@doe.mass.edu with any questions. Further information will be available in May 2007 on the Department's website at www.doe.mass.edu/sped or www.doe.mass.edu/frameworks/cinstitute.

Announcing a New STEM Scholarship Opportunity

MATHEMATICS & SCIENCE TEACHERS SCHOLARSHIP PROGRAM

We are pleased to announce that the state legislature has funded a pilot scholarship program for mathematics and science teachers who have received waivers from certification regulations and/or are "out of field teachers." These funds are designed to help to increase the number of public school teachers in the Commonwealth who are certified in mathematics and science.

Scholarships will cover the **cost of tuition, fees and related expenses for math and science teachers for up to three courses per semester at higher education institutions to meet teacher certification requirements**. Eligible mathematics and science teachers (including technology/engineering teachers) can apply this scholarship to courses at eligible Massachusetts public or independent (private) colleges and universities.

Recipients of the scholarships will be required to commit to continue teaching mathematics and science in the Commonwealth for a term of service after becoming licensed. The program has been designed to give priority for scholarships to teachers from high-need districts.

Information about application materials will soon be available for the 2007 summer semester at: <http://www.doe.mass.edu/omste/?section=news&flag=true>

Scholarship applications for Fall 2007 semester courses will be available June 2007.

For more information, please contact Barbara Libby at blibby@doe.mass.edu.



Participate in this summer's exciting Professional Development Institutes!

Mathematics
Science & Technology/Engineering
STEM and the Arts
Reading & Writing
AND More!

ALSO—if you are teaching on **waiver** or “**out of field,**”
take advantage of the upcoming

Mathematics & Science Teachers Scholarship Program!

Information about the Scholarship Program will be available at
<http://www.doe.mass.edu/omste/?section=news&flag=true>
Scholarships will be available for the 2007 summer semester!

This catalogue is available at
<http://www.doe.mass.edu/frameworks/cinstitute/>