



Mathematics Seminars

Are you interested in enhancing elementary or secondary mathematics instruction at your school? These new CPE courses are designed to support instructional practices. While the courses are not prerequisite for one another, they are designed to complement one another in their classroom applications.

Reaching Struggling Learners in Mathematics (Elementary Level)

This five-day seminar helps participants understand why students struggle with mathematical ideas and directly addresses students' learning barriers. Today's students need a firm grasp of mathematics to succeed both academically and in the job market. Academy participants will examine multiple avenues to assist struggling students in moving along the path toward grade-level competency. To achieve this, participants will learn to:

- Examine the thinking and strategies used by students
- Make mathematical thinking explicit in the classroom
- Link assessment to instruction
- Build understanding of mathematical ideas through communication,
- Assist and support students in taking responsibility for their own learning

Allegheny Intermediate Unit

July 7, 8, 9, 21, 22, 2010, 8:30-4:00

2 credits

Measuring in One, Two, and Three Dimensions (Elementary Level)

This five-day seminar helps participants think about the big ideas of measurement and how these ideas fit into the PA Standards Aligned System (SAS). Measurement is frequently a mathematical stumbling block for students of all grade levels, which can then lead to problems in other subject areas, most noticeably, science. In order to best address this potential barrier to learning, during this seminar, participants will:

- Examine different attributes of size
- Develop facility in composing and decomposing shapes
- Apply these skills to make sense of formulas for area and volume
- Explore issues of length, area and volume and their interrelationships
- Analyze children's thinking as they work on measurement ideas

Allegheny Intermediate Unit

July 12-16, 2010, 8:30-4:00

2 credits

Digging Deep into *How People Learn* (Secondary Level)

- How can you effectively address student misconceptions and preconceptions in your mathematics classroom?
- How can you help students retain and transfer new learning to novel situations?
- How can you empower students to take ownership of their learning?

This 5-day course is designed for participants to explore the three key findings from *How People Learn* in order to address the questions above. *How People Learn* is based on more than 50 years of cognitive research on how the brain functions. Participants will explore the implications of these findings for teaching practices for middle and high school mathematics classrooms.

Allegheny Intermediate Unit

July 12-16, 2010, 8:30-4:00

2 credits

Assessment for Learning in Mathematics (Secondary Level)

- How can using formative assessment enhance student learning?
- How are formative assessment strategies different from tests and quizzes?
- What do you do once you are aware of what kids know and don't know?

This 5 day course enables participants to understand and practice formative assessment, or assessment for learning. Formative assessment can occur continuously in the classroom and has been shown to significantly improve student learning by informing instruction. In this course, participants will identify the role of formative assessment and use key strategies for implementation, including creating classroom discourse, providing effective feedback to students, and activating students as learning resources for one another.

Allegheny Intermediate Unit

July 19-23, 2010, 8:30-4:00

2 credits



Information and Registration

For further information about any of the elementary academies, contact Andrea Miller (andrea.miller@aiu3.net) or Corinne Murawski (corinne.murawski@aiu3.net). For further information about any of the secondary academies, contact Michael Fierle (michael.fierle@aiu3.net) or Michele Burgess (michele.burgess@aiu3.net). Registration will be handled through the AIU Continuing Professional Education (CPE)/Edu-Link registration system at <https://www.edulinkinc.com/IU3Registration/Default.aspx?tabid=1>. Registration will open on May 17 (12:00 a.m.).

No-Show Fees

ALL DISTRICTS will be assessed a **\$20.00 fee** for each educator who RSVPs to attend an Academy session but does not actually attend.