

Draft Schedule for CTTI Cohort I *Math*

Type	Activity (and location)	Draft Dates
Network	Day-long symposium on CTTI (UIC)	June 5, 2010
Workshop 1	Leadership in schools (UIC)	June 21 – June 25, 2010
Course 1	<i>Making sense of numbers & symbols:</i> The course will discuss how concrete exploration of number can help students make sense of the symbolic algebraic manipulations necessary for success in high school and early college mathematics. (UIC)	July 12 – 30, 2010
Network	Day-long symposium on CTTI (UIC or DePaul)	Sept. 11, 2010
Course 2	<i>Data analysis and modeling:</i> This course integrates science content with mathematics, building on classical experiments from 17th century physics and 18th century chemistry. Teachers will explore linear, exponential, quadratic, and power functions in data modeling and science, using graphing calculators and probes. (DePaul)	Fall Semester, 2010
Course 3	<i>Logic across the high school curriculum—making sense internally:</i> The course will emphasize the basic logical distinction between proof from axioms and truth in a mathematical structure. (UIC)	Spring Semester, 2011
Network	Day-long symposium on CTTI (UIC or DePaul)	June 4, 2011
Workshop 2	Leadership in science and mathematics teaching (DePaul)	Summer, 2012
Network	Day-long symposium on CTTI (UIC, Loyola, or DePaul)	Sept. 17, 2011
Workshop 3	Incorporating new science and mathematics content into HS programs (monthly meetings) (UIC)	Oct. 18, Nov. 8, Dec. 13, 2011 and monthly during Spring, 2012
Course 4	<i>Investigating pedagogical content knowledge for mathematics teaching:</i> Teachers will identify and explore the mathematical themes that will form the content of 12th grade courses. This course will draw on the three content courses as well as the workshop on course planning and implementation. (DePaul)	Spring, 2012

Draft Schedule for CTTI Cohort I *Physical Science*

Network	Day-long symposium on CTTI (UIC or Loyola)	June 5, 2010
Workshop 1	Leadership in schools (UIC)	June 21 – June 25, 2010
Course 1	<i>Energy:</i> The “greening” of society requires the development of new materials to transform energy, especially solar energy, and to store it in the form of advanced batteries. The concept of a fuel will also be covered, including the potential for biofuels. (Loyola)	July 6 – July 23, 2010
Network	Day-long symposium on CTTI (UIC or Loyola)	Sept. 11, 2010
Course 2	<i>Synthesis and design:</i> Research in the design and synthesis of materials. A unit on organic synthesis will cover emerging trends in target-oriented and diversity-oriented strategies. A unit on inorganic materials will cover current work in the design of nanoparticles for use in sensors. (UIC)	Fall Semester, 2010
Course 3	<i>Detection and analysis:</i> This course will cover principles and applications within current problems in analytical chemistry. The physical principles behind separation and detection methods will be presented with applications drawn from neurochemistry, atmospheric chemistry, and genomics. (UIC)	Spring Semester, 2011
Network	Day-long symposium on CTTI (UIC or DePaul)	June 4, 2011
Workshop 2	Leadership in science and mathematics teaching (DePaul)	Summer, 2012
Network	Day-long symposium on CTTI (UIC or Loyola)	Sept. 17, 2011
Workshop 3	Incorporating new science and mathematics content into HS programs (monthly meetings) (UIC)	Oct. 18, Nov. 8, Dec. 13, 2011 and monthly during Spring, 2012
Course 4	<i>Research in physics and chemistry education and teaching:</i> Science education has advanced on many fronts through the formulation of overall conceptual frameworks and the development of research-based understandings of student learning. This final course will cover recent research in the teaching and learning of science. (Loyola)	Spring, 2012