

Course Syllabus Form:

MTH 595

Course Designator & Number

Mathematics

Department

School

MTH

Designator

595

Number

T³-Teachers Teaching with Technology Institutes 1 – 3

Title

Credit

Cross Reference

Prerequisites: Registered participant in a T³ Sponsored Mathematics Institute

Title Abbreviation: T³ Institute

(Title abbreviation restricted to twenty (20) characters and spaces or less.)

X Course number has been cleared with the Registrar's Office.

State rationale for course level:

Continuing education of in-service mathematics teachers is a professional and practical imperative in the educational system of the 21st century in the United States. Changes continually occur in classroom practice, curriculums, assessment practices, and national, state, and local requirements. Changes are especially evident in the technology that drives many of these reshaped school experiences and the world in general. This course is actually a varied group of professional development experiences designed for in-service mathematics teachers who need to enhance their subject matter and pedagogical skills for the secondary (Grades 6-12) mathematics classroom. The courses utilize current graphing calculator and computer technology as the catalyst that facilitates the improved effectiveness of the new teaching methods and materials. Best teaching and assessment practices, as defined by research, are explored and implemented in the courses to model what and how to teach effectively using technology in an overall program of exploration, investigation, and problem solving. The expected outcomes for each of the various courses are increased student performance caused by a teacher's improved understanding and facility with technology and problem solving processes.

The objectives of the Teachers Teaching with Technology (T³) Institutes are:

1. To increase teachers' knowledge and understanding of mathematics content;
2. To explore alternate pedagogical methods of delivery using computer and graphing calculator technology;
3. To become more proficient in the use of computer and graphing calculator technology for teaching and learning mathematics at the secondary level;
4. To become familiar with curricular material available for high school mathematics classes;
5. To become familiar with planning and executing classroom lessons using techniques and knowledge gained in the institutes.

Bulletin description: (25 words or less)

This is a special group of professional development courses for in-service teachers who are registered participants in one of the T³ Institutes.

Textbooks and other required material to be furnished by the student:

Material supplied as part of the course. No additional material to purchase.

Special requirements of the course (field trips, special fees, etc.):

Registration and attendance at one of the official 3, 4, 5, or 9-day T³ Institutes. (1 semester hour for 3 or 4-day institute; 2 semester hours for a 5 day institute; and 3 semester hours for a 9-day institute.)

General methodology used in teaching the course:

Lecture, demonstration, group work, special projects, hands-on participation, and written and oral reports.

Evaluation: How is the student's work evaluated and how frequently?

Participants will complete a pre-post assessment instrument to measure growth across the stated general objectives of the institutes. This will include subject matter and pedagogical skills, lesson preparation, and technology skills. During the 9-day institutes, material preparation and presentation skills for adult learners will be also be taught. (The 9-day institute model is based on the “trainer of trainers” model designed to prepare teachers to become skilled professional development presenters in their local schools and districts.)

Course outline: Attach the appropriate course outline with specific course objectives here.

References: Specific references should be included with each course outline.

Syllabus prepared by Charles Vonder Embse Date May 1, 2007