

# Institute of Leadership Training for Teaching Mathematics and Technology

The following organizations give their support to the continuation of the Institute of Leadership Training for Teaching Mathematics and Technology:

- The Institute of MERIT
- The Mathematics and Computer Information Science Department at State University of New York College at Old Westbury
- Nassau County Mathematics Teachers Association
- Suffolk County Mathematics Teachers Association
- Nassau County Association of Mathematics Supervisors
- Math Olympiads for Elementary and Middle Schools
- The Museum of Mathematics (MoMath)

The program welcomes the participation of novice teachers, teachers in high-need districts, and teachers who strive to improve both their mathematical and pedagogical skills. Our aim is to assist teachers in becoming lead teachers in their schools. We encourage participants to become aware of current educational trends. Stress is placed on the development of teacher confidence so that they in turn can cultivate confidence in their students. A collaborative environment will be used to raise the awareness of the importance of sharing ideas and to reduce anxiety.

The purpose of the Program is to offer an opportunity for teacher participants to be engaged in a high quality mathematics education program. This will allow participants to acquire pedagogical skills that meet the high demands of the New York State Math Curriculum and the Common Core State Standards.

Instruction will incorporate the six principles of learning:

- Equity
- Curriculum
- Teaching
- Learning
- Assessment
- Technology

The responsibilities of the participants include but are not limited to:

- Share what they learn at the Institute with faculty at their home school
- Collaborate with colleagues, administrators and project staff to implement new strategies in their districts
- Create an integrated mathematics technology unit for their students which incorporates what they learned in class
- Write a weekly reflection on their teaching and learning
- Mandatory attendance at the annual Long Island Mathematics Conference, LIMAÇON, in March.

- A member of the project staff will observe each participant in the K-6 program at the participant's school. These visits will include a classroom observation and a follow-up consultation to assist the participants and to evaluate their progress.

Each session will incorporate the 8 Standards for Mathematical Practice as well as the Standards for Mathematical Content as described in the Common Core State Standards. Teachers will be involved in applying problem solving strategies, using manipulatives for instruction, writing lesson plans, and learning techniques to provide in-service training to others. In addition, the nature of mathematics, real life applications, rubrics, and assessments will be explored. The use of calculators and computers will be an integral part of many of the lessons and teachers will be introduced to the available software.

Each teacher participant will receive manipulatives and a nominal stipend pending approval by the New York State Department of Education.

**Become the student you want your students to be.**

The proposed yearly activities to meet the goals stated in this program involve two distinct phases.

## **Time Frame (K - 6):**

Phase I: October through March  
Each workshop session is held on Thursday from 4:30-7:30 and will take place for 13 weeks. The independent study supervised by program staff is an additional 9 hours (includes a weekly reflection, lesson plan writing, and creation of a unit study). Pretests and post-tests will be administered to both the participants and their students.

Phase II: March through May  
Two discussion sessions will be held for 3 hours each (4:30-7:30). The mandatory attendance at the Limaçon conference is 6 hours.

**Total 60 hours = 4 in-service credits**

## **Time Frame (7 - 12)**

Phase I: October through April  
Each classroom session is held on Wednesday from 4:30-7:30 and will take place for 12 weeks. Pretests and posttests will be administered to the participants.

Phase II: October through April  
Three sessions each (4:30-7:30) will be held in our computer lab to learn how to prepare professional looking worksheets and tests, and to be introduced to programs such as Geometers Sketchpad, Geogebra, MathType, and Excel. The mandatory attendance at the Limaçon conference is 6 hours. There will be an additional 9 hours of assignments.

**Total 60 hours = 4 in-service credits**

The K-6 program will be comprised of 10 large group sessions and five separate grade groups (K-2 and 3-6) sessions during the academic school year. Each group will have learning experiences appropriate for their grade level.

The 7-12 program will be comprised of 12 large group sessions and three separate grade groups (7-9 and 10-12) sessions during the academic school year. Each group will have learning experiences appropriate for their grade level.

Since the Institute was founded in 1986, about 1000 educators from Long Island and New York City have participated in the program. Teachers have reported that there was a positive change to their instructing style. They shared their innovative ideas, skills, and experiences with their peer teachers through meetings and in-service workshops in their school districts. The instructional strategies learned were incorporated into the mathematics curriculum and positively effected their classroom management. Teachers reported improved student attitude towards mathematics and an increase in content knowledge as measured by pre- and post-tests.

The program is funded by a grant from New York State Department of Education and there is no cost to the participants.

## How to get to Old Westbury:

**BY CAR** - SUNY College at Old Westbury is located immediately North of the Long Island Expressway in the Village of Old Westbury, N.Y. Please use the main entrance to the College, Gate A, located on the west side of Route 107 approximately one mile north of Jericho Turnpike (Route 25). On weekends and late evenings, Gates B & C (Long Island Expressway service road) will be closed.

**From the Long Island Expressway (Route 495),** East or West:  
Travel to exit 41 North, Route 106/107. Proceed north for 1½ miles to the main campus entrance, Gate A, which is located on the West side of Route 107, past Route 25.

**From the Northern State Parkway** East or West:  
Travel to exit 35 North, Route 106/107. Proceed north for 1½ miles to the main campus entrance. The main entrance to the College, Gate A, is located on the west side of Route 107, past Route 25.

**When using GPS, use the following address:**  
St Paul's Preschool, 2534 Cedar Swamp Road, Glen Head, NY 11545. Please note this is not the College's address. It is the address to a preschool that is located across the street from the campus main entrance on RT 107, the College is located on the West side of RT 107.  
*for maps and more information visit the website [www.instituteofmerit.com](http://www.instituteofmerit.com).*

For information on how to participate:  
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### Project Director:

**Arthur L. Kalish**  
*Director of The Institute of MERIT  
Mathematics Education, Research, and  
Instructional Technology*

### Consultants for the Project:

**Dr. Henry O. Pollack**  
*Former President of the Mathematical  
Association of America*

**Dr. Ben Lindeman**  
*Past Associate for the Bureau of Mathematics  
Education, NYSED*

### Coordinating Instructors for the Program:

**Ms. Joanne Lufrano**  
*M.S. degree in Elementary Education; past  
President of Nassau County Mathematics  
Teachers Association; presenter of in-service  
workshops at local, state, and NCTM  
conferences*

**Ms. Lisa Minerva**  
*M.S. degree in Elementary Education;  
coordinator and instructional specialist in  
gifted mathematics; in-service mathematics  
workshop leader; presenter of workshops at  
local, state levels, and president of NCMTA*

**Ms. Sherri Winick**  
*M.S. in Elementary Education; specialist in  
gifted education; in-service mathematics  
workshop leader; presenter of workshops at  
local, state levels*

**Mr. Arthur L. Kalish**  
*B.A. in Mathematics and M.S. in Math  
Education; NCTM Calendar author; chief  
problem editor for MOEMS; NCIML VP*

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# Teaching Mathematics & Technology

For teachers of grades  
K- 6 and 7-12

THE COLLEGE AT  
**OLD WESTBURY**  
STATE UNIVERSITY OF NEW YORK  
Calvin O. Butts, III, President