

Summer 2008

2008 Summer Enrichment Program in Mathematics and Technology for Talented Youth (MTTY) (Established 1994)

Website: <http://www.mtty.org> **Tel. (703)973-MTTY(6889)**

1. Introduction: The purpose of this program is to offer non-credit enrichment courses in mathematics and computer sciences for students who are entering the 6th grade through 12th grade. The courses are designed to provide an accelerated learning environment in a college atmosphere for high-potential students. This program was established in 1994 by Dr. J. E. Lin. It is an independent and self-supported program. The classes are held at George Mason University, Fairfax Campus.

Eligibility: The participants must have at least a B average in the most recent mathematics course.

2. Schedule:

Term 1. June 23 - July 3, 2008, Monday through Friday.

Morning Session: 9:00 AM - 12:20 PM.

Afternoon Session: 1:00 PM - 4:20 PM.

Term 2. July 7 - July 18, 2008, Monday through Friday.

Morning Session: 9:00 AM - 12:00 PM.

Afternoon Session: 1:00 PM - 4:00 PM.

Term 3. July 21 - August 1, 2008, Monday through Friday.

Morning Session: 9:00 AM - 12:00 PM.

Afternoon Session: 1:00 PM - 4:00 PM.

3. Subjects: Pre-algebra, Algebra 1, Geometry, Algebra 2 with Trigonometry, Calculus, Introduction to JavaScript with Webpage Design, Fundamentals of Computing with Visual Basic Programming Language, and Fundamentals of Computing with Visual C++ Programming Language.

4. Class size: Each class is limited to 25 students with the minimum of 8 students.

5. Tuition:

(1) \$400 per course except Introduction to JavaScript with Webpage Design, Fundamentals of Computing with Visual Basic Programming Language, and Fundamentals of Computing with Visual C++ Programming Language.

(2) \$500 per course for Introduction to JavaScript with Webpage Design, Fundamentals of Computing with Visual Basic Programming Language, and Fundamentals of Computing with Visual C++ Programming Language.

6. Application procedure:

(1) Complete the attached registration form.

(2) Write a check payable to **MTTYGMU** (Mathematics and Technology for Talented Youth at George Mason University) for the amount of the tuition.

(3) **Mail the completed registration form and the check to:**

Dr. J. E. Lin

Box 3736

George Mason University

4450 Rivanna Lane

Fairfax, VA 22030-4441

7. For more information, please contact Dr. J. E. Lin at (703)973-6889 or

send an email to: talentedyouth@gmail.com

Website address: <http://www.mtty.org>

Summer 2008

COURSE DESCRIPTION

1. Pre-Algebra: The topics covered include variables, formulas, solving problems by using equations, operations with algebraic expressions, graphing linear equations, and inequalities.
2. Algebra 1 (Pre-requisite: Pre-Algebra): The topics covered include properties of numbers, solving equations, polynomials, factoring polynomials, graphs, linear equations, inequalities, fractional expressions and equations, real numbers, radical expressions, quadratic equations. Logical reasoning and mathematical applications are emphasized throughout the course.
3. Geometry (Pre-requisite: Algebra 1): The topics covered include points and angles, congruence and angles, triangles and congruence, triangles and inequalities, parallel lines, quadrilaterals, similarity, polygons, circles, coordinate geometry, and 3-dimensional geometry. Proofs are emphasized throughout the course.
4. Algebra 2 with Trigonometry (Pre-requisite: Algebra 1 and Geometry): The topics covered include functions, polynomials, rational expressions, trigonometry, trigonometric equations, identities, Laws of Sine and Cosine, and graphing trigonometric functions.
5. Calculus (Pre-requisite: Pre-calculus): The topics covered include functions, graphs, limits, continuity, derivatives, second derivatives, applications of derivatives, antiderivatives, integrals, applications of integrals, Fundamental Theorem of Calculus, sequences, series, and Taylor series.
6. Introduction to JavaScript with Webpage Design:
This course is for beginners only. No prior programming experience is required. Learn HTML, the language of the Internet. Learn to create Java Scripts that bring "life" to your web pages.
7. Fundamentals of Computing with Visual Basic Programming Language: This course is for beginners only. No prior programming experience is required. Topics included are (but not limited to) Basics of Computing, Controls, Lists and Menus, Events, Functions, Arrays, Multiple Document Interface, Object-based Programming, and BASIC applications.
8. Fundamentals of Computing with Visual C++ Programming Language: This course is for beginners only. No prior programming experience is required. Topics included are (but not limited to) Basics of Computing, Control Structures, Functions, Arrays, Strings and Files, Pointers, Classes, Operator Overloading, Inheritance, and C++ Applications.

**For more information, please contact Dr. J. E. Lin at (703)973-6889 or
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Website address: <http://www.mtty.org>**

**THE REGISTRATION FORM FOR 2008 SUMMER ENRICHMENT PROGRAM IN
MATHEMATICS AND TECHNOLOGY FOR TALENTED YOUTH AT GEORGE MASON
UNIVERSITY**

Name _____ Home phone (_____) _____
Address _____
Email _____ Parent's work phone (_____) _____
School _____

Entering grade level as of 9/08 _____ Interested in the carpool? Yes _____, No _____.

Course selection: (Place the course choice 1, 2, 3, ... in the order of preference, 1 is the most desirable, etc.)

Term 1 (June 23 - July 3, 2008, Monday through Friday)

Morning session (9:00 AM - 12:20 PM)

- Pre-algebra (\$400)
 Algebra 1 (\$400)
 Geometry (\$400)
 Algebra 2 with Trigonometry (\$400)

Afternoon session (1:00 PM - 4:20 PM)

- Introduction to JavaScript with Webpage Design (\$500)

Term 2 (July 7 - July 18, 2008, Monday through Friday)

Morning session (9:00 AM - 12:00 PM)

- Algebra 1 (\$400)
 Geometry (\$400)
 Algebra 2 with Trigonometry (\$400)
 Calculus (\$400)

Afternoon session (1:00 PM - 4:00 PM)

- Fundamentals of Computing with Visual Basic Programming Language (\$500)

Term 3 (July 21 - August 1, 2008, Monday through Friday)

Morning session (9:00 AM - 12:00 PM)

- Pre-algebra (\$400)
 Algebra 1 (\$400)
 Geometry (\$400)

Afternoon session (1:00 PM - 4:00 PM)

- Fundamentals of Computing with Visual C++ Programming Language (\$500)

*****The following information is required by George Mason University*****

Emergency Contact: The following person should be contact in case of emergency:

Name: _____ Relationship: _____

Telephone: _____

Name of the Health Insurance Company or HMO: _____

Insurance Policy Number _____

Risk Release Statement

The undersigned, being the parents/guardian of the above named student, certified that I hereby relieve the program coordinator and the instructors of any legal and financial responsibilities of the above named student for accident and sickness that may take place during the conduct of this program. I also agree, for myself, my heirs and assigns, to release and hold harmless George Mason University, the Commonwealth of Virginia, and their officers, employees and agents from any claim, damage, liability, injury, expense or loss, including defense costs and attorney's fees, arising from the above student's activities in the program.

Signed: _____ Date: _____

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Box 3736
George Mason University
4450 Rivanna Lane
Fairfax, VA 22030-4441

2008 Summer Enrichment Program

in

Mathematics and Technology For

Talented Youth (MTTY)

at George Mason University

| | Term 1 (6/23 - 7/3) | Term 2 (7/7 - 7/18) | Term 3 (7/21 - 8/1) |
|---------------------------------------------------------------------|------------------------|------------------------|------------------------|
| Morning Session | | | |
| Pre-algebra | open | | open |
| Algebra 1 | open | open | open |
| Geometry | open | open | open |
| Algebra 2 with Trigonometry | open | open | |
| Calculus | | open | |
| Afternoon session | | | |
| Introduction to JavaScript with Webpage Design | open | | |
| Fundamentals of Computing with Visual Basic Programming Language | | open | |
| Fundamentals of Computing with Visual C++ Programming Language | | | open |

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