

■ **PART B INTERESTS**

Prepare on a separate sheet of paper

- B-1** Describe some areas of mathematical studies and/or experiences (in or out of a classroom) that you have particularly enjoyed, and, for each of these experiences, say a few words about why you enjoyed it.
- B-2** Describe some areas of mathematical studies and/or experiences (in or out of a classroom) that you have not particularly enjoyed, and, for each of these experiences, say a few words about why you didn't enjoy it.
- B-3** Describe your plans and ambitions and how mathematics might support these goals.
- B-4** Describe why you wish to participate in the Summer Mathematics Institute at Oakland University.
- B-5** Sign your name.

■ **PART C OFFICIAL TRANSCRIPT**

- C-1** Include an official transcript or have your school send a copy to the institute.

■ **PART D PARENT OR GUARDIAN STATEMENT**

- D-1** Ask a parent or guardian to sign the following (or similar) statement, showing his or her support for your participation in the Summer Mathematics Institute. This statement provides an assurance that transportation will be provided. To assist in possible car-pooling arrangements, all parents of accepted students will receive the names, addresses, schools and phone numbers of camp participants.

My child, _____, has my enthusiastic permission to participate in Oakland University's Summer Mathematics Institute. I guarantee transportation to and from the Oakland University campus.

Parent's or Guardian's Signature: _____

Date: _____

■ **PART E TEACHER RECOMMENDATION**

- E-1** Ask your sponsoring mathematics teacher to write a recommendation on your behalf. The recommendation should include:

- Your name
- Teacher's name and position
- School name and address
- Teacher's telephone number
- How long the teacher has known you and in what capacity
- A description of your math problem-solving skills and why you would benefit from the Summer Mathematics Institute

■ **PART F THE PROBLEM SET**

- F-1** E-mail: echeng@oakland.edu

Web: <http://www.math.oakland.edu/ousmi06/prob.html>

The Problem Set is designed to reveal your thought processes and how you go about solving a problem (this activity will take a significant amount of time to complete).

Join Michigan's elite mathematics students at
Oakland University's Summer Mathematics Institute



Professor Eddie Cheng, Director
Summer Mathematics Institute
E-mail: echeng@oakland.edu
Web site: www.math.oakland.edu/ousmi.html



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THE 2006
SUMMER
MATHEMATICS
INSTITUTE

JUNE 26 — AUGUST 4
A FREE Day Camp for Bright
and Gifted Pre-College Students

An unparalleled experience | Take challenging college-level math courses | Earn up to eight college credits – free | Work with Oakland University's top-notch faculty | Open to Michigan's elite mathematics students



Registration material enclosed and online at: www.math.oakland.edu/ousmi.html
Oakland University | Rochester, MI

OAKLAND UNIVERSITY'S SUMMER MATHEMATICS INSTITUTE

■ THE INSTITUTE

Oakland University's Summer Mathematics Institute, a six-week day camp, provides bright and gifted high school students the opportunity to work with university faculty while taking challenging college-level math classes and earning college credit. All aspects of the day camp are free — including university tuition and fees, books, tutoring and counseling, lunch and supplies.

The institute offers two specifically chosen university courses (four college credits per class) that focus on advanced undergraduate mathematics and statistical concepts including probability theory, number theory, group theory, combinatorics, graph theory, statistics and linear algebra as well as supervised lab activity.

The SMI provides organized tutoring and advanced problem-solving sessions. Participants have access to SMI-designated computer facilities, fully networked with Internet and e-mail access codes. Instruction is provided in the use and ideas behind symbolic mathematical software, such as Maple or Mathematica, which solve sophisticated mathematical questions. Participants also work independently on self-directed mathematical investigations.

■ THE SCHEDULE

The six-week program runs Monday, June 26, through Friday, August 4, 2006. Classes are Monday through Thursday from 8:30 a.m. – 3:30 p.m. and Friday from 8:30 a.m. – 1 p.m. A free lunch is provided every day. (Note: SMI will not be held Monday, July 3, 2006 and Tuesday, July 4, 2006.)

Closing ceremonies for the program will be held Tuesday, August 6, 2006, at a banquet hosted by the institute. The participants' parents, mathematics teachers and school principals are encouraged to attend. At the ceremony, program participants will present mathematical work, highlighting what they learned, and receive a certificate of program completion.

■ THE HISTORY

The Summer Mathematics Institute was created and is completely funded through the gift of an anonymous donor. Now a top executive at one of the world's leading technology firms, the donor was a participant in a similar program at Oakland University more than 30 years ago. The gift covers all on-campus expenses, including university tuition and fees, books, tutoring and counseling, lunch and supplies.

"The summer camp offered a great opportunity for me to jump-start my college education. The classes offered are challenging and give students interested in mathematics the chance to see the subject isn't just plugging numbers into equations and memorizing formulas. I really enjoyed the other students and professors. Both made the experience enjoyable and unforgettable."

Raymond Kleinberg, previous OUSMI student

■ COURSE HISTORY

1996	APM 263 Discrete Mathematics MTH 372 Number Theory
1997	STA 226 Applied Statistics MTH 475 Abstract Algebra
1998	MTH 256/266 Linear Algebra/Linear Laboratory STA 405 Probability Models and Statistical Estimation
1999	APM 405 Linear Programming MTH 302 Introduction to Advanced Mathematical Thinking
2000	APM 405 Combinatorics: Enumeration STA 226 Applied Statistics
2001	APM 405 Introduction to Graph Theory MTH 461 General Topology
2002	MTH 256/266 Linear Algebra/Linear Laboratory MTH 372 Number Theory with Cryptography
2003	MOR 342 Introduction to Operations Research MTH 302 Introduction to Advanced Mathematical Thinking
2004	APM 405 Combinatorics: Enumeration MTH 361 Geometric Structures
2005	MTH 205 Introduction to Operations Research STA 226 Applied Statistics
2006	MTH 275 Linear Algebra MTH 372 Number Theory with Cryptography

■ FACULTY

SMI faculty are selected from OU's full-time Ph.D. holding faculty.

Director and Instructor: Eddie Cheng, Ph.D., associate professor and director of the Michigan Mathematics Prize Competition

Instructor: Baruch Cahlon, Ph.D., professor

■ ADMISSION CRITERIA

Admission to the Summer Mathematics Institute is selective.

- Participation is limited to 36 students.
- You must possess an exceptional talent and interest in mathematics.
- You must have completed your high school sophomore, junior or senior year. (Those who have completed their freshman year may apply if they possess exceptional talent and have accelerated their mathematical studies.)

■ ADMISSION DEADLINES

Applicants will be notified of admission by June 1, 2006. For full consideration, mail completed admission materials by May 15, 2006, to:

Professor Eddie Cheng, Director, Summer Mathematics Institute
Department of Mathematics and Statistics
Oakland University, Rochester, MI 48309-4485

REGISTRATION CHECKLIST

The application consists of six parts. Please cut and return this panel with application material (photocopies of the panel are fine). Application materials can be downloaded from the Web at: www.math.oakland.edu/ousmi.html

■ PART A GENERAL INFORMATION

Name: _____

Gender (circle one): Male Female

Permanent Address: _____

Telephone Number: _____

Date of Birth: _____

Soc. Sec. Number: _____

Name of Parent(s) or Guardian(s): _____

School Name: _____

School Address: _____

Name of your school principal: _____

Name of your sponsoring teacher: _____

What school grade will you complete by June 2006? _____

What mathematics course(s) are you enrolled in? _____

Include information on an attached sheet about any mathematics scores on ACT and/or SAT, performance in science fairs, MATHCOUNTS and/or the Michigan Mathematics Prize Competition, and other evidence of unusual mathematical talent and interest in the theoretical and playful aspects of mathematics and statistics.