

"I really enjoy the college atmosphere and the challenge of the courses."

"I get college credit for courses I will be required to take — now they'll be out of the way."

"The higher-level learning stimulates my interest."

JOIN  
OUR  
COMMUNITY  
OF  
SCHOLARS

## ELIGIBILITY

If you attend a designated high school in a participating district, you may attend the institute. If you are interested in attending, talk to your school counselor and determine whether you meet these requirements.

- be a senior
- have taken two years of algebra through advanced algebra, one year of plane geometry and one semester of trigonometry, which may be taken concurrently
- obtain a satisfactory score on the Mathematics Association of America Calculus Readiness Test, administered in the spring of your junior year (Transfer students, exchange students and students taking mathematics courses in the summer may take the test in August.)
- be highly motivated and willing to make a significant time commitment to studying

Exceptions to the eligibility criteria will be considered, and may be granted upon approval of the institute director.

## BENEFITS

The Mathematics and Physics Institute offers a first-class alternative learning experience; you'll gain immeasurably when you choose to participate in the institute.

In this exciting and unique program, you will:

- earn college credit while still in high school, **at no charge or at reduced rates**
- interact with talented students from other schools
- benefit from a low student-teacher ratio (one to two instructors in each course)
- meet leaders in science from academia, industry and government
- develop crucial learning skills needed in college
- experience the demands of college-level courses before enrolling full time
- receive academic counseling as desired or when needed
- receive assistance with college admission and financial aid
- receive individual attention from tutors as desired or when needed
- be eligible for one of five UMKC Chancellor's Tuition Award scholarships available only to institute students
- and you will feel special.



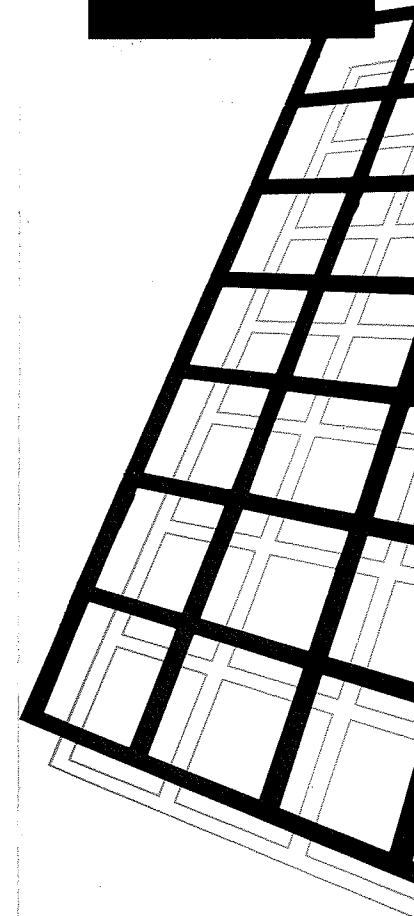
## INFORMATION ABOUT THE MATHEMATICS AND PHYSICS INSTITUTE

Contact a staff member at (816) **276-1272** ~~264-2663~~, or write or visit:

The Mathematics and Physics Institute  
UMKC - Truman Campus  
600 West Mechanic  
Independence, MO 64050.

## PARTICIPATING SCHOOL DISTRICTS:

Fort Osage      Kansas City, Mo.  
Independence      Raytown

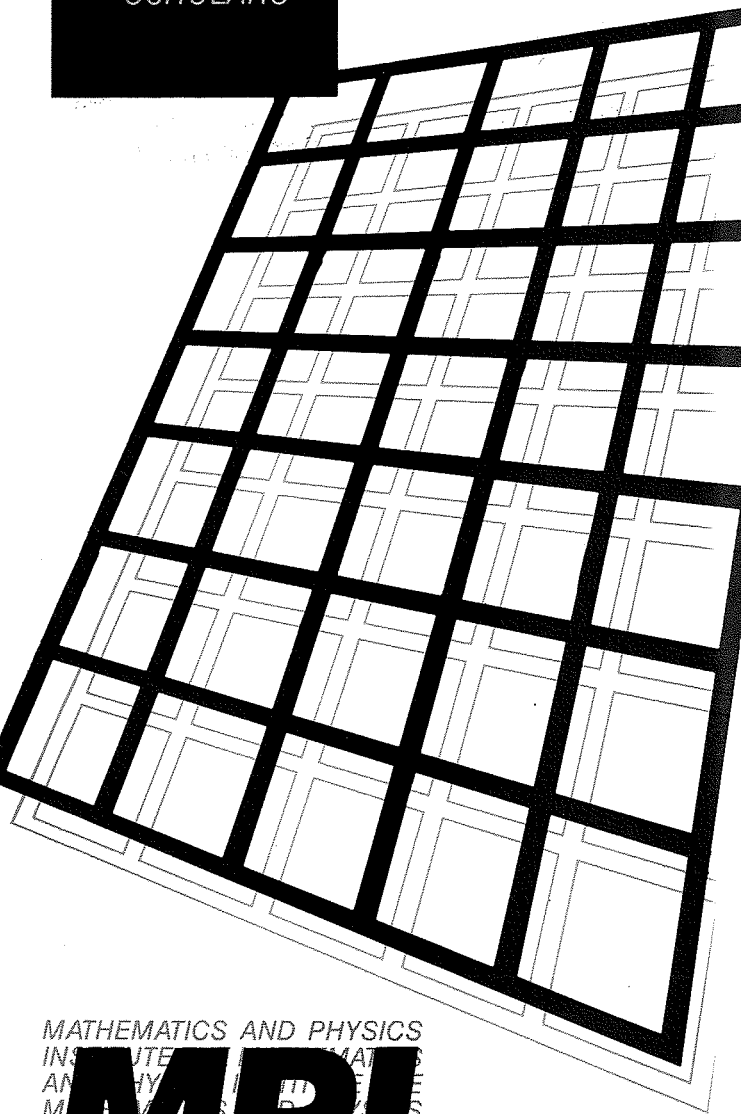


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# MPI

A program for talented high school students

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SCHOLARS



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# MPI

*A program for  
talented high school seniors*

***"I'm getting a feel for college life and the difficulty of the courses as compared to high school."***

### **Laboratory**

*In physics, an essential ingredient for understanding is "discovery." Learning physics is a "hands-on" process, and lab experiments using state-of-the-art equipment allow you to observe and measure, then draw conclusions about the physical phenomena you have observed.*

### **Tutoring**

*Supplemental instruction can help ensure a smooth transfer from high school courses to college courses. The tutoring staff is available not only at the institute, but also at the participating high schools.*

### **Enrichment and Field Trips**

*A unique part of the Mathematics and Physics Institute is the biweekly enrichment period, which features presentations by experts in the scientific and industrial communities. Among those who have addressed institute students have been engineers, mathematicians, physicians, meteorologists, university faculty and business people. You'll also have the opportunity to attend field trips and experience first-hand how mathematics and physics are used in the world around you.*

"The chancellor's award I received through the institute means I will worry less about finances. That helps me concentrate on my studies."

"It offers courses my high school does not and better physics laboratory facilities."

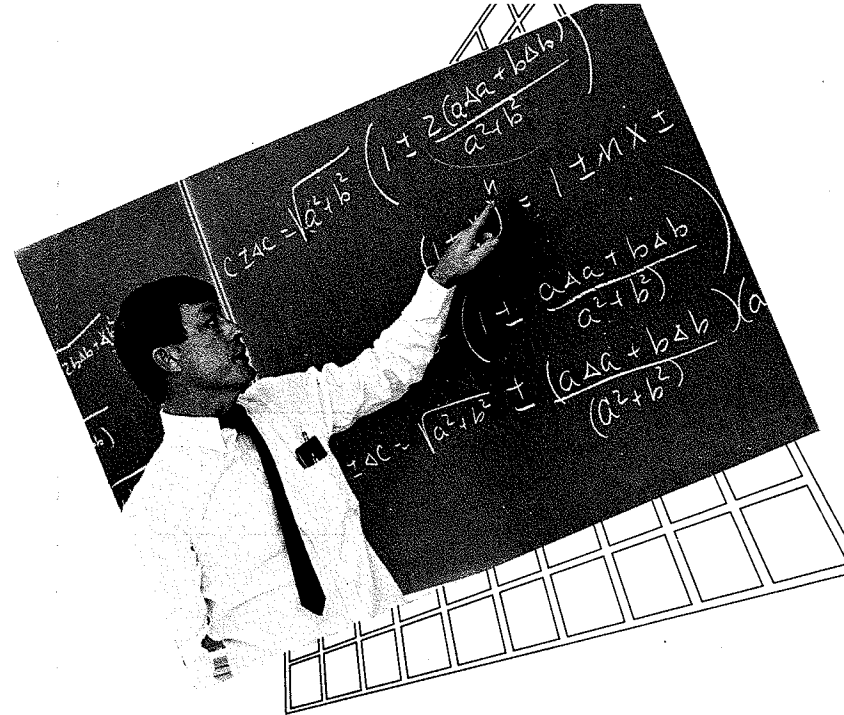
## CONCEPT

In looking for ways to meet the need for more intensive instruction in mathematics and physics for high school students, four Kansas City area school districts—Fort Osage, Independence, Kansas City, Mo., and Raytown—and the University of Missouri-Kansas City created a program to improve and strengthen instruction in these two subjects. With help from the Hall Family Foundation and the Kansas City Association of Trusts and Foundations, this cooperative effort established the **MATHEMATICS AND PHYSICS INSTITUTE** for talented high school seniors.



## PROGRAM

The program starts after Labor Day and continues to mid-May. You begin classes at the institute at 7:10 a.m. and return to your high school at 8:55 a.m. Courses now being taught at the institute are Calculus I, Calculus II and General Physics I. As the program expands, other courses in areas such as finite mathematics may be added to meet student needs. Courses are offered for college and high school credit and are identical in content and expectations to regular university courses. You may choose to take both calculus and physics, or to take only one course. The courses are taught by university faculty members and high school instructors from the participating districts. Lecture, problem solving, laboratory, tutoring and enrichment sessions, along with field trips and special projects, become multiple avenues for learning at the college level. In addition, the academic coordinator will help you with college applications, financial-aid information and academic counseling.



## Lectures

Learning through lectures and demonstrations means you'll sharpen your listening and note-taking skills. The Calculus I, II sequence has four days of lecture per week, while the year-long Calculus I and Physics I courses have two days of lecture each week.

## Problem Solving

Problem-solving sessions are another important component of the program. During these one-hour sessions, twice a week, students in the year-long Calculus I and General Physics I classes work problems in the presence of one or two instructors and one or two tutors. You are encouraged to discuss problems with each other and to analyze your reasoning strategies.

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