**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, 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

A program for talented high school students...
APPLICATION INFORMATION

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INFORMATION ABOUT THE MATHEMATICS AND PHYSICS INSTITUTE

Contact a staff member at (816) 276-1272 or write or visit:
The Mathematics and Physics Institute
UMKC - Truman Campus
600 West 12th Street
Independence, MO 64050.

PARTICIPATING SCHOOL DISTRICTS:

Fort Osage Independence Kansas City, Mo.
Independence Raytown

A program for talented high school seniors
meet the need for instruction in physics for high school students. Kansas City area teachers, who came to the University of Missouri, created a program to strengthen physics subjects. With the help of the Foundation and the Association of Women Physicists, this program was established 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.

**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.

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**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.

**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, physicists, 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.
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 the 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
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