



MSTL

Math, Science, Technology, & Leadership July 8—July 20, 2018

Audience

The Math, Science, Technology and Leadership program at Michigan State University is a two-week summer residential and commuter program for academically talented students who have completed grades 9 or 10. The eligibility criteria are: ACT Math score of 20 or Composite of 21, or SAT score of Math or Critical Reading 520 or Combined Total of 1020. In 2018, a total of twenty-six (26) students participated; nineteen (19) males and seven (7) females; fifteen (15) 9th graders, eleven (11) 10th graders.

Funding

MSTL programming and scholarships are funded by the W. B. and Candace Thoman Foundation and the Dorothy Lawshe Endowment. Student tuition covers the remaining program costs. Five (5) students were awarded financial aid scholarships.

Objectives

The academic focus of the MSL program is on mathematics, science, technology, and leadership and the applications in these areas. The goal is to match the intellectual abilities of talented adolescents with rigorous and challenging coursework which provides enrichment, but does not duplicate coursework that is part of the regular K-12 school curriculum.

MSTL offers opportunities for students

- * to experience active learning as they investigate problems that can be solved through a better understanding of mathematics, science, engineering, and technology
- * to focus on intensive areas of study that allow for interdisciplinary research using tools of mathematics, science, and technology
- * to link the tools of many career fields while focusing on real world problems

Description

MSTL students select two academic courses and one leadership workshop to attend each day for the two weeks of this residential and commuter program. Classes are held on the MSU campus, using campus classrooms, labs and special facilities. Taught by MSU faculty who were assisted by area high school teachers, students participate in two-hour lectures/labs in the morning and afternoon, followed by a 90 minute special workshop. There were sixteen (16) instructors, and nine (9) residential supervisory staff.

Each evening has fun evening activities scheduled for the group. Students went ice skating at the Munn Arena, visited the Abrams Planetarium, used of the IM pool and gymnasiums plus nightly activities planned by the program on-site coordinators and residential assistants. Students have 24/7 supervision in the dorm, to and from class, and during the evenings.

Outcomes

- * 92% of students rated this program as increasing their knowledge of different majors, career paths, and opportunities available at MSU
- * 88% of students said they would attend another GATE program in the future.
- * 100% of parents rated the overall program good or excellent

Parents were asked about the impact the MSTL program had on their child. Responses included:

"This program has been a game-changer for my daughter. She has attended for four years and it has given her so much confidence, improved her self-esteem, and left her with so many treasured memories. And she is always surprising me with tidbits of information she learned in her classes that I had no idea she knew! Thank you so much for giving her this experience".

"Both years he has participated, my son has left the program with new considerations for coursework in his regular studies. He is also making connections between the MSTL topics and his career path. He is reconsidering his age-old answer of what he wants to be when he grows up, which is a great experience to have ahead of undergraduate studies!"

"Her confidence is through the roof. She has had trouble in her small school socially and is really bored academically but at camp all the awkwardness goes away. She feels validated and accepted. She has also been able to learn things that are not even offered at her school".

"Career choice and confidence - experiencing college life and science careers has demystified these things for my kid and made them aware/motivated to pursue research".

Academic courses included: Physics, Microbiology, Mechatronics and Robotics, Biomath, Animation: Applied

Workshops included: Business Leadership, Rhetoric & Sociocultural Movements, Leadership & Economic Impact

Additional Information

2018 was the 1st year for the MSTL program on the MSU campus. The program drew students from Illinois, Ohio, North Carolina, and Massachusetts .

Contact Information

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