

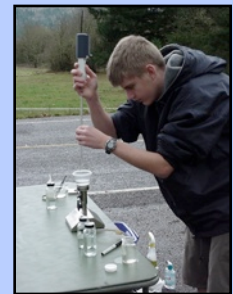
A New Career Path: The Science and Math Academy at Springfield High School

Helping students become accountants, doctors, and engineers.



How can students join us?

Students who seek guidance and career related opportunities in STEM fields simply need to enroll in advanced math and science courses. The Science and Math Academy will counsel and support all students throughout their stay at SHS, but students enrolled in courses beyond Algebra 2 and Chemistry will receive greater attention. Science and Math teachers at SHS are committed to inspiring students toward STEM careers with technology and inquiry teaching strategies.



Science and Math Academy Mission- “The Science and Math Academy at Springfield High School will inspire students to pursue science, technology, engineering, and math (STEM) careers.”

WHY SHOULD STUDENTS BE A PART OF THE SCIENCE AND MATH ACADEMY?

Many of our political and economic leaders desire a workforce with stronger science and math knowledge to fill the nation’s growing STEM professions. The Science and Math Academy at SHS hopes to inspire more students toward this lucrative and fulfilling career path with greater support for students, career related learning experiences, and a commitment to incorporate technology in the teaching of science and math for real world applications.

There are very few high school students who know the exact career path they wish to follow. In the ever changing economic landscape, it is important that students keep their options open. Level of math and science coursework in high school is a valid predictor of college success in any field. Department of Education studies have shown that students who advance beyond Algebra 2 in high school more than double their odds of bachelor degree attainment in college ¹. Harvard University studies indicated that success in university science courses was directly related to math level attainment in



high school and same subject science preparation in high school². These studies and others led the State of Oregon to recently change the Oregon High School Diploma requirements to include more math and science. The SMA at SHS will support all students who commit to improving their academic experience at SHS through advanced math and science, but also hopes to use the courses to increase interest in STEM professions.

Commitments of SMA Teachers to SMA Students

The staff of the Science and Math Academy will support students through several initiatives....

First, SMA students will receive regular guidance and counseling regarding college and career goals. Teachers in the advanced math and science courses will use guest speakers, former students, and the counseling and career centers of SHS to support SMA students. SHS is also seeking support for SAT preparation for SMA students, because high SAT scores are not only essential for college entrance, but also can lead to scholarships. Students who complete Biology 2 and Calculus could leave SHS with over 20 college credits at Lane Community College. The science and math staff will prepare students for local, state, and/or national science and math competitions, such as the Westinghouse Science, Lane County Math Fair, and Balsa Bridge Building competitions. The SHS science and math departments currently hold a district Science and Math Olympics for local middle schools. This event will provide SMA students and opportunity to inspire younger students and develop leadership skills.

Second, SMA students will perform career related learning experiences in a STEM-related profession. These experiences could be as short as a day (of volunteer work) or possibly extended paid internships with local businesses. The SMA is seeking business partners in STEM professions to offer students career related experiences. Local businesses have shown an interest in these experiences for a few reasons; Many local businesses simply realize the benefit of local students with science and math skills. Some businesses would like to inspire students to achieve more. Others may wish to hire SMA students who are likely to be skilled, responsible workers.

Lastly, SMA students will learn math and science through inquiry, hands-on, and technology rich techniques. The teachers of the SHS science and math departments are committed to teaching high school students the real world applications of the content learned in their courses. There has always been a great tradition of hands-on and inquiry science and math at SHS, but the departments have embraced technology recently. There are science and math teachers who use the CPS “clicker” system for student input, science probes for computerized data, internet simulations, podcasting, and much more.

Commitments of SMA Students to SMA Teachers

SMA students will achieve 4 credits in science (through Physics/ Chem 2/ or Biology 2) and 4 credits in math (through FST/ FST-PreCalculus/ or Calculus). SMA students will also achieve a 3.0 G.P.A at minimum and perform a career related experience in a STEM profession.

1. Adelman, C. 1999. *Answers in the Tool Box: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment*. Washington, DC: U.S. Department of Education.
 2. Harvard University (2007, July 29). “College Science Success Linked To Math And Same-subject Preparation”. *Science-Daily*. Retrieved December 2, 2007, from <http://www.sciencedaily.com/releases/2007/07/070726142017.htm>
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