SECONDARY ELECTIVE S.T.E.M. PROGRAMS

Digit All Systems provides additional Science/Technology/Engineering/Math (STEM) courses for secondary-level students that are in line with state evaluation standards. Designed for scholastic performance, these courses inspire creative learning with the utilization of fun and interesting elements.

Our Secondary Elective STEM Programs mission has three basic components: to *expose* disadvantaged students to career opportunities in video game design and development, to *educate* them in how to create games, and to *enhance* learning in academic subjects such as math and science. The purpose of the Lego Mindstorm Robotics Program and the Video Game Design course is to prepare students for higher level studies.

DAS conveniently provides various partner options for its STEM courses. Summer programs, classroom electives, and after school and weekend intramural programs are available, and classes are provided either on-site or at a local DAS facility.

Lego Mindstorm Robotics Program   Grade: Middle/High

This course helps students to develop math, science, technology, engineering and computer programming skills while they design, build, and test autonomous and remote-controlled robots for competition and display. Students will build robots to navigate independently, sense and respond to their environments, collect, lift, place objects, and a host of other operations. The Robotics Program provides fun and creative hands-on projects that help students build self-esteem and confidence while developing the skills needed to help them shape America's technological future.

> **Course length**: 80 instructional hours (40 hours of class instruction and 40 hours of hands-on class discussion, lab exercises, and testing).

Video Game Design   Grade: Middle/High

This course is designed to prepare youth for college-level study in video game design and related fields such as computer science, digital art and engineering, and introduces career alternatives. Students are introduced to the creative and technical process for the design and programming of computer video games, creating the foundation for more complicated computer programming language. Students are educated in how to create games and are given enhanced learning in science, technology, engineering, and math concepts.

> **Course length**: 20 instructional hours (10 hours of class instruction and 10 hours of hands-on class discussion, lab exercises, and testing).

FACT: The strength of the STEM workforce is viewed politically, governmentally, and academically as an indicator of a nation's ability to sustain itself.

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