

Robotics

Instructor: Richard Griffith

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Course Description

The Robotics course introduces the world of robotics engineering, manufacturing and operations. Students learn design, controls, programming, and sensor (e.g., ultrasonic, touch, infrared) use. They learn engineering is designing to meet people's needs using engineering processes under time constraints and budgets mirroring industry practices. Their projects may include designing, building, and operating robots to help the law enforcement class clear a room searching for suspects, building hypersonic-design aircraft launched by High Powered Rockets or programming humanoid robots. Humanoid robots have facial recognition, understand language, speak, and move autonomously. Projects may include teaching the robots to play soccer, dance, or aid humans needing conversation or assistance in the home.

Materials and Fees

Mandatory	
HCTC polo shirt (required for field trips, special events, and Dress for Success day) – payment due the first week of class	\$20.00
QUAD RULED Composition Notebook - 200 pgs, 9.75" x 7.5" at Walmart or Target	\$2.00
Student Organizations – required to compete in contests (subject to change)	
• SkillsUSA membership	\$16.00
• SkillsUSA student competition fee	\$31.00
• Technology Students Association	\$17.00
Optional (i.e., Student Funded Trips; Fees are Mandatory if Student Attends)	
International Space Settlement Design Competition, NASA, Houston	\$200.00
- US qualifying round mimics real engineering project to design a vehicle to transport 10,000 colonists to Mars	
- More funds will be needed if the student wins and is selected for the international competition. Prior international competitions were at Kennedy Space Center, FL.	

Transportation

EMS ISD provides daily transportation between HCTC and the home campuses. Students may drive personal vehicles to and from HCTC with a signed parent/guardian transportation form and a proof of automobile insurance on file at HCTC. HCTC will issue no-cost parking passes after receiving both items. Students are not allowed to transport other students during the school day.

Eagle Mountain-Saginaw ISD does not discriminate based on race, color, national origin, gender, or handicap in its programs, services, or activities as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended. Eagle Mountain-Saginaw ISD assures the lack of English language skills are not a barrier to admission and participation in any educational or Career and Technology Education program.

Es norma de Eagle Mountain-Saginaw Independent School District no discriminar por motivos de raza, color, origen nacional, sexo o impedimento, en sus programas, servicios o actividades vocacionales, tal como lo requieren el Título VI de la Ley de Derechos Civiles de 1964, según enmienda; el Título IX de las Enmiendas en la Educación, de 1972 y la Sección 504 de la Ley de Rehabilitación de 1973, según enmienda. Eagle Mountain-Saginaw Independent School District tomará las medidas necesarias para asegurar que la falta de habilidad en el uso de la lengua inglés no sea un obstaculo para la admisión y participación en todos los programas educativos y vocacionales.