

Cedar Creek High School

Magnet Programs

Overview

The Magnet Programs at Cedar Creek High School represent two focused curricular choices. Each offering has at its core a design to move students beyond a customary high school education, and to provide them with a concentrated, topic-specific program that will serve to prepare them for either University study of the topic or entrance into a career in the field of study. Each Magnet Program consists of a series of electives to be taken over a student's four-year career that will expose them to the vocation and allow the student to study with peers who share their educational interests and aspirations. Whether a student selects the *Engineering* or *Environmental Science* Magnet, they will be provided with a "hands-on" learning experience delivered not only from Cedar Creek teachers, but also Professionals from the field of study and College Professors utilizing real-world applications of their knowledge. In addition to the electives offered as the curricular-core of the Magnet Programs, a number of the standard courses required for graduation (such as English, History, or Math) will contain components directly related to the course of study in the Magnet selected.

Any student within the Greater Egg Harbor Regional High School District is eligible for participation in either Magnet Program.

ENGINEERING

Cedar Creek's Engineering Magnet is run in conjunction with nationally accredited *Project Lead the Way*, currently in operation in 49 states. The combination of traditional math and science courses with innovative *Pathway to Engineering* courses prepares students for college majors in engineering and E/T fields and offers them the opportunity to earn college credit while still in high school.

Pathway to Engineering courses engage high school students through a combination of activities-based, project-based, and problem-based (APPB) learning. This approach encourages students to develop skills that will also assist them in other rigorous courses and programs, such as Honors and Advanced Placement. Specific abilities focused on include:

- * Problem Solving (Individual and Team Projects)
- * Public Speaking
- * Logic and Reasoning
- * Research and Data Analysis

Cedar Creek's teachers involved with *Project Lead the Way* will have completed additional training specific to the Engineering Program, and students will be eligible to

receive college credit for specific courses within the program. Some of the courses to be offered will include:

- * Introduction to Engineering Design
- * Principles of Engineering
- * Digital Electronics
- * Civil Engineering and Architecture
- * Engineering Design and Development

Cedar Creek will also be collaborating with Rowan University and professors within their Engineering School through this Magnet. The academic expectations will be both challenging and rewarding, and allow students with an interest in the area of Engineering to begin their advanced studies during their high school years.

ENVIRONMENTAL SCIENCE

The *Environmental Science* Magnet will offer students interested in pursuing environmental-related fields of study at the college level or similar careers an opportunity to begin advanced course-work during their high-school years. The basic skills addressed will include:

- * Inquiry-based Learning and Lab-work
- * Data Collection and Assessment / Evaluation
- * Environmental Impact and Conservation Concerns
- * Field work and Collaborative Projects
- * The Role of Government and Society in Environmental Policy and Perception

Coursework is being designed through a collaborative effort with Stockton College and professors within its Environmental Science School. The curriculum will not replace any of the traditional science courses offered, but rather serve to deepen a student's knowledge and understanding in a parallel, focused approach. Some of the courses expected to be offered will include:

- * Environmental Sciences and Methodologies
- * Ecology
- * Human Impact and the Global Environment
- * Environmental Law and Resource Management
- * AP Environmental Science

Students will interact with professionals from the field and local and state agencies to gain real-world experiences and begin establishing their own contacts within the field. The program will provide students with an opportunity to seek transfer of the credit from its courses to the college / university level (pending approval of specific institution).