Advanced Computer Science (6 Credit Hours)

The Advanced Computer Science track is open to a total of 20 high school students that meet the requirements for program admission.

Computer science is the use of software development languages to solve problems in all areas of business, industry, and government. Computer science deals with the theoretical foundations of information and computation, and with practical techniques for their implementation and application. Computer science is an exciting modern field of information technology that involves the interdisciplinary study of math, science, engineering, and computers.

This program would appeal to students who are interested in setting themselves apart from those who receive degrees in the traditional field of computers. The computer science program is designed for students who plan to attend a two- or four-year college or university with a major in information technology or computer science. After completing this program, the student will be better prepared to perform at the junior level in a postsecondary software engineering or computer science program.

Semester One – August to December
ECA127 meets three times a week on Monday, Wednesday and Friday 7:30 to 8:45am

_ECA127: Programming Logic and Problem Solving (3 credit, 4 contact hours)_
This course addresses the student to program logic and problem solving techniques. Primary emphasis is on achieving familiarity with structured programming principles through awareness and application of structured programming and object-oriented concepts and techniques. Upon course completion, the student should have an understanding of how to develop the logic to solve a programming solution using structured flowcharts and Pseudocode.

Semester Two – January to May
ECA222 meets three times a week on Monday, Wednesday and Friday 7:30 to 8:45am

_ECA222 – C++ Programming (3 credit, 4 contact hours)_
This course focuses on software engineering concepts, control structures, functions, arrays, pointers and strings found in C++. In addition, the course also examines data abstraction, classes, and operator overloading in C++. Principles of good software engineering are emphasized. Hands-on labs prepare students to solve real-world problems.

Prerequisites
ECA127 – Programming Logic and Problem Solving

There is no cost to the student for this program.

INTERESTED STUDENTS need to meet with their guidance counselor and complete a dual enrollment admissions packet for admission to Stark State College and this program. Completed student enrollment packets (dual enrollment application form, high school transcripts, COMPASS scores & course enrollment form) need to be sent to Waneta Petty at Stark State by May 1, 2013.