

## COMPUTER SCIENCE/ENGINEERING

### ELECTIVE COURSES:

GRADE 9	GRADE 10	GRADE 11	GRADE 12
Programming with Python	Programming with Python Principles of Engineering	Programming with Python Principles of Engineering	Programming with Python Principles of Engineering

#### **315    Programming with Python**

**2 terms            1/2 credit**

**Pre:** None

**Grade Level:** 9-12

**Course Summary:** Python is a widely used, very versatile programming language that is relatively easy to read and write. Students will be introduced to the basics of python and programming. Students will learn how to complete simple math operations, manipulate strings (text), collect user input, flow control, and write functions. This is a beginning level course; you do not need prior programming or coding experience.

#### **316    Principles of Engineering (POE)**

**2 terms            1/2 credit**

**Grade Level:** 10 – 12

**Course Summary:** Designed for 10th or 11th grade students, this course is designed to introduce students to basic electronics and automation. Students will learn to design basic electronic circuits and write computer code to control devices such as servos and motors which respond to various sensor inputs. Students will develop problem-solving skills and apply their knowledge of mechanisms and programming to create solutions to various challenges. Students will also learn how to properly document their work and communicate their results and solutions