

North Hunterdon-Voorhees Regional High School District
Annandale, NJ

The following curriculum changes are being proposed for the 2018-19 school year:

Name changes:

- Change the name of Small Engines I (069) to Power Technology I
- Change the name of Small Engines II (070) to Power Technology II
- Change the name of Communication and Digital Literacy through Science and Engineering (499) to Introduction to STEM
- Change the name of Communication and Digital Literacy through Humanities (216) to Digital Media and Communication

Change in district requirements:

- Starting with the class of 2022, Communication and Digital Literacy (216 and 499) will no longer be a graduation requirement
- Starting with the class of 2022, provide students with more flexibility in when and how they fulfill the NJDOE 2.5-credit Financial Literacy requirement:
 - Students can take the 2.5-credit Financial Literacy (770) class at any point during their high-school career (was previously taken during freshman year)
 - Students can fulfill the Financial Literacy requirement by taking the following course:
 - AP Micro/Macroeconomics (742)

New courses:

- Python (programming class; 2.5 credits)
 - Python is a language with a simple syntax, and a powerful set of libraries. It is an interpreted language, with a rich programming environment, including a robust debugger and profiler. While it is easy for beginners to learn, it is widely used in many scientific areas for data exploration. This course is an introduction to the Python programming language for students with limited programming experience. We cover data types, control flow, object-oriented programming, and graphical user interface-driven applications. The examples and problems used in this course are drawn from diverse areas such as text processing, simple graphics creation and image manipulation, HTML and web programming, and genomics.
- Data Structures (5 credits)
 - This year-long course continues and deepens students' understanding and practice of object oriented programming. Students are expected to have familiarity with programming in Java at the AP Computer Science A level. Core topics in the context of the Java programming language include practical implementations of fundamental and more advanced data structures (linked lists, hash encoded storage, binary search tree and red-black trees, algorithms for organizing and manipulating data - including sorting, searching, and traversal algorithms), and time complexity of algorithms in a problem-solving oriented context. In-depth exploration of graph traversal algorithms (depth first search, breadth first search, shortest paths, and connected components) and string processing algorithms (substring search and string compression) is also included. Much of the course is project-based, with assignments stressing the design of classes and algorithms appropriate to a particular problem.