POLY-POLYTECHNIC INSTITUTE

POLY 1003 Frontiers in Emerging Technologies, First-year Experience 3 Credit Hours
Students explore and apply emerging technologies like artificial intelligence, cybersecurity, and digital manufacturing. Critical thinking and civil discourse are emphasized as students examine the ethical, cultural, and societal impacts of these technologies. This course helps students understand their role as digital citizens, preparing them to contribute positively to industries and their communities. (F, Sp) [V-FYE].

POLY 1203 Foundations of Programming for Emerging Technologies 3 Credit Hours
This course introduces Python programming fundamentals, focusing on core concepts such as binary computation, problem-solving techniques, and algorithm development. Students will learn about procedural and data abstractions, program design, debugging, testing, and documentation. Key topics include Python-specific data types, control structures, functions, parameter passing, built-in libraries, arrays, and object-oriented programming with inheritance. Laboratory sessions will provide hands-on experience. (Sp)

POLY 2203 Applied Statistics for Modern Computing 3 Credit Hours
Prerequisite: MATH 1503. This course is an introduction to basic statistical terminology, organization of data, measures of central tendency and dispersion, review of combinations, permutations, and probability, binomial and normal distributions, hypothesis testing, and a variety of other statistical techniques. Bias and Variance will be discussed in the context of model evaluation. This course emphasizes the development of critical statistical thinking skills. (F)

POLY 2513 Applied Discrete Mathematics for Computing 3 Credit Hours
Prerequisite: MATH 1503. This course is an introduction to the theory of discrete structures with an emphasis on the application of discrete math/structures for problem solving. Topics include combinatorics, relations, functions, computational complexity, recurrences, and graph theory. (Sp)