

ADVANCED FUNCTIONS AND MODELING

Course Code: 24002X0C **Fee (if applicable):** n/a

Offered at: All High Schools **Grade(s):** 10,11,12

Prerequisite: NC Math III

ADVANCED FUNCTIONS AND MODELING – Honors

Course Code: 24005X0C

Prerequisite: NC Math III

This fourth math course provides an in-depth study of modeling and applying functions. Linear, quadratic, cubic, trigonometric, exponential, logarithmic and piece-wise functions will be used to solve problems. Students will also analyze data and apply probability concepts to solve problems. Home, work, recreation, consumer issues, public policy, and scientific investigations are areas from which applications will originate. Appropriate technology will be used regularly for instruction and assessment. The final exam for this course is the NC Final Exam for AFM.

AFM is intended for students for students who wish to be NC University system Ready and who may want to pursue a STEM course of study. It is also appropriate as an additional course prior to Pre-Calculus or Calculus.

STATISTICS-ADVANCED PLACEMENT

Course Code: 2A037X0CAP **Fee (if applicable):** n/a

Offered at: All High Schools **Grade(s):** 10,11,12

Prerequisite: Pre-Calculus (SBHS & WOHS – AFM is the prerequisite)

Advanced Placement Statistics is an introductory, non-calculus based, college course in statistics. The four major topics studied include organizing data, producing data: samples and experiments, probability: foundations of inference, and inference: conclusions with confidence. Students entering the course should be proficient in reading mathematical text and be willing to research independently outside of class time. A grade of B or higher in Algebra II and/or NC Math III is recommended for this course. Students are expected to take the AP examination. The student may earn college credit for successful completion of the course and AP examination.

PRE-CALCULUS HONORS

Course Code: 24035X0C **Fee (if applicable):** n/a

Offered at: All High Schools **Grade(s):** 9,10,11,12

Prerequisite: NC Math III and/or Advanced Functions and Modeling (SBHS – AFM is the prerequisite)

Pre-Calculus Honors provides students an honors-level study of trigonometry, advanced functions, analytic geometry, and data analysis in preparation for calculus. Applications and modeling will be included throughout the course of study. The final exam for this course is the NC Final Exam for Pre-Calculus Honors.

CALCULUS AB-ADVANCED PLACEMENT

Course Code: 2A007X0CAP **Fee (if applicable):** n/a

Offered at: All High Schools **Grade(s):** 10,11,12

Prerequisite: Pre-Calculus

This course provides a review of the concepts covered in Pre-Calculus with an emphasis on functions (particularly trigonometric). The course will introduce the student to limits and topics in differential and integral calculus. Students will also have an opportunity to explore conic sections and polar coordinates. Students taking this course are encouraged to take the AP exam.