ADVANCED PLACEMENT COURSES AT MIDWOOD

MATH & COMP SCI

AP Calculus AB

Explore the concepts, methods, and applications of differential and integral calculus. You'll work to understand the theoretical basis and solve problems by applying your knowledge and skills.

Prerequisites: 3 math regents & pre-calculus

AP Calculus BC

Explore the concepts, methods, and applications of differential and integral calculus, including topics such as parametric, polar, and vector functions, and series. You'll perform experiments and investigations and solve problems by applying your knowledge and skills.

Prerequisites: honors pre-calculus or accelerated Algebra II

AP Computer Science A

Get familiar with the concepts and tools of computer science as you learn a subset of the Java programming language. You'll do hands-on work to design, write, and test computer programs that solve problems or accomplish tasks.

Prerequisites: Algebra II/Trigonometry

AP Computer Science Principles

Learn the principles that underlie the science of computing and develop the thinking skills that computer scientists use. You'll work on your own and as part of a team to creatively address real-world issues using the tools and processes of computation

Prerequisites: Geometry

AP Statistics

Learn about the major concepts and tools used for collecting, analyzing, and drawing conclusions from data. You'll explore statistics through discussion and activities, and you'll design surveys and experiments.

Prerequisites: Algebra II/Trigonometry

LIFE & PHYSICAL SCIENCE

AP Biology

Study the core scientific principles, theories, and processes that govern living organisms and biological systems. You'll do hands-on laboratory work to investigate natural phenomena.

Prerequisites: Living Environment & Chemistry regents

AP Chemistry

Learn about the fundamental concepts of chemistry including structure and states of matter, intermolecular forces, and reactions. You'll do hands-on lab investigations and use chemical calculations to solve problems

Prerequisites: Living Environment and Algebra regents; regents Chemistry and regents Geometry

AP Environmental Science

Explore and investigate the interrelationships of the natural world and analyze environmental problems, both natural and human-made. You'll take part in laboratory investigations and field work.

Prerequisites: Living Environment & Chemistry regents

AP Physics 1

Learn about the foundational principles of physics as you explore Newtonian mechanics; work, energy, and power; mechanical waves and sound; and introductory, simple circuits. You'll do hands-on laboratory work to investigate phenomena.

Prerequisites: Living Environment, Chemistry, and Geometry Regents; regents Physics

AP Physics 2

Expand your understanding of physics as you explore topics such as fluids; thermodynamics; electric force, field, and potential; electric circuits; magnetism and electromagnetic induction; geometric and physical optics; and quantum, atomic, and nuclear physics. You'll do hands-on and inquiry-based in-class activities and laboratory work to investigate phenomena.

Prerequisites: Regents Physics or AP Physics 1 and Algebra II/Trigonometry

AP Physics C: Electricity & Magnetism

Explore concepts such as electrostatics, conductors, capacitors and dielectrics, electric circuits, magnetic fields, and electromagnetism. You'll do hands-on laboratory work and in-class activities to investigate phenomena and use calculus to solve problems.

Prerequisites: Regents Physics or AP Physics 1 & Pre-Calculus

Corequisite: Calculus

AP Psychology

Explore the ideas, theories, and methods of the scientific study of behavior and mental processes. You'll examine the concepts of psychology through reading and discussion and you'll analyze data from psychological research studies.

Prerequisites: Living Environment and Earth Science or Chemistry Regents

ADVANCED PLACEMENT COURSES AT MIDWOOD

ENGLISH

AP English Language and Composition

Learn about the elements of argument and composition as you develop your critical-reading and writing skills. You'll read and analyze nonfiction works from various periods and write essays with different aims: for example, to explain an idea, argue a point, or persuade your reader of something

Prerequisites: ELA Regents score of 85+

AP English Literature and Composition

Learn how to understand and evaluate works of fiction, poetry, and drama from various periods and cultures. You'll read literary works and write essays to explain and support your analysis of them.

Prerequisites: ELA Regents score of 85+

AP Capstone Seminar

Develop and practice the skills in research, collaboration, and communication that you'll need in any academic discipline. You'll investigate topics in a variety of subject areas, write research-based essays, and design and give presentations both individually and as part of a team.

AP Capstone Research

Build on what you learned in AP Seminar to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, you will design, plan, and conduct a year-long research based investigation to address a research question

Prerequisites: AP Capstone Seminar

SOCIAL STUDIES

AP World History

Study the cultural, economic, political, and social developments that have shaped the world from c. 1200 CE to the present. You'll analyze texts, visual sources, and other historical evidence and write essays expressing historical arguments.

AP United States History

Study the cultural, economic, political, and social developments that have shaped the United States from c. 1491 to the present. You'll analyze texts, visual sources, and other historical evidence and write essays expressing historical arguments.

AP Human Geography

Explore how humans have understood, used, and changed the surface of Earth. You'll use the tools and thinking processes of geographers to examine patterns of human population, migration, and land use.

AP US Government and Politics

Study the key concepts and institutions of the political system and culture of the United States. You'll read, analyze, and discuss the U.S. Constitution and other documents as well as complete a research or applied civics project.

Corequisite: AP Macroeconomics

AP Macroeconomics

Explore the principles of economics that apply to an economic system as a whole. You'll use graphs, charts, and data to analyze, describe, and explain economic concepts.

Corequisite: AP US Government and Politics

WORLD LANGUAGES

AP French Language and Culture

Develop your French language skills and learn about the cultures in French-speaking parts of the world. You'll practice communicating in French and study real-life materials such as newspaper articles, films, music, and books.

Prerequisite: French LOTE Exam

AP Spanish Language and Culture

Develop your Spanish language skills and learn about the cultures in Spanish-speaking parts of the world. You'll practice communicating in Spanish and study real-life materials such as newspaper articles, films, music, and books

Prerequisite: Spanish LOTE Exam

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