



**Math Department- Academic Expectations for Honors and AP Classes**

**AP courses provide students with the critical thinking skills expected in a college level course. Teachers of AP courses follow a required course outline and prepare students with the knowledge and skills necessary to be successful on the Advanced Placement examination which takes place in May.**

**Honors Math Courses are typically the path a student may choose to prepare for AP math courses in the future as well as prepare them for a college level preparation. A student should not feel that they need to choose honors in all of their areas of study but rather focus on their strongest courses or the courses that are in their area of interest. There is a substantial difference in rigor between AP/Honors courses and the regular courses.**

**The below chart provides an approximation of the time and assignments for each AP and Honors course offered in the Math Department. In order to make appropriate and informed choices at HSS, it is to your advantage to understand the rigor of each course.**

Area of Study	# of pages to read to prepare for each class	# of hours to study/class	Tests/Quizzes	Major Projects	Summer Assignments	Comments
Multivariable Calculus & Linear Algebra (Semester courses – Dual Enrollment course with GMU)	6-10 pages of mathematical concepts, theorems and examples.	Typically, a student should be studying or doing practice work for about 60 minutes for each class.	2-3 of each per quarter	n/a	The summer assignment should take about 1-2 hours. It contains practice on previously learned concepts for skill practice.	This is a very rigorous course intended for students who wish to pursue a math/science related field. BC Calculus is a prerequisite for these courses.
BC Calculus	6-10 pages of mathematical concepts, theorems and examples.	Typically, a student should be studying about 60-90 minutes for each class.	2-3 major test / quarter as well as 3-6 quizzes per quarter.	There is one major project/presentation after the AP exam. There are 2-3 shorter projects during the year.	The summer assignment should take about 4-6 hours. This is based on previous math classes.	This is a very rigorous course intended for students who wish to pursue a math/science related field. Honors Pre-calculus is a prerequisite for this course.

AB Calculus	6-10 pages of mathematical concepts, theorems and examples.	Typically, a student should be studying about 60-90 minutes for each class.	2-3 major test / quarter as well as 3-6 quizzes per quarter.	There is one major project/presentation after the AP exam. There are 2-3 shorter projects during the year.	The summer assignment should take about 4-6 hours. This is based on previous math classes.	This course is a very demanding course which may allow a student to pass out of a math requirement in college. In addition, this course would prepare a student to pursue a math or science major.
AP Statistics	6-10 pages of mathematical concepts, theorems and examples.	Typically, a student should be studying about 45-60 minutes for each class.	2-3 major test / quarter as well as 3-6 quizzes per quarter.	This course has no major projects but may include 1-2 small projects, short labs, or activities each quarter.	The summer assignment should take about 3-4 hours and is intended to build a student's enthusiasm for statistics.	This course is increasing in popularity as statistics is now about 25% of the new SAT. This is also becoming the most common required math course for liberal arts majors in many colleges. Algebra 2 is the prerequisite for this course. We recommend the student has had previous experience in Honors or AP courses in Math, English or Social Studies.

AP Computer Science	Mostly project based with required studying and programming outside of class.	Typically, a student should be studying about 45-60 minutes for each class.	2-3 major test per quarter as well as 3-6 quizzes per quarter.	This course contains several projects each quarter.	No summer assignment	Recommended for students who have strong math backgrounds as well as a strong interest in computer programming. Computer Science is a pre-requisite for the AP Computer Science course.
AP Computer Principles	8-12pages of reading/class.	Typically, a student should be studying about 45-60 minutes for each class.	2-3 major test / quarter as well as 3-6 quizzes per quarter.	This is a new course that is still under development. We expect the course will have at least one major project during the year as well as the AP exam.	No summer assignment	This course introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. With a unique focus on creative problem solving and real-world applications, AP Computer Science Principles prepares students for college and career. The College Board recommends that students successfully complete a high school algebra course like Algebra I with a strong foundation in basic algebraic concepts dealing with function notation and problem-solving strategies. Students do not need to have prior knowledge of any programming language.

Honors Pre-calculus	6-10 pages of mathematical concepts, theorems and examples.	Typically, a student should be studying about 45-60 minutes for each class.	2-3 major test / quarter as well as 3-6 quizzes per quarter.	There are no major projects for this course.	No summer assignment	This is highly recommended for students who intend to take AP Calculus in HS or pursue a math/science career in the future.
Honors Algebra 2	6-10 pages of mathematical concepts, and examples.	Typically, a student should be studying about 45-60 minutes for each class.	2-3 major test / quarter as well as 4-6 quizzes per quarter.	Expect a short project near the end of the year.	Expect to have a summer assignment. This will be Algebra review and should take 1-2 hours..	This is highly recommended for students who intend to take AP Calculus in HS or pursue a math/science career in the future.
Honors Geometry	5-8 pages of mathematical concepts, and examples.	Typically, a student should be studying about 45-60 minutes for each class.	2-3 major test / quarter as well as 3-6 quizzes per quarter.	Students should expect several projects throughout the year and a cumulative final.	You should expect a summer assignment. The assignment should take 1-3 hours.	This is highly recommended for students who intend to take AP Calculus in HS or pursue a math/science career in the future.
Honors Algebra 1	5-8 pages of mathematical concepts, and examples.	Typically, a student should be studying about 45-60 minutes for each class.	2-3 major test / quarter as well as 3-6 quizzes per quarter.	There are no major projects for this course.	No summer assignment	This is highly recommended for students who intend to take AP Calculus in HS or pursue a math/science career in the future.