HOLTON-ARMS SCHOOL

The Transition from MS to US Mathematics and Science

Math & Science Placement Process for Rising 9th Graders

As the eighth-graders transition to the Upper School, we hope to be transparent and strive for equity and consistency in the honors placement process. Below are the criteria that will be used by the Math and Science departments to determine placement in Honors courses in the Upper School. We developed this process with great thought, a keen understanding of age appropriateness, and deep experience working with students in their math and science careers. We aim to place students at levels that build foundational skills and provide an appropriate challenge. When over-challenged, students often miss the opportunity to build these foundational skills and competencies, and therefore, suffer consequences in the long term. Therefore, rising ninth graders need to take courses that will be challenging, and provide opportunities for success while providing appropriate support as well. For this reason, we use four data points to make our Honors recommendations for ninth grade. They are:

1. A Geometry/Physics Readiness Assessment that is administered in late April or early May. This one-hour assessment is the same one given to ***new-to-Holton*** incoming ninth-grade students for placement.
2. Student performance (grades) in math and science during their seventh and eighth-grade years
3. STARS Benchmark Assessment Scores (if available)
4. Math and Science Learning Competencies: We recommend students for Honors classes who not only meet course-specific competencies but also consistently demonstrate high-level problem-solving. Many middle- and high-school students are still honing these skills, which is developmentally appropriate. We know each individual will follow a unique path in their journey—for many, it's just a matter of time, maturity, and development. The competencies are:

   Readiness and Foundations:
   Demonstrates fluency with numbers; an ability to synthesize information, make connections, and draw conclusions. Shows a deep level of conceptual understanding rather than just memorization of procedures. Possesses strength in reading comprehension and proficiency with decoding language that is necessary for application and word problems.

   Curiosity and Interest:
   Embraces problem-solving and stretches to accept challenge and ambiguity. Demonstrates joy in the learning process and flexible thinking. Exhibits a willingness to think deeply about mathematical applications.

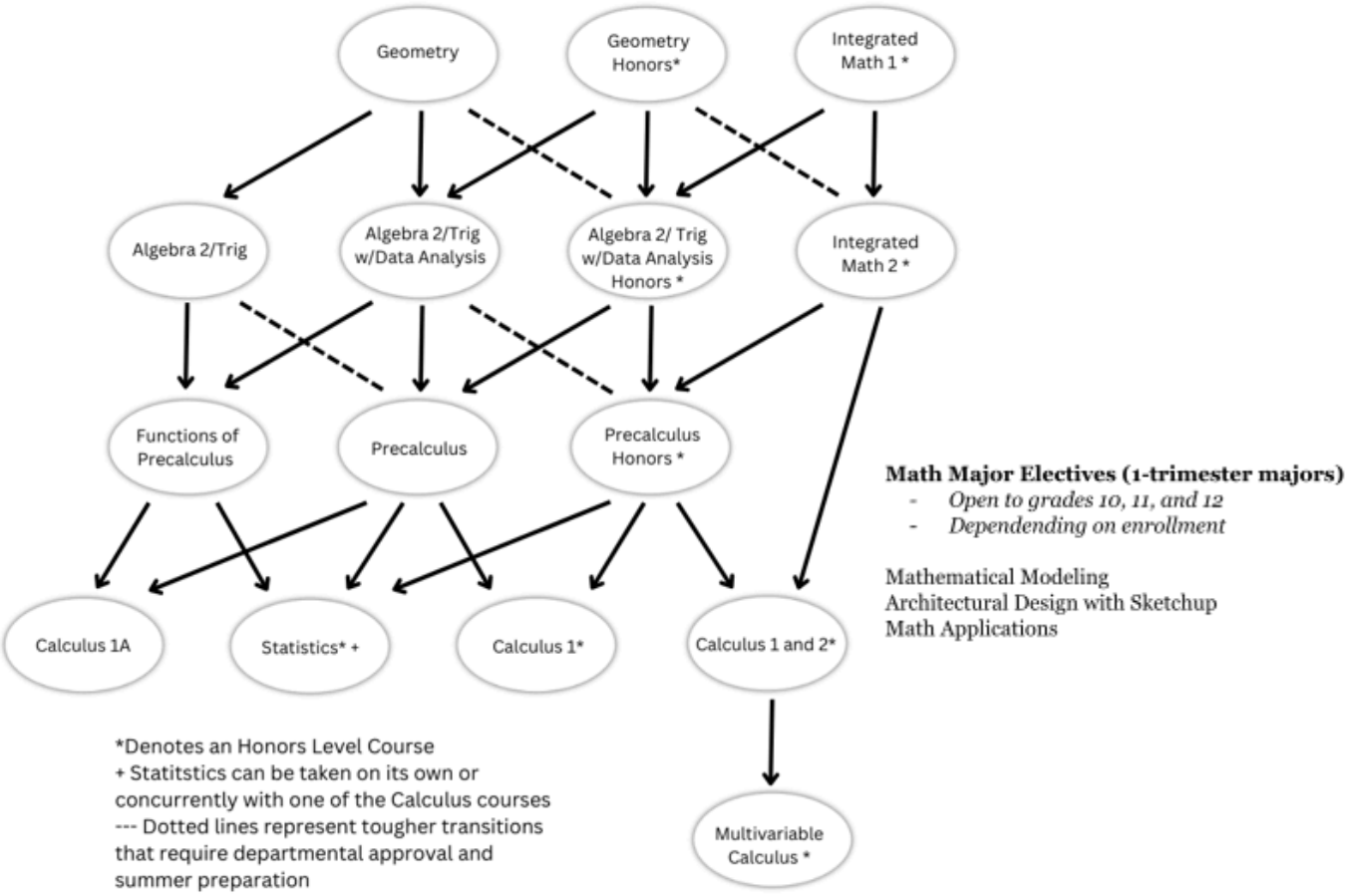
   Intellectual Maturity:
   Shows resilience, self-advocacy, and a comfort level with the independent, active learning that occurs in a student-centered and inquiry-based classroom. Exhibits a willingness to take risks and an openness to struggle through challenges independently and with peer collaborators.

   Growth Mindset:
   Demonstrates willingness to wrestle with more abstract material. Understands the time commitment needed to master concepts. Shows an understanding of the importance of learning through mistake-making.

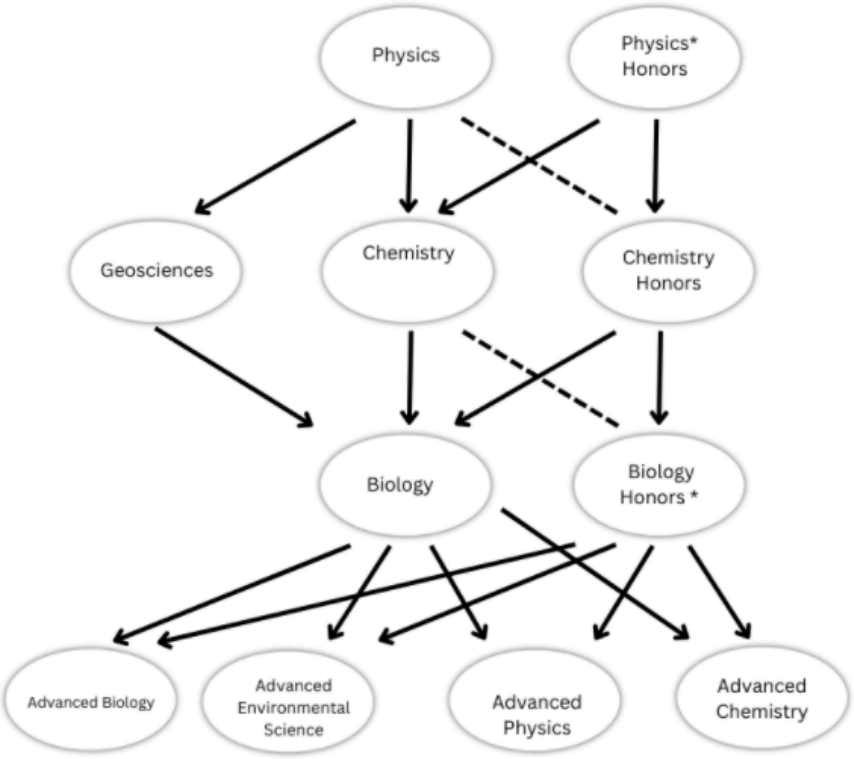
Honors Placement Rubric

Placement in ninth-grade courses **does not determine** placement in future courses in the Upper School. Students can move from and to honors-level classes in other grades.

See the chart below for the possible pathways in **<u>Upper School Mathematics:</u>**



See the chart below for the possible pathways in **Upper School Science:**



*Denotes an Honors Level Course
+ Trimester long science courses are open to students in grades 11 and 12. Engineering is open to students in grades 10-12
--- Dotted lines represent tougher transitions that require departmental approval and summer preparation