

## **Frequently Asked Questions about Georgia's Mathematics Curriculum** (Adapted from the DOE with Additional Effingham County Information)

In fall 2005, schools throughout Georgia began implementing a new mathematics curriculum, the Georgia Performance Standards (GPS) for Mathematics. These standards were developed by master classroom teachers, district and regional mathematics leaders, and university faculty to lay a foundation for a more advanced mathematics education than that previously provided to Georgia students. As with any new effort, questions have arisen about the changes we all face as we strive to implement a more rigorous and challenging mathematics program. The following questions are those most frequently asked about our middle and high school mathematics curriculum. If you have additional questions, please contact the Office of Student and Professional Learning at the Effingham County Board of Education.

### **Why do we need a new mathematics curriculum?**

Real-world applications of mathematics are rarely separated by topic. A mathematics curriculum that integrates topics like algebra, geometry and statistics makes mathematics easier to understand and apply. Our new curriculum, the Georgia Performance Standards (GPS), follows that approach. When the new curriculum is completely implemented, students will be better prepared mathematically.

### **When will the new curriculum begin?**

The new mathematics GPS is being phased in over a multi-year period. Grade 6 was implemented in 2005; K-2 and 7 were implemented in 2006; grades 3-5 and 8 were implemented in 2007; and grades 9-12 will be phased in during 2008-2011.

### **Will there be textbooks for the new curriculum?**

Although our textbooks never completely align with our curriculum, there are textbooks available that contain much of the content in our new integrated mathematics standards. Additional resources are available to supplement textbooks. The purchase and distribution of textbooks is a local decision made by the individual school district. Effingham County School System has adopted texts based on an examination of the GPS and a correlation to available texts.

### **What about the old courses like Algebra I and Geometry?**

Because algebra, geometry and statistics topics are integrated in the new mathematics courses, the names of the old courses no longer describe what is being taught. The names of the high school courses have been changed to match the content. Mathematics I: Algebra / Geometry / Statistics or Accelerated Mathematics I: Geometry / Algebra II / Statistics will be the courses most students take during their ninth grade year.

### **Why are the high school courses named Mathematics I, II, III, and IV? Will my child still learn algebra and geometry?**

The challenging mathematics offered in grades six through twelve will include all of the concepts and skills previously taught in traditional Algebra I, Algebra II, Geometry and Pre-calculus courses. The new course names reflect a more integrated, problem-solving, real-world approach to mathematics. Students should understand why they are learning mathematics and how it is used in other disciplines and in their own areas of interest. Each of the required mathematics courses will include topics in algebra, geometry, number sense, and statistics in a format that encourages

mathematical reasoning and understanding, competency in skills and procedures, and the use of appropriate technology.

### **How are the GPS mathematics courses in middle school different from those taught under the old curriculum?**

Courses previously taught in grades 6-8 were extremely repetitious, addressing almost the same content in all three grades. Expectations for student learning were not clear and in most cases, demanded only low-level thinking skills. Under the new GPS, by the time students have finished 8th grade, they should have learned 80% of the concepts and skills in Algebra 1, 50% of the content in high school geometry, and a significant amount of high school statistics and probability. The new standards require that students think critically, apply the mathematics they are learning in problem-solving situations, and communicate their work.

Will middle schools still offer high school credit courses?

Middle schools can continue to offer accelerated courses and high school Carnegie credit for students who have the prerequisite skills, including honors and gifted. Carnegie course names will transition along with the high school phase-in. Because eighth grade students will continue to take the CRCT, which is aligned to the eighth grade GPS, and because the new curriculum is extremely rigorous, Effingham County School System has decided not to offer high school courses in grade 8 at this time. High school students can accelerate their course work and be eligible for AP Calculus or post-secondary options while still in high school. As the phase-in progresses, Effingham County School System will monitor the opportunities for our students and make changes as necessary.

### **Can students still take Advanced Placement classes?**

Students are encouraged to take AP classes. The new Georgia Performance Standards are designed to help prepare more students to be successful in higher-level courses, including Advanced Placement and International Baccalaureate.

### **Must the new mathematics courses be taken in sequential order? Will students be allowed to take two mathematics courses concurrently?**

The content taught in Mathematics I through Mathematics IV and Accelerated Mathematics I through Accelerated Mathematics III is sequential. However, students will have a variety of options for the fourth year of mathematics, including Mathematics IV, Discrete Mathematics, AP Statistics, AP Calculus AB, AP Calculus BC, and courses in applied mathematics related to specific, career-oriented fields of study. After Mathematics II or Accelerated Mathematics II, students may choose to take Discrete Mathematics or AP Statistics while taking any higher level course.

### **Will colleges and universities accept the new courses for credit? Will my child be prepared for college mathematics?**

The changes in the Georgia mathematics curriculum have been strongly endorsed by faculty from the major colleges and universities in the state, including Georgia Tech, Georgia State University, and the University of Georgia. The content and philosophy of the curriculum are consistent with current recommendations of leading national and international mathematics educators and organizations. Colleges and universities throughout the United States are aware of and, in most cases, are promoting these kinds of changes.

### **How will colleges know about these new courses?**

Beginning in 2008, there will be a new graduation rule for incoming freshmen. Under the new rule, the new courses will appear on the transcripts of ninth grade students. In-state and out-of-state

colleges and universities will be made aware of the new course content and names during the transition. By 2011 all transcripts going to postsecondary institutions will contain the names of the new courses.

### **What about students who transfer to Georgia high schools after 2008?**

Transfer students will take an assessment designed by the Georgia Department of Education. The results of this assessment will be used to construct a self-paced online program of study to supplement coursework in the Georgia Performance Standards (GPS). Students will be required to complete only prerequisite mathematics content not yet mastered.

### **How are we going to address the needs of struggling students within the mathematics classroom?**

A new Mathematics Support course will be available to high school students starting in the 2007-2008 school year. This course is being added to give high schools an opportunity to put students in a companion class that will parallel the content being taught in the regular mathematics class. This support class will give struggling students the extra time and attention they need to be successful. The new Mathematics Support course will be taught by a mathematics-certified teacher and should be used as an intervention strategy to help struggling students before they fail. The course should be conducted in a flexible manner that allows for individualized interventions. Students will receive academic elective credit for this class. Schools are advised to monitor students' mathematics scores (especially incoming freshmen) and assign students to this Mathematics Support course as a preventive measure.

### **What will happen to State End-of-Course Tests (SEOCT)?**

Students currently take an SEOCT upon completing Algebra I and another SEOCT upon completing Geometry. Students will take a comprehensive SEOCT at the end of Mathematics I or Accelerated Mathematics I and another SEOCT at the end of Mathematics II or Accelerated Mathematics II.

### **How will the Georgia High School Graduation Test (GHSGT) be affected by the new high school courses?**

Students entering Georgia high schools as freshmen in 2008 will be assessed under the new Georgia Performance Standards on the GHSGT. When this group of students takes the GHSGT in 2011, the test will assess the new content standards. The SEOCT for Mathematics I/Accelerated Mathematics I and the SEOCT for Mathematics II/Accelerated Mathematics II will be used as predictors of success on the GHSGT, thus providing opportunities for intervention strategies prior to taking the GHSGT.

**How are the needs of gifted students being addressed within the mathematics classroom?** The Georgia Department of Education respects the right of local school systems to determine how to best meet gifted and talented students' advanced learning needs. The local education agency (LEA) may designate a particular SBOE-approved course as service to gifted students based on the modifications the system implements to the basic curriculum for that course. The core content class in which gifted students participate should be modified significantly from the one that more typical students at that grade level would take. A course description should address the GPS standards and show how the course has been modified in terms of content, pacing, process skills emphasis, and expectation of student outcomes. Local school systems may elect to include high-achieving students who have not met state gifted program eligibility criteria, but who have demonstrated the academic ability and motivation to be successful in a high-level class in that particular content area. Further, LEAs may

also provide guidance within their respective system to accelerate instruction for mathematically talented students.

**What do parents need to do?**

Educators throughout Georgia are working diligently to provide quality mathematics instruction that will prepare students for life in a world that is increasingly dependent on mathematical reasoning, problem solving, and technology. Parents also have a vital role to play and are encouraged to talk with their child about the mathematics he or she is learning in school. Parents and students should discuss the tasks given to students and how the mathematics involved relates to the world in which we live. Parents are also encouraged to speak with teachers and administrators in the local district regarding how the GPS is being implemented. As we strive to raise the mathematical and statistical literacy of all Georgia students, nothing is more important than a strong partnership between educators and parents that supports student learning in the mathematics classroom and beyond.

**Where can I get more information about the new Georgia mathematics curriculum?**

More information on the mathematics in the Georgia Performance Standards can be found at the website [www.georgiamath.org](http://www.georgiamath.org). At this site, you will find standards for each course which provide detailed information about what students will be expected to know and be able to do at each grade level. In the Mathematics Frameworks section, you will find sample tasks that provide guidance to teachers and students in regard to the level of rigor required in the new curriculum.

**How can my child qualify for the advanced or accelerated mathematics sequence as outlined by the Effingham County Schools?**

Criteria related to student mathematics achievement and performance such as ITBS results, GCRCT results, locally-developed test results, mathematics grades, and work habits are used by teachers in recommending student placement.

**What are the advantages of having my child in the advanced or accelerated sequence?**

For a few *highly talented* mathematics students, there is the opportunity to enroll in two college mathematics courses while still in high school. For all others, the standard sequence and the accelerated sequence both provide the opportunity for the student to enroll in one year of college level mathematics in high school.

**If my child qualifies for the advanced or accelerated mathematics sequence as outlined by the Effingham County Schools, what if I am not certain that I want my child to follow that sequence?**

Your child can continue to take the on-grade-level mathematics courses. This on-level curriculum stresses rigorous content development, presents realistic and relevant tasks, and keeps a strong emphasis on computational skills. The curriculum encourages students to reason mathematically and to make mathematical connections. The on-level sequence of middle school GPS followed by Mathematics I-IV culminates in readiness for university entry level mathematics.

**What are the placement options if my child begins the advanced or accelerated mathematics sequence and then decides it is too rigorous?**

Your child may request to transition to the standard sequence. Please be aware that the **content** of the **standard sequence** is the **same** as the content of the advanced or accelerated option. The **advanced and accelerated options** progress at a **faster pace** through the same content.

If my child does not qualify for the advanced or accelerated mathematics sequence as outlined by the Effingham County Schools, may I still place my child in that sequence?

You may appeal your child's mathematics placement by setting up a conference with the principal and the child's mathematics teacher who will explain reasons for recommended placement. After the conference, if it is still your desire to place your child in the advanced or accelerated mathematics sequence, you will be asked to sign a waiver of placement. Please be aware that should your child be unsuccessful, there is not a different course to move to; they would simply move to the on-level course.

**\*This plan is subject to change based on any additional changes that the DOE may implement.**