GaDOE Regional Counselor Workshop Mathematics Program Updates June, 2011

Mathematics Program Updates

- >CCGPS Mathematics
- > Fourth Mathematics Course Options
- ➤ Implications of SBOE High School Mathematics Program Changes
- ➤ Support Measures for High School Mathematics Program Changes

Mathematics CCGPS Update

Georgia's Mathematics Program Past, Present, and Future

1986

Quality Core Curriculum (QCC) Objectives

2005

Georgia Performance Standards (GPS)

2012

Common Core Georgia Performance Standards (CCGPS)

What are the non-negotiables?

 100% of the CCSS must be delivered in our curriculum.

 CCSS must be addressed at the grade level where they are assessed.

Common Core State Standards in Mathematics

- Identify the mathematics that all students should study in order to be college and career ready
- ➤ Designed to be delivered in a three course sequence
- >Internationally benchmarked
- > Focused, coherent, clear and rigorous
- > Evidence and research based

Dr. John D. Barge, State School Superintendent "Making Education Work for All Georgians"

www.gadoe.org

Common Core for Mathematics

Standards for Mathematical Content

- K-8 grade-by-grade standards organized by domain
- 9-12 high school standards organized by conceptual categories

Standards for Mathematical Practice

- Describe mathematical "habits of mind"
- Offer standards for mathematical proficiency: reasoning, problem solving, modeling, decision making, and engagement
- Connect with content standards in each grade



Secondary CCGPS Mathematics Implementation Plan

	Ninth Graders	Tenth Graders	Eleventh Graders	Twelfth Graders
2011/ 2012	GPS Course	GPS Course	GPS Course	GPS Course
2012/2013	CCGPS Course	GPS Course	GPS Course	GPS Course
2013/ 2014	CCGPS Course	CCGPS Course	GPS Course	GPS Course
2014/ 2015	CCGPS Course	CCGPS Course	CCGPS Course	GPS Course

Fourth Mathematics Course Options

Fourth Mathematics Course Options

Course Code	Fourth Mathematics Course Name	Suggested Prerequisite Courses	
27.08300/27.06230	Mathematics III or GPS Advanced Algebra	Mathematics Support III or GPS Advanced Algebra Support for core credit	
27.08400/27.06240	Mathematics IV or GPS Pre-Calculus	Mathematics I, II, III or GPS Algebra, GPS Geometry, GPS Advanced Algebra, Accelerated Mathematics I, II or Accelerated GPS Algebra/Geometry, Accelerated GPS Geometry/Advanced Algebra	
27.08500	*Advanced Mathematical Decision Making	Mathematics I, II, III or GPS Algebra, GPS Geometry, GPS Advanced Algebra, Accelerated Mathematics I,II or Accelerated GPS Algebra/Geometry, Accelerated GPS Geometry/Advanced Algebra	
27.08600	*Mathematics of Industry and Government	Mathematics I, II, III or GPS Algebra, GPS Geometry, GPS Advanced Algebra, Accelerated Mathematics I,II or Accelerated GPS Algebra/Geometry, Accelerated GPS Geometry/Advanced Algebra	
27.08700	*Mathematics of Finance	LEA Flexibility	
27.07400	AP Statistics	Mathematics I, II, III or GPS Algebra, GPS Geometry, GPS Advanced Algebra, Accelerated Mathematics I,II or Accelerated GPS Algebra/Geometry, Accelerated GPS Geometry/Advanced Algebra	
27.07200	AP Calculus AB	Mathematics I, II, III, IV or GPS Algebra, GPS Geometry, GPS Advanced Algebra, GPS Pre-Calculus, Accelerated Mathematics I,II,III or Accelerated GPS Algebra/Geometry, Accelerated GPS Geometry/Advanced Algebra, Accelerated GPS Pre-Calculus	
27.07300	AP Calculus BC	Accelerated Mathematics I, II, III, IV or Accelerated GPS Algebra/Geometry, Accelerated GPS Geometry/Advanced Algebra, Accelerated GPS Pre- Calculus	
27.05200	History of Mathematics	AP Calculus AB or BC (may be taken concurrently w/AP Calculus)	
27.07700	Multivariable Calculus	AP Calculus BC	

^{*}Modules will be selected for alignment with specific CTAE pathways.



CCGPS Fourth Mathematics Course Options

- AP Calculus AB
- AP Calculus BC
- AP Statistics
- Calculus *
- Mathematics IV
- GPS Pre-Calculus
- Advanced Mathematical Decision Making
- Mathematics of Industry & Government
- Mathematics of Finance
- Multivariable Calculus
- History of Mathematics



Implications of Recent SBOE High School Mathematics Program Changes

March 14, 2011 Changes

- ✓ Added the following courses:
- 27.06200 GPS Algebra
- 27.06220GPS Geometry
- 27.06230GPS Advanced Algebra
- 27.06240GPS Pre-Calculus

March 14, 2011 SBOE Changes

- ✓ Changed the elective status to core/elective status ONLY for students who entered ninth grade in 2008-2009, 2009-2010, 2010-2011 for the following courses:
- 27.04400 Mathematics Support I
- 27.04500 Mathematics Support II
- 27.04600 Mathematics Support III

Mathematics Sequence Options

Diploma Options for Students
Who Entered HS in
2011-2012

Diploma Options for Students
Who Entered HS in
2010-2011

Math I-III + 4th Math

Diploma Options for Students
Who Entered HS in
2009-2010

Diploma Options for Students
Who Entered HS in
2008-2009

Math I–III + 4th Math OR GPS Alg, GPS Geo, GPS Adv Alg + 4th Math

OR
GPS Alg, GPS Geo,
GPS Adv Alg + 4th Math
OR
Math I, Math II,
Math Support III, Math III
OR
GPS Alg, GPS Geo,
Math Support III, GPS Adv Alg
OR
Math I – II + 2 additional core
mathematics credits
OR
GPS Alg + GPS Geo + 2 additional

core mathematics credits

Math I–III + 4th Math
OR
GPS Alg, GPS Geo,
GPS Adv Alg + 4th Math
OR
Math I, Math II,
Math Support III, Math III
OR
GPS Alg, GPS Geo,
Math Support III, GPS Adv Alg
OR
Math I – II + 2 additional core
mathematics credits
OR
GPS Alg + GPS Geo + 2 additional
core mathematics credits

Math I–III + 4th Math OR GPS Alg, GPS Geo, GPS Adv Alg + 4th Math

Math I, Math II,

Math Support III, Math III

OR

GPS Alg, GPS Geo,

Math Support III, GPS Adv Alg

OR

Math I – II + 2 additional core

mathematics credits

OR

GPS Alg + GPS Geo + 2 additional

core mathematics credits

NOTE: Support courses will be available for struggling students for both delivery systems.



PROPOSED Additions

✓ The following courses are proposed additions to the IDA-3 roster of courses. The courses have not been approved by the SBOE at this time:

27.04100 GPS Algebra Support*

27.04200 GPS Geometry Support*

27.04600 GPS Advanced Algebra Support*

PROPOSED Additions

✓ The following courses are proposed additions to the IDA-3 roster of courses. The courses have not been approved by the SBOE at this time:

27.09400 Accelerated GPS Algebra/Geometry

27.09500 Accelerated GPS Geometry/Advanced

Algebra

27.09600 Accelerated GPS Pre-Calculus

27.07800 Calculus*



PROPOSED Change

✓ The following course code change is proposed to avoid confusion with an IDA-2 mathematics course with the same code. The change has not been approved by the SBOE at this time:

27.06200 GPS Algebra -> 27.06210 GPS Algebra

Mathematics Requirements for Graduation

> PROPOSED Revision to HS Graduation Rule 160-4-2-.48

4 units of required and/or core courses

- Mathematics I, GPS Algebra, or the equivalent
- Mathematics II, GPS Geometry, or the equivalent
- Mathematics III, GPS Advanced Algebra, or the equivalent
- Additional core courses selected from the list of GPS/CCGPS/AP/IB/dual enrollment courses



Mathematics Requirements for Graduation

> PROPOSED Revision to HS Graduation Rule 160-4-2-.48

the equivalent and the associated support course, along with Mathematics II, GPS Geometry or the equivalent and the associated support course, may upon determination through the IEP process meet diploma requirements by completing Mathematics III, GPS Advanced Algebra, or the equivalent for a total of 3 mathematics credits. Successful completion of 3 units of mathematics may not meet mathematics admission requirements for entrance into a USG post-secondary institution.



Mathematics Requirements for Graduation

> PROPOSED Revision to HS Graduation Rule 160-4-2-.48

All students, including Students with Disabilities, who entered ninth grade in school years 2008-2009, 2009-2010, or 2010-2011 ONLY who earn credit in Mathematics I, GPS Algebra, or the equivalent and Mathematics II, GPS Geometry, or the equivalent, along with 2 additional core mathematics credits, will have satisfied the minimum mathematics credits for high school graduation.

Response from the USG Board of Regents

> USG Institutions will accept the Mathematics I or GPS Algebra, Mathematics II or GPS **Geometry, Mathematics Support III or GPS Advanced Algebra Support, and Mathematics** III or GPS Advanced Algebra sequence for admission to USG institutions for students who entered ninth grade in 2008-2009 and 2009-2010 ONLY.

NCAA and MATHEMATICS SUPPORT I and II

- Mathematics Support courses have not been approved as core courses by the NCAA for Division I athletic financial aid (partial or full).
- NCAA requires 3 core Mathematics credits.
- Your school district or school must submit core courses to the NCAA Eligibility Center for approval.

Contact: Patrick Blenke <u>ablenke@doe.k12.ga.us</u> or 404-463-1765

Support Measures for High School GPS Mathematics Program Changes

Mathematics Resources

for High School Administrators, Counselors, and Educators

- Course descriptions and curriculum maps for discrete courses are posted on the GaDOE Mathematics webpage.
- Georgia Virtual credit recovery modules for Mathematics I & II are posted at:

http://www.gavirtuallearning.org/Resources/Shared_Math1.aspxhttp://www.gavirtuallearning.org/Resources/shared_math2.aspx

 A Mathematics Guidance Document, including a placement matrix for use with transfer students, will be available by Fall 2011.

Mathematics Resources

for High School Administrators, Counselors, and Educators

➤ Transition packets for in-state transfers will be posted by June 15, 2011

GPS Algebra -> Mathematics II

Mathematics I -> GPS Geometry

It is important to note that:

- ✓ GPS Advanced Algebra = Mathematics III
- ✓ GPS Pre-Calculus = Mathematics IV
- ✓ Accelerated GPS Algebra/Geometry = Accelerated Mathematics I (units sorted differently within course)
- ✓ Accelerated GPS Geometry/Advanced Algebra = Accelerated Mathematics II (units sorted differently within course)
- ✓ Accelerated GPS Pre-Calculus = Accelerated Mathematics III

Support from GaDOE Mathematics Curriculum Team

GaDOE Mathematics Program Webpage

- http://public.doe.k12.ga.us/ci_servic es.aspx?PageReq=CIServMath
- > Fourth Mathematics Course Options
- > Reference Documents
- ➤ Links to GaDOE Resources

Mathematics Listserve

> Send an email with no message to:

join-mathematics-administrators@list.doe.k12.ga.us

Mathematics Conversation with High School Counselors

- > WHEN: April 21, 2011 at 10:00 a.m.
- ➤ WHERE:Elluminate Live Webinar recording at http://elluminate.gavirtualschool.org/doe/pla-y_recording.html?recordingId=125887599222
 0_1303392923140

Remediation and Support

- > Mathematics Project EXPRESS
- **➢ Online GHSGT Preparation 2 week program**
- ➤ Ongoing Mathematics Support via webinars and email Correspondence

ACCEL Program

High School Course Roster Additions

- ✓ The courses and course codes below are inactive and will not appear on the IDA-3 roster of state-funded courses
- ✓ The courses and course codes are to be reported only upon receipt of dual enrollment college level credit for a course which ACCEL has aligned to the *inactive* course

27.07910College Statistics A

27.07920College Statistics B

27.08010College Calculus A

27.08020College Calculus B



We Appreciate YOU



and sincerely believe that together we can make a difference in mathematics education for ALL Georgia students

Thank you for your participation!

Contact Information

Sandi Woodall
GaDOE Mathematics Coordinator

swoodall@doe.k12.ga.us

404.463.1736