

STATE OF ALABAMA DEPARTMENT OF EDUCATION



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Eric G. Mackey, Ed.D. Secretary and Executive Officer June 16, 2021

<u>M E M O R A N D U M</u>

TO: City and County Superintendents of Education

FROM: Eric G. Mackey Eq. (

State Superintendent of Education

RE: 2021-2022 Secondary Mathematics Course Pathways with Full

Implementation of the 2019 Alabama Course of Study: Mathematics

As you begin fully implementing the 2019 *Alabama Course of Study: Mathematics*, we realize that 2020-2021 has been one of the most challenging school years for both educators and students. For this reason, mathematics course sequences referenced in the Mathematics Pathways memorandum (FY15-2072) dated May 26, 2015, have been extended for the 2021-2022 academic year. This extension only applies to the following situations:

- 1. Either Algebra with Finance or Career Mathematics may substitute for the Algebra II graduation requirement.
- 2. Algebra with Finance and Career Mathematics may be completed before, after, or concurrently with Algebra II with Statistics.
- 3. Even though the courses were retired with the full implementation of the 2019 *Alabama Course of Study: Mathematics*, students who were previously enrolled in and were not awarded credit for Algebra IB, Geometry B, or Algebraic Connections may complete credit recovery via ACCESS.

Student course selection should be made with the assistance of parents and school counselors and aligned with the student's four-year plan. Additionally, students must be familiar with college or university admission requirements, ensuring that their course selection does not limit opportunities for scholarships or prevent National Collegiate Athletic Association (NCAA) eligibility.

Upon completion of the 2021-2022 academic year, high school students must follow the mathematics pathways described in Appendix B of the 2019 *Alabama Course of Study: Mathematics*. With a fewer number of standards per course, Geometry with Data Analysis, Algebra I with Probability, and Algebra II with Statistics are accessible to all students and provide challenging content designed to equip all students for future academic success.

City and County Superintendents of Education Page 2 June 16, 2021

Memorandum FY15-2072 and page 131 of the Revised 2016 Alabama Course of Study: Mathematics are attached. If you have questions concerning the approved mathematics pathways for the 2021-2022 academic year, please contact Mrs. Cathy Jones by email at cjones01@alde.edu, Monica Mack Dr. by email monica.mack@alsde.edu, Cathy Lankford email or by at cathy.lankford@alsde.edu. You may also contact Mrs. Jones, Dr. Mack, and Mrs. Lankford by telephone at (334) 694-4768.

EGM/CJ/VG

Attachments

cc: LEA Secondary Curriculum Directors

LEA High School Counselors

LEA Counseling Coordinators

LEA Technology Coordinators

LEA High School Principals

Dr. Daniel Boyd

Mrs. Angela Martin

Dr. Elisabeth Davis

Dr. Jimmy Hull

Mr. Sean J. Stevens

Mrs. Cathy Jones

Dr. Monica Mack

Mrs. Cathy Lankford

FY21-2085



STATE OF ALABAMA DEPARTMENT OF EDUCATION



May 26, 2015

Alabama State Board of Education

MEMORANDUM

Governor **Robert Bentley** President

Ai Thompson District I

City and County Superintendents of Education

FROM:

TO:

Thomas R. Bice

State Superintendent of Education

RE:

Mathematics Pathways

Betty Peters District II

Stephanie Beil

The additional substitute courses referenced in the Approved Courses in Mathematics and Science (FY15-1013) memorandum dated April 3, 2015, has generated numerous telephone calls and e-mails inquiring about pathways of mathematics using the courses in the

have addressed how these may all fit together in assisting students in becoming prepared for their goals in high school and afterwards.

Yvette M. Richardson, Ed.D. District IV

Students should choose their mathematics courses carefully and with intense counseling. The courses should be selected that would best aid the students in preparing for their college and career plans. Four-year plans may require mathematics course adjustments in the higher grades as the students' focus becomes clearer regarding future post-high school goals and mathematics preparation needed to be successful.

mathematics course of study, substitute courses, and special education courses. Inquiries

Elia B. Bell Vice President

> Students need to be familiar with the college or university mathematics admissions requirements of the institutions they plan to attend. Certain scholarships may also have high school mathematics course requirements. Athletes need to know if the National Collegiate Athletic Association (NCAA) approves the selected mathematics course credits for eligibility. One of the most important considerations is whether the mathematics courses selected will prepare the student for his/her future college or career goals. If a local education agency (LEA) is considering using dual enrollment to meet high school mathematics course requirements, the LEA should consider working closely with postsecondary institutions to develop courses that align with high school course standards.

Cynthia McCarty, Ph.D. District VI

Mary Scott Hunter, J.D. District VIII

Jeff Newman

President Pro Tem

The accompanying document provides possible mathematics pathways for students, parents, and counselors to consider as the student prepares for high school mathematics course credits. Some students begin to earn high school mathematics credits as early as Grade 7 or Grade 8. If high school credits are earned earlier than Grade 9, the students who have been advanced need to know what mathematics courses will be available in Grades 9-12. The purpose for advancing students in mathematics is to ensure that the students may receive

Thomas R. Bice, Ed.D. Secretary and **Executive Officer**

City and County Superintendents of Education Page 2 May 26, 2015

additional mathematics credit in high school. The charts provide possible pathways for those students. The charts also describe pathways for students who are on track for earning their mathematics credits in Grades 9-12. Possible pathways for regular education students with special needs or students with disabilities have also been included.

If you have questions concerning the mathematics pathways, please contact Dr. Susan B. Davis at (334) 353-9151 or by e-mail at sdavis@alsde.edu or Mrs. Alicia Hodge at (334) 242-8114 or by e-mail at ahodge@alsde.edu.

TRB/RAN/LM

Attachments

cc:

LEA Curriculum Directors

LEA Counselors

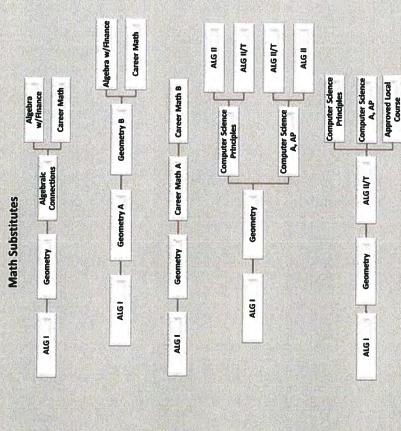
LEA Technology Coordinators

Principals

Dr. Susan B. Davis Mrs. Alicia Hodge

FY15-2072

Algebra I in Grade 9



Analytical Math

Math Invest

ALG II/T

Precalculus

Discrete Math

Geometry

ALG II/T

ALG II

ALG Con

ALG I

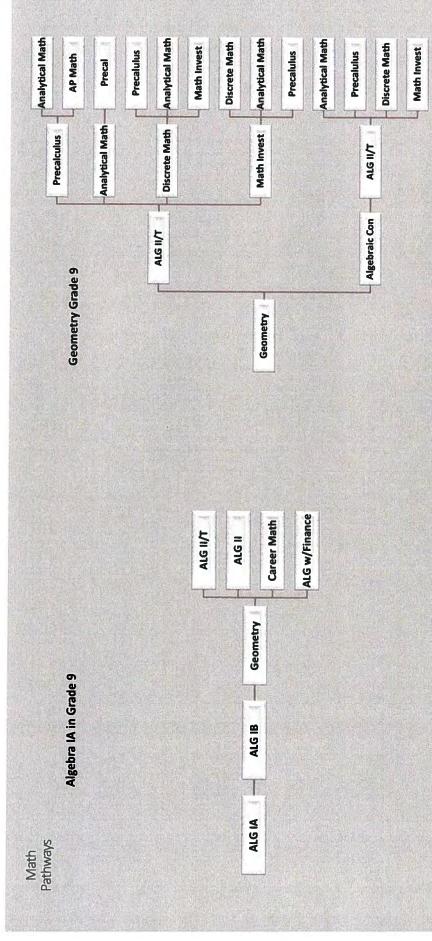
ALG II/T

ALG II

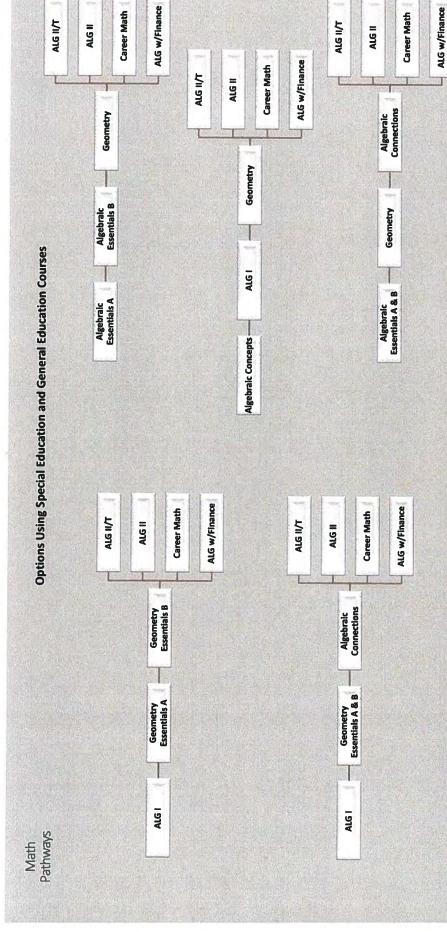
Geometry B

Geometry A

- Selected mathematics courses should be checked by the student, with counselor guidance, for acceptance by NCAA, certain scholarships, college or university admission requirements, and/or chosen career goals.
 - Students must be well counseled before they enroll in any mathematics course, including substitute courses.
- Mathematics courses should be carefully chosen for the student's four-year plan and modified as the student narrows his/her focus on post-high school goals.
- Mathematics courses should be selected by each student, with proper counseling, that will enable him/her to be successfully prepared to reach his/her desired post-high school goal(s).



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Possible Mathematics Course Pathways

Algebra I in Grade 9

Mathematics Substitutes

Algebra I Geometry Algebra Il/Trigonometry Computer Science A, AP	Algebra I Geometry Algebra II/Trigonometry Approved Local Course		
Algebra I	Algebra I	Algebra I	Algebra I
Geometry	Geometry	Geometry	Geometry
Computer Science Principles	Computer Science Principles	Computer Science A, AP	Computer Science A, AP
Algebra II/Trigonometry	Algebra II	Algebra II/Trigonometry	Algebra II
Algebra I	Algebra I	Algebra I	Algebra I
Geometry	Geometry	Geometry A	Geometry A
Algebraic Connections	Algebraic Connections	Geometry B	Geometry B
Algebra with Finance	Career Mathematics	Algebra with Finance	Career Mathematics
Algebra I	Algebra I	Algebra I	Algebra I
Geometry	Geometry	Geometry A	Geometry A
Algebraic Connections	Algebraic Connections	Geometry B	Geometry B
Algebra II/Trigonometry	Algebra II	Algebra II/Trigonometry	Algebra II
Algebra I	Algebra I	Algebra I	Algebra I
Geometry	Geometry	Geometry	Geometry
Algebra II/Trigonometry	Algebra II/Trigonometry	Algebra II/Trigonometry	Algebra II/Trigonometry
Precalculus	Mathematical Investigations	Analytical Mathematics	Discrete Mathematics

Algebra I Geometry Algebra Il/Trigonometry Computer Science Principles

Algebra I Geometry Career Mathematics A Career Mathematics B

Possible Mathematics Course Pathways

Algebra IA in Grade 9

Algebra II/Trigonometry Algebra IA Algebra IB Geometry

Algebra IA Algebra 1B Geometry Algebra II

Career Mathematics Algebra IA Algebra 18 Geometry

Algebra with Finance Algebra IA Algebra 18 Geometry

Geometry in Grade 9

Algebra II/Trigonometry Analytical Mathematics Discrete Mathematics Geometry Algebra II/Trigonometry

Geometry

Algebra II/Trigonometry

Algebraic Connections

Geometry

Analytical Mathematics

Algebra II/Trigonometry Analytical Mathematics Precalculus Precalculus Geometry AP Math

Geometry

Algebra II/Trigonometry Analytical Mathematics Precalculus Geometry

Algebra II/Trigonometry

Geometry

Discrete Mathematics

Algebra II/Trigonometry Discrete Mathematics Precalculus Geometry

Algebra II/Trigonometry

Geometry

Analytical Mathematics

Algebra li/Trigonometry Algebraic Connections Precalculus Geometry Geometry Mathematical Investigations Algebra II/Trigonometry Discrete Mathematics

Algebra II/Trigonometry Algebraic Connections Discrete Mathematics Geometry Mathematical Investigations Mathematical Investigations

Mathematical investigations Algebra II/Trigonometry Algebraic Connections

> Mathematical Investigations Algebra II/Trigonometry Precalculus Geometry

Possible Mathematics Course Pathways

Options Using Special Education and General Education Courses

Algebra I	Algebra I	Algebraic Essentials A	Algebraic Concepts Algebra I Geometry Algebra II/T	Algebraic Essentials A & B
Geometry Essentials A	Geometry Essentials A & B	Algebraic Essentials B		Geometry
Geometry Essentials B	Algebraic Connections	Geometry		Algebraic Connections
Algebra II/T	Algebra II/T	Algebra II/T		Algebra II/T
Algebra I	Algebra I	Algebraic Essentials A	Algebraic Concepts	Algebraic Essentials A & B
Geometry Essentials A	Geometry Essentials A & B	Algebraic Essentials B	Algebra I	Geometry
Geometry Essentials B	Algebraic Connections	Geometry	Geometry	Algebraic Connections
Algebra II	Algebra II	Algebra II	Algebra II	Algebra II
Algebra I Geometry Essentials A Geometry Essentials B Career Math	Algebra I	Algebraic Essentials A	Algebraic Concepts	Algebraic Essentials A & B
	Geometry Essentials A & B	Algebraic Essentials B	Algebra I	Geometry
	Algebraic Connections	Geometry	Geometry	Algebraic Connections
	Career Math	Career Math	Career Math	Career Math
Algebra I	Algebra I	Algebraic Essentials A	Algebraic Concepts Algebra I Geometry Algebra w/Finance	Algebraic Essentials A & B
Geometry Essentials A	Geometry Essentials A & B	Algebraic Essentials B		Geometry
Geometry Essentials B	Algebraic Connections	Geometry		Algebraic Connections
Algebra w/Finance	Algebra w/Finance	Algebra w/Finance		Algebra w/Finance

POSSIBLE COURSE PATHWAYS

There are several pathways by which a student can meet the high school graduation requirements for earning four credits in mathematics in Grades 9-12. Local school systems may determine which pathways lead to completion of the requirements for a specific diploma, provided the minimum requirements set forth by the Alabama State Board of Education are followed. Some pathways in Grades 9-12 are indicated below.

Pathways for Students Who Begin Algebra I in Grade 9

Algebra I Algebra I Algebra I Geometry Geometry Geometry

Algebra II With Trigonometry
Precalculus

Algebra II With Trigonometry
Analytical Mathematics

Algebra II With Trigonometry
Discrete Mathematics

Algebra I Algebra I Algebra IA
Geometry Geometry Algebra IB
Algebra II With Trigonometry Algebraic Connections Geometry

Mathematical Investigations

Algebra II With Trigonometry

Algebra II With Trigonometry

Algebra II With Trigonometry

Algebra IAlgebra IAlgebra IAGeometry AGeometryAlgebra IBGeometry BAlgebraic ConnectionsGeometry

Geometry B Algebra Connections Geometry
Algebra II With Trigonometry Algebra II
Algebra I

Algebra I Geometry A Geometry B Algebra II

Some Pathways for Students Who Complete Algebra I in Grade 8

Geometry Geometry Algebra II With Trigonometry Precalculus Analytical Mathematics Precalculus Advanced Placement (AP)

Geometry Algebra II With Trigonometry Algebra II With Trigonometry Precalculus Analytical Mathematics Precalculus Advanced Placement (AP)

Analytical Mathematics
Precalculus
Advanced Placement (AP)
Mathematics Course

Geometry
Algebraic Connections
Algebra II With Trigonometry
Algebra II With Trigonometry
Discrete Mathematics
Mathematical Investigations

Algebra II With Trigonometry Discrete Mathematics Mathematical Investigations
Analytical Mathematics Precalculus Precalculus

Geometry Geometry Geometry

Geometry
Algebra II With Trigonometry
Algebra II With Trigonometry
Mathematical Investigations
Discrete Mathematics
Algebra II With Trigonometry
Algebra II With Trigonometry
Algebra II With Trigonometry
Algebra II With Trigonometry

Discrete Mathematics Algebra II with Irigonometry

Discrete Mathematics Mathematical Investigations Precalculus

Geometry Geometry Geometry

Algebraic Connections Algebraic Connections Algebra II With Trigonometry
Analytical Mathematics Algebra II With Trigonometry
Discrete Mathematics Algebra II With Trigonometry
Mathematical Investigations