ABINGTON SCHOOL DISTRICT
ABINGTON, PENNSYLVANIA

SUPERINTENDENT'S
ADMINISTRATIVE PROCEDURE

REGARDING: **Secondary Mathematics**

Section: **Superintendent's Committees**

Effective Date: October 2016

Reissued: NEW

See Also:

Background

High Schools with a non-integrated approach follow one of the following two sequences in secondary mathematics.

Algebra 1 – Algebra 2 – Geometry – Pre-calculus or Other Elective

Algebra 1 – Geometry – Algebra 2 – Pre-calculus or Other Elective (ASHS sequence)

One can argue positives and negatives with each. Placing algebra 2 before pre-calculus means the foundational topics required in pre-calculus can more easily be recalled. This has been the approach at Abington Senior High School.

There are several recent changes in benchmark testing and the law that call to question whether our current progression is optimal. One is the implementation of the Keystone Algebra 1 test and the Pennsylvania graduation requirement to pass it or a local equivalent. Students in college preparatory mathematics take the Keystone Algebra test in the spring of grade nine. Students who score Basic or Below Basic are retested at the end of grade 10 during which they have been enrolled in Geometry and Critical Math 10, a remediation course. Those students who do not achieve proficiency at the end of grade 10 re-take the test in the winter of grade 11. This gives the best chance of improvement since the students are studying the content seven periods per week in Algebra 2 and Critical Math 11.

The SAT changed in January of 2016. This newest iteration includes a much larger focus on Algebra 2 content. Geometry, which accounted for a significant portion of the SAT in the past, is not heavily tested in the current version. Most students take the SAT in the winter and spring of grade 11. College preparatory mathematics students are taking Algebra 2 in grade 11 so they are at a disadvantage if they take the SAT in the winter or early very spring.

In addition to matching courses with the assessments which are required for graduation and/or open doors to post-secondary education, the committee will review the skills that students are recommended to have for college and career readiness and to identify where these are addressed in the secondary mathematics program.

A final consideration comes from House Bill 833 that amends the Public School Code Section 1605 – Courses of Study, as follows.

Beginning with students graduating at the end of the 2016-17 school from a public high school and each year after, a student who completes a course in computer science or information technology during grades 9-12 will be permitted to apply up to one credit earned for completion of such course to satisfy the student's mathematics or science credit requirement for graduation.

Currently, Abington does not award credit for a computer science or IT course to fulfill mathematics or science graduation requirements. This change to the school law opens the discussion to computer offerings, requirements and how they fulfill graduation credits.

Committee Charge

The Secondary Mathematics Committee is established to undertake a comprehensive review of current issues related to preparing students for college and careers in order to make specific recommendations with regard to:

- The sequence of the Algebra 1, Geometry and Algebra 2 courses,
- A plan for meeting the PA school code requirement that permits a student to apply a computer science credit to satisfy a mathematics or science credit requirement for graduation,
- Changes in course content in grades 7 – 11 to prepare all students for college and career readiness.

In the formulation of its recommendations, the committee is directed to consider:

- A timeline of current testing practices and related data for the Keystone Algebra 1 test, the PSAT, the SAT and the AC,

- Requirements of the Pennsylvania Core Standards for Mathematics as well as the mathematics content tested on the current SAT and ACT assessments and where it is addressed in the mathematics program,

- Pre-requisites for Pre-Calculus and Statistics courses.

- The level and rigor of the high school's current computer science courses, mathematics courses and science courses

- Recommended mathematics skills for students to be college and career-ready.

Committee Membership

Dr. Ann Bacon, Co-Chair	Director of Curriculum
Mr. James Rizzuto, Co-Chair	Mathematics Department Chairperson, Abington Senior High School
Dr. Denise Mendez	Coordinator of Mathematics
Mr. Edward Harkins	Mathematics Department Chairperson, Abington Junior High School
Mr. Cosimo Fiorino	Assistant Principal, Abington Senior High School
Mr. Jonathan Kovaleski	Assistant Principal, Abington Junior High School
Mr. David Daubenspeck	Business Department Chairperson, Abington Senior High School
Mr. Bradley Palmer	Science Department Chairperson, Abington Senior High School
Mr. Joseph Tagliaferro	Coordinator of Student Support Services, Abington Senior High School
Ms. Doretta Agostine	Science Teacher, Abington Senior High School
Ms. Nicole Callahan	Special Education Teacher, Abington Senior High School
Mr. Brian Crognale	Special Education Teacher, Abington Senior High School
Mr. Dennis Garvin	Mathematics Teacher, Abington Junior High School
Mr. Bryan Hinds	Mathematics Teacher, Abington Junior High School
Ms. Barbara O'Neill	Mathematics Teacher, Abington Senior High School
Ms. Jennifer Repetto	Mathematics Teacher, Abington Junior High School
Ms. Michelle Ritterman	Mathematics Teacher, Abington Senior High School
Mr. Bradley Schneider	Mathematics Teacher, Abington Senior High School
Mr. Ryan Williams	Science Teacher, Abington Senior High School
Mr. Michael Zanetti	Mathematics Teacher, Abington Senior High School
Mr. Joshua Woolsey	Mathematics Teacher, Abington Junior High School
Ms. Rachael E. Brown	Community Representative, Penn State University
Dr. Kathleen Fadigan	Community Representative, Penn State University
Mr. Barry Stupine	Board of School Directors Representative
Ms. Sara Bloncourt	Parent Representative
Ms. Maura Connor-Murcar	Parent Representative

Committee Tasks and Responsibilities

1. Identify the mathematics skills and concepts tested on the current Keystone Algebra I Exam, the SAT and the ACT and match them with the content of Abington's secondary mathematics courses.

2. Identify the pre-requisites for Geometry, Algebra 2, pre-calculus and statistics courses.

3. Use the information resulting from Step 1 and Step 2 to determine the best sequence for the Algebra I, Geometry, and Algebra 2 courses.

4. Review the recent amendment to the school code that permits a student to apply a computer science credit to satisfy a mathematics or science credit requirement for graduation. Consider the mathematics and science courses required for graduation and the computer science courses that are currently offered. Recommend a plan to address the computer science credit option.

5. Review college and career readiness information to identify recommended mathematics skills for high school graduates. If the current course offerings do not include the recommended skills, propose a solution.

<u>Timeframe</u>

- **October 2016**

  o Committee Selection

- **November – December, 2016**

  o Initial Committee Meeting
  o Tasks # 1, 2 and 3

- **January 2017**

  o Task #4

- **February 2017**

  o Task #5