

# Mathematics Graduation Requirements for Students

Effective for Freshmen Entering High School in 2012-2013 and BEYOND (Policy GCS-N-004 from <http://sbepolicy.dpi.state.nc.us/>)

Four mathematics credits\* are required for graduation. A student's post-secondary school plans should help determine the student's mathematics sequence.

NC Math 1 (2109)



NC Math 2 (2209)



NC Math 3 (2309)



a 4<sup>th</sup> mathematics course taken from one of the three columns to the right



All Four Mathematics Credits for Graduation

\* Four math credits do not have to include a fourth level math, but it is highly recommended that all students be given access to the highest levels of math.



The Policy listed above is the official State Board Education Policy on graduation requirements. The next four columns are intended as guidance and are subject to change based upon revisions to courses or standards at the high school and/or post-high school levels.

## Courses accepted as a 4<sup>th</sup> level math credit for admission into UNC System institutions and for the NC Community College System's Multiple Measures policy

### NC Standard Course of Study Courses

- 2400 – Adv Functions and Modeling
- 2401 – Discrete Mathematics
- 2402 – Integrated Math IV
- 2403 – Pre-Calculus
- 2408 – Essentials for College Math (SREB READY)

### Community College Courses

- 2C01 – MAT 143 – Quantitative Literacy
- 2C02 – MAT 152 – Statistical Methods I
- 2C03 – CCP – MAT 171 – Precalculus Algebra
- 2C04 – CCP – MAT 172 – Precalculus Trigonometry
- 2C05 – MAT 263 – Brief Calculus
- 2C06 – CCP – MAT 271 – Calculus I
- 2C07 – MAT 272 – Calculus II
- 2C11 – MAT 252 – Statistics II
- 2C12 – MAT 273 – Calculus III
- 2C13 – MAT 280 – Linear Algebra
- 2C14 – MAT 285 – Differential Equations
- 2C15 – MAT 141 – Mathematical Concepts I
- 2C16 – MAT 142 – Mathematical Concepts II
- 2C20 – MAT 167 – Discrete Math

### AP and IB Courses

- 2A00 – AP Calculus AB
- 2A01 – AP Calculus BC
- 2A03 – AP Statistics
- 2I028 – IB Mathematical Studies SL
- 2I038 – IB Mathematics SL
- 2I048 – IB Mathematics HL
- 2I058 – IB Further Math HL

## Courses meeting Multiple Measures for the NC Community Colleges but not UNC System minimum course requirements

- 2406 – AMTEM-Mindset

## Courses accepted as a 4<sup>th</sup> math credit for students planning to attend other colleges, a Community College, or a Technical School

Students using CTE courses to meet Math credit graduation requirements (Class of 2014 and beyond) will be required to complete math placement testing prior to enrolling in community college math courses.

### CTE Single Courses that equal 1 full math credit

- 0A02 – AP Computer Science Principles
- 2A02 – AP Computer Science
- BA10 – Accounting I
- BA20 – Accounting II
- BF10 – Principles of Business and Finance
- IV22 – Drafting II Engineering
- IC21 – Carpentry I
- IC61 – Drafting I
- IC62 – Drafting II Architectural
- IM41 – Metals Manufacturing Technology I
- IM42 – Metals Manufacturing Technology II
- TP11 – PLTW Introduction to Engineering Design
- TP12 – PLTW Principles of Engineering
- TP21 – PLTW Digital Electronics
- TP22 – PLTW Computer Integrated Manufacturing
- TP23 – PLTW Civil Engineering and Architecture
- TP25 – PLTW Aerospace Engineering
- TP27 – PLTW Environmental Sustainability
- TP31 – PLTW Engineering Design and Development
- FA31 – Apparel & Textile Production I
- FA32 – Apparel & Textile Production II
- FI51 – Interior Design I
- FI52 – Interior Design II
- FH22 – Culinary Arts and Hospitality II
- FH72 – ProStart II
- TE21 – Principles of Technology I
- TE22 – Principles of Technology II
- BP10 – Computer Programming I
- BP12 – Computer Programming II

### Pairs of CTE Courses that equal 1 Math CREDIT

- BP20 – SAS I AND BP22 – SAS II
- BF05 – Personal Finance AND ME11 – Entrepreneurship I
- IM31 – Electronics I AND IM32 – Electronics II
- IC11 – Masonry I AND IC12 – Masonry II
- FH20 – Introduction to Culinary Arts & Hospitality AND FH21 – Culinary Arts & Hospitality I
- TS31 – Game Art and Design AND TS32 – Advanced Game Art and Design
- IC 41 – Electrical Trades I AND IC42 – Electrical Trades II
- TS21 – Scientific & Technical Visualization I AND TS22 – Scientific & Technical Visualization II
- FH20 – Introduction to Culinary Arts & Hospitality AND FH71 – ProStart I
- IC22 – Carpentry II AND IC23 – Carpentry III

## Courses accepted as a 4<sup>th</sup> math course for students exempted by Principal from usual sequence (SUBSTITUTION)

### NC MATH 1 AND NC MATH 2

#### Plus two additional courses from choices below:

- 2020 – Introductory Mathematics
- 2090 – Foundations of NC Math 1
- 2091 – Foundations of NC Math 2
- 2092 – Foundations of NC Math 3
- 2040 – Alternate Mathematics I
- 2041 – Alternate Mathematics II

#### OR

- 0A02 – AP Computer Science Principles
- 2A02 – AP Computer Science
- BA10 – Accounting I
- BA20 – Accounting II
- BF10 – Principles of Business and Finance
- IC61 – Drafting I
- IV22 – Drafting II Engineering
- IC21 – Carpentry I
- IC62 – Drafting II Architectural
- IM41 – Metals Manufacturing Technology I
- IM42 – Metals Manufacturing II
- TP11 – PLTW Introduction to Engineering Design
- TP12 – PLTW Principles of Engineering
- TP21 – PLTW Digital Electronics
- TP22 – PLTW Computer Integrated Manufacturing
- TP23 – PLTW Civil Engineering and Architecture
- TP25 – PLTW Aerospace Engineering
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- TP31 – PLTW Engineering Design and Development
- FA31 – Apparel & Textile Production I
- FA32 – Apparel & Textile Production II
- FI51 – Interior Design I
- FI52 – Interior Design II
- FH22 – Culinary Arts and Hospitality II
- FH72 – ProStart II
- TE21 – Principles of Technology I
- TE22 – Principles of Technology II
- BP10 – Computer Programming I
- BP12 – Computer Programming II

Students are NOT required to complete math credits in this option in any particular order. Students may take CTE or other courses prior to or concurrently with NC Math 1 and/or NC Math 2. Additionally, students may also complete the Substitution sequence with two core mathematics courses plus one additional math course from above (pink) and one CTE course OR a pair of CTE courses from previous column (green) (pairs of CTE courses = 1 math credit).

## Students Identified as Learning Disabled in Math

NC General Statute § 115C-81(b) states that the State Board of Education shall not require Algebra I\* as a graduation standard for any student whose IEP [Individualized Education Plan]: i) identifies the student as learning disabled in the area of mathematics and ii) states that this learning disability will prevent the student from mastering Algebra I. The IEP team decision regarding the application of this statute through documentation in the IEP can occur at different times during the academic career of a student with an SLD in the area of math. For further information on the required considerations for application of this statute, please see the August 24, 2016 [Students with SLD and Mathematics Sequence Exemption in the Future-Ready Course of Study](#) memo and worksheet.

Students included in the category defined by NC General Statute § 115C-81(b) must complete four credits in mathematics. These students must construct a four-course mathematics sequence using any combination of the courses listed in the preceding columns. Each student's course selections should be guided by his or her post-secondary goals, as defined in his/her IEP.

\*Algebra I is now interpreted as NC Math 1.

## Students Following the Occupational Course of Study

- Introduction to Math I (9220B) AND NC Math 1 (9225B)

#### AND ONE of the following courses:

- 9222B – Financial Management
- 2041 – Alternate Math II
- BF05 – Personal Finance

Students who complete the sequence above should be classified as Occupational Course of Study (OCS). These students may also complete a CTE concentration.