North Carolina Mathematics Graduation Requirements
Options Charts

According to the State Graduation Requirement Policy, students earn four mathematics credits which shall be either:

a. NC Math 1, 2, and 3 and a fourth mathematics course to be aligned with the student's post high school plans
b. In the rare instance a principal exempts a student from the Future-Ready Core mathematics sequence, except as limited by N.C.G.S. §115C-81(b), the student will be required to pass: NC Math 1 and Math 2 plus two additional courses identified on the NC DPI Math options chart. Note: Credit shall be awarded for Math I, II, III if taken prior to the 2016-17 school year.

The following charts are provided to identify the courses that are options to fulfill the mathematics graduation requirement and that align with the student's post high school plan.
The charts include option for students who seek:

- 1. Admission into a UNC System Institution or meet the NC Community College System's Multiple Measure Policy
- 2. Admission into a Community College or Technical School
- 3. Enter directly into a Career after High School
- 4. Principal Exemption from the Future Ready Core Graduation Requirements

Guidance is also provided for students who are:

- Identified as Learning Disabled in Math
- Following the Occupational Course of Study

North Carolina Mathematics Graduation Requirements
Options Charts

1. Admission into a UNC System Institution or meet the NC Community College System's Multiple Measure Policy*

For admission into universities and colleges outside of the UNC System Institution, please check with that institution's admissions office for requirements and recommendations.

Students must earn credit for:

- **2109 – NC Math 1**
- **2209 – NC Math 2**
- **2309 – NC Math 3**

And 1 credit from the following:

NC SCOS – 4th Level Math Courses	Community College Courses	AP, IB, and Cambridge Courses
• 2400 – Adv Functions and Modeling • 2401 – Discrete Mathematics • 2402 – Integrated Math IV • 2403 – Pre-Calculus	• 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 • 2C20 – MAT 167 – Discrete Math	• 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 • 2I068 – IB Analysis and Approaches SL *New • 2I078 – IB Analysis and Approaches HL *New • 2I088 – IB Applications & Interpretations SL *New • 2I098 – IB Applications & Interpretations HL *New • 2V008 – CIE Mathematics AS • 2V018 – CIE Mathematics A • 2V028 – CIE Mathematics & Mechanics AS • 2V038 – CIE Mathematics & Mechanics A • 2V048 – CIE Mathematics & Probability/Statistics AS • 2V058 – CIE Mathematics & Probability/Statistics A

The following courses meet the NC Community College System's Multiple Measures Policy but does not meet the UNC System's minimum course requirements for mathematics:

- 2406 – AMTEM-Mindset
- 21008 – IB Computer Science SL
- 21018 – IB Computer Science HL

For more information, see the NC Community College System's Multiple Measures Policy.

The following courses meet the UNC System's minimum course requirements for mathematics but does not meet the NC Community College System's Multiple Measure Policy.

- 2C15 – MAT 141 – Mathematical Concepts I
- 2C16 – MAT 142 – Mathematical Concepts II

For more information about the UNC System's Minimum Course Requirements for admission, see the Minimum Course Requirements.

The following course may not meet the UNC System's minimum course requirements for mathematics at all of its member institutions. Check with the admissions office at the intended college/university for acceptance. This course does meet the NC Community College System's Multiple Measure Policy.

- 2408 – Essentials for College Math (SREB READY) – The course 2408 will not be available starting the 2019-20 school year.

* UPDATE: The NC Community College System is gradually replacing the Multiple Measure Policy with the RISE Placement Criteria. In this new placement criteria, the 4th math course is not a limiting factor for placement. Placement will be determined by a student's GPA and other factors. The RISE Placement Criteria will be rolled out in stages across the state. Please contact the community college for more information.

Spring 2019 RISE pilots: Brunswick, Caldwell, Catawba Valley, Central Carolina, Davidson, Forsyth Tech, Guilford Tech, Lenoir, Sandhills, Robeson, Durham Tech, Western Piedmont, Southwestern, and Stanly.

Fall 2019: These colleges will begin using the new RISE placement criteria when they begin to accept applications for the summer and/or fall semester: Alamance, Central Piedmont, Cleveland, Craven, Edgecombe, Fayetteville, Gaston, Martin, McDowell, Piedmont, Pitt, Richmond, Rockingham, Rowan-Cabarrus, Southeastern, South Piedmont, Wake Teach and Wilson

2. Admission into a Community College or Technical School

These options below do not meet the Multiple Measures Policy for the NC Community College System. Students who use this option will be required to complete math placement testing prior to enrolling in community college math courses.
The CTE options listed below will count as a CTE credit and will fulfill the mathematics requirement for graduation.
Students may also earn a credit in a 4th Level Math Course, Community College Math Course, or an AP and IB Course that is listed in the Admission into a UNC System Institution Chart.

Students must earn credit for:

- **2109 – NC Math 1**
- **2209 – NC Math 2**
- **2309 – NC Math 3**

And 1 credit from the following:

AP and IB Courses

- 0A02 – AP Computer Science Principles (CTE Credit)
- 2A02 – AP Computer Science
- 21008 – IB Computer Science SL
- 21018 – IB Computer Science HL

CTE Single Courses that fulfill 1 of the 4 required mathematics credits for graduation

- 0A02 – AP Computer Science Principles – Course Description

CTE Course Descriptions

- BA10 – Accounting I
- BA20 – Accounting II
- BF10 – Principles of Business and Finance – BF10 will no longer be a fourth Mathematics credit option for all students entering ninth grade in the 2020-21 academic year.
- 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

CTE Paired Courses that fulfill 1 of the 4 required mathematics credits for graduation

CTE Course Descriptions

- 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

3. Enter directly into a Career after High School

These options below do not meet the Multiple Measures Policy for the NC Community College System. Students who use this option will be required to complete math placement testing prior to enrolling in community college math courses.

Students may also earn a credit in a 4th Level Math Course, Community College Math Course, or an AP and IB Course that is listed in the Admission into a UNC System Institution Chart.

Students must earn credit for:

- **2109 – NC Math 1**
- **2209 – NC Math 2**
- **2309 – NC Math 3**

And 1 credit from the following:

AP and IB Courses	**CTE Single Courses that fulfill 1 of the 4 required mathematics credits for graduation**	**CTE Paired Courses that fulfill 1 of the 4 required mathematics credits for graduation**
• 0A02 – AP Computer Science Principles (CTE Credit) • 2A02 – AP Computer Science • 21008 – IB Computer Science SL • 21018 – IB Computer Science HL **Additional Mathematics Courses** 2090 – Foundations of NC Math 1 2091 – Foundations of NC Math 2 2092 – Foundations of NC Math 3	• 0A02 – AP Computer Science Principles – Course Description CTE Course Descriptions • BA10 – Accounting I • BA20 – Accounting II • BF10 – Principles of Business and Finance – BF10 will no longer be a fourth Mathematics credit option for all students entering ninth grade in the 2020-21 academic year. • 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	CTE Course Descriptions • 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

4. Principal Exemption from the Future Ready Core Graduation Requirements

These options below do not meet the Multiple Measures Policy for the NC Community College System. Students who use this option will be required to complete math placement testing prior to enrolling in community college math courses.

Students may also earn a credit in a 4th Level Math Course, Community College Math Course, or an AP and IB Course that is listed in the Admission into a UNC System Institution Chart.

Students must earn credit for:

- **2109 – NC Math 1**
- **2209 – NC Math 2**

And 2 credits from the following:

AP and IB Courses

- 0A02 – AP Computer Science Principles (CTE Credit)
- 2A02 – AP Computer Science
- 21008 – IB Computer Science SL
- 21018 – IB Computer Science HL

Additional Mathematics Courses

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

CTE Single Courses that fulfill 1 of the 4 required mathematics credits for graduation

- 0A02 – AP Computer Science Principles – Course Description

CTE Course Descriptions

- BA10 – Accounting I
- BA20 – Accounting II
- BF10 – Principles of Business and Finance – BF10 will no longer be a fourth Mathematics credit option for all students entering ninth grade in the 2020-21 academic year.
- 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
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- 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

CTE Paired Courses that fulfill 1 of the 4 required mathematics credits for graduation

CTE Course Descriptions

- 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
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- 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

Students identified as Learning Disabled in Math

General Statue 115C-12(9d) states:
"The State Board shall not adopt or enforce any rules that requires Algebra I* as a graduation standard or as a requirement for a high school diploma for any student whose individualized education program (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." As noted in General Statute 115C-12(9d), **the individualized education program (IEP) must state that the specific learning disability (SLD) in the area of mathematics will prevent the student from mastering Algebra I (now interpreted as NC Math 1 per memo dated 12/16/13).**

The IEP team decision regarding the application of this statute through documentation in the IEP could occur at different times during the academic career of a student with a SLD in the area of mathematics. For further information on the required considerations for application of this statute, please see the August 24, 2016 memo and worksheet (http://bit.ly/NCSLDMathFRC).
Note: The memo and worksheet refer to General Statute 115-81b. Recent legislation relocated the content of 115-81b to 115-12(9d) without changing the text of the statute. Please continue to use the memo and worksheet as intended for students with a specific learning disability in the area of mathematics.

Students included in the category defined by NC General Statute 115C-12(9d) 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 Options Charts. Each student's course selection should be guided by his or her post-secondary goals, as defined in his/her IEP.
For complete information on application of General Statue 115C-12(9d), refer to the Students with Specific Learning Disabilities and Mathematics Sequence Exemption in the Future-Ready Course of Study memo referenced above.

*Algebra I is now interpreted as NC Math I.

Students following the Occupational Course of Study

Students who follow this sequence should be classified as Occupational Course of Study.

Students must earn credit for:

- **9220B – Introduction to Mathematics**
- **9225B – Math 1**

And earn a math credit from the following:

- 9222B – Financial Management
- BF05 – Personal Finance – *If Personal Finance is counted as third math credit the course may not also be counted as CTE credit.*