



## **MATHEMATICS PLACEMENT**

### **GUIDE FOR STUDENTS**

**Academic Year 2025–26**

The Mathematics and Computer Science Department is pleased to welcome you to Raritan Valley Community College and the educational journey you are about to begin. Please know that all of the faculty and staff at RVCC are committed to supporting you as you work toward your degree. To help you begin your academic journey on the right track, we've outlined some guidelines in this document to assist with your course selection. The courses you choose for your first semester will be both challenging and rewarding, setting the foundation for the rest of your studies.

The Mathematics Placement Guide for Students was created to help you select the best initial math course for you based on your degree program and preparation level. It includes a description of the content and expectations for each course, broken down by the type of degree you are pursuing.

There are four distinct categories of academic programs at RVCC based on differences in math requirements:

- Liberal Arts programs (non-STEM, non-Business)
- Education, P-12 program
- Non-STEM programs requiring Statistics
- STEM programs and Business programs requiring Calculus

RVCC's Tutoring Center offers academic support to students as they become successful, life-long learners. Services offered include free tutoring, open areas for studying/homework, computers with educational software, reference materials, manipulative learning tools and online tutoring. Services are free and available on a drop-in basis.

Website: [www.raritanval.edu/student-life/student-services/tutoring-services](http://www.raritanval.edu/student-life/student-services/tutoring-services)

Phone: 908-526-1200, ext. 8549 or 8393

If you have any questions, please reach out to the Math and Computer Science Department ([math-cs@raritanval.edu](mailto:math-cs@raritanval.edu)) or an academic advisor ([acts@raritanval.edu](mailto:acts@raritanval.edu)).

## PLACEMENT USING HIGH SCHOOL GRADES AND TEST SCORES

For incoming students who have graduated from high school within the last five years, mathematics course placement is based on the grade earned in your most recent high school mathematics course, or in some cases, the score earned on a standardized test. Only courses in the standard sequence are considered for placement (Algebra I, Geometry, Algebra II, Precalculus/Trigonometry, and Calculus).

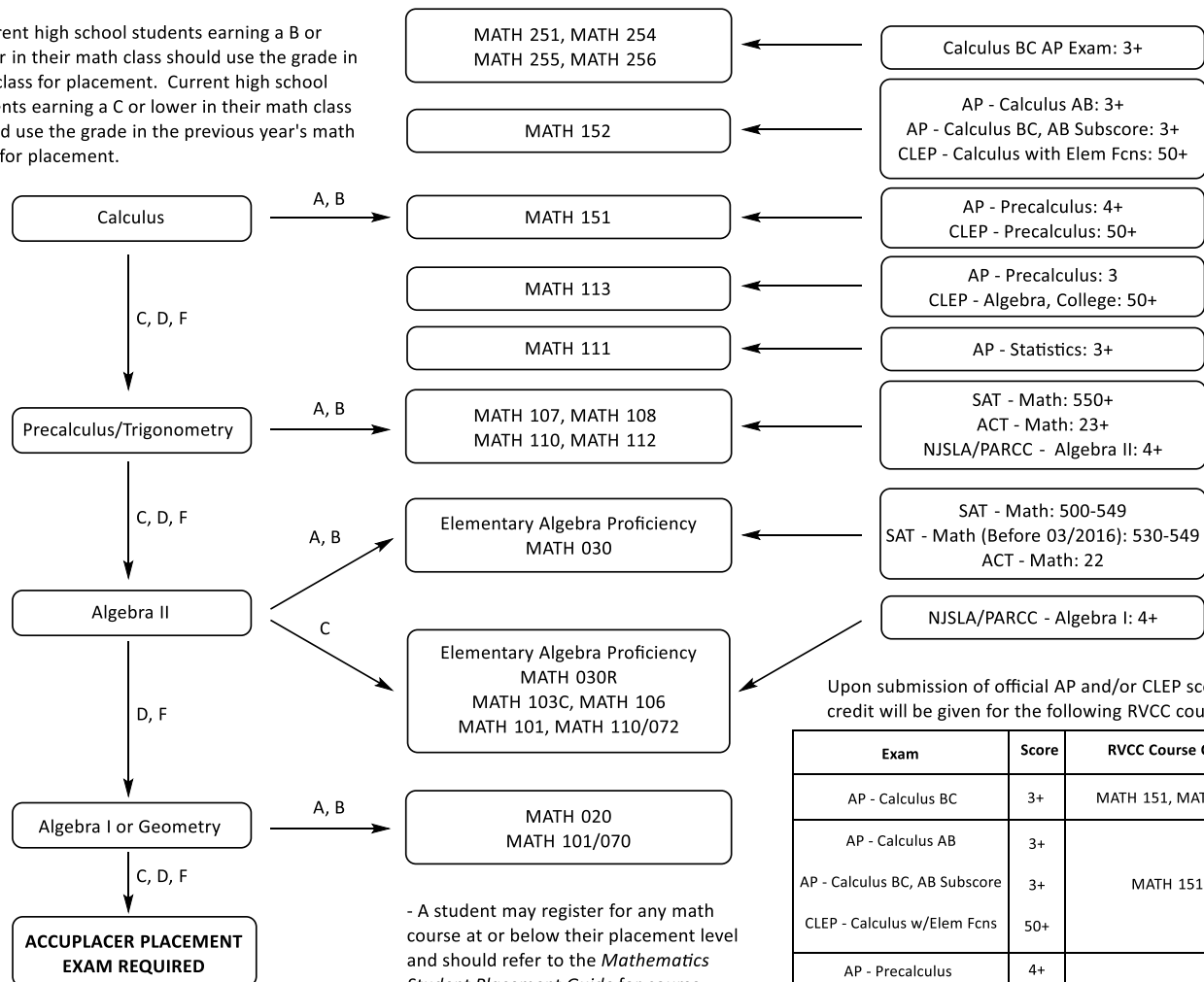
### GRADE EARNED IN MOST RECENT HIGH SCHOOL MATH COURSE (if graduated within last 5 years)

- Courses outside of the standard math sequence (Alg I - Geometry - Alg II - Precalc/Trig - Calculus) are not considered for placement.

- Current high school students earning a B or better in their math class should use the grade in that class for placement. Current high school students earning a C or lower in their math class should use the grade in the previous year's math class for placement.

### PLACEMENT INTO RVCC MATH COURSE

### EXAM SCORE (AP, CLEP, SAT, ACT, NJSLA, PARCC)



Upon submission of official AP and/or CLEP score(s), credit will be given for the following RVCC course(s).

Exam	Score	RVCC Course Credit
AP - Calculus BC	3+	MATH 151, MATH 152
AP - Calculus AB	3+	MATH 151
AP - Calculus BC, AB Subscore	3+	
CLEP - Calculus w/Elem Fcns	50+	MATH 151
AP - Precalculus	4+	MATH 112, MATH 113
CLEP - Precalculus	50+	
AP - Precalculus	3	MATH 112
CLEP - Algebra, College	50+	
AP - Statistics	3+	MATH 110

- The Accuplacer exam is required if a student graduated from high school more than five years ago.

- The Accuplacer exam may be used to challenge placement based on high school grades.

-The Accuplacer exam cannot be used to place higher than MATH 151.

- A student may register for any math course at or below their placement level and should refer to the *Mathematics Student Placement Guide* for course descriptions and recommendations based on their degree program.

## Course Descriptions & Expectations: What is the best fit for you?

### Liberal Arts programs (non-STEM, non-Business)

These programs typically require one college-level General Education math course. Some programs require a specific course from this list.

#### MATH 101: Number Systems

This course covers a variety of topics that will fulfill your three-credit Gen Ed math requirement. Topics include: Systems of numeration, sets and set operations, logic, problem solving strategies, modular arithmetic, Euclidean geometry, and number theory.

NOTE: MATH 101 has a prerequisite of MATH 020 Elementary Algebra. If you have not demonstrated Elementary Algebra proficiency through the placement process, you are encouraged to take MATH 101/070.

#### MATH 101/070: Number Systems with Workshop

This course combination includes all of the content in MATH 101 along with a refresher in Algebra and Arithmetic and extra instructional time. This course is appropriate for students who have not demonstrated Elementary Algebra proficiency through the placement process.

#### MATH 103C: Quantitative Reasoning

This course is suitable for you to take if you have a moderate foundation in Algebra and your degree requires a three-credit Gen Ed math course. This course includes statistical and financial applications utilizing technology and prepares students to apply mathematical concepts and quantitative reasoning to problems in areas such as personal finance, environment, population, health applications and data in students' daily lives. Topics include: Concepts, methods and visual representation in numerical reasoning, statistical thinking and problem solving.

NOTE: MATH 103C has a prerequisite of MATH 020 Elementary Algebra. If you have not demonstrated Elementary Algebra proficiency through the placement process, you are encouraged to take MATH 101/070. If you are in a program that requires MATH 103C, you must first complete MATH 020 Elementary Algebra or MATH 020W Elementary Algebra with Workshop. See page 6 for Algebra course descriptions.

#### MATH 106: Technical Math

This course is suitable for you to take if you have a moderate foundation in Algebra and your degree requires a three-credit Gen Ed math course. The course focuses on fundamental mathematical concepts applied to practical technical fields, and it is most appropriate for technical programs such as Automotive Technology, Environmental Control Technology, and Ophthalmic Science. Topics include: Ratios and proportions, metric measures, geometry, practical algebra, and elementary trigonometry with an emphasis on application to technical programs.

NOTE: MATH 106 has a prerequisite of MATH 020 Elementary Algebra. If you have not demonstrated Elementary Algebra proficiency through the placement process, you are encouraged to take MATH 101/070. If you are in a program that requires MATH 106, you must first complete MATH 020 Elementary Algebra or MATH 020W Elementary Algebra with Workshop. See page 6 for Algebra course descriptions.

## Course Descriptions & Expectations: What is the best fit for you?

### Education, P-12 program

This program requires two Math for Educators courses (MATH 107 and MATH 108) that can be taken in either order and require proficiency in Intermediate Algebra.

#### **MATH 107: Mathematical Reasoning for Educators – Logic and Numeration** **MATH 108: Mathematical Reasoning for Educators – Geometry and Statistics**

These courses require a strong foundation in Algebra through Algebra II

- Math 107 - Topics include: Problem solving strategies, number theory, and algebraic structures.
- Math 108 - Topics include: Probability, Statistics and Geometry.

NOTE: MATH 107 and MATH 108 have a prerequisite of MATH 030 Intermediate Algebra. If you have not demonstrated Intermediate Algebra proficiency through the placement process, you must first complete MATH 030 Intermediate Algebra or MATH 030R Intermediate Algebra with Review. See page 6 for Algebra course descriptions.

### Non-STEM programs requiring Statistics

These programs do not require Precalculus or Calculus, but do require at least one semester of Statistics.

#### **MATH 110 Statistics I**

This course requires a strong foundation in Algebra through Algebra II. Topics include: Descriptive displays and analysis, classical probability, the normal distribution, the sampling distribution of the mean, inferences concerning means p-values.

NOTE: MATH 110 has a prerequisite of MATH 030 Intermediate Algebra. If you have not demonstrated Intermediate Algebra proficiency through the placement process, you are encouraged to take MATH 110/072 Statistics I with Workshop.

#### **MATH 110/072 Statistics I with Workshop**

This course combination includes all of the content in MATH 110 plus a refresher in Algebra and Arithmetic and extra instructional time.

NOTE: MATH 110/070 Statistics I with Workshop has a prerequisite of MATH 020 Elementary Algebra. If you have not demonstrated Elementary Algebra proficiency through the placement process, you must first complete MATH 020 Elementary Algebra or MATH 020W Elementary Algebra with Workshop. See page 6 for Algebra course descriptions.

Course Descriptions & Expectations: What is the best fit for you?

**STEM programs and Business programs requiring Calculus**

These programs require Precalculus and/or Calculus.

**MATH 112 Precalculus I**

Students entering this course should be familiar with quadratic equations and be able to:

- Solve equations with two variables
- Draw a parabola
- Solve equations with exponents and square roots
- Work with relations, domains, functions and ranges

Topics include: Study of polynomial, rational, logarithmic, and exponential functions and other topics from algebra.

NOTE: MATH 112 Precalculus I has a prerequisite of MATH 030 Intermediate Algebra. If you have not demonstrated Intermediate Algebra proficiency through the placement process, you must first complete MATH 030 Intermediate Algebra or MATH 030R Intermediate Algebra with Review. See page 6 for Algebra course descriptions.

**MATH 113 Precalculus II**

Students entering this course should be familiar with polynomials, rational expressions, logarithms, exponential functions, and various graphing techniques. Topics include: The study of trigonometric functions and other topics from trigonometry and analytic geometry.

NOTE: MATH 113 Precalculus II has a prerequisite of MATH 112 Precalculus I.

**MATH 151 Calculus I**

Students entering this course should be familiar with trigonometric functions, analytical geometry, and graphing techniques. Topics include: Limits, differentiation, applications of derivatives, integration, the Fundamental Theorem of Calculus, and logarithmic, exponential, and other transcendental functions.

NOTE: MATH 151 Calculus I has a prerequisite of MATH 113 Precalculus II.

### Algebra Course Descriptions

#### **MATH 020 Elementary Algebra**

This course is appropriate for students who have not taken a math class in more than five years or who did not complete Algebra II in high school with an A, B or C. Topics include: Exponents, polynomials, factoring, solving first degree equations and inequalities, rational and radical expressions, quadratic equations, techniques of graphing, systems of equations and applications.

#### **MATH 020W Elementary Algebra with Workshop**

This course includes all of the content in MATH 020 plus an Arithmetic refresher and extra instructional time.

#### **MATH 030 Intermediate Algebra**

This course is appropriate for students who have a moderate foundation in basic algebra. Topics include: Advanced factoring, systems of equations and inequalities, numerical and graphical solutions of linear and quadratic equations and inequalities, rational and radical expressions and equations, integer and rational exponents, absolute value equations, introduction to functions and their graphs, introduction to circles.

#### **MATH 030R Intermediate Algebra with Review**

This course includes all of the content in MATH 030 plus an Algebra refresher and additional instructional time. This course is appropriate for students who received a C in Algebra II.