

Choosing Your Math Course

When choosing your first math class, it's important to **consider your current skills, the topics covered and course expectations**. It's also helpful to think about **how each course aligns with both your interests and your career and transfer goals**. If you have questions, talk with your advisor.

The courses on page 1 are developmental-level and the courses on page 2 are college-level.

- **Developmental math courses** (Foundations of Math and Foundations of Algebra) offer the chance to develop concepts and skills you may have forgotten or never had the chance to learn. They focus less on lecture and more on practicing concepts individually and in groups. Your homework will emphasize developing and practicing new skills.
- **College-level math courses** build on foundational skills taught in developmental math courses. Homework, quizzes, and exams will often include word problems that require multiple steps and incorporate a variety of math skills. You should expect three to four exams per semester, which cover a variety of concepts, and shorter weekly quizzes which focus on one or two concepts. You may be asked to complete a final project and submit a paper using course concepts, research, and writing skills.

| Course | Your Skills & Readiness | Topics Covered & Course Expectations |
|-----------------------------------|--|---|
| Foundations of Mathematics | 1. All multiplication facts (through tens, preferably twelves) should be memorized. 2. Whole number addition, subtraction, multiplication, division (without a calculator): a. $\begin{array}{r} 456 \\ + 37 \\ \hline \end{array}$ b. $\begin{array}{r} 897 \\ - 649 \\ \hline \end{array}$ c. $\begin{array}{r} 534 \\ \times 23 \\ \hline \end{array}$ d. $408 \div 34 =$ | In Foundations of Mathematics , you will: <ul style="list-style-type: none"> • learn to use fractions, decimals, percentages, whole numbers, & integers to solve problems • interpret information that is communicated in a graph, chart & table |
| Foundations of Algebra | 1. Order of operations: $24 \div (9 - 1) + 3 \cdot 5$ 2. Addition, subtraction, multiplication, division of signed numbers: $-1.2 \div -6$ 3. Percent problems: a. Joe had 20 math problems for homework. He completed 45%. How many problems does he have left to complete? b. Dan could run 4 miles last year. This year he can run 5 miles. By what percent did his miles increase? 4. Operations with fractions: a. $\frac{2}{3} - \frac{4}{5} =$ b. What is $\frac{3}{8}$ of 24? | In Foundations of Algebra , you will: <ul style="list-style-type: none"> • use algebraic laws, polynomials, exponents, linear equations & factoring in order to solve problems that occur in various fields of study |

| Course | Your Skills & Readiness | Topics Covered & Course Expectations |
|---|--|---|
| Intermediate Algebra or Applied Math Concepts | <ol style="list-style-type: none"> Solve for x: $7 - x = 11$ Multiply: $(4 + x)(3 - x)$ Evaluate the following when $x = -2$ & $y = 3$: $\frac{-5x - 4y + \sqrt{12y}}{-4 - x}$ Identify & interpret the slope & the y-intercept of the linear equation: $3x + 4y = 12$ Solve for x: $\frac{1}{2}(x + 9) = \frac{1}{6} + \frac{1}{3}(x - 3)$ There are 21 flowers of three colors in a vase. The number of blue flowers is two less than the number of red flowers & the number of yellow flowers is one less than triple the amount of blue flowers. How many flowers of each color are there? Use an equation to solve. Suppose a car travels a distance of x miles at a velocity of 48 mph. Give an algebraic expression for the time the car travels. A clothing store runs a sale in which each winter jacket is discounted 20%. Write an algebraic expression for the sale price of the jacket. Simplify & express answers without negative exponents: a. $(x^3)^4 \cdot x^5$ b. $(x^3y^{-2})^2$ c. $\left(\frac{x^{-5}}{x^{-2}}\right)^{-3}$ Multiply. Write answers in simplest form. $(2x - 3y + 1)(-5x + 4y)$ Factor the following completely: a. $x^2 - 3x - 10$ d. $3x^4 - 3x^3 - 60x$ b. $4x^2 - 12x + 9$ e. $6x^3 - 9x^2 + 4x - 6$ c. $25x^6 - 9y^4$ | <p>In Intermediate Algebra, you will:</p> <ul style="list-style-type: none"> learn in-depth algebra skills to prepare for College Algebra or Finite Math understand algebraic laws, polynomials, exponents, linear equalities & inequalities, factoring, functions, set notation, & graphing in the Cartesian Coordinate system <p>In Applied Math Concepts, you will:</p> <ul style="list-style-type: none"> learn & practice mathematical problem solving skills needed for a variety of professional & personal applications become proficient with set theory, personal finance, probability & statistics, geometry, linear systems, & data interpretation strengthen math & quantitative reasoning skills for the workplace & your personal life <p>In College Algebra, you will:</p> <ul style="list-style-type: none"> develop advanced algebra skills learn topics including equations & inequalities, exponents, radicals, functions, systems of equations, polynomials & applications prepare for science, engineering, & technology fields & higher level mathematics courses such as Pre-Calculus & Calculus <p>In Finite Math, you will:</p> <ul style="list-style-type: none"> build on strong algebra skills to focus on applications in business, finance, the social sciences, & human services learn set theory & symbolic logic, linear systems & programming, coordinate systems & graphic techniques, elementary matrix operations, probability, & math of finance fulfill a frequent requirement in bachelor level business & accounting degree programs |
| College Algebra or Finite Math or Statistics | <ol style="list-style-type: none"> Solve & graph: $-6 < \frac{2 - 3x}{2} \leq 13$ Find t when $\bar{x}_1 = 29, \bar{x}_2 = 19, s_1 = 3.2, s_2 = 4.8, n_1 = 129, \text{ and } n_2 = 97$. $t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$ | <p>In Statistics I, you will:</p> <ul style="list-style-type: none"> learn the basic ideas & techniques of probability & statistics calculate mean, mode, median, range, & standard deviation create & analyze graphical information such as bar graphs, pie charts, boxplots, & histograms prepare for transfer & careers that include research & data analysis in the fields of social sciences, science, allied health, business, & technology |