

Discrete Math

Readiness Profile & Course Expectations

Prerequisites: “C” or higher in Algebra II.

Below are some guidelines for choosing the best course for an individual student. This is *not* a placement test and it should *not* be used as the only criteria for making placement decisions

Student Background

Students entering **Discrete Math** should *already* have a good understanding of the following concepts:

- Basic math skills, especially solving for variables in equations.
- Solve basic probability questions.
- Students should also have strong reading skills and to be able to understand and interpret a variety of word problems and explanations of concepts.

Students entering **Discrete Math** should also be able to solve problems such as

<u>Equation Problem:</u> Solve the system of equations: $x + 2y = 23$ $x + 3y = 4$	<u>Word Problem:</u> Given that Statement A is true, must Statement B be true also? Statement A: “If it is raining, I will get wet”. Statement B: “I am wet, so it must be raining”
<u>Number Sense Problem:</u> If you have three kinds of bread, two kinds of meat, and four types of cheese, list the types of sandwiches can you make?	

Students entering **Discrete Math** are expected to do the following things:

- Have a strong desire to learn concepts that make you think in different ways than you are used to in math classes.
- Do some reading assignments outside of class
- Ask “How does this apply to life?” and help find answers.
- Seek help when needed.

Course Content and Expectations

In **Discrete Math** students will learn concepts such as

- Formal Logic including path and circuit theory
- Probability
- Social theories such as elections theories, apportionment theories, fair division theories and game theories
- Number sense/Mathematical reasoning including proofs and encryption
- Matrices/Linear Algebra as it applies to business and economics situations
- History of Math
- Finance models

Textbook: *Discrete Mathematics with Applications*, 3rd Edition, Brooks/Cole 1995, Epp.

Students will be expected to spend an average of approximately 1 hour outside of class on homework for each class period. Approximately 1 section from the text will be covered per class and one chapter every 2 weeks. Each semester will have approximately 8 tests and 8 quizzes.

Grades will be calculated within the following guidelines:

- Tests and Quizzes: 50 – 70%
- Homework: 10 – 20%
- Projects: 15 – 35%

There may also be projects such as

- History of Math project (oral presentation)
- Probability Project

Test Scores

Other indicators of potential success in **Discrete Math** include test scores near or above the following values:

- California Standards Test (CST) for Algebra II: Basic (at least)
- District Benchmark Test for Algebra II: 60%

Other Comments

This class is designed to show you how math works in everyday life. The emphasis is on the application of concepts.