

# GQ at Penn State

## Alternatives to Algebra, Precalculus, and Calculus

As noted on the back of the FTCAP Profile, “all baccalaureate degree programs require at least six credits of quantification. Courses in computer science, statistics, mathematics (including non-calculus mathematics), and symbolic logic may be taken to fulfill this requirement.”

The Department of Mathematics offers a number of courses that satisfy the General Education Quantification (GQ) requirements, with five courses geared specifically for students whose degree programs do not require specific algebra, precalculus, or calculus material. These courses include the following:

### **MATH 017 – Finite Mathematics**

How many different pizzas can I order which have three toppings (out of a selection of ten different toppings)? What’s the probability of being dealt a full house in a game of poker? These and many other questions related to counting and probability will be addressed.

### **MATH 018 – Elementary Linear Algebra**

This course is geared for students who have a solid algebra background, or who enjoy algebra, but are not interested in a College Algebra course. The course deals with systems of equations, matrices, and linear programming from a beginner’s perspective.

### **MATH 034 – The Mathematics of Money**

This course deals with basic topics related to money – simple and compound interest, annuities, investments, credit card debt, home mortgages, and more.

### **MATH 035 – General View of Mathematics**

This elementary course embodies the spirit of mathematics by considering a wide variety of self-contained topics and ideas from a historical context, often starting with recreational puzzles and moving towards more practical applications. Topics include prime numbers, irrational numbers, and networks.

### **MATH 036 – Insights into Mathematics**

How many seats in the House of Representatives will Pennsylvania receive after the 2010 census? How is the Heisman Trophy winner determined? How does my mailman determine an efficient route to take when delivering the mail in my neighborhood? These questions, and many other real-world issues, are answered in this course.

The following webpage shares the complete list of courses that may be taken to fulfill the General Education Quantification (GQ) requirements:

<http://www.psu.edu/bulletins/bluebook/gened/gq.html>

Students are encouraged to view this site, in consultation with an academic adviser, to determine appropriate GQ courses for their academic program. As indicated in the webpage mentioned above, a variety of GQ courses are available, with offerings from a number of departments at Penn State.